

Permanent Aviation Fuel Facility (EP-139/2002/A)

First Quarterly Environmental Monitoring and Audit Report – March 2006

13th April 2006

Environmental Resources Management

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For and on behalf of Environmental Resources Management	
Approved by:	Freeman Cheung
Signed:	
Position:	Environmental Team Leader
Date:	13 th April 2006

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EXECUTIVE SUMMARY

This first quarterly Environmental Monitoring and Audit (EM&A) report presents the EM&A works carried out during the period from 18th November 2005 to 14th February 2006 in accordance with the EM&A Manual.

Spot Acoustic Monitoring and Underwater Noise Monitoring were conducted in the first week of the marine piling and the results complied with the EP requirements. Dolphin Visual Monitoring was conducted during the piling activities and no dolphins were found entering the 500m exclusion zone during piling activities over the reporting period.

Weekly site inspections were conducted during the reporting period and no non-compliance was found. Recommendations have been made to the contractor for observations on the environmental deficiencies on site.

No breaches of action/limit levels was occurred and no environmental summon or prosecution was received in this reporting period. However, two complaints regarding the dust emission were received in October and November 2005. Follow up actions were implemented to minimise the dust emission on site.

Air and noise monitoring are not required for the Project. No water quality monitoring was conducted as no dredging work was implemented.

1 PROJECT INFORMATION

Leighton Contractors (Asia) Limited (LCAL) has appointed ERM-Hong Kong, Limited (ERM) as the Environmental Team (ET) to implement the Environmental Monitoring and Audit (EM&A) programme for the Permanent Aviation Fuel Facility (the Project) during construction works.

1.1 PROJECT AREA

The project area is in Area 38 of Tuen Mun and the pipelines are located in Urmston Road between Tuen Mun Area 38 and Sha Chau. The site is illustrated in *Annex B*.

1.2 ENVIRONMENTAL SENSITIVE RECEIVERS

No air and noise sensitive receivers were identified in the EIA close to the project area. However, water sensitive receivers and ecological sensitive receivers were identified in the EIA study, and are shown in *Annex A*.

1.3 PROJECT ORGANISATION

The project organization chart and contact details are shown in *Annex C*.

1.4 CONSTRUCTION PROGRAMME

The work programme for the Project is presented in *Annex D*. A summary of the major construction activities undertaken in this reporting period is shown in *Table 2.1*.

Table 2.1 Summary of Works Undertaken from 18 November 2005 and 14 February 2006

Area	Works Undertaken
Tuen Mun Area 38	Marine Piling Works Site Preparation Works Surcharges Construction

1.5 STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS AND REPORTS SUBMISSION

A summary of the relevant permits, licences, notifications and reports submitted for this Project as of 14th February 2006 is presented in *Annex E*.

2 SUMMARY OF EM&A REQUIREMENTS

2.1 AIR QUALITY AND NOISE

Air and noise monitoring are not required for this Project.

2.2 WASTE MANAGEMENT

Auditing the contractor's Waste Management Plan (WMP) is part of the EM&A requirements. The WMP was received during the reporting period and was submitted to EPD after our and IEC reviews. The WMP provided details on the waste management issues associated with the construction phase of the project, and included recommendations on the procedures for handling of C&D materials, excavated materials, chemical waste and general refuse.

2.2.1 Solid and Liquid Waste Management Status

Solid Waste

Major solid wastes generated on site during the reporting period were C&D materials (mainly sand for surcharges) and general refuses. The Contractor indicated that the C&D materials would be reused on site. Bins and recycling facilities were provided on site for general refuse and the C&D wastes were disposed at WENT. Trip tickets were available for inspection.

During site inspections, some rubbish was found on site. The Contractor was advised to remove the rubbish regularly and to inform the staff that rubbish should be placed in the refuse bins provided. Extra bins should be provided on site if considered necessary.

Liquid Waste

The main type of liquid waste was wasted oil (lubricant oil). Two chemical waste stores were provided on site. The stores were enclosed with 3 sides and a roof top, and labelled. Curtains were provided to cover up the front side of the stores to avoid direct sunlight and rain getting inside the stores. Drip trays were provided for the chemical waste containers and overall, the containers were labelled properly.

During site inspections, some chemical waste containers were found without labels. The Contractor was reminded to label all chemical waste containers properly. The Contractor was advised to seal the store appropriately.

Chemical waste was produced during the reporting period, however, no chemical waste has yet been collected and disposed.

2.3 WATER QUALITY

Water quality monitoring will be evaluated against Action and Limit Levels which are presented in *Annex F*. Water quality monitoring is only required during the dredging phase of the project and the monitoring locations are presented in *Annex A*. Since no dredging activity has been conducted during the reporting period, water quality monitoring was not required.

The Contractor applied for a wastewater discharge licence on 23 January 06 and the licence has not been issued within the reporting period.

2.4 ECOLOGY

Dolphin pre-construction phase baseline monitoring was conducted prior to the commencement of marine piling works, Spot acoustic monitoring and Underwater noise monitoring were conducted during the first week of the marine piling works and Visual dolphin monitoring for the 500m exclusion zone was conducted during the piling works. The action plan for dolphin pre/post-construction phase monitoring is presented in *Annex F*. Bubble jackets were used surrounding the pile and barge to reduce the noise impact generated from the marine piling activities.

2.5 CULTURAL HERITAGE

The watching brief (dive investigation) for marine archaeology is only required during the dredging phase of the pipe trench. Since no dredging activity has been conducted during the reporting period, dive investigation was not required.

2.6 LANDSCAPE AND VISUAL

According to the EIA report and EM&A Manual, mitigation measures and site inspection are required during the landscaping/planting works. However, no landscaping or planting works were conducted on site during the reporting period. Our weekly inspection included audits on landscape and visual issues to ensure that the site was in orderly acceptable manner. The action plans for design and operational phases are presented in *Annex F*.

2.7 LAND CONTAMINATION, HAZARD TO LIFE AND FUEL SPILL RISK

According to the EIA report and EM&A Manual, mitigation measures and design phase audit are required to minimise the risk of fuel spill and hazards. As there was no construction works related to such issues in the reporting period, audit on the mitigation design and measures was not required. However, weekly site inspection covered the waste management aspects which included measures to prevent land contamination by chemical wastes.

Weekly site inspections were conducted during the construction phase of the project covering the aspects of air and noise, water quality, waste management and landscape & visual. Overall the site was in good orderly manner and no non-compliance was found. *Table 2.2* summarised the environmental deficiencies found on site during the reporting period.

Table 2.2 *Environmental Deficiencies (Observations) from the Site Inspections during the Reporting Period*

Reporting Month	Observation	Follow-up Action
December 2005	Stagnant water near pier	Stagnant water was filled with sand.
January 2006	A dusty stockpile was found not covered properly	Cover was provided for the stockpile.
January 2006	Stagnant water near a surcharge	Water (marine) was generated from the surcharge. A trench was formed next to surcharge to contain water. Stagnant water was also cleared.
January 2006	No front cover for a chemical waste store	Front cover was provided for the store.
January 2006	Chemical waste drums without labels	Labels were provided for the chemical waste drums.
February 2006	A C&D stockpile without cover	The C&D stockpile was removed.
February 2006	Chemical waste drums without labels	Labels were provided for the chemical waste drums.

IMPACT PREDICTION REVIEW

The construction impacts predicted in the EIA and the monthly reports were similar with the actual impacts occurred in the reporting period. However, as the underwater noise monitoring results were not available during the reporting period, it is unable to compare the noise levels generated from the piling barge during piling with the EP conditions. As water quality monitoring was not conducted during the reporting period due to no dredging work, it is unable to conduct prediction review on the water quality.

Future Key Issues in the Next Quarter

- Impacts on dolphins due to piling works;
- Noise from operating machinery and equipment;
- Dust release and suppression
- Wastewater discharge within construction site as wet season is approaching

IMPLEMENTATION STATUS ON ENVIRONMENTAL PROTECTION REQUIREMENTS

The implementation status of environmental mitigation measures and requirements as stated in the EIA Report, Environmental Permits and EM&A Manual during the reporting period is summarized in *Annex G*.

4 ENVIRONMENTAL NON-CONFORMANCE

4.1 SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE AND EXCEEDANCE

No environmental non-compliance or exceedance was found during the reporting period.

4.2 SUMMARY OF ENVIRONMENTAL COMPLAINT

During the reporting period, two environmental complaints regarding dust emission were received in November 2005. However, one complaint was made prior to the commencement of the construction works. The ET's Interim Reports and Complaint Logs of the two complaints were sent to EPD on the 25th November and 5th December 2005 respectively. A copy of the Interim Reports and Complaint Logs, and the follow up actions are attached in *Annex H*. The contractor conducted follow-up mitigation measures after the complaints including the use of water tankers to wet the site regularly and provided tarpaulin sheets to cover up large stockpiles.

4.3 SUMMARY OF ENVIRONMENTAL SUMMONS

No summons was received in this reporting period.

The EM&A works were conducted throughout the construction period and the relevant monitoring were conducted in accordance with the EP's requirements. Mitigation measures were used to minimise the environmental impacts on site including those on the piling barge. Some environmental deficiencies were observed during site inspections and the Contractor provided mitigation measures to solve the issues. Overall, the site was in an orderly manner.






Recommendations to the environmental deficiencies found on site during site inspections included:

- To cover up dusty stockpiles and locate them away from the windy locations as possible
- To label all chemical waste containers and store them in enclosed cabin with good ventilation
- To install the wastewater treatment facility as soon as possible to treat the wastewater/runoff from the site as wet season is approaching
- To clear the stagnant water on site or fill the ponds with sand

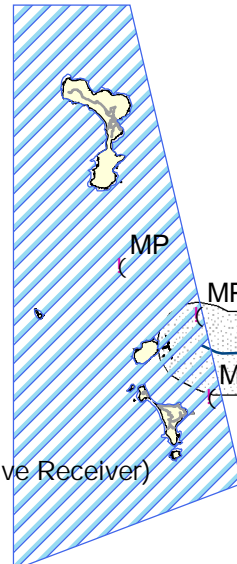
Annex A

**Water Quality Monitoring
Locations, Water Quality
and Ecological Sensitive
Receivers**

KEY

-  Control Stations
-  Impact Stations
-  Proposed Pipeline
-  Marine Park
-  Potential IMO1 & IMO2 MONitoring Zone

Marine Park
(Water Sensitive Receiver)



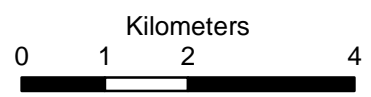
C2 (NM5)

C1 (NM3)

MPB1

MPB2

C3 (NM6)



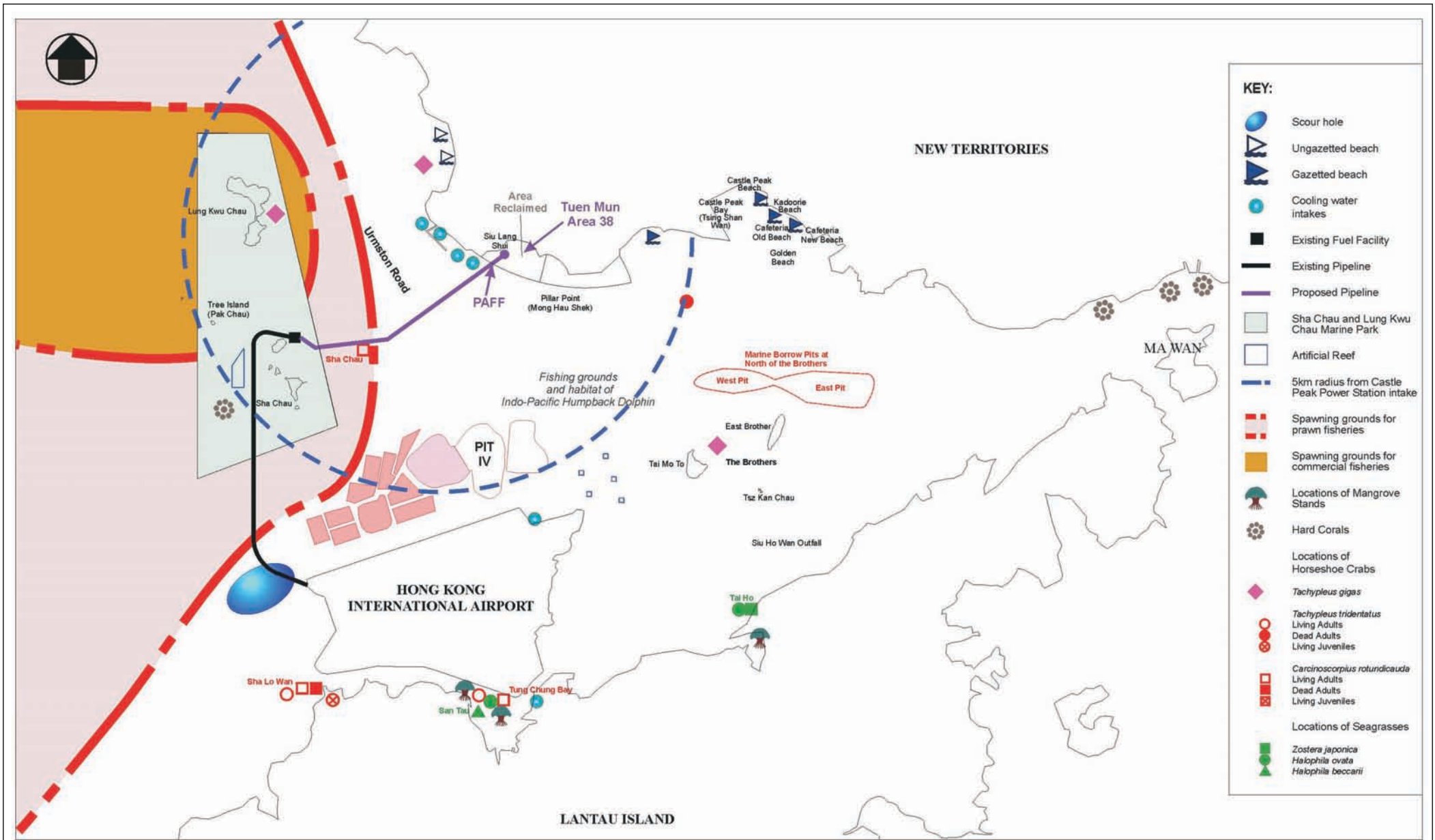
Annex A

Water Quality Monitoring Locations

File: 0018105_4.mxd
Date: 23/01/2006

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Annex A

Water Quality and Ecological Sensitive Receivers

FILE: C2475aa
DATE: 25/01/2006

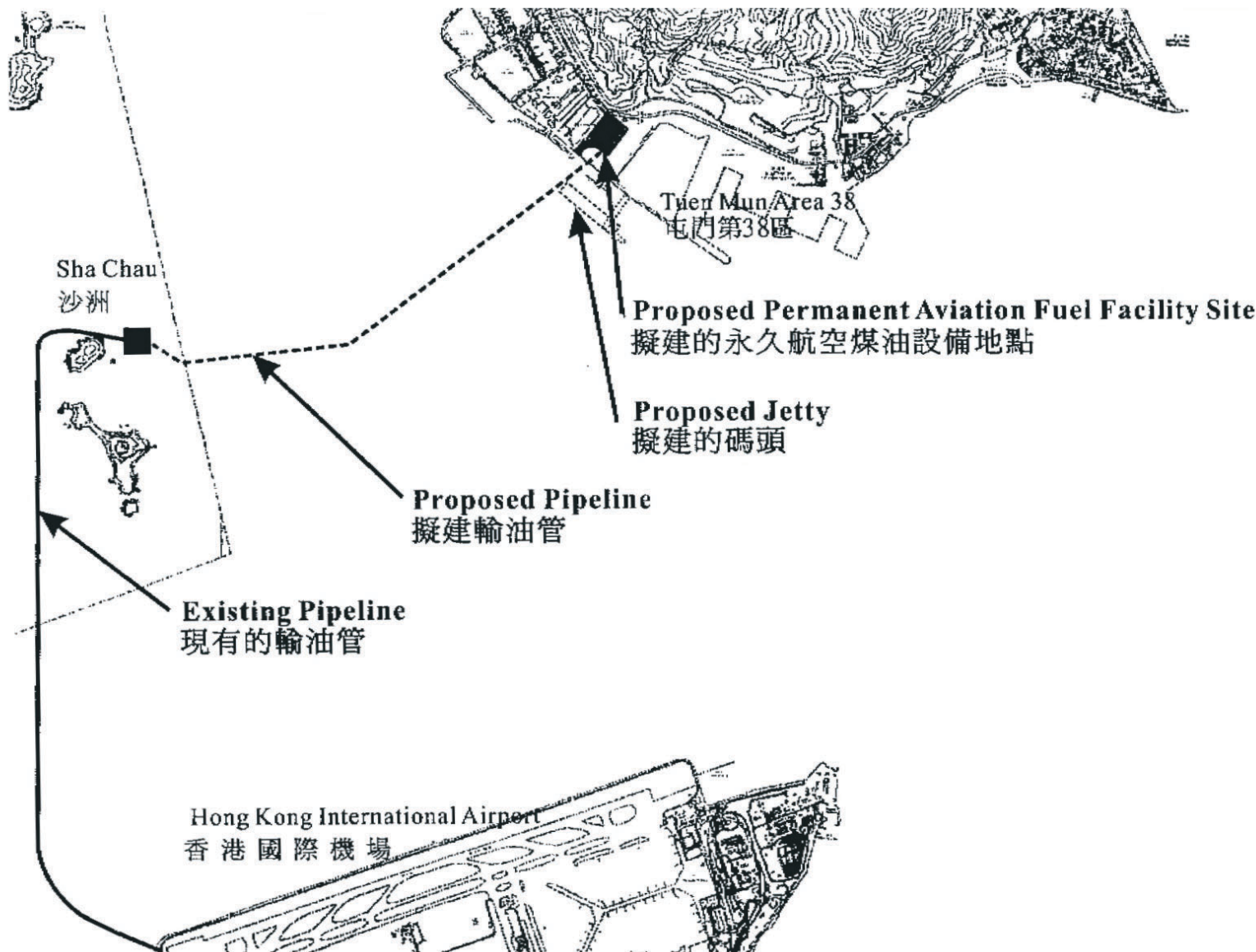
(Source : PAFF for Hong Kong International Airport EIA, Mouchel 2002)

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Annex B

Project Location



NOT TO SCALE

Annex B

PROJECT LOCATION

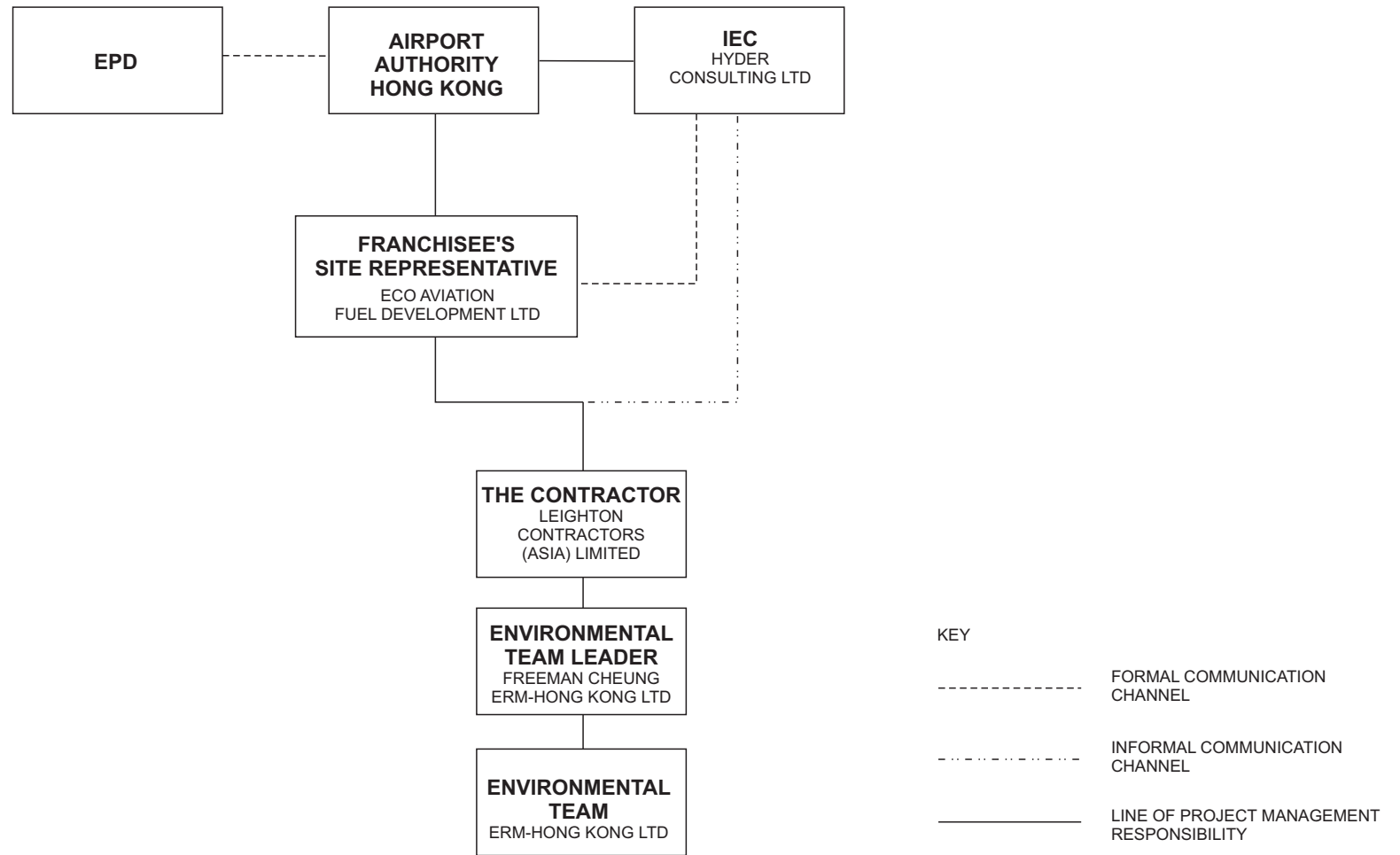
FILE: 0018105aa1
DATE: 12/12/2005

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Annex C

Organisation Chart



PERMANENT AVIATION FUEL FACILITY

Project Organisation - Contact Details

Role	Contact Person	Organization	Telephone	Facsimile	E-mail
Contractor (Project Director)	Brian Gillon	Leighton Contractors (Asia) Limited	2403 0900	2404 0081	brian.gillon@leighton asia.com
Contractor (Project Environmental Coordinator)	David Holden	Leighton Contractors (Asia) Limited	2404 8900	2404 0081	david.holden@leight onasia.com
Contractor (Sub Agent – Environmental)	Eric Luk	Leighton Contractors (Asia) Limited	2403 0992	2404 0081	eric.luk@leightonasia .com
Environmental Team (Team Leader)	Freeman Cheung	ERM-HK Ltd	2271 3104	2723 5660	freeman.cheung@erm .com
Environmental Team (Project Manager)	Craig Reid	ERM-HK Ltd	2271 3179	2723 5660	craig.reid@erm.com
Environmental Team (Team Member)	Jor Fan	ERM-HK Ltd	2271 3186	2723 5660	jor.fan@erm.com
IEC	Gui-yi Li	Hyder Consulting Ltd	2911 2731	2805 5028	gui- yi.li@hyderconsulting .com
IEC	Sharifah Or	Hyder Consulting Ltd	2911 2730	2805 5028	sharifah.or@hydercon sulting.com
Franchisee's Site Representative	Philip Siu	ECO Aviation Fuel Development Ltd	2963 2820	2563 6311	Philip.siu@towngas.c om
Airport Authority	Martin Putnam	Airport Authority HK	2183 6645	2183 3186	PUTNAMM@hkairp ort.com
EPD	Matthew Chan	EPD	2835 2163	2591 0558	matthewchan@epd.go v.hk

Annex D

Works Programme

Data Date 25OCT05
Run Date 15DEC05 12:31

H-2104 BASE LINE PROGRAM - REVISION "I" WP: CONSTRUCTION PROGRAM

Current Schedule: BLRI
Target 1: None
Target 2: None

Act. ID	Activity Description	Orig Dur	ES	EF	TF	2005												2006												2007												2008																				
						O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
CC-A GENERAL & PRELIMINARIES																																																														
CC-A.10 Contract Key Dates & Milestones																																																														
CC-A.10.10 Contract Dates																																																														
CC-A.10.10.10 Completion Dates																																																														
KD01	STAGE 1 Calculated (Ready for Trial Operation)	0		31MAY08	0																																																									
KD01CONT	STAGE 1 CONTRACT DATE (Ready for Trial Op)	0		01JUN08*	0																																																									
KD02	STAGE 2 Calculated (Ready for Commercial Operat)	0		01AUG08	0																																																									
KD02CONT	STAGE 2 CONTRACT DATE (Ready for Commercial Op)	0		01AUG08*	0																																																									
CC-B TANK FARM & FACILITIES																																																														
CC-B.90 Construction Works																																																														
CC-B.90.10 Civil Works																																																														
CC-B.90.10.10 Establishment & Inital Works																																																														
1809	SI Works Tanks T5 & T6	24	08NOV05*	05DEC05	43																																																									
PREP	Site Preparation; Temp. Fencing; Gates, etc	57	17DEC05	02MAR06	14																																																									
CC-B.90.10.15 Drainage & Under Ground Services																																																														
CC-B.90.10.15.10 U/G Fuel Pipes																																																														
1165	Excavate U/GFuel Piping (Rcpt Platform to TF)	24	22APR06	20MAY06	33																																																									
1202	Install U/GFuel Piping EVA X-ing (Rcpt to TF)	48	22MAY06	19JUL06	33																																																									
1166	Install/ U/G Receipt Fuel Piping (S'wall - Rcpt)	48	20NOV07	18JAN08	38																																																									
CC-B.90.10.15.20 U/G Drainage																																																														
1167	U/G Drains/Sump EVA X-ing to Interceptor (@T-01)	24	04FEB06	03MAR06	14																																																									
1069	Subsoil Drains (betw Acs Rd & T-1/3)	72	18SEP06	14DEC06	36																																																									
1044	Rd Drains - Pipe & MH (betw Acs Rd & T-1/3)	72	04OCT06*	02JAN07	24																																																									
1058	Rd Drains - Pipe & MH (South of T5/6)	72	03JAN07	30MAR07	72																																																									
1072	Subsoil Drains (South of T5/6)	72	03JAN07	30MAR07	72																																																									
1057	Rd Drains - Pipe & MH (Sea Side T1/2/5)	90	15JAN07	04MAY07	26																																																									
1070	Subsoil Drains (Sea Side T1/2/5)	90	15JAN07	04MAY07	26																																																									
1059	Rd Drains - Pipe & MH (betw T2/4/6 & Future TF)	90	05MAR07	20JUN07	23																																																									
1074	Subsoil Drains (betw T2/4/6 & Future TF)	90	05MAR07	20JUN07	23																																																									

Level 1 CostC

- DESIGN, GENERAL & PRELIMINARIES
- TANK FARM
- JETTY
- SUB-MARINE PIPE LINE

Legend:

- Current Schedule
- Original IPS (Rev I)
- Progress Bar
- Critical Activity

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Leighton Contractors (Asia) Limited
PAFF - PERMANENT AVIATION FUEL FACILITY
WORKS PROGRAM

Proj. Name: BLRI
 Targ 1 Name:
 Layout: NS MASTER LAYOUT
 Filter: WP: CONSTRUCTION PROGRAM
 Run Date: 15DEC05 12:31
 Data Date: 25OCT05
 Prepared by N. Sero

Page No: Sheet 1 of 27

PAFF/LC/01/SCH/G/001 Rev I

Date	Revision	Checked	Approver
08MAY04	A - Dsg Prog for Approval	NS	BG
31MAY04	B - Rev.Dsg & Constr.	NS	BG
09SEP04	C - Site L'put Delays	NS	BG
06MAR05	D - Land Grant Delays	NS	BG
07APR05	E - Orgnl IPS Reinstated	NS	BG
23SEP05	H - Changed Access	NS	BG
15DEC05	I - Construct. Full Revision	NS	BG

Annex E

Summary of Environmental
Licensing, Notification,
Permit and Report
Submission Status

Annex E

Summary of Environmental Licensing, Notification, Permit and Report Submission Status

Permit/ Licenses/ Notification/Reports	Reference	Validity Period	Remarks
Environmental Permit	EP-139/2002	Throughout Project	Issued on 2 August 2002
Variation of Environmental Permit	VEP-133/2004	Throughout Project	Issued on 28 January 2004
Amended Environmental Permit	EP-139/2002/A	Throughout Project	Issued on 24 February 2004
Chemical Waste Producer Registration	WPN 5111-421-L2174-25	Throughout Project	Issued on 10 November 2005
Notification of Construction Works under Air Pollution Control (Construction Dust) Regulation	001004989	Throughout Project	Notification on 5 November 2005 (Tank Farm at TM Area 38, Jetty at Urmston Road and Fuel Pipeline)
Construction Noise Permit	PP-RW0024-05	12 Nov 05 to 31 Mar 06	Issued on 7 November 2005, for Hydraulic Hammer (single acting) driving steel pile
Construction Noise Permit	GW-RW0785-05	7 Dec 05 to 31 Mar 06	Issued on 7 December 2005, for General Works (Welding) at Jetty Area
Wastewater Discharge License	--	--	Applied on 23 January 2006
Waste Management Plan (Rev 1)	VEP-133/2004 (Condition 3.6)	Throughout Project	Submitted on 27 February 2006
Revised EM&A Manual (updated version)	VEP-133/2004 (Condition 2.4)	Throughout Project	Submitted on 10 February 2006
Pre-Construction Phase Dolphin Monitoring Report (updated version)	VEP-133/2004 (Condition 3.3)	Throughout Project	Submitted on 6 February 2006
Dolphin Visual Monitoring during Piling	VEP-133/2004 (Condition 3.22)	Throughout Project	Submitted in Monthly EM&A Reports
Spot Acoustic Monitoring	VEP-133/2004 (Condition 3.23)	Throughout Project	Submitted with 1 st Monthly EM&A Report
Underwater Noise Monitoring	VEP-133/2004 (Condition 3.24, 3.25)	Throughout Project	Submitted with 3 rd Monthly EM&A Report

Permit/ Licenses/ Notification/Reports	Reference	Validity Period	Remarks
Set up of a Web cam and web site	VEP-133/2004 (Condition 5.8, 6.2)	Throughout Project	Submitted on 8 February 2006
1 st Monthly EM&A Report (updated version)	VEP-133/2004 (Condition 5)	Throughout Project	Submitted on 7 March 2006
2 nd Monthly EM&A Report (updated version)	VEP-133/2004 (Condition 5)	Throughout Project	Submitted on 7 March 2006
3 rd Monthly EM&A Report (first submission)	VEP-133/2004 (Condition 5)	Throughout Project	Submitted on 8 March 2006

Annex F

Action/Limit Levels and Action Plan for the EM&A

ANNEX F ACTION/LIMIT LEVELS AND ACTION PLANS FOR THE EM&A

Action and Limit Levels for Water Quality

Parameters	Action (mg/L)	Limit (mg/L)
DO in mg/L (Depth Average & Bottom)	<u>Depth Average</u> 4.5 mg/l and upstream control stations' mean DO (at the same tide of the same day)	<u>Depth Average</u> 4.0 mg/l and upstream control stations' mean DO (at the same tide of the same day)
DO in mg/L (Depth Average & Bottom)	<u>Bottom</u> 2.5 mg/l and upstream control stations' mean DO (at the same tide of the same day)	<u>Bottom</u> 2.0 mg/l and upstream control stations' mean DO (at the same tide of the same day)
Suspended Solids (Depth averaged)	30 mg/l and 130% of upstream control stations' mean SS (at the same tide of the same day)	39 mg/l and 130% of upstream control stations' mean SS (at the same tide of the same day)
Turbidity in NTU (Depth averaged)	130% of upstream control stations' mean Turbidity (at the same tide of the same day)	N/A

Notes:

- For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
- For SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
- All the figures given in the table are for reference only and these may be amended with the agreement of DEP.
- "Depth Averaged" is calculated by taking the arithmetic mean of the in-situ parameters readings at all three depths. For suspended solids "depth averaged" is calculated by combining all three samples into one mixed sample which is analysed to produce a physical arithmetic mean.

Event and Action Plan for Water Quality

EVENT	ACTION			
	ET	IEC	FSR	Contractor
Action Level being exceeded by one sampling day	<ol style="list-style-type: none"> 1. Repeat <i>in-situ</i> measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC and the Contractor and FSR; 4. Check monitoring data, all plant, equipment and the Contractor's working methods; 5. Discuss mitigation measures with the IEC and the Contractor; 	<ol style="list-style-type: none"> 1. Discuss with the ET and the Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the FSR accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with the IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented. 	<ol style="list-style-type: none"> 1. Inform the FSR and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ET and the IEC and propose mitigation measures to the IEC and the FSR; 6. Implement the agreed mitigation measures.
Action Level being exceeded by more than one consecutive sampling days	<ol style="list-style-type: none"> 1. Repeat <i>in-situ</i> measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC and the Contractor and FSR; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with the IEC and the Contractor; 6. Ensure mitigation measures are implemented; 	<ol style="list-style-type: none"> 1. Discuss with the ET and the Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the FSR accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with the IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 3. Assess effectiveness of the implemented mitigation measures; 	<ol style="list-style-type: none"> 1. Inform the FSR and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ET and the IEC and propose mitigation measures to the IEC and FSR within 3 working days; 6. Implement the agreed mitigation measures.

EVENT	ACTION			
	ET	IEC	FSR	Contractor
Limit Level being exceeded by one consecutive sampling day	<ol style="list-style-type: none"> 1. Repeat <i>in-situ</i> measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC, the Contractor and the DEP; 4. Check monitoring data, all plant, equipment and the Contractor's working methods; 5. Discuss mitigation measures with the IEC, the FSR and the Contractor; 6. Ensure mitigation measures are implemented; 	<ol style="list-style-type: none"> 1. Discuss with the ET / Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the FSR accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with the IEC, the ET and the Contractor on the proposed mitigation measures; 2. Request the Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ET, the IEC and the FSR and propose mitigation measures to the IEC and the FSR within 3 working days; 6. Implement the agreed mitigation measures.
Limit Level being exceeded by more than one consecutive sampling days	<ol style="list-style-type: none"> 1. Repeat <i>in-situ</i> measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC, the Contractor and DEP; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with the IEC, the FSR and the Contractor; 6. Ensure mitigation measures are implemented; 	<ol style="list-style-type: none"> 1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the FSR accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with the IEC, the ET and the Contractor on the proposed mitigation measures; 2. Request Contractor to critically review working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess effectiveness of the implemented mitigation measures; 5. 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. 	<ol style="list-style-type: none"> 1. Inform the FSR and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ET, the IEC and the FSR and propose mitigation measures to the IEC and the FSR within 3 working days; 6. Implement the agreed mitigation measures; 7. As directed by the FSR, slow down or stop all or part of the construction activities.

Action Plan for Dolphin Monitoring

EVENT	ACTION				
	ET	IEC	FSR	Contractor	
Dolphin numbers recorded in the post-construction monitoring are significantly lower than those recorded in the pre-construction monitoring	<ol style="list-style-type: none"> 1. Repeat statistical data analysis to confirm findings; 2. Review historical data to ensure differences are as a result of natural variation or previously observed seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, FSR and Contractor; 5. Check monitoring data, all plant, equipment and Contractor's working methods; 6. Discuss mitigation measures, such as additional dolphin monitoring, with the IEC and Contractor. 	<ol style="list-style-type: none"> 1. Discuss with the ET and the Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the FSR accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with the IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented. 	<ol style="list-style-type: none"> 1. Inform the FSR and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ET and the IEC and propose mitigation measures to the IEC and the FSR; 6. Implement the agreed mitigation measures. 	

Event / Action Plan for Landscape and Visual Design Phase

Action Level	Landscape and Visual Auditor	Project Engineer (PE)	Project Landscape Architect (PLA)
Non Conformity (with Design Standards and Specification)	<ul style="list-style-type: none">• Identify Source• Inform PE and PLA• Discuss remedial actions with PE, PLA• Verify remedial actions when complete	<ul style="list-style-type: none">• Notify PLA• Discuss remedial actions with PLA• Ensure remedial designs are fully incorporated	<ul style="list-style-type: none">• Amend designs• Discuss remedial actions with PE

Event / Action Plan for Landscape and Visual Construction Phase

Action Level	ET⁽¹⁾	IEC⁽¹⁾	FSR⁽¹⁾	Contractor⁽¹⁾
Non-conformity on one occasion	<ol style="list-style-type: none"> 1. Identify Source 2. Inform the Contractor, IEC and the FSR 3. Discuss remedial actions with the IEC, the FSR and the Contractor 4. Monitor remedial actions until rectification has been completed 	<ol style="list-style-type: none"> 1. Check report 2. Check the Contractor's working method 3. Discuss with the ES and the Contractor on possible remedial measures 4. Advise the FSR on effectiveness of proposed remedial measures. 5. Check implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Notify Contractor 2. Ensure remedial measures are properly implemented 	<ol style="list-style-type: none"> 1. Amend working methods 2. Rectify damage and undertake any necessary replacement
Repeated Non-conformity	<ol style="list-style-type: none"> 1. Identify Source 2. Inform the Contractor, IEC and the FSR 3. Increase monitoring frequency 4. Discuss remedial actions with the IEC, the FSR and the Contractor 5. Monitor remedial actions until rectification has been completed 6. If exceedance stops, cease additional monitoring 	<ol style="list-style-type: none"> 1. Check monitoring report 2. Check the Contractor's working method 3. Discuss with the ES and the Contractor on possible remedial measures 4. Advise the FSR on effectiveness of proposed remedial measures 5. Supervise implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Notify the Contractor 2. Ensure remedial measures are properly implemented 	<ol style="list-style-type: none"> 1. Amend working methods 2. Rectify damage and undertake any necessary replacement

Note: (1) ET – Environmental Team, IEC – Independent Environmental Checker, FSR – Franchisee’s Site Representative

Annex G

Required Submissions
Specified in Environmental
Permit (Implementation
Status of Mitigation
Measures)

ANNEX G REQUIRED SUBMISSIONS SPECIFIED IN ENVIRONMENTAL PERMIT (IMPLEMENTATION STATUS OF MITIGATION MEASURES)

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
1A General Submission Requirements					
1.9	During Submissions	All submissions, as required under this Permit, shall be rectified in accordance with the comments, if any, made by the Director within one month of the receipt of the Director's comments or otherwise as specified by the Director.	All parties, as appropriate.		Ongoing
1.10	During Submissions	All submissions approved by the Director, all submissions deposited without comments by the Director, or all submissions rectified in accordance with comments by the Director under this Permit shall be construed as part of the permit conditions described in Part C of this Permit. Any variation of the submissions shall be approved by the Director in writing or as prescribed in the relevant permit conditions. All submissions or any variation of the submissions shall be certified by the Environmental Team (ET) Leader and verified by the Independent Environmental Checker (IEC) referred to in Conditions 2.1 and 2.2 below, before submitting to the Director under this Permit.	All parties, as appropriate.		Ongoing
1.11	During Submissions	The Permit Holder shall release all finalized submissions as required under this Permit to the public by depositing copies in the Environmental Impact Assessment Ordinance Register Office, or in any other places, or any internet websites as specified by the Director, or by any other means as specified by the Director for public inspection. For this purpose, the Permit Holder shall provide sufficient copies of the submissions.	All parties, as appropriate.		Ongoing
1.12	During Submissions	All submissions to the Director required under this Permit shall be delivered either in person or by registered mail to the Environmental Impact Assessment Ordinance Register Office (currently at 27/F, Southorn Centre, 130 Hennessy Road, Wanchai, Hong Kong). Electronic copies of all finalized submissions required under this Permit shall be prepared in Hyper Text Markup Language (HTML) (version 4.0 or later) and in Portable Document Format (PDF version 4.0 or later), unless otherwise agreed by the Director, and shall be submitted at the same time as the hard copies.	All parties as appropriate.		Ongoing

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
1.14	Timing consideration for interpreting submissions.	For the purpose of this Permit, "commencement of construction" does not include works related to site clearance and preparations, or other works as agreed by the Director.	None.		
1.13	At least 1 month prior to construction	<p>Notification of Commencement Date:</p> <p>The Permit Holder shall notify the Director in writing the commencement date of construction of the Project no later than one month prior to the commencement of construction of the Project. The Permit Holder shall notify the Director in writing immediately if there is any change of the commencement date of the construction.</p>	<ul style="list-style-type: none"> AA to inform EPD of commencement date (cc to ERM/LCAS). 		Completed
2.1 (PART – see EM&A Section)	At least 1 month prior to construction (BC)	<p>Environmental Team:</p> <p>An ET shall be established by the Permit Holder no later than one month before commencement of construction of the Project. The ET shall not be in any way an associated body of the Contractor or the IEC for the Project. The ET shall be headed by an ET Leader. The ET leader shall be a person who has at least 7 years' of experience in environmental monitoring and auditing (EM&A) or environmental management. The ET and the ET Leader shall be responsible for the implementation of the EM&A programme in accordance with the requirements as contained in the EM&A Manual.</p>	<ul style="list-style-type: none"> AA to inform EPD that ERM have been appointed as the ET (cc to ERM/LCAS). 		Completed
2.2 (PART – see EM&A Section)	At least 1 month prior to construction (BC)	<p>Independent Environmental Consultant:</p> <p>An IEC shall be employed by the Permit Holder no later than one month before commencement of construction of the Project. The IEC shall not be in any way an associated body of the Contractor or the ET for the Project. The IEC shall be a person who has at least 7 years' of experience in EM&A or environmental management.</p>	<ul style="list-style-type: none"> AA to inform EPD that Hyder have been appointed as the IEC (cc to ERM/LCAS/Hyder) 		Completed

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
2.3	At least 1 month prior to construction (BC)	<p>Qualified Person:</p> <p>A qualified person with degree in biology shall be employed to carry out monitoring and visual inspection of dolphin under Conditions 3.3, 3.20 and 3.22 of this Permit. The qualification and experience of the qualified person shall be certified by ET Leader and verified by the IEC. The qualified person shall form part of the ET.</p>	<ul style="list-style-type: none"> ERM to provide the qualified person and submit his/her qualification and experience with the certification to LCAS/IEC Hyder to forward Verification Form to AA (cc to LCAS/ERM) 		Complete
2.4	At least 1 month prior to construction (BC)	<p>Updating of EM&A Manual:</p> <p>The Permit Holder shall, no later than one month before the commencement of the Project, submit to the Director for approval four hard copies and one electronic copy of an updated EM&A Manual for the Project. The updated EM&A Manual shall be certified by the ET Leader and verified by the IEC as conforming to the information and recommendations contained in the EIA Report. The updated EM&A Manual shall include the setting up of additional water quality monitoring stations for all marine construction activities.</p>	<ul style="list-style-type: none"> ET to prepare and certify updated EM&A manual to IEC/AA (cc to LCAS) IEC to forward verification Form to AA (cc to ERM/LCAS) AA to forward updated EM&A manual, certification & verification Forms to EPD (cc to ERM/ Hyder/LCAS) 		Completed
3.1	Within 1 month after start of construction (C)	<p>Management Organization:</p> <p>The Permit Holder shall, within one month after commencement of construction of the Project, inform the Director in writing the management organization of the main construction companies and/or any form of joint ventures associated with the construction of the Project. The submitted information shall include at least an organization chart, names of responsible persons and their contact details.</p>	<ul style="list-style-type: none"> LCAS to provide their management organization to AA (cc to ERM) AA to forward this information to EPD (cc to ERM/ LCAS/Hyder) 		Completed

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
3.2	At least 2 months prior to commencement of the works (BC)	<p>Testing Results of the Bubble Jacket Trial</p> <p>Trial of bubble jacket shall be carried out to demonstrate noise attenuation effect of 3 dB or more as recommended in the approved EIA Report (Register No. AEIAR-062/2002). The Permit Holder shall, at least 2 months before commencement of piling works, submit the testing results of the bubble jacket trial to the Director for approval and shall deposit 15 copies of the testing results of the bubble jacket trial to the Secretary of the EIA Sub-committee of the Advisory Council on the Environment (ACE) at 10/F., Citibank Tower, 3 Garden Road, Central, Hong Kong. The Director may require the Permit Holder to make a presentation to the ACE on the bubble jacket trial to seek approval prior to commencement of construction. The submission shall be certified by ET Leader and verified by the IEC before submission to the Director.</p>	<ul style="list-style-type: none"> • LCAS to provide testing result of the Bubble Jacket Trail to ET and IEC. • ET to forward certification Form to AA/IEC (cc to LCAS) • IEC to forward verification form to AA (cc to ERM/LCAS) • AA to forward testing result, certificate & verification Forms to EPD (cc to ERM/Hyder/LCAS) 		Completed
3.3	At least 1 month prior to marine construction (BC)	<p>Dolphin Monitoring Programme and Action Plan</p> <p>Dolphin monitoring for pre- and post-construction activities shall be carried out. The Permit Holder shall submit the dolphin monitoring programme and the action plan to the Director for approval at least 1 month before commencement of marine construction works of the Project. The action plan shall include recommendations for further monitoring should dolphin numbers be significantly different to the pre-construction activity. The submission shall be certified by ET Leader and verified by the IEC before submission to the Director. The monitoring shall be undertaken by a qualified person (minimum requirement of graduate qualification in marine biology of equivalent biological science with 5 yrs experience).</p>	<ul style="list-style-type: none"> • ET to prepare the monitoring programme and the action plan and submit to IEC/AA (cc to LCAS) • IEC to forward verification Form to AA (cc to ERM/LCAS) • AA to forward the monitoring programme and action; and verification Forms to EPD (cc to ERM/Hyder/LCAS) 		Completed

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
3.4	At least 2 months before the commence of the survey	<p>Marine Archaeology Investigation:</p> <p>A qualified marine archaeologist shall be engaged to carry out a marine archaeological investigation of the pipeline route. The Permit Holder shall submit the methodology for the survey and the curriculum vitae of the qualified marine archaeologist to the Director for approval at least one month before commencement of any field work of the marine archaeological investigation.</p>	<ul style="list-style-type: none"> ET to provide the qualified person and methodology of the survey. ET to provide the marine archaeological investigation result to LCAS/IEC. ET to forward certification Form to AA/IEC (cc to LCAS) 		Completed
	Within 2 months after completion of the survey	<p>The Permit Holder shall, within 2 months after completion of the marine archaeological investigation, submit the results of the survey and the recommendations to avoid, minimize and mitigate any archaeological impact to the Director for approval. The submissions shall be certified by ET Leader and verified by the IEC before submission to the Director.</p>	<ul style="list-style-type: none"> IEC to forward verification Form to AA (cc to ERM/LCAS) AA to forward the result, certificate & verification Forms to EPD (cc to ERM/IEC/LCAS) 		

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
3.6	Within 1 month after the commencement of construction (C)	<p>Waste Management Plan (WMP)</p> <p>The Permit Holder shall, within one month after the commencement of construction of the Project, deposit with the Director three hard copies and one electronic copy of a Waste Management Plan (WMP) for the construction stage of the Project. The WMP shall be certified by the ET Leader and verified by the IEC as conforming to the information and recommendations contained in the approved EIA Report (Register No. AEIAR-062/2002). The WMP 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 include the recommended mitigation measures on waste management in Section 14.7 of the approved EIA Report (Register No. AEIAR-062/2002). The WMP shall indicate the disposal location(s) of all surplus excavated spoil and other waste. A trip ticket system shall be included in the WMP. Surplus excavated spoil and other wastes shall only be disposed of at designated disposal locations unless otherwise approved by the Director. All measures recommended in the approved WMP shall be fully and properly implemented by the Permit Holder and any person working on the Project throughout the construction period.</p>	<ul style="list-style-type: none"> • LCAS to provide the WMP to ET and IEC. • ET to forward certification Form to AA/IEC (cc to LCAS) • IEC to forward verification Form to AA (cc to ERM/LCAS) • AA to forward the WMP, certificate & verification Forms to EPD (cc to ERM/IEC/LCAS) 		Contractor submitted the draft WMP, in the progress of review

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
3.8	At least 1 month before construction in these areas (BC)	<p>Landscape Plan</p> <p>At least one month before commencement of the landscape works, the Permit Holder shall deposit with the Director 3 sets of the landscape plan prepared for the Project. The landscape plan shall include the locations, design details, implementation schedules, and drawings in the scale of 1:1000 or other appropriate scale showing the landscape and visual mitigation measures. The measures shall include 1.5m high perimeter landscaped bund, 4m high landscape mound and landscape works for the area of the site which is not initially required for fuel tanks. The landscape plan shall be certified by the ET Leader and verified by the IEC as conforming to the requirements set out in Section 8.10 of the approved EIA Report (Register No. AEIAR-062/2002) before deposit.</p>	<ul style="list-style-type: none"> • LCAS to provide the landscape plan to ET and IEC. • ET to forward certification Form to AA/IEC (cc to LCAS) • IEC to forward verification Form to AA (cc to ERM/LCAS) • AA to forward the landscape plan, certificate & verification Forms to EPD (cc to ERM/ IEC/LCAS) 	Ongoing, first submission was made on 23 December 2006	
3.9 (PART – see Table 2)	At least 1 month before commencement of the implementation (BO).	<p>Measures to Prevent Fuel Spill, Land Contamination and Water Quality Impact during Operation:</p> <p>The Permit Holder shall, at least one month before commencement of implementation of the measures to prevent fuel spill, land contamination and water quality impact during operation of relevant parts of the Project, deposit with the Director 3 sets of design drawings with explanatory statements showing details of measures to be used in relevant parts of the Project. Before submission to the Director, the drawings shall be certified by the ET Leader and verified by the IEC as conforming to the information and recommendations contained in the approved EIA Report (Register No. AEIAR-062/2002).</p>	<ul style="list-style-type: none"> • LCAS to provide the design drawing to ET and IEC. • ET to forward certification Form to AA/IEC (cc to LCAS) • IEC to forward verification Form to AA (cc to ERM/LCAS) • AA to forward the design drawing, certificate & verification Forms to EPD (cc to ERM/ IEC/LCAS) 	Pending	

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
4.1	At least 3 months before operation of the Project (BO)	<p>Measures to Prevent Fuel Spill, Land Contamination and Water Quality Impacts during Operation</p> <p>The Permit Holder shall be fully responsible for monitoring and audit the effectiveness of the measures and systems specified in Condition 3.9 of this Permit to prevent fuel spill, land contamination and water quality impact during operation of the Project. The Permit Holder shall, at least three month before operation of the Project, deposit with the Director 3 sets of audit report showing the incorporation of the measures and systems in the Project and the effectiveness of the measures and systems.</p>	<ul style="list-style-type: none"> AA to implement 		Pending
4.2	Annually	<p>The effectiveness of the measures and systems specified in Condition 3.9 of this Permit shall be tested and audited at least once a year. Annual audit report of the performance of the measures and systems shall be deposited with the Director.</p>	<ul style="list-style-type: none"> AA to implement 		Pending
4.3	At least 2 months before operation of relevant parts (BO)	<p>Contingency Plan</p> <p>The Permit Holder shall formulate a comprehensive contingency plan to handle the event of fire, fuel spillage and fuel leakage. The contingency plan shall at least detail the remedial actions, the emergency response planning and procedures, the logistic arrangements and coordination and the notification arrangements for the event of fire, fuel spillage and fuel leakage. Oil dispersant shall not be used. The Permit Holder shall carry out regular rehearsal of the contingency plan to ensure the effectiveness of the plan. The Permit Holder shall, at least two month before operation of relevant parts of the Project, deposit with the Director 5 sets of the contingency plan.</p>	<ul style="list-style-type: none"> AA to provide the contingency plan for the event of fire, fuel spillage and fuel leakage to EPD. 		Pending

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
4.4	Prior operation (BO)	<p>Environmental Management System</p> <p>The Permit Holder shall, before the operation of the Project or otherwise agreed by the Director, develop and implement an Environmental Management System (EMS) for the operation of the Project. The EMS is to ensure that the operation of the Project is in environmentally friendly manner and in accordance with all relevant environmental legislations. The EMS shall include at least regular audit of the Project to ensure that it is properly operated and maintained to avoid or minimize any environmental impact. The Permit Holder shall engage an Environmental Manager to oversee and implement the EMS. The Environmental Manager shall be a person who has at least 7 years' of experience in Environmental Monitoring and Audit (EM&A) or environmental management. The EMS shall be certified under ISO 14000 within 1 year after the operation of the Project or otherwise agreed by the Director.</p>	<ul style="list-style-type: none"> • LCAS to implement the EMS. 		Pending
5.2 (PART – see Table 2	At least 2 weeks before construction (BC)	<p>Baseline Monitoring Report</p> <p>The Permit Holder shall submit two hard copies and one electronic copy of the Baseline Monitoring Report to the Director at least 2 weeks before commencement of construction of the Project. The submissions shall be certified by the ET Leader and verified by the IEC before submission to the Director. Additional copies of the submission shall be provided upon request by the Director.</p>	<ul style="list-style-type: none"> • ET to prepare baseline monitoring report and forward to AA/IEC (cc to LCAS) • IEC to forward verification Form to AA (cc to LCAS/ERM) • AA to forward baseline monitoring report, certification & verification Form to EPD (cc to ERM/IEC/LCAS) 		Dolphin Baseline Report was completed.

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
5.3	Within 2 weeks after the end of the reporting month. (C/AC)	<p>Monthly EM&A Report</p> <p>The Permit Holder shall submit two hard copies and one electronic copy of the monthly EM&A Report to the Director within 2 weeks after the end of the reporting month. The submissions shall be certified by the ET Leader and verified by the IEC before submission to the Director. Additional copies of the submission shall be provided upon request by the Director.</p>	<ul style="list-style-type: none"> • ET to prepare EM&A report and forward to AA/IEC (cc to LCAS) • IEC to forward verification Form to AA (cc to LCAS/ERM) • AA to forward monthly EM&A report, certification & verification Form to EPD (cc to ERM/ Hyder/LCAS) 		Ongoing
5.8	Within 1 month after the commencement of the Project	<p>Web Cameras Plan</p> <p>Within three months of the commencement of construction of the Project, the Permit Holder shall install and thereafter maintain a system of web cameras covering the works areas at Tuen Mun site. The system shall provide real time visual monitoring of the site condition accessible by public through the dedicated web site set up by the Permit Holder under Condition 6.2 below. Within one month of the commencement of the Project, the Permit Holder shall propose a plan and a system of web cameras for the Director's agreement.</p>	<ul style="list-style-type: none"> • LCAS to prepare the web camera plan to AA (cc to ERM) • AA to forward the web camera plan to EPD (cc to ERM/ LCAS/IEC) 		Completed. Revised plan was submitted to EPD on 8 Feb 06

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
6.1	At the same time as hard copies as described in Conditions 5.2 and 5.3.	<p>Electronic Reporting of EM&A Information</p> <p>To facilitate public inspection of the EM&A Reports via the EIAO Internet Website and at the EIAO Register Office, electronic copies of these Reports shall be prepared in the Hyper Text Markup Language (HTML) (version 4.0 or later) and in Portable Document Format (PDF version 4.0 or later), unless otherwise agreed by the Director and shall be submitted at the same time as the hard copies as described in Conditions 5.2 and 5.3 of this Permit. For the HTML version, a content page capable of providing hyperlink to each section and sub-section of these Reports shall be included in the beginning of the document. Hyperlinks to all figures, drawings and tables in these Reports shall be provided in the main text from where the respective references are made. All graphics in these Reports shall be in interlaced GIF format unless otherwise agreed by the Director. The content of the electronic copies of these Reports must be the same as the hard copies.</p>	<ul style="list-style-type: none"> ET to prepare the EM&A report in the HTML and PDF format. 		Ongoing
6.2	Within 6 weeks after the start of Construction (C)	<p>The Permit Holder shall, set up a dedicated web site and notify the Director in writing the internet address where the environmental monitoring and project data is to be placed, within six weeks after the commencement of the Project. All environmental monitoring results described in Condition 6.1 above shall be made available to the public via a dedicated web site to be set up by the Permit Holder in the shortest possible time and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available, unless otherwise agreed with the Director.</p>	<ul style="list-style-type: none"> LCAS to prepare the web site and submit the internet address to AA (cc to ERM) AA to forward the address to EPD (cc to ERM/ IEC/LCAS) 		Ongoing

Table 2 General Conditions of the Environmental Permit

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
1A General Environmental Permit Conditions					
1.1	At all times (BC/C/AC)	The Permit Holder and any person working on the Project shall comply with all conditions set out in this Permit. Any non-compliance by any person may constitute a contravention of the Environmental Impact Assessment Ordinance (Cap. 499) and may become the subject of appropriate action being taken under the Ordinance.	• AA to write to LCAS to remind them of their obligation to comply with EP condition (cc to ERM).		Ongoing
1.2	At all times (BC/C/AC)	The Permit Holder shall ensure full compliance with all legislation from time to time in force including, without limitation to, the Noise Control Ordinance (Cap. 400), Air Pollution Control Ordinance (Cap. 311), Water Pollution Control Ordinance (Cap. 358), Dumping at Sea Ordinance (Cap. 466), Waste Disposal Ordinance (Cap. 354), Dangerous Goods Ordinance (Cap. 295), Shipping and Port Control Ordinance (Cap. 313), Marine Parks Ordinance (Cap. 476), Occupational Safety and Health Ordinance (Cap.509) and Factories and Industrial Undertakings Ordinance (Cap.59). This Permit does not of itself constitute any ground of defence against any proceedings instituted under any legislation or imply any approval under any legislation.	• AA to write to LCAS to remind them of their obligation to comply with all environmental legislation in force (cc to ERM).		Ongoing
1.3	At all times (BC/C/AC)	The Permit Holder shall ensure full compliance with all fire safety requirements formulated by the Fire Services Department to address the potential fire risks of all possible areas within the Project site including the jetty. Implementation of measures under this Permit does not of itself constitute any ground of defense against any fire safety requirements instituted by the Fire Services Department.	• AA to write to LCAS to remind them of their obligation to comply with all fire safety requirement (cc to ERM).		Ongoing
1B Posting and Notification of EP Requirements					

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
1.4	At all times (BC/C/AC)	The Permit Holder shall make copies of this Permit together with all documents referred to in this Permit and the documents referred to in Part A of the Permit readily available at all times for inspection by the Director or his authorised officers at all sites/offices covered by this Permit. Any reference to the Permit shall include all documents referred to in the Permit and also the relevant documents in the Register.	<ul style="list-style-type: none"> • LCAS to advise AA whether they have all necessary document (cc to ERM) • AA to provide document to LCAS, as required (cc to ERM) • LCAS to keep document at all sites/offices covered by this EP. 		Ongoing
1.5	At start of construction works and during introduction of new site staff (C)	The Permit Holder shall give a copy of this Permit to the person(s) in charge of the site(s) and ensure that such person(s) fully understands all conditions and all requirements incorporated by the Permit. The site(s) refers to site(s) of construction and operation of the Project and shall mean the same hereafter.	<ul style="list-style-type: none"> • LCAS to advise AA of "Person in charge" for the site (cc to ERM) • AA to write to LCAS provide copy of EP to person in charge (cc to ERM) 		Completed
1.6	Immediately prior to and during construction (BC/C)	The Permit Holder shall display conspicuously a copy of this Permit on the Project site(s) at all vehicular site entrances/exits or at a convenient location for public information at all times. The Permit Holder shall ensure that the most updated information about the Permit, including any amended permit, is displayed at such locations. If the Permit Holder surrenders a part or the whole of the Permit, the notice he sends to the Director shall also be displayed at the same locations as the original Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site(s).	<ul style="list-style-type: none"> • LCAS to display copy of full permit at all vehicular site entrances/exits or at a convenient location for public information at all times. 		Completed
1C Design and Construction in Accordance with EIA/EP/EM&A					
1.7	During Construction and Operation (C/O)	The Permit Holder shall construct and operate the Project in accordance with the project description in Part B of this Permit.	<ul style="list-style-type: none"> • AA to write to LCAS to remind them of their obligation to comply with EP condition (cc to ERM) 		Ongoing

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
1.8	At all times (BC/C/AC)	The Permit Holder shall ensure that the Project is designed, constructed and operated in accordance with the information and all recommendations described in the approved EIA Report (Register No. AEIAR-062/2002), other relevant documents in the Register, the information and mitigation measures described in this Permit, mitigation measures to be recommended in submissions that shall be deposited with or approved by the Director as a result of permit conditions contained in this Permit, and mitigation measures to be recommended under on-going surveillance and monitoring activities during all stages of the Project. Where recommendations referred to in the documents of the Register are not expressly referred to in this Permit, such recommendations are nevertheless to be implemented unless expressly excluded or impliedly amended in this Permit.	<ul style="list-style-type: none"> AA to write to LCAS to remind them of their obligation to comply with all recommendations described in the approved EIA report, other relevant documents in the Register and the EP condition (c to ERM) 		Completed
5.1	At all times	The EM&A programme shall be implemented in accordance with the procedures and requirements in the updated EM&A Manual approved under Condition 2.4 of this Permit. Any changes to the EM&A programme shall be justified by the ET Leader and verified by the IEC as conforming to the requirements set out in the EM&A Manual and shall seek the prior approval from the Director before their implementation.	<ul style="list-style-type: none"> ERM to implement the EM&A programme 		Ongoing
5.4	At all times	The actions described in the Event /Action Plans of the EM&A Manual shall be fully and properly carried out in accordance with the time frame as set out in the Event/Action Plans, or as agreed by the Director.	<ul style="list-style-type: none"> LCAS/ERM to implement Event/Action plans 		Ongoing
5.5	At all times	All environmental monitoring and audit data submitted under this Permit shall be true, valid and correct.	<ul style="list-style-type: none"> ERM to submit the valid EM&A data 		Ongoing
5.6	At all times	To ensure a high degree of transparency regarding the monitoring data and results in view of the public concern about the Project, all environmental monitoring and audit data and results and all submissions and all performance test data and results required by this Permit shall be made available by the Permit Holder to the public through a dedicated web site to be set up by the Permit Holder under Condition 6.2 below, in the shortest possible time and in no event later than 2 weeks after such information is available.	<ul style="list-style-type: none"> ERM to upload the EM&A data, result and all submissions and all performance test data and results required by this Permit to the web site. 		Ongoing

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
6.1	At all times	To facilitate public inspection of the EM&A Reports via the EIAO Internet Website and at the EIAO Register Office, electronic copies of these Reports shall be prepared in the Hyper Text Markup Language (HTML) (version 4.0 or later) and in Portable Document Format (PDF version 4.0 or later), unless otherwise agreed by the Director and shall be submitted at the same time as the hard copies as described in Conditions 5.2 and 5.3 of this Permit. For the HTML version, a content page capable of providing hyperlink to each section and sub-section of these Reports shall be included in the beginning of the document. Hyperlinks to all figures, drawings and tables in these Reports shall be provided in the main text from where the respective references are made. All graphics in these Reports shall be in interlaced GIF format unless otherwise agreed by the Director. The content of the electronic copies of these Reports must be the same as the hard copies.	<ul style="list-style-type: none"> ERM to prepare the electronic copies of the EM&A reports in the HTML and PDF format 		Ongoing
<i>1D Measures to Prevent Fuel Spill, Land Contamination and Water Quality Impact During Operation</i>					
3.9	During Operation	<p>The measures shall include, but not limited to, the following requirements:</p> <p>a) <u>Bundling system of tank farm for storage of aviation fuel</u></p> <p>All fuel tanks shall be located in bunded compounds with capacity of at least 110% of the largest individual tank in each compound. A security wall of breeze-block type shall be provided outside the bund wall to act as secondary containment in the event of overtopping of the bund. The security gate at the security wall shall be provided with a ramp and leak tight seal at the bottom of the gate up to the first hinge to contain any spill within the site. A drainage ditch with sloping catchment shall be provided outside the security wall to trap any liquid splash over the security wall and the security gate.</p> <p>b) <u>Drainage isolation and containment system of tank farm for storage of aviation fuel</u></p> <p>Impermeable layer under fuel tanks shall be used to prevent seepage of aviation fuel to ground. Storm drainage system shall be equipped with valve, collection sump and oil separator to retain spilled fuel.</p>	<ul style="list-style-type: none"> LCAS to implement ER to enforce 		Pending
					Pending

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
		c) <u>Tank overfill monitoring system</u> Overfill monitoring system with automatic shutdown inlet valve shall be provided for fuel tanks.			Pending
		d) <u>Installations at the jetty</u> Installations at the jetty shall include the provision of defensive fenders to prevent possible collision from small craft and the provision of coupling points with slop collection utilities to prevent minor fuel spill during unloading. Slop collection utilities shall be connected to oil separator.			Pending
		e) <u>Fuel pipelines protective measures</u> Fuel pipelines shall be covered with a protective rock armour layer of minimum thickness of 1m to prevent the pipelines from damaging by anchors.			Pending
		f) <u>Leak detection system for fuel pipelines</u> Continuous leak detection system with automatic shut-off device shall be provided for fuel pipelines.			Pending
1E Measures to Mitigate Water Quality Impact During Construction					
3.10	During construction	No more than one dredger shall be in operation at any time during construction.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Pending
3.11	During construction	No Lean Material Overboard (LMOB) system shall be used.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Pending
3.12	During construction	No hopper dredger with leaking pipe shall be used during construction.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Pending
3.13	During construction	Bottom openings of barges and hopper dredgers shall be tightly sealed to prevent leakage of dredged materials. Freeboard on barges shall be provided to ensure that decks are not washed by wave action.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Pending
3.14	During construction	No dredged material shall be splashed to the surrounding water during loading of dredged material to barges and hopper dredgers.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Pending

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
3.15	During construction	No dredged material shall be overflowed from barges and hopper dredgers during loading or transportation.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Pending
3.16	During construction	To mitigate environmental impacts due to site runoff and other potential water pollution caused by construction activities, mitigation measures described in Appendix A shall be implemented throughout the construction period.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Ongoing
Appendix A (a) (i)	During construction	Surface run-off from the construction site shall be directed into adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins before discharge into storm drains. Channels, earth bunds or sand bag barriers shall be provided on site to properly direct stormwater to such silt removal facilities.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Ongoing
Appendix A (a) (ii)	During construction	Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Ongoing
Appendix A (a) (iii)	During construction	Silt removal facilities, channels and manholes shall be maintained with the deposited silt and grit being removed at least once a week, and at the onset of and after each rainstorm to ensure that these facilities are functioning at all times.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Ongoing
Appendix A (a) (iv)	During construction	Open stockpiles of construction materials (e.g. aggregates and sand) on site shall be covered with tarpaulin or similar fabric during rainstorms. Measures such as providing sand bag barriers shall be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Ongoing
Appendix A (a) (v)	During construction	Manholes (including any newly constructed ones) shall always be 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. Discharges of surface run-off into foul sewers shall always be prevented in order not to unduly overload the foul sewerage system.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Ongoing

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
Appendix A (b)	During construction	At all parts of all works areas and construction sites, and throughout the full duration of the construction contract(s), debris and rubbish on site shall be handled and disposed of to avoid entering the water column and causing water quality impacts. Temporary on-site storage of excavated materials shall be covered with tarpaulin or similar fabric during rainstorms. Any washout of construction or excavated materials should be diverted to the drainage system via sediment traps. Stockpiling of the excavated material can be minimised by scheduling the construction programme in a way that one section of the alignment can be constructed and completed before the excavation works of the next section commence.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Ongoing
<i>1F Measures to Protect Marine Park (Sha Chau & Lung Kwu Chau) and Avoid or Mitigate Ecological Impact During Construction</i>					
3.17	During construction	No construction work shall be carried out from shore or land within the Marine Park.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Pending
3.18	During construction	No hydraulic dredging shall be carried out within the Marine Park.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Pending
3.19	During construction	Pipeline trench dredging within the Marine Park shall be scheduled to coincide with maintenance dredging for marine access channel for Sha Chau Aviation Fuel Receiving Facility.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Pending
3.20	During construction	A 250m dolphin exclusion zone during dredging within the Marine Park shall be implemented. Dredging work shall not be carried out until the area is certified by a qualified person to ensure continuously clear of dolphins within the 250m exclusion zone for 30 minutes.	<ul style="list-style-type: none"> • LCAS to implement the 250m dolphin exclusion zone • ER to enforce • ERM to provide the qualified person 		Pending

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
3.21	During construction	Piling works shall not be carried out during April to June of the year to avoid peak calving period of dolphin.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce • ET to monitor whether piling works is undertaken during April to June 		Ongoing
3.22	During construction	A 500m dolphin exclusion zone during piling activities for the jetty shall be implemented. Piling work shall not be carried out until the area is certified by a qualified person to ensure continuously clear of dolphins within the 500m exclusion zone for 30 minutes. Piling work shall cease if dolphins move into the 500m exclusion zone during piling. Piling work shall not be resumed until the area is certified by a qualified person to ensure continuously clear of dolphins for 30 minutes.	<ul style="list-style-type: none"> • LCAS to implement 500m dolphin exclusion zone • ER to enforce 		Ongoing
3.23	During construction	Spot acoustic monitoring of the 500m dolphin exclusion zone during piling activities shall be conducted for three days of the first week of piling to confirm that dolphins are not missed in the visual inspection carried out under Condition 3.22 of this Permit. The spot acoustic monitoring shall be conducted in accordance with the procedures and requirements in the updated EM&A Manual approved under Condition 2.4 of this Permit.	<ul style="list-style-type: none"> • LCAS to provide spot acoustic monitoring 		Completed
3.24	During construction	Bubble jacket shall be used for piling work to reduce underwater piling noise to achieve the following underwater mitigated noise levels: 162 dB at 250m, 152 dB at 500m and 145dB at 1000m.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Ongoing
3.25	During construction	Underwater noise monitoring shall be conducted during piling to ensure that the underwater mitigated noise levels as specified in Condition 3.24 of this Permit are achieved. Underwater mitigated noise levels shall be recorded over the initial three days of the first week of piling work. Underwater noise monitoring shall be conducted in accordance with the procedures and requirements in the updated EM&A Manual approved under Condition 2.4 of this Permit.	<ul style="list-style-type: none"> • LCAS to provide underwater noise monitoring 		Completed. Summary Report was included in the 3 rd Monthly EM&A Report

EP PART C	Timing	Condition	Responsibility for Action	Latest Date for Completion of Action*	Status
3.26	During construction	Piling hammer at the beginning of each piling session shall be ramped up gradually. Piling activities shall be continuous without short-break and shall avoid sudden random loud noise emission. Piling activities shall occur on a regular basis, be scheduled to occur with similar activities and commence at the same time each day. No piling works shall be carried out during 11:00 p.m. to 7:00 a.m.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Ongoing
3.27	During construction	Piling and related equipment installed on the piling barge shall be acoustically decoupled from the hull of the barge.	<ul style="list-style-type: none"> • LCAS to implement • ER to enforce 		Ongoing

Table 3 Project Specific Mitigation Measures

Item No.	Location/Timing	EIA Reference	Mitigation Measures	Implementation Agent
1. Air Quality Measures				
	Land based areas / During construction	S 4.5.3	Twice daily watering of all exposed site areas shall be undertaken.	Contractor
	Land based areas / During construction	S 4.5.3	No debris or other materials shall be burnt on the works areas.	Contractor
	Land based areas / During construction	S 4.5.3	All exposed road surfaces and dust sources shall be maintained as wet.	Contractor
	Land based areas / During construction	S 4.5.3	Watering shall be undertaken during rock/concrete breaking.	Contractor
	Land based areas / During construction	S 4.5.3	Open dropping heights for excavated materials shall be controlled to a maximum height of 2m.	Contractor
	Land based areas / During construction	S 4.5.3	Stockpiles of imported material kept on site shall be contained within hoardings, dampened and/or covered during dry and windy weather.	Contractor
	Land based areas / During construction	S 4.5.3	Site hoarding not less than 2.4m at site boundary shall be provided.	Contractor
	Land based areas / During construction	S 4.5.3	Dust creating activities shall be reprogrammed in periods of high winds.	Contractor
	Land based areas / During construction	S 4.5.3	Areas of exposed soil shall be minimised to areas in which works have been completed shall be restored as soon as is practicable.	Contractor
	Land based areas / During construction	S4.5.3	Stockpiling of the excavated material can be minimised by scheduling the construction programme in a way that one section of the alignment can be constructed and completed before the excavation works of the next section commence.	Contractor
	Land based areas / During construction	S 4.5.3	Any vehicle used for moving materials which have the potential to create dust shall have properly fitting side and tail boards. Materials having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin. The tarpaulin shall be properly secured and shall extend at least 300mm over the edges of the side and tail boards.	Contractor
	Site entrances and exits / During construction	S 4.5.3	No earth, mud, debris, dust and the like shall be deposited on public facility shall be usable prior to any earthworks roads. Wheel washing excavation activity on the Site.	Contractor
	Land based Site / During construction	S 4.9.1	EM&A in the form of site audit of dusty activities.	Contractor
	PAFF/Operational phase	S 4.7.1	Best practicable means as specified by the Air Pollution Control Ordinance for Part IV specified process shall be adhered to.	Franchisee

2. Noise

Item No.	Location/Timing	EIA Reference	Mitigation Measures	Implementation Agent
	Land based Site / During construction	S 5.7.1	Use quiet equipment with suitable noise levels and labels.	Franchisee
	Land based Site / During construction	S 5.7.1	Regular maintenance of equipment.	Contractor
	Land based Site / During construction	S 5.7.1	Ensure noise attenuation devices are fitted to plant and equipment.	Contractor
	Land based Site / During construction	S 5.7.1	Fitting more efficient exhaust sound reduction equipment and ensuring the Manufacturers' enclosure panels are kept closed on dump trucks, lorries, excavators and cranes.	Contractor
	Land based Site / During construction	S 5.7.1	Fitting suitably designed muffler or sound reduction equipment and using dampened bit to eliminate ringing on breakers.	Contractor
	Land based Site / During construction	S 5.7.1	Ensure all leaks in air lines are sealed on all pneumatic equipment.	Contractor
	Land based Site / During construction	S 5.7.1	Use temporary noise barriers where applicable.	Contractor
	Land based Site / During construction	S 5.7.1	Restrict or modify working hours to minimise high noise activities.	Contractor
	Land based Site / During construction	S 5.7.1	Provide awareness training in the need to minimise noise.	Contractor
	Land based Site / During construction	S 5.7.1	Proper planning of work area.	Contractor
	Land base Site/ During construction	S 5.7.1	Good site practice to limit noise emissions at source	Contractor
	Land based Site / During construction	S 5.9.1	EM&A in the form of site audit of noise activities	Contractor

3. Water Quality

	Dredged areas/Design Phase	S 6.7.1.4	Standard good dredging practice measures shall be written into the dredging contract.	Franchisee
	Marine Park / Pipeline Dredging	S 6.7.1.1	There should be no access to the shore or working from land within the Marine Park. No marine anchors shall be used within the Marine Park.	Contractor
	Marine Park / Pipeline Dredging	S 6.7.1.2	No hydraulic dredging within Marine Park.	Contractor
	Sha Chau AFRF Marine access channel	S 6.7.1.3	Dredging for pipeline trench should be timed to coincide with maintenance dredging for Sha Chau AFRF marine access channel.	Airport Authority
	Dredged areas/ Pipeline Dredging	S 6.7.1.4	Use of Lean Material Overboard (LMOB) systems shall be prohibited. No mud overflow is to be permitted for dredging using trailer suction hopper dredgers.	Contractor
	Dredged areas/ Pipeline Dredging	S 6.7.1.4	Mechanical grabs shall be designed and maintained to avoid spillage and should seal tightly while being lifted.	Contractor
	Dredged areas/ Pipeline Dredging	S 6.7.1.4	Barges and hopper dredgers shall have tight fitting seals to their bottom openings to prevent leakage of material.	Contractor
	Dredged areas/ Pipeline Dredging	S 6.7.1.4	Any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes.	Contractor

Item No.	Location/Timing	EIA Reference	Mitigation Measures	Implementation Agent
	Dredged areas/ Pipeline Dredging	S 6.7.1.4	Loading of barges and hoppers shall be controlled to prevent splashing of dredged material to the surrounding water. Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation.	Contractor
	Dredged areas/ Pipeline Dredging	S 6.7.1.4	Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved.	Contractor
	Dredged areas/ Pipeline Dredging	S 6.7.1.4	Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action.	Contractor
	Dredged areas/ Pipeline Dredging	S 6.7.1.4	All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.	Contractor
	Dredged areas/ Pipeline Dredging	S 6.7.1.4	The works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site.	Contractor
	Pipeline trench / Pipeline Dredging	S 6.7.1.5	Placement of pipeline trench backfill should be undertaken in a controlled manner to minimize impacts. Backfilling with rock should be undertaken either down pipe or by a reverse grab operation or other controlled technique to ensure that this material does not mound on the seabed.	Contractor
	Land Site / During Construction	S 6.7.1.6	Wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters.	Contractor
	Land Site / During Construction	S 6.7.1.6	Sewage effluent and discharges from on-site kitchen facilities shall be directed to Government sewer in accordance with the requirements of the WPCO or collected for disposal offsite. The use of soakaways shall be avoided.	Contractor
	Land Site / During Construction	S 6.7.1.6	Storm drainage shall be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sandbag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.	Contractor
	Land Site / During Construction	S 6.7.1.6	Silt removal facilities, channels and manholes shall be maintained and any deposited silt and grit shall be removed regularly, including specifically at the onset of and after each rainstorm.	Contractor
	Land Site / During Construction	S 6.7.1.6	Temporary access roads should be surfaced with crushed stone or gravel.	Contractor

Item No.	Location/Timing	EIA Reference	Mitigation Measures	Implementation Agent
	Land Site / During Construction	S 6.7.1.6	Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	Contractor
	Land Site / During Construction	S 6.7.1.6	Measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system.	Contractor
	Land Site / During Construction	S 6.7.1.6	Open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms.	Contractor
	Land Site / During Construction	S 6.7.1.6	Manholes (including any newly constructed ones) should always be 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.	Contractor
	Land Site / During Construction	S 6.7.1.6	Discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.	Contractor
	Land Site / During Construction	S 6.7.1.6	All vehicles and plant should be cleaned before they leave the construction site to ensure that no earth, mud or debris is deposited by them on roads. A wheel washing bay should be provided at every site exit.	Contractor
	Land Site / During Construction	S 6.7.1.6	Wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain.	Contractor
	Land Site / During Construction	S 6.7.1.6	The section of construction road between the wheel washing bay and the public road should be surfaced with crushed stone or coarse gravel.	Contractor
	Land Site / During Construction	S 6.7.1.6	Wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be screened to remove large objects.	Contractor
	Land Site / During Construction	S 6.7.1.6	Vehicle and plant servicing areas, vehicle wash bays and lubrication facilities shall be located under roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor in accordance with the requirements of the WPCO or collected for off site disposal.	Contractor
	Land Site / During Construction	S 6.7.1.6	The contractors shall prepare an oil / chemical cleanup plan and ensure that leakages or spillages are contained and cleaned, up immediately.	Contractor
	Land Site / During Construction	S 6.7.1.6	Waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance.	Contractor
	Land Site / During Construction	S 6.7.1.6	All fuel tanks and chemical storage areas should be provided with locks and be sited on sealed areas. The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank.	Contractor

Item No.	Location/Timing	EIA Reference	Mitigation Measures	Implementation Agent
	Land Site / During Construction	S 6.7.1.6	Surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.	Contractor
	All works / During construction	S 6.10.1	All construction works shall be subject to routine audit to ensure implementation of all EIA recommendations and good working practice.	Contractor
	Submarine Pipeline / During Design and construction	S 6.7.2.1	Submarine section of aviation fuel pipeline shall be covered with rock armour protection which shall not protrude above the level of the adjacent natural seabed.	Franchisee
	Jetty / During construction	S 6.7.2.2	Coupling points on the jetty will be protected with slop collection utilities.	Franchisee
	Tank farm / During construction	S 6.7.2.2	Oily drainage systems and slop collection systems will connect to an oil/water separator.	Franchisee
	Tank farm / During construction	S 6.7.2.2	All tanks shall be bunded to a capacity of at least 110% of the largest individual tank in each compound. Tank pits shall be protected by an impermeable bed (e.g. geotextile sheeting) to prevent seepage of aviation fuel to ground. A leak detection system shall be installed beneath The containment membrane.	Franchisee
	Tank farm / During construction	S 6.7.2.2	Valves shall be installed within the storm drainage system to facilitate the retention of spillages.	Franchisee
	Impact monitoring stations located 500m north/northwest and south/south east of any dredger during dredging works at a distance greater than 1000m outside of the Marine Park	S 6.10.2	Water quality monitoring shall be undertaken for suspended solids, turbidity, and dissolved oxygen.	Contractor
	Designated monitoring stations as defined in EM&A Manual <i>Section 7</i> Construction period when dredging takes place within 1000m of Marine Park.	S 6.10.2	Water quality monitoring shall be undertaken for suspended solids, turbidity, and dissolved oxygen.	Contractor
	All facilities / Operational phase	S 6.7.2.2	Detailed emergency response procedures shall be drawn up. These will include requirements to maintain floating oil booms, absorbent materials and skimmers on site at all times.	Franchisee
	Tank farm / Operational phase	S 6.7.2.2	Auxiliary tanks shall be permanently maintained at the tank farm for recovered fuel and slops.	Franchisee

Item No.	Location/Timing	EIA Reference	Mitigation Measures	Implementation Agent
	Tank farm/Operational phase	S 6.7.2.2	There shall be no direct outlet from the bund. A collection sump shall be included in the base. Removal of accumulated rainwater shall be activated manually and discharged to storm drain via an oil / water separator.	Franchisee
	Tank farm/Operational phase	S 6.7.2.2	Contingency procedures shall be drawn up to ensure containment and safe disposal of any fuel lost from tanks or pipework. Suitable absorbent materials (e.g. sand or earth) shall be kept on site to deal with spillages.	Franchisee
	Tank Farm / Tank farm Commissioning	S 6.7.1.7	Wastewater from pipe commissioning de-watering exercises shall be stored on site and for chemical analysis and safe disposal in accordance with the WPCO.	Franchisee

4. Ecology

	Detailed Design Phase (D)	S 7.8.2.7	Specification for 500m dolphin exclusion zone during piling shall be prepared.	Consultant
	Detailed Design Phase (D)	S 7.8.2.8	Specification for 250m dolphin exclusion zone during dredging in the Marine Park shall be prepared.	Consultant
	Detailed Design Phase (D)	S 7.8.2.18	Specification for pre and post construction dolphin abundance monitoring.	Consultant
	Detailed Design Phase (D)	S 7.8.2.10	Specification for underwater noise monitoring during piling shall be prepared.	Consultant
	Detailed Design Phase (D)	S 7.8.2.9	Specification for acoustic monitoring shall be prepared.	Consultant
	Detailed Design Phase (D)	S 7.8.2.5	Design of bubble jacket for pile shall be prepared.	Consultant
	Detailed Design Phase (D)	S 7.8.2.13	Design of acoustic decoupling methods.	Consultant
	Prior to piling. (C)	S 7.8.2.17	Data review shall be undertaken using available long term data set prior to the works to check that dolphin distribution patterns are consistent with those assumed in the EIA.	Contractor
	Around each jetty pile / During piling activities. (C)	S 7.8.2.5	Implementation of bubble jacket to achieve a 3-5 dB reduction. Specific underwater noise targets are as follows: 162 dB at 250m, 152 dB at 500m and 145dB at 1000m.	Contractor
	500m around piling barge/ During piling activities. (C)	S 7.8.2.7	A 500m dolphin exclusion zone shall be implemented and piling shall not begin until the observer has confirmed that the area has been clear for 30 minutes.	Contractor
	250m around dredger in Marine Park / During dredging in Marine Park (C)	S 7.8.2.8	A 250m dolphin exclusion zone shall be implemented and dredging shall not begin until the observer has confirmed that the area has been clear for 30 minutes.	Contractor
	Within dolphin exclusion zone/ 3 days in first week of piling (C)	S 7.8.2.9	Spot acoustic monitoring shall be undertaken for 3 days in the first week of piling.	Contractor
	250m, 500m and 1000m from piling barge/during piling. (C)	S 7.8.2.10	Underwater noise monitoring during percussive piling activities.	Contractor
	April to June	S 7.8.2.12	Piling shall be scheduled outside the period April to June.	Contractor

Item No.	Location/Timing	EIA Reference	Mitigation Measures	Implementation Agent
	Piling barge/During piling. (C)	S 7.8.2.13	Implement acoustic decoupling measures in accordance with specifications prepared during the design phase.	Contractor
	Piling barge/During piling. (C)	S 7.8.2.14	Ramping up of the piling hammer shall be implemented at the start of each piling session.	Contractor
	Piling barge/During piling. (C)	S 7.8.2.15	Piling activities shall be continuous and short breaks and random sudden noises avoided.	Contractor
	During piling. (C)	S 7.8.2.15	Piling events shall be scheduled to occur on a regular basis and commence at the same time each day.	Contractor
	Jetty / During piling. (C)	S 7.8.2.15	The piling shall be scheduled to allow a rest period of 7 hours during the night-time.	Contractor
	Jetty / During piling. (C)	S 7.8.2	All mitigation measures shall be audited to ensure effectiveness.	Contractor
	Jetty / During piling. (C)	S 7.11	Design and construction phase EM&A to prepared specifications and undertaken monitoring and audit during piling.	Contractor

5. Landscape and Visual

	PAFF site/ During construction (D/C)	S8.10.2.1	Screen mounding including hydroseeded and part tree planted would be constructed and planted early on in the construction programme prior to the building of the Phase 1 tanks	Contractor
	PAFF site/ During construction (D/C)	S 8.10.2.3	The construction programme for the PAFF should be reduced to the shortest possible period and should be executed in phases with future phases of tanks built in sets of 2-4.	Contractor
	PAFF site/ During construction (C/O)	S 8.10.2.3	The extent and periphery of the works areas should be managed so that they are as small as possible and do not appear cluttered, untidy and unattractive, particularly to road traffic along Lung Mun Road.	Contractor
	PAFF site/ During construction (D/C)	S 8.10.2.3	Temporary hoarding barriers should be of a recessive visual appearance in both colour and form.	Contractor
	PAFF site/ During construction (C/O)	S 8.10.2.3	Materials should be stored in areas with the least obstruction to residents, pedestrians and traffic.	Contractor
	PAFF site/ During construction (C/O)	S 8.10.2.3	All material stockpiles should be covered with an impermeable material and sandbagging diversions should be placed around exposed soil.	Contractor
	PAFF site/ Construction period of fuel tank expansion (O)	S 8.10.2.2	Conservation of existing and imported soil resources. Existing soil resources on site will be conserved in stockpiles with a maximum height of 2m, and re-used in the formation of the proposed screen bund	Contractor

Item No.	Location/Timing	EIA Reference	Mitigation Measures	Implementation Agent
	PAFF site/ On commencement of construction (D/C)	S 8.10.3.1	Transplantation of existing road side whips affected by the proposed works and new compensatory planting works should be carried as early as possible in the construction period.	Project Proponent
	PAFF site/ On commencement of construction (D/C)	S 8.10.3	Temporary earth mounding, tree planting and hydroseeding should be implemented on the area of site not initially required for tanks.	Project Proponent
	PAFF site/ During construction (D/C/O)	S 8.10.3.1	A raised bund/earth mound comprising containment bund-wall, access road and planting buffer shall be built and maintained around the tank farm.	Project Proponent
	PAFF site/ During construction (D/C)	S8.10.3.1	The existing whips in the amenity areas and along the access road are proposed to be transplanted to form a planting buffer around the site at phase 2005. The planting buffer will comprise a mix of native species and species that have a tall habit and are fast growing.	Project Proponent
	PAFF site/ During construction (C)	S.8.10.3.2	A 24-month maintenance period will be needed to ensure transplantation/plant establishment is successful	Project Proponent
	PAFF site / Design (D/C)	S 8.10.4.3	The design of the PAFF should incorporate materials, details and textures which are visually recessive.	Project Proponent
	PAFF site tanks /Design (D/C)	S 8.10.4.2	Colours should be of low chromatic intensity to reduce the potential contrast between the structures and their background.	Project Proponent
	Site perimeter (D/C/O))	S 8.10	Visually permeable security fencing should be used around the perimeter.	Project Proponent
	Tanks / Operational phase (D/C/O)	S 8.10.5.1	Minimum amount of lighting for the tanks shall be used, only applied for safety at the key access points and staircases.	Project Proponent
	PAFF site/Operational phase (D/C/O)	S 8.10.5.1	Limited lighting intensity on the site.	Project Proponent
	PAFF site/ Operational phase	S 8.10.5.1	Directional down lighting is suggested to minimise light spill to the surrounding area	Project Proponent
	PAFF site/Operational phase (D/C/O)	S 8.13.10	Construction and operational stage EM&A to prepared and undertaken monitoring and audit of the compensatory planting/transplantation and planting establishment.	Contractor
6. Cultural Heritage				
	Along pipeline alignment / Prior to dredging works	S 9.7.7	A complete marine archaeological investigation shall be carried by a qualified marine archaeologist of the pipeline route before any construction works start.	Franchisee
	Along pipeline alignment / Prior to dredging works	S 9.7.7	The marine archaeological investigation shall comprise a geophysical survey followed by a diver survey, if required, to confirm the results of the geophysical survey.	Franchisee

Item No.	Location/Timing	EIA Reference	Mitigation Measures	Implementation Agent
	Along pipeline alignment / Prior to dredging works	S 9.7.7	The methodology for the survey shall be submitted to the Director of Environmental Protection for approval no less than one month before any field work commences and the results of the survey and any mitigation measures shall be to the approval of the Director of Environmental Protection.	Franchisee
	Along pipeline alignment / Prior to dredging works	S 9.7.7	The CV of the marine archaeologist shall be submitted to the EPD for approval prior to the start of the investigation at the time of submission of the methodology.	Franchisee
	Along pipeline alignment / Prior to dredging works	S 9.7.7	The MAI shall be carried out by a qualified marine archaeologist who shall apply for a license under the Antiquities and Monuments Ordinance, Cap 53.	Franchisee
	Along pipeline alignment/Prior to dredging works	S9.7.7	The Project Proponent shall comply with the recommendations of the MAI	Franchisee
	During dredging (c)		During the dredging of the pipe trench, a watching brief will be implemented where the trench intersects sub-surface targets SS1 and SS2.	Contractor
	During dredging (c)		Dredge operators to be made aware of the likely presence of a shipwreck near the coordinates given for SS1 and SS2 and are to report any unusual resistance or slowing down of the dredging in these areas.	Contractor
	During dredging (c)		Dredging to cease in the nominated areas, SS1 and SS2, after a few 3 and 2 m of sediment has been removed respectively. Divers, under the supervision of a licensed maritime archaeologist, are then to examine the trench for possible cultural remains of significance.	Contractor

7. Waste Management

	Contract mobilisation / During construction (C)	S 14.7.2	The Contractor shall identify a coordinator for the management of waste.	Contractor
	Contract mobilisation / During construction (C)	S 14.7.2	The waste coordinator shall prepare and implement a Waste Management Plan which specifies procedures such as a ticketing system, to facilitate tracking of loads and to ensure that illegal disposal of wastes does not occur, and protocols for the maintenance of records of the quantities of wastes generated, recycled and disposed.	Contractor
	Contract mobilisation / During construction (C)	S 14.7.2	The Contractor shall apply for and obtain the appropriate licenses for the disposal of public fill, chemical waste and effluent discharges.	Contractor
	PAFF Site / During construction	S 14.7.2	No waste shall be burnt on site.	Contractor
	All sites / During construction (C)	S 14.7.2	Excavated material shall be used on site for purposes of landscaping or formation of bund walls.	Contractor

Item No.	Location/Timing	EIA Reference	Mitigation Measures	Implementation Agent
	All areas / During construction (C)	S 14.7.2	All material shall be reused on site as far as practicable, including formwork plywood, topsoil and excavated material.	Contractor
	Contract preparation stage (D)	S 14.7.2	Suitable provisions shall be included in the construction contract to ensure that the Contractor sorts and recycles waste.	HyD
	All areas / During construction (C)	S 14.7.2	Re-use and recycling of waste must always be considered first. Waste disposal shall only be undertaken in the last resort. Any surplus material generated shall be sorted on site into construction and demolition (C&D) waste and the public fill fraction. A sorting facility shall be set up on the site.	Contractor
	All areas / During construction (C)	S 14.7.2	The site and surroundings shall be kept tidy and litter free.	Contractor
	CED public fill stockpile in Mui Wo, North Lantau or Mui Wo refuse transfer stations/ During construction (C)	S 14.7.2	The C&D waste shall be disposed of at a licensed landfill or deposited at an authorised waste transfer facility and the material suitable for public fill delivered to a public filling area, public filling barging point or public fill stockpile area after obtaining the appropriate licence.	Contractor
	Along alignment of haulage road and road link / Site Clearance activities (C)	S 14.7.2	Vegetation shall be stripped prior to site clearance, chopped and compacted using a mobile compactor to reduce the volume of material to be transported and disposed of.	Contractor
	All areas / During construction (C)	S 14.7.2	Stockpiled material shall avoid vegetated areas.	Contractor
	All areas / During construction, particularly dry season (C)	S 14.7.2	Stockpiles shall be covered by tarpaulins and/or watered as required.	Contractor
	All areas / During construction (C)	S 14.7.2	Storage of material on site should be kept to a minimum.	Contractor
	All areas, particularly at site exits / During construction (C)	S 14.7.2	Excavated material in trucks shall be covered by tarpaulins.	Contractor
	Site entrances and exits / During construction (C)	S 14.7.2	Wheel washing facilities shall be used by all trucks leaving the site to prevent the transfer of mud onto public roads.	Contractor
	Works site / During construction (C)	S 14.7.2	Suitable chemical waste storage areas should be formed at the works site for temporary storage pending collection	Contractor
	Chemical waste treatment facility at Tsing Yi/ During construction (C)	S 14.7.2	A licensed contractor shall be employed to collect chemical waste for delivery to a licensed treatment facility.	Contractor
	All areas / During construction (C)	S 14.7.2	Temporary storage areas for general refuse should be enclosed to avoid environmental impacts.	Contractor
	All areas / During construction (C)	S 14.7.2	Sufficient dustbins should be provided for storage of waste.	Contractor

Item No.	Location/Timing	EIA Reference	Mitigation Measures	Implementation Agent
	All areas, WENT Landfill or NWNT refuse transfer stations/ During construction (C)	S 14.7.2	General refuse should be cleared daily and should be disposed of to the nearest licensed facility.	Contractor
	Site offices, along alignments / During construction (C)	S 14.7.2	Nightsoil arising from chemical toilets and chemical treatment facilities should be transported by a licensed contractor to government Sewage Treatment Works for disposal.	Contractor
	PAFF site / During construction (C)	S 14.7.2	Waste oils, chemicals or solvents shall not be disposed of to drain.	Contractor
	PAFF site / During construction (C)	S 14.7.2	Good site practice shall be implemented to avoid waste generation and promote waste minimisation.	Contractor
	PAFF site / During construction (C)	S 14.7.2	Waste materials such as paper, metal, timber and waste oil shall be recycled as far as practicable.	Contractor
	PAFF site / During construction (C)	S 14.7.2	Temporary structures used during construction shall be provided in the form of proprietary Portakabin type units sited on areas of permanent hard paving units as far as practicable.	Contractor
		S 14.7.2	Dredged marine mud shall be disposed of in a gazetted marine disposal ground under the requirements of the Dumping at Seas Ordinance.	Contractor
	PAFF site / During construction (C)	S 14.7.2	All waste containers shall be in good condition and fitted with lids or covers to prevent waste from escaping or the ingress of water.	Contractor
	PAFF site / During construction (C)	S 14.7.2	All waste containers shall be in a secure area on hardstanding.	Contractor
	PAFF site / During construction (C)	S 14.7.2	Emergency equipment to deal with any spillage or fire shall be kept on site.	Contractor
	PAFF site / During construction (C)	S 14.7.2	All containers used for storage of chemical waste shall be maintained in good condition and clearly labelled in both English and Chinese.	Contractor
	PAFF site / During construction (C)	S 14.7.2	All storage areas for chemical waste shall be: <ol style="list-style-type: none"> 1. clearly labelled; 2. enclosed on at least 3 sides; 3. have impermeable floor and bunding sufficient to fully retain any spillage or leakages;ventilated; and 4. covered to prevent rainfall from entering. 	Contractor
	PAFF site / During construction (C)	S 14.7.2	All types of asbestos including sources (such as clutch linings) shall be treated as chemical waste, Asbestos containing wastes shall be kept separate from other wastes.	Contractor
	PAFF site / During construction (C)	S 14.7.2	All leaking containers shall be contained and removed from site as soon as is reasonably practicable.	Contractor

Item No.	Location/Timing	EIA Reference	Mitigation Measures	Implementation Agent
	PAFF site / During construction (C)	S 14.7.2	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling.	Contractor
	All areas / During construction (C)	S 14.10.1	EM&A of waste handling, storage, transportation, disposal procedures and documentation through the site audit programme shall be undertaken.	Contractor

Annex H

Interim Reports and Complaint Logs

**Environmental
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FAXED

BY POST AND FAX (2415 7191)

25th November 2005

Mr Suk Lun Leung
Env Protection Officer (Regional West)

Environmental Protection Department
Environmental Compliance Division
Regional Office (West)
7/F Tsuen Wan Government Offices
38 Sai Lau Kok Road
Tsuen Wan
New Territories



Our Ref: C2475_0018105_25Nov04_Letter01.doc

Dear Mr Leung

PERMANENT AVIATION FUEL FACILITY

- Interim Report and Complaint Log -

Further to your email dated 16th November 2005 providing details of an anonymous complaint received with regard to the above project, please find attached the Environmental Team's Interim Report on the event. Please note this report has been prepared in accordance with the procedures outlined in the Environmental Monitoring and Audit (EM&A) Manual for the project.

The report provides a record of the complaint (see Complaint Log attached the report), as well as details on the investigation, the subsequent actions and the future reporting requirements in the forthcoming EM&A reports.

We trust you will find the attached assures you that the matter has been adequately dealt with and that procedures are now in place to prevent similar such complaints from arising in the future.



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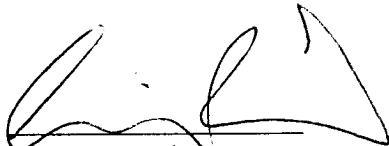
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Thank you in advance and please don't hesitate to contact us should you have any questions.

Yours sincerely
For ERM Hong Kong, Ltd



Craig A Reid
Senior Consultant on behalf of the Environmental Team Leader

*Direct Tel: 2271 3179
E-mail: craig.reid@erm.com*

cc *Mr Martin Putnam, Airport Authority Hong Kong, by fax, 2183 3186
Mr Brian Gillon, Leighton Contractors (Asia) Limited, by fax, 2529 8784*

PERMANENT AVIATION FUEL RECEIVING FACILITY

EP-139/2002/A

- INTERIM REPORT -

1. Introduction

This report presents the handling procedure for complaints received through the Environmental Protection Department (EPD) during the construction of the Permanent Aviation Fuel Facility (PAFF). The complaints procedures have been based on the Environmental Monitoring and Audit (EM&A) Manual for the study and in accordance with the Environmental Permit (EP-139/2002/A).

2. Details of Complaint

A complaint was received by the Environmental Team (ET), ERM-Hong Kong, Ltd, through the EPD on 16th November 2005. According to the information provided by the EPD, an anonymous complaint against dust emission from construction site of PAFF was received by the department on 31st October 2005.

On 2nd November 2005, representatives from the EPD visited the PAFF construction site and found that no activity was carried out on that day. The EPD, however, notified the Contractor of the complaint and advised to take measures to reduce the dust emission.

A following site visit by representatives of the EPD was made on 14th November 2005 and it appeared the construction site was dry and the access road was not paved. Dust was generated when vehicles were driven inside the construction site. As a result, the EPD issued a record of inspection to the Contractor.

In accordance with the EM&A Manual, a completed complaints log is attached in *Attachment A*.

3. Details of Investigation

Following the receipt of complaint, the ET contacted the Contractor and was informed that the work being undertaken that could cause dust relates to the access road. Immediately when advised by the EPD the Contractor's Site Supervisor engaged a water truck to cover the site (*Figure 1*). Subsequent site visits have indicated the site has been watered and there is no indication of dust.



Figure 1 Water Truck stationed at Permanent Aviation Fuel Facility (PAFF) Construction Site (Photo: Leighton Contractors (Asia) Limited, November 2005)

4. Follow-up Actions

The ET will conduct weekly site visits to the construction site of PAFF. As part of the site visits, visual monitoring of the potential for dust emissions will be made. The ET will ensure site watering has been conducted, where appropriate, and make reference to such in the site visit report. Site visit reports will be presented in the monthly EM&A reports during construction works.

Attachment A

Complaints Log

COMPLAINT LOG

Ref: 0018105 Complaints Log 24Nov05 v0.doc

Log Ref.	Date / Location	Complainant/ Date of Contract	Details of Complaint	Investigation / Mitigation Action	File Closed
01	31 st October 2005; Construction Site of Permanent Aviation Fuel Facility	Anonymous	Dust emission	<p>The work being undertaken that could cause dust relates to the access road. Immediately when advised by the EPD the Contractor's Site Supervisor engaged a water truck to cover the site. Subsequent site visits have indicated the site has been watered and there is no indication of dust.</p> <p>The ET will conduct weekly site visits to the construction site of PAFF. As part of the site visits, visual monitoring of the potential for dust emissions will be made. The ET will ensure site watering has been conducted, where appropriate, and make reference to such in the site visit report. Site visit reports will be presented in the monthly EM&A reports during construction works.</p>	Yes



Filed by Environmental Team Leader:

25/11/05

Date:

**Environmental
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5th December 2005

Mr Suk Lun Leung
Env Protection Officer (Regional West)

Environmental Protection Department
Environmental Compliance Division
Regional Office (West)
7/F Tsuen Wan Government Offices
38 Sai Lau Kok Road
Tsuen Wan
New Territories

FAXED
- 5 DEC 2005



ERM

BY HAND

- 5 DEC 2005

DRF-548

Our Ref: C2475_0018105_05Dec05_Letter01.doc

Dear Mr Leung

PERMANENT AVIATION FUEL FACILITY

- Interim Report and Complaint Log -

Further to your email dated 29th November 2005 providing details of an anonymous complaint received with regard to the above project, please find attached the Environmental Team's Interim Report on the event. Please note this report has been prepared in accordance with the procedures outlined in the Environmental Monitoring and Audit (EM&A) Manual for the project.

The report provides a record of the complaint (see Complaint Log attached the report), as well as details on the investigation, the subsequent actions and the future reporting requirements in the forthcoming EM&A reports.

We trust you will find the attached assures you that the matter has been adequately dealt with and that procedures are now in place to prevent similar such complaints from arising in the future.



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ISO 14001:2004
Certificate No. FS 32515

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Thank you in advance and please don't hesitate to contact us should you have any questions.

Yours sincerely
For ERM Hong Kong, Ltd



Freeman Cheung
Environmental Team Leader

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cc Mr Martin Putnam, Airport Authority Hong Kong, by fax, 2183 3186 ✓
Mr Brian Gillon, Leighton Contractors (Asia) Limited, by fax, 2529 8784 ✓
Mr Guiyi Li, Hyder Consulting Limited, by fax, 2805 5028 ✓



Figure 1 Water Truck stationed at Permanent Aviation Fuel Facility (PAFF) Construction Site (Photo: Leighton Contractors (Asia) Limited, November 2005)

4. Follow-up Actions

The ET will conduct weekly site visits to the construction site of PAFF. As part of the site visits, visual monitoring of the potential for dust emissions will be made. The ET will ensure site watering has been conducted, where appropriate, and make reference to such in the site visit report. Site visit reports will be presented in the monthly EM&A reports during construction works.

PERMANENT AVIATION FUEL RECEIVING FACILITY

EP-139/2002/A

- INTERIM REPORT -

1. Introduction

This report presents the handling procedure for complaints received through the Environmental Protection Department (EPD) during the construction of the Permanent Aviation Fuel Facility (PAFF). The complaints procedures have been based on the Environmental Monitoring and Audit (EM&A) Manual for the study and in accordance with the Environmental Permit (EP-139/2002/A).

2. Details of Complaint

A complaint was received by the Environmental Team (ET), ERM-Hong Kong, Ltd, through the EPD on 29th November 2005. According to the information provided by the EPD, an anonymous complaint against dust emission from construction site of PAFF was received by the department on 24th November 2005. The EPD have stated they will follow up on the complaint.

In accordance with the EM&A Manual, a completed complaints log is attached in *Attachment A*.

3. Details of Investigation

Following the receipt of complaint, the ET contacted the Contractor and was informed that the Contractor will take the following actions to mitigate dusts on site:

- Water trucks will spray water on the site at least twice per day, or more if necessary, to keep dust down. The water truck in operation on site is presented in *Figure 1*;
- Cover the surplus stockpile excavated material as far as possible. Stockpiles on site are presented on *Figure 2* and the water truck shown watering the stockpiles are presented in *Figure 3*;
- Cover up the complete sand surcharge with tarpaulin (*Figure 4*). The partially covered sand surcharge is presented on *Figure 5*;
- Water small surplus stockpiles by the water truck (*Figure 6*).

In addition to the above, the general condition of the site entrance and access road are presented in *Figures 7* and *8*. The effects of the water trucks dousing the road to prevent dust generation are visible in both these pictures.



Figure 1 *Water Truck stationed at PAFF Construction Site (Photo: Leighton Contractors (Asia) Limited, November 2005)*



Figure 2 *Stockpile at PAFF Construction Site (Photo: Leighton Contractors (Asia) Limited, November 2005)*



Figure 3 *Water Truck dousing stockpile at PAFF Construction Site (Photo: Leighton Contractors (Asia) Limited, November 2005)*



Figure 4 *Sand surcharge at PAFF Construction Site (Photo: Leighton Contractors (Asia) Limited, November 2005)*



Figure 5 Sand surcharge partially covered with tarpaulin at PAFF Construction Site (Photo: Leighton Contractors (Asia) Limited, November 2005)



Figure 6 Small stockpile doused with water at PAFF Construction Site (Photo: Leighton Contractors (Asia) Limited, November 2005)



Figure 7 *General condition of entrance to PAFF Construction Site (Photo: Leighton Contractors (Asia) Limited, November 2005)*



Figure 8 *General condition of access road to PAFF Construction Site (Photo: Leighton Contractors (Asia) Limited, November 2005)*

4. Follow-up Actions

The ET will conduct weekly site visits to the construction site of PAFF. As part of the site visits, visual monitoring of the potential for dust emissions will be made. The ET will ensure site watering has been conducted, where appropriate, and make reference to such in the site visit report. Site visit reports will be presented in the monthly EM&A reports during construction works.

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