土木工程拓展署
CEDD Civil Engineering and Development Department

Environmental Monitoring and Audit for Contaminated Mud Pit at Sha Chau (2009-2013) – Investigation
Agreement No. CE 4/2009(EP)

8th Monthly Progress Report for Contaminated Mud Pits at Sha Chau – February 2010

Revision 0

25 March 2010

Environmental Resources Management
21/F Lincoln House
Taikoo Place, 979 King's Road
Island East, Hong Kong
Telephone 2271 3000
Facsimile 2723 5660

ERM

Delivering sustainable solutions in a more competitive world

Environmental Monitoring and Audit for Contaminated Mud Pit at Sha Chau (2009-2013) – Investigation

8th Monthly Progress Report for Contaminated Mud Pits at Sha Chau – February 2010

Revision 0

Document Code: 0103262 Feb 10 Monthly Report.doc

Environmental Resources Management

21/F Lincoln House
979 King's Road
Taikoo Place
Island East
Hong Kong
Telephone: (852) 2271 3000
Facsimile: (852) 2723 5660
E-mail: post.hk@erm.com
http://www.erm.com

Client: Civil Engineering and Development Department (CEDD)	Proposal No: 0103262
Summary: This document presents progress of monitoring works on contaminated mud pits at Sha Chau in February 2010 under Agreement No. CE 4/2009 (EP).	Date: 25 March 2010 Approved by: *Dr Robin Kennish* *Director*

0	8th Monthly Progress Report for CMP – Revision 0	EW	JT	RK	25/03/10
Revision	Description	By	Checked	Approved	Date

Distribution

☒ Internal

☒ Public

☐ Confidential

Agreement No. CE 4/2009 (EP)
Environmental Monitoring and Audit
for Contaminated Mud Pit at Sha Chau (2009-2013) - Investigation

8th MONTHLY PROGRESS REPORT FOR CONTAMINATED MUD PITS AT SHA CHAU - February 2010

1.1 *BACKGROUND*

Since 1992, the East of Sha Chau area has been the site of a series of dredged contaminated mud pits (CMPs) designed to provide confined marine disposal capacity for contaminated mud arising from the HKSAR's dredging and reclamation projects. CMP IVc is presently in operation for backfilling by contaminated mud and is anticipated to reach its capacity in 2010. A series of four newly constructed seabed pits at the East of Sha Chau area, CMP Va-d, will be provided for the disposal of contaminated mud after CMP IVc is full. Dredging operations are now taking place to construct CMP Va. The environmental monitoring and audit (EM&A) programme for the CMPs at the East of Sha Chau area presently covers disposal operations at CMP IVc and dredging operations at CMP V.

1.2 *REPORTING PERIOD*

This *Monthly Progress Report* covers the monitoring period of February 2010.

1.3 *DETAILS OF SAMPLING AND LABORATORY TESTING ACTIVITIES*

Field sampling activities conducted in this monthly period for CMP IVc are listed below:

- *Routine Water Quality Monitoring* was conducted on 4 February 2010;
- *Water Column Profiling* was conducted on 5 February 2010; and,
- *Demersal Trawling* was conducted on 25 and 26 February 2010.

For CMP V, sampling for *Impact Monitoring during Dredging Operations* and *Water Column Profiling* were conducted on 3 and 4 February 2010, respectively. A summary of field activities are presented in *Annex A*.

A summary of laboratory analysis results submitted by the Contractor in this reporting month is presented on *Table 1.1*.

Table 1.1 Summary of laboratory analysis results submitted by the Contractor during the reporting month

Key Task	Monitoring Component	Results Received from the Contractor
CMP IV		
Water Sampling and Chemical Analysis	a) Water Column Profiling	February's sampling: *18 February 2010*
	b) Routine water quality monitoring	February's *in situ* sampling: *18 February 2010*
Sediment Sampling and Chemical Analysis	a) Pit Specific Sediment Chemistry	December's sampling: *3 February 2010*
	b) Cumulative Impact Sediment Chemistry	December's sampling: *3 February 2010*
Benthic Recolonisation Study		December's sampling: *19 January 2010*
Demersal Trawling and Tissue Analysis	a) Tissue and Whole Body Analyses	July and August's sampling: *3 February 2010*
CMP V		
Water Sampling and Chemical Analysis	a) Water Column Profiling	February's sampling: *8 February 2010*
	b) Impact Monitoring during Dredging Operations	February's sampling: *8 February 2010*

1.4 DETAILS OF OUTSTANDING SAMPLING AND / OR ANALYSIS

No outstanding sampling remained from February 2010. However, *Water Quality Monitoring during Capping* which was scheduled on 5 February 2010 was not conducted as no capping at CMP IV was scheduled to be carried out on this day.

1.5 BRIEF DISCUSSION OF THE MONITORING RESULTS

Results of *Water Column Profiling* and *Routine Water Quality Monitoring* for February 2010; *Pit Specific Sediment Chemistry, Cumulative Impact Sediment Chemistry* and *Benthic Recolonisation* for December 2009; and, *Tissue and Whole Body Analyses* for July and August 2009 are presented for CMP IV. Monitoring results presented for CMP V include *Water Column Profiling* and *Impact Monitoring during Dredging Operations* for February 2010. Detailed results will be discussed in the relevant *Quarterly Reports*.

1.5.1 CMP IV

Water Column Profiling for CMP IV in February 2010

Results of *Water Column Profiling* for February 2010 show that levels of Salinity, pH and Dissolved Oxygen (DO) compiled with WQOs at both Upstream and Downstream stations (*Figures 2* to *4* of *Annex B*). Levels of

Total Suspended Solids (TSS) complied with WQO at the Upstream station, however, exceedance of WQO was recorded at the Downstream station (*Figure 1* of *Annex B*). TSS data collected from the *Routine Water Quality Monitoring* should be examined further when available from the *Contractor* in order to assess any adverse impacts to the marine water quality caused by the CMP IV operations.

Routine Water Quality Monitoring for CMP IV during February 2010

In situ Measurements

Levels of pH, DO and Salinity complied with WQOs at all stations during *Routine Water Quality Monitoring* in February 2010 (*Figures 5, 8* and *9* of *Annex B*). All *in situ* water quality measurements showed relatively minor variations between Impact, Intermediate and Reference stations (*Figures 5* to *10* of *Annex B*).

Pit Specific Sediment Chemistry for CMP IV during December 2009

Concentrations of metals were generally below the *Lower Chemical Exceedance Level (LCEL)* at all stations, with the exceptions being Arsenic, Copper, Silver and Zinc (*Figures 11* and *12* of *Annex B*). Concentrations of Arsenic exceeded *LCEL* at all Near Pit and Pit Edge stations (*Figure 11* of *Annex B*). Concentrations of Copper, Silver and Zinc exceeded *LCEL* at the Active Pit station NCA and remained below the criterion at all other stations (*Figures 11* and *12* of *Annex B*). No metal concentrations exceeded the *Upper Chemical Exceedance Level (UCEL; Figures 11* and *12* of *Annex B*).

Concentrations of Total DDT were higher at the Near Pit station CNA and Active Pit station NCA (*Figure 13* of *Annex B*). Concentrations of 4,4" DDE, Tributyltin (TBT) in both interstitial water and sediment samples were higher at the Active Pit station NCA (*Figures 13-15* of *Annex B*). Concentrations of Low Molecular Weight (LMW) Polyaromatic Hydrocarbons (PAHs), High Molecular Weight (HMW) PAHs, Total PAHs and Polychlorinated Biphenyls (PCBs) were below detection limits at all stations.

Sediment concentrations of Total Organic Carbon (TOC) were slightly higher at the Active Pit station NCA relative to other stations (*Figure 17* of *Annex B*) and all sediment samples were mainly composed of silt and clay materials (68 – 98 %; *Figure 18* of *Annex B*).

Cumulative Impact Sediment Chemistry for December 2009

Concentrations of all metals, except Arsenic, were below the *LCEL* (*Figures 19* and *20* of *Annex B*). Concentrations of Arsenic in sediment samples from all stations were above the *LCEL* (*Figure 19* of *Annex B*). Overall, there were only minor differences in metal concentrations between stations (*Figures 19* and *20* of *Annex B*). All metal concentrations remained below *UCEL* (*Figures 19* and *20* of *Annex B*).

The concentration of Total DDT was higher at Mid Field stations and Near Field station RNA compared to all other stations (*Figure 21* of *Annex B*). Concentrations of 4,4" DDE were generally similar between stations with no obvious spatial trend (*Figure 21* of *Annex B*). Concentrations of TBT in sediment samples were highest at the Far Field station RFA (*Figure 22* of *Annex B*), whereas TBT concentrations in all interstitial water samples were below the detection limit. Similarly, concentrations were below detection limit at all stations for LMW PAHs, HMW PAHs, Total PAHs and PCBs.

Concentrations of TOC in sediments were relatively similar between stations (*Figure 23* of *Annex B*) and sediments were mainly composed of silt and clay materials (31.8 – 56.4 %; *Figure 24* of *Annex B*).

Benthic Macro-Infauna and Taxonomic Identification for CMP IV

A benthic survey was conducted at the Capped Mud Pit stations and at the Reference stations to the south of Sha Chau in December 2009. A total of 179 individuals, belonging to six animal phyla were obtained from the monitoring stations. *Table 1.2* summarises the results of the benthic survey.

Table 1.2 ***Summary of Benthic Survey Results during December 2009 Monitoring***

Area	Station	No. of individuals (Total)	Biomass (g) (Total)	Average No. of Individuals (Per Station)	Biomass (g) (Per Station)	Average Biomass per individual (mg)	Average Number of Genera
Capped Stations							
CPA	3	9	0.08	3.00	0.03	0.01	1.67
CPB	3	16	41.57	5.30	13.96	2.60	3.67
CPC	3	14	0.22	4.67	0.07	0.02	1.67
(Total)		*39*	*41.87*	-	*14.06*	-	-
8.44							
RBA	3	42	2.37	14.00	0.79	0.06	5.67
RBB	3	66	557.16	22.00	185.72	8.44	6.00
RBC	3	41	2.14	13.67	0.71	0.05	7.00
(Total)		*149*	*561.67*	-	*187.22*	-	-
Total	**18**	**188**	**603.54**	**-**	**201.28**	**-**	**-**

Total number of individuals, total biomass, average biomass per individual and average number of genera were generally lower at the Capped Pit stations than at the Reference stations.

Biota Tissues/Whole Body Contaminant Analysis for July and August 2009

<u>Tissue Analysis</u>

Graphical presentation for the tissue analysis of the demersal trawling samples which were collected in July and August 2009 is presented in *Figures 25* to *38* of *Annex B*. Analyses were only conducted on target species in which sufficient tissue samples were collected. Generally, tissue concentrations of all metals remained below the relevant *Maximum Permitted Concentrations* (*MPC*) which are specified under the *Food Adulteration (Metallic*

Contamination) Regulations (Cap. 132) of Hong Kong Law, except for Chromium concentrations in Gastropod tissues sampled at Impact station INA and Reference stations TNB and TSB (*Figure 31*).

Overall, concentrations of Inorganic Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Silver and Zinc measured in tissues samples of target species were relatively similar between Impact and Reference stations (*Figures 25*, *27*, *29*, *31*, *33*, *35*, *37*, *39* and *41*). In addition, concentrations of organic contaminants measured in tissue samples of target species appeared similar between Impact and Reference stations (*Figures 26*, *28*, *30*, *32*, *34*, *36* and *38*). Statistical tests to detect any significant differences in tissue contaminant concentrations between stations will be presented in the relevant *Quarterly Report.*

Whole Body Analysis

Graphical presentation for the whole body analysis of demersal trawling samples which were collected in July and August 2009 is presented in *Figures 39* to *48* of *Annex B*. Analyses were only conducted on the target species with sufficient whole body samples available. Concentrations of all metals measured in whole body samples remained below the relevant *MPC* standards.

Overall, concentrations of Inorganic Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Silver and Zinc measured in whole body samples of target species were relatively similar between the Impact and Reference stations (*Figures 39* to *48*). Concentrations of all organic contaminants measured in whole body samples of all target species also appeared similar between the Impact and Reference stations (*Figure 22, 24, 26, 28* and *30*).

1.5.2 CMP V

Water Column Profiling for CMP V during February 2010

Results of *Water Column Profiling* for February 2010 show that levels of Salinity, pH and DO compiled with WQOs at both Upstream and Downstream stations (*Figures 50* to *52* of *Annex B*). However, levels of TSS exceeded the WQO at both Upstream and Downstream stations (*Figure 49* of *Annex B*).

Impact Monitoring during Dredging Operations of CMP V – February 2010

Impact Monitoring during Dredging Operations of CMP V was conducted on 3 February 2010. Sampling was conducted during both mid-ebb and mid-flood tides at two Reference (Upstream) stations upstream and five Impact (Downstream) stations downstream of the dredging operations at CMP V. Monitoring was also conducted at the Ma Wan station. At each station, *in-situ* measurements of water quality parameters and water samples were taken from three water depth levels of the water column which were surface (1m below sea surface), mid-depth and bottom (1m above the seabed).

Monitoring results are presented in *Figures 53* to *56* of *Annex B*. Levels of DO, depth-average Turbidity and TSS complied with the Action and Limit Levels set in the *Baseline Monitoring Report* (1) (*Tables B1* and *B2* of *Annex B*).

1.6 ACTIVITIES SCHEDULED FOR THE NEXT MONTH

Impact Monitoring during Dredging Operations for CMP V is the only monitoring activity scheduled in the next monthly period of March 2010. The sampling schedule is presented in *Annex A*.

1.7 STUDY PROGRAMME

A summary of the Study programme is presented in *Annex C*.

(1) ERM (2009) Baseline Monitoring Report. Environmental Monitoring and Audit for Contaminated Mud Pit at Sha Chau (2009-2013) – Investigation. Agreement No. CE 4/2009(EP). Submitted to EPD in September 2009.

Annex A

Sampling Schedule

Annex A1 - East of Sha Chau Environmental Monitoring and Audit Sampling Schedule for CMP IVc (July 2009 - March 2010)

			2009						2010		
Pit Specific Sediment Chemistry	**Code**	**Frequency**	**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**
Active-Pit											
	NCA 1 - 8	3 times per year		*				*			
	NCB 1 - 8	3 times per year		*				*			
Pit-Edge											
	CPA 1-8	3 times per year		*				*			
	CPB 1-8	3 times per year		*				*			
Near-Pit											
	CNA 1-8	3 times per year		*				*			
	CNB 1-8	3 times per year		*				*			

Cumulative Impact Sediment Chemistry			**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**
Near-field Stations											
	RNA 1-9	2 times per year		*				*			
	RNB 1-9	2 times per year		*				*			
Mid-field Stations											
	RMA 1-9	2 times per year		*				*			
	RMB 1-9	2 times per year		*				*			
Capped Pit Stations											
	RCA 1-9	2 times per year		*				*			
	RCB 1-9	2 times per year		*				*			
Far-Field Stations											
	RFA 1-9	2 times per year		*				*			
	RFB 1-9	2 times per year		*				*			

Sediment Toxicity Tests			**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**
Near-Field Stations											
	TCA	2 times per year		3				3			
	TCB	2 times per year		3				3			
Reference Stations											
	TRA	2 times per year		3				3			
	TRB	2 times per year		3				3			

Tissue/ Whole Body Sampling			**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**
Near-Pit Stations											
	INA	2 times per year		*						*	
	INB	2 times per year		*						*	
Reference North											
	TNA	2 times per year		*						*	
	TNB	2 times per year		*						*	
Reference South											
	TSA	2 times per year		*						*	
	TSB	2 times per year		*						*	

Demersal Trawling			**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**
Near Pit Stations											
	INA 1-5	4 times per year	5	5					5	5	
	INB 1-5	4 times per year	5	5					5	5	
Reference North											
	TNA 1-5	4 times per year	5	5					5	5	
	TNB 1-5	4 times per year	5	5					5	5	
Reference South											
	TSA 1-5	4 times per year	5	5					5	5	
	TSB 1-5	4 times per year	5	5					5	5	

Capping			**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**
Ebb Tide											
Impact Station Downcurrent											
	IPE1	4 times per year	3	3				3		3	
	IPE2	4 times per year	3	3				3		3	
	IPE3	4 times per year	3	3				3		3	
	IPE4	4 times per year	3	3				3		3	
	PFC1	4 times per year	3	3				3		3	
Intermediate Station Downcurrent											
	INE1	4 times per year	3	3				3		3	
	INE2	4 times per year	3	3				3		3	
	INE3	4 times per year	3	3				3		3	
	INE4	4 times per year	3	3				3		3	
	INE5	4 times per year	3	3				3		3	
Reference Station Upcurrent											
	RFE1	4 times per year	3	3				3		3	
	RFE2	4 times per year	3	3				3		3	
	RFE3	4 times per year	3	3				3		3	
	RFE4	4 times per year	3	3				3		3	
	RFE5	4 times per year	3	3				3		3	
Flood Tide											
Impact Station Downcurrent											
	INF1	4 times per year	3	3				3		3	
	PFC2	4 times per year	3	3				3		3	
	INF3	4 times per year	3	3				3		3	
Intermediate Station Downcurrent											
	IPF1	4 times per year	3	3				3		3	
	IPF2	4 times per year	3	3				3		3	
	IPF3	4 times per year	3	3				3		3	
Reference Station Upcurrent											
	RFF1	4 times per year	3	3				3		3	
	RFF2	4 times per year	3	3				3		3	
	RFF3	4 times per year	3	3				3		3	

Routine Water Quality Monitoring			**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**
Ebb Tide											
Impact Station Downcurrent											
	IPE1	2 times per year		*						*	
	IPE2	2 times per year		*						*	
	IPE3	2 times per year		*						*	
	IPE4	2 times per year		*						*	
	IPE5	2 times per year		*						*	
Intermediate Station Downcurrent											
	INE1	2 times per year		*						*	
	INE2	2 times per year		*						*	
	INE3	2 times per year		*						*	
	INE4	2 times per year		*						*	
	INE5	2 times per year		*						*	
Reference Station Upcurrent											
	RFE1	2 times per year		*						*	
	RFE2	2 times per year		*						*	
	RFE3	2 times per year		*						*	
	RFE4	2 times per year		*						*	
	RFE5	2 times per year		*						*	
Flood Tide											
Impact Station Downcurrent											
	INF1	2 times per year		*						*	
	INF2	2 times per year		*						*	
	INF3	2 times per year		*						*	
Intermediate Station Downcurrent											
	IPF1	2 times per year		*						*	
	IPF2	2 times per year		*						*	
	IPF3	2 times per year		*						*	
Reference Station Upcurrent											
	RFF1	2 times per year		*						*	
	RFF2	2 times per year		*						*	
	RFF3	2 times per year		*						*	

Water Column Profiling			**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**
Plume Stations	WCP1	6 times per year	2	2				2	2	2	
	WCP2	6 times per year	2	2				2	2	2	

Benthic Recolonisation Studies			**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**
Capped Contaminated Mud Pits											
	CPA 1-3	2 times per year		3				3			
	CPB 1-3	2 times per year		3				3			
	CPC 1-3	2 times per year		3				3			
Reference Stations											
	RBA 1-3	2 times per year		3				3			
	RBB 1-3	2 times per year		3				3			
	RBC 1-3	2 times per year		3				3			

"*" = Number of replicates depends on field catch or parameters

Sampling completed

Annex A2 - East of Sha Chau Environmental Monitoring and Audit Sampling Schedule for CMP V (July 2009 - March 2010)

			2009						2010		
Baseline Water Quality Monitoring			**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**
Near Field	ESC-WNAA		*	*							
	ESC-WNAB		*	*							
	ESC-WNAC		*	*							
	ESC-WNAD	To be surveyed 24 times (3 days per week during mid-flood and mid-ebb tide of each day) in the month prior to commencement of marine works	*	*							
	ESC-WNBA		*	*							
	ESC-WNBB		*	*							
	ESC-WNBC		*	*							
	ESC-WNBD		*	*							
Mid Field	ESC-WMB	To be surveyed 24 times (3 days per week during mid-flood and mid-ebb tide of each day) in the month prior to commencement of marine works	*	*							
	ESC-WMA		*	*							
Far Field	ESC-WFA	To be surveyed 24 times (3 days per week during mid-flood and mid-ebb tide of each day) in the month prior to commencement of marine works	*	*							
	ESC-WFB		*	*							
	MW1		*	*							
Reference Stations	NM1		*	*							
	NM2		*	*							
	NM3	To be surveyed 24 times (3 days per week during mid-flood and mid-ebb tide of each day) in the month prior to commencement of marine works	*	*							
	NM5		*	*							
	NM6		*	*							
Water Column Profiling			**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**
Plume Stations	Upstream				2	2	2	2	2	2	
	Downstream				2	2	2	2	2	2	
Water Quality Impact Monitoring for Dredging			**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**
Downcurrent Impact Stations	1				*	*	*	*	*	*	*
	2				*	*	*	*	*	*	*
	3				*	*	*	*	*	*	*
	4				*	*	*	*	*	*	*
	5				*	*	*	*	*	*	*
Upcurrent Stations	1				*	*	*	*	*	*	*
	2				*	*	*	*	*	*	*
	MW1				*	*	*	*	*	*	*

Sampling completed

Sampling to be completed

Annex B

Monitoring Results

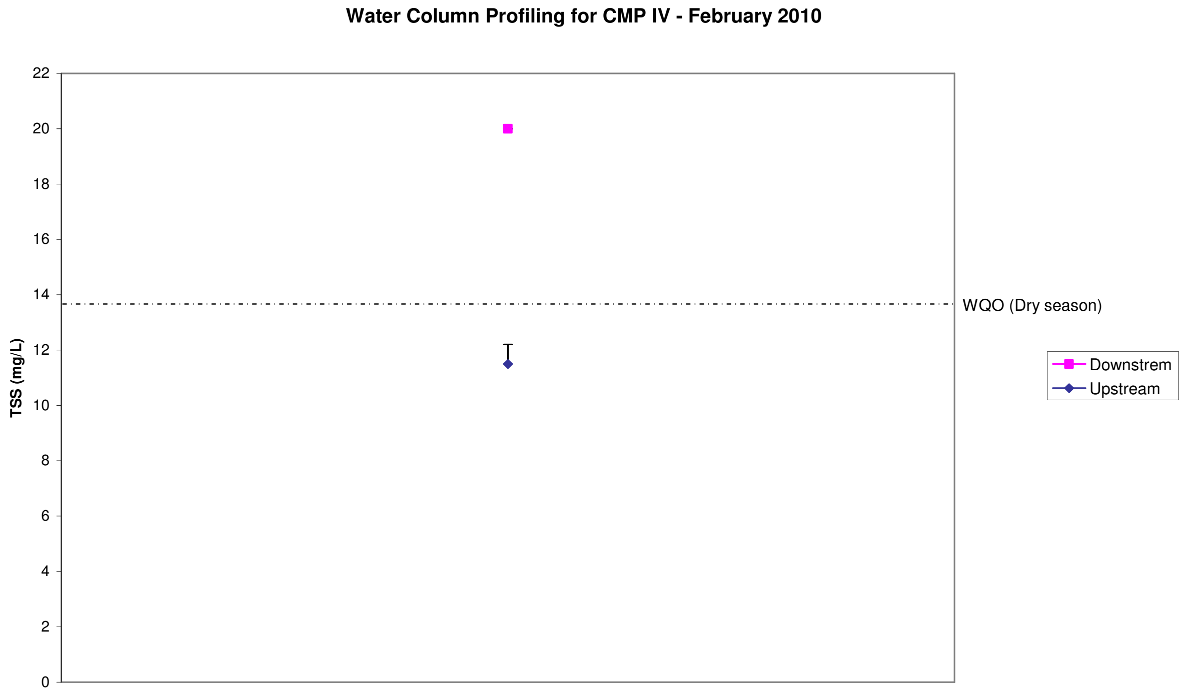

Figure 1: Levels of Total Suspended Solids (mean ± SD) during Water Column Profiling for CMP IV in February 2010.

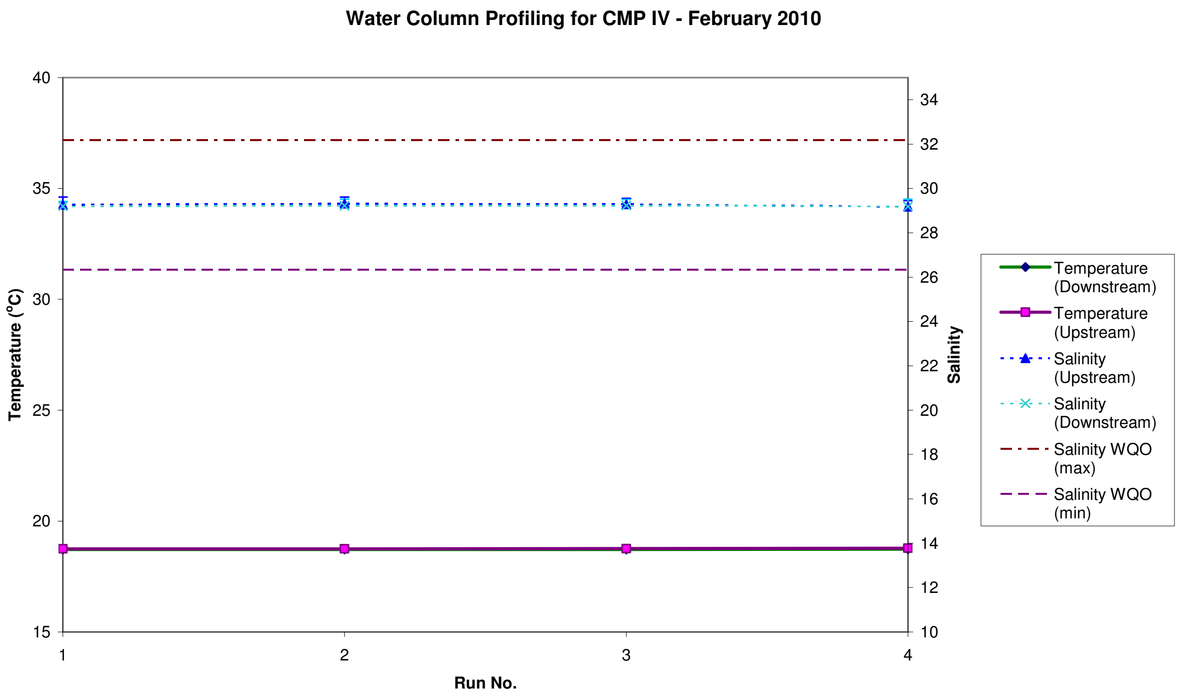

Figure 2: Salinity and Temperature (mean ± SD) during Water Column Profiling for CMP IV in February 2010.

Source:	H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06. 12 Water Column Profiling CMP V\Feb 2010
Date:	9/03/2010

Environmental Resources Management

ERM

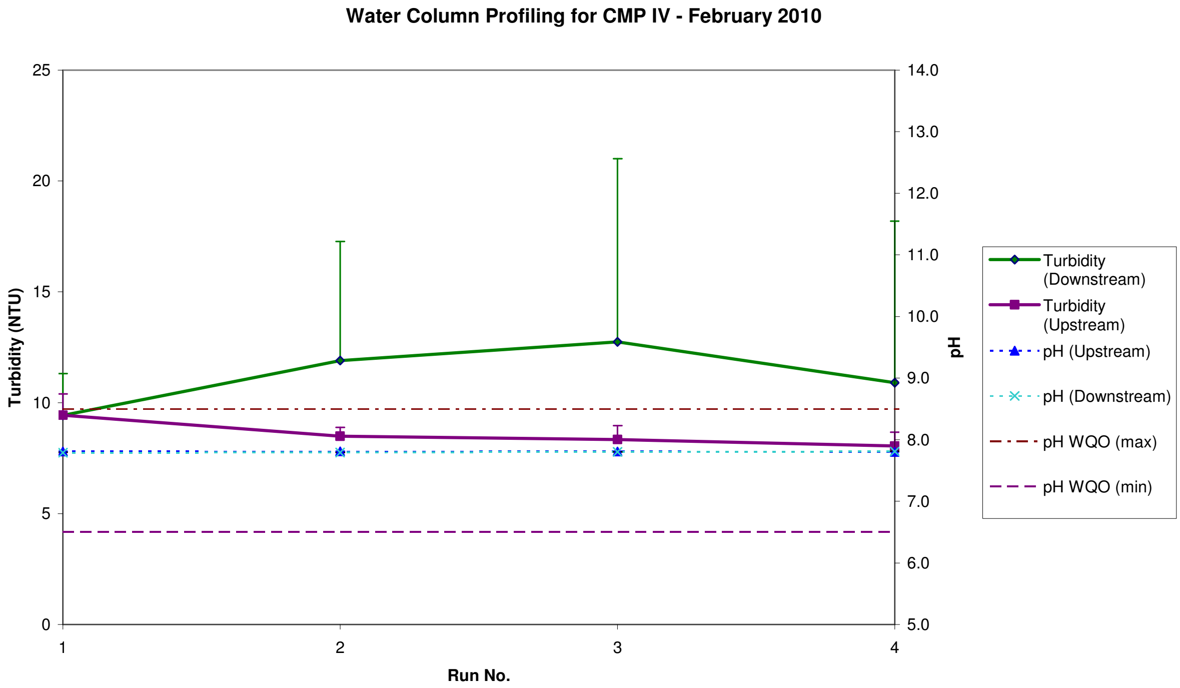

Figure 3: Turbidity and pH (mean ± SD) during Water Column Profiling for CMP IV in February 2010.

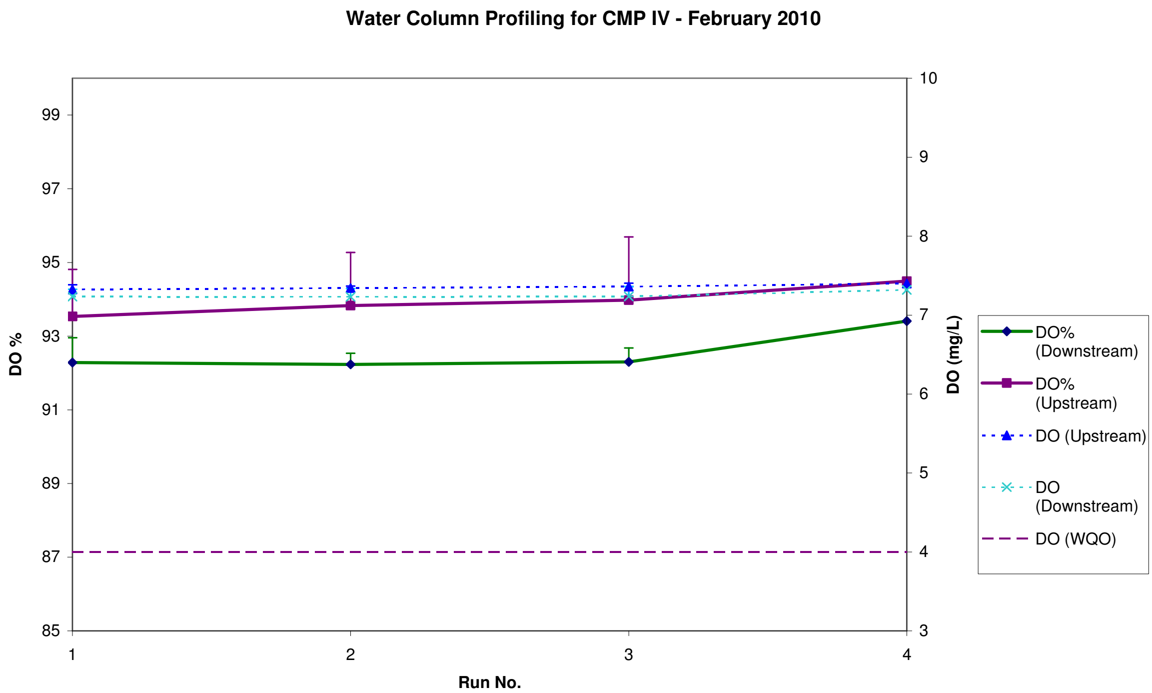

Figure 4: Dissolved Oxygen (mean ± SD) during Water Column Profiling for CMP IV in December 2009.

Source:	H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06. 12 Water Column Profiling CMP V\Feb 2010
Date:	09/03/2010

Environmental Resources Management

ERM

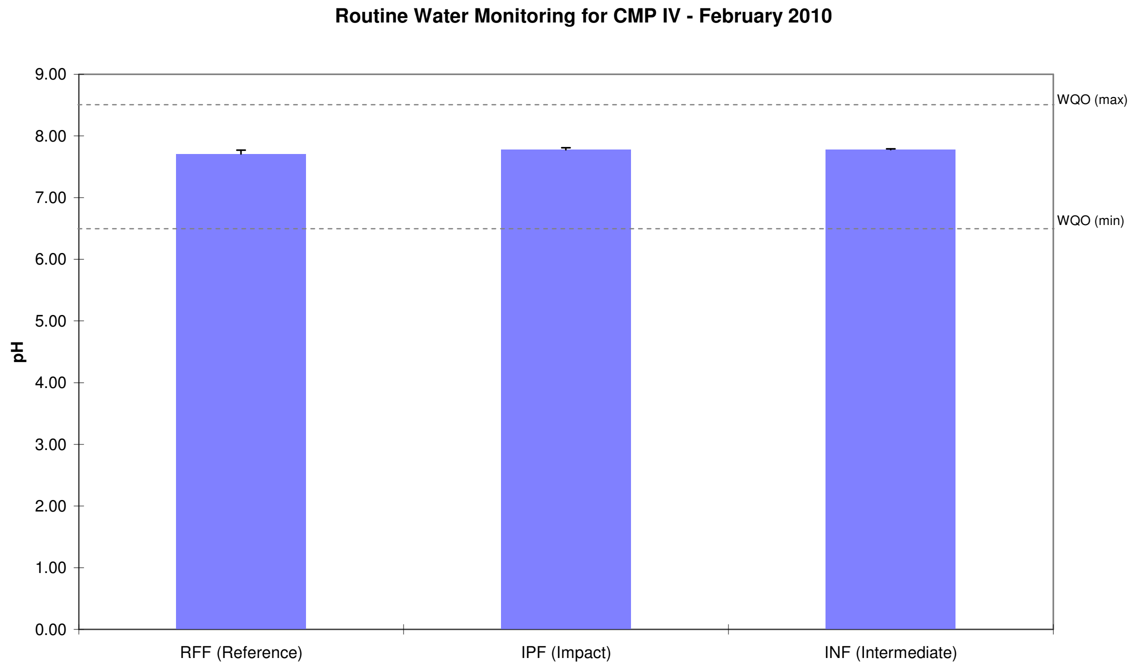

Figure 5: Level of pH (mean ± SD) during *in-situ* measurements for Routine Water Quality Monitoring for CMP IV in February 2010.

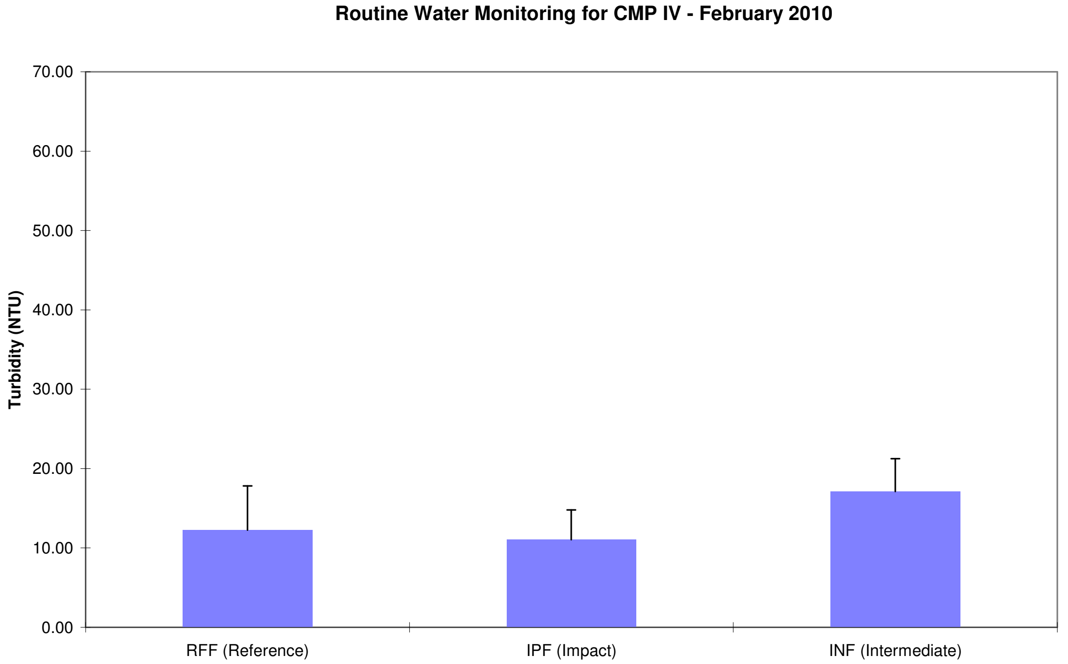

Figure 6: Level of Turbidity (mean ± SD) during *in-situ* measurements for Routine Water Quality Monitoring for CMP IV in February 2010.

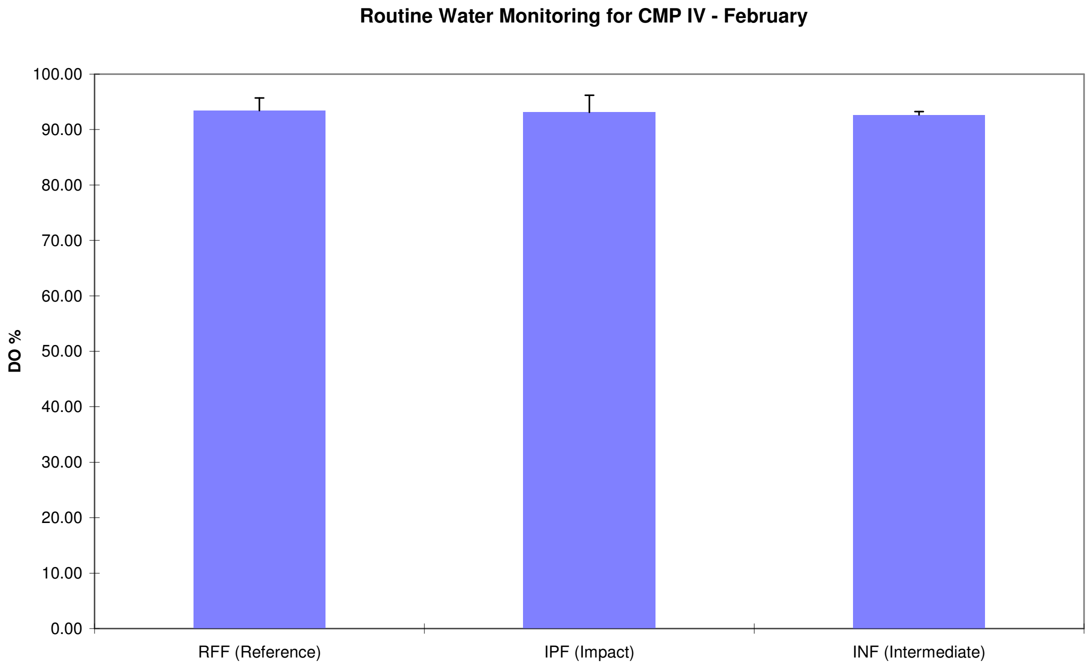

Figure 7: Level of Dissolved Oxygen (% mean ± SD) during *in-situ* measurements for Routine Water Quality Monitoring for CMP IV in February 2010.

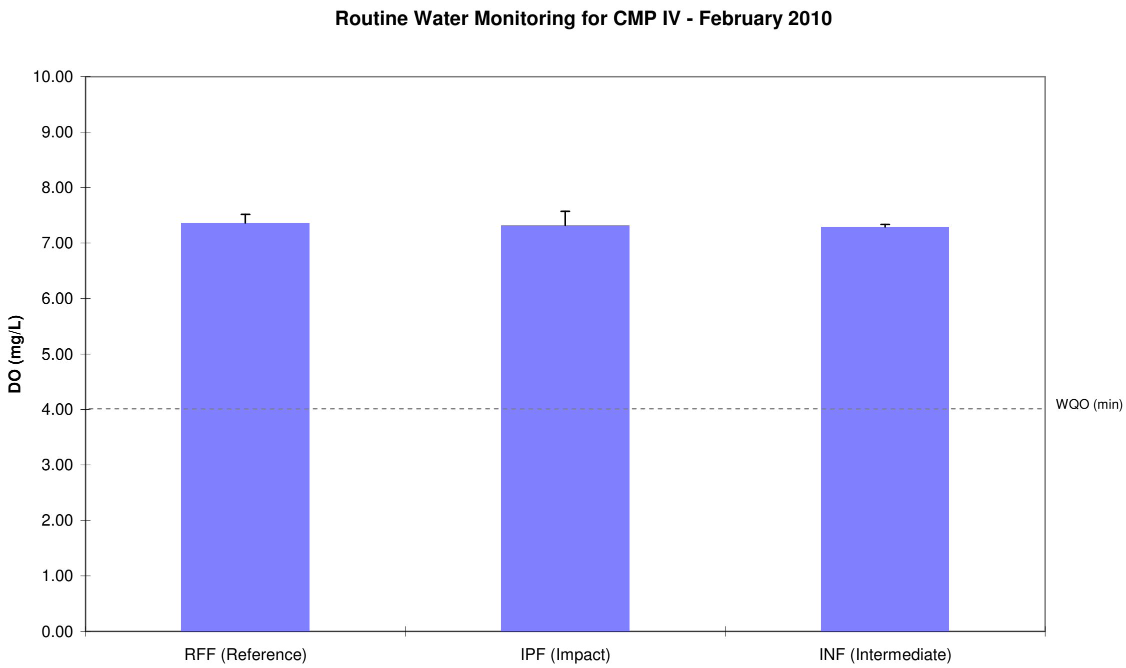

Figure 8: Concentration of Dissolved Oxygen (mg/L mean ± SD) during *in-situ* measurements for Routine Water Quality Monitoring for CMP IV February 2010.

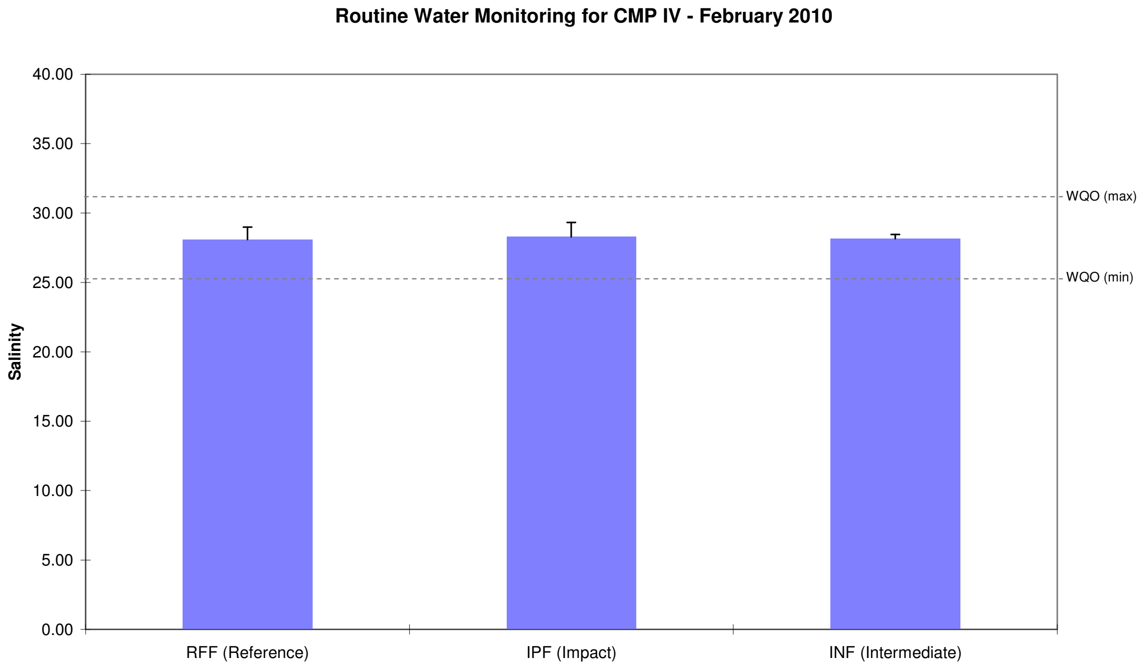

Figure 9: Level of Salinity (mean ± SD) during *in-situ* measurements for Routine Water Quality Monitoring for CMP IV in February 2010.

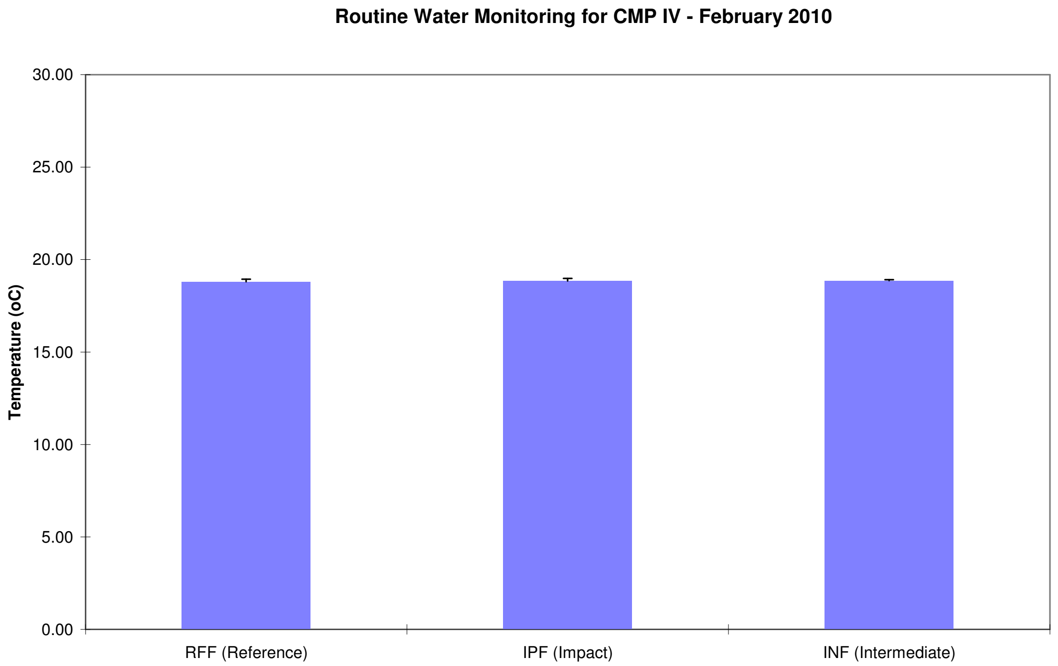

Figure 10: Temperature (mean ± SD) during *in-situ* measurements for Routine Water Quality Monitoring for CMP IV in February 2010.

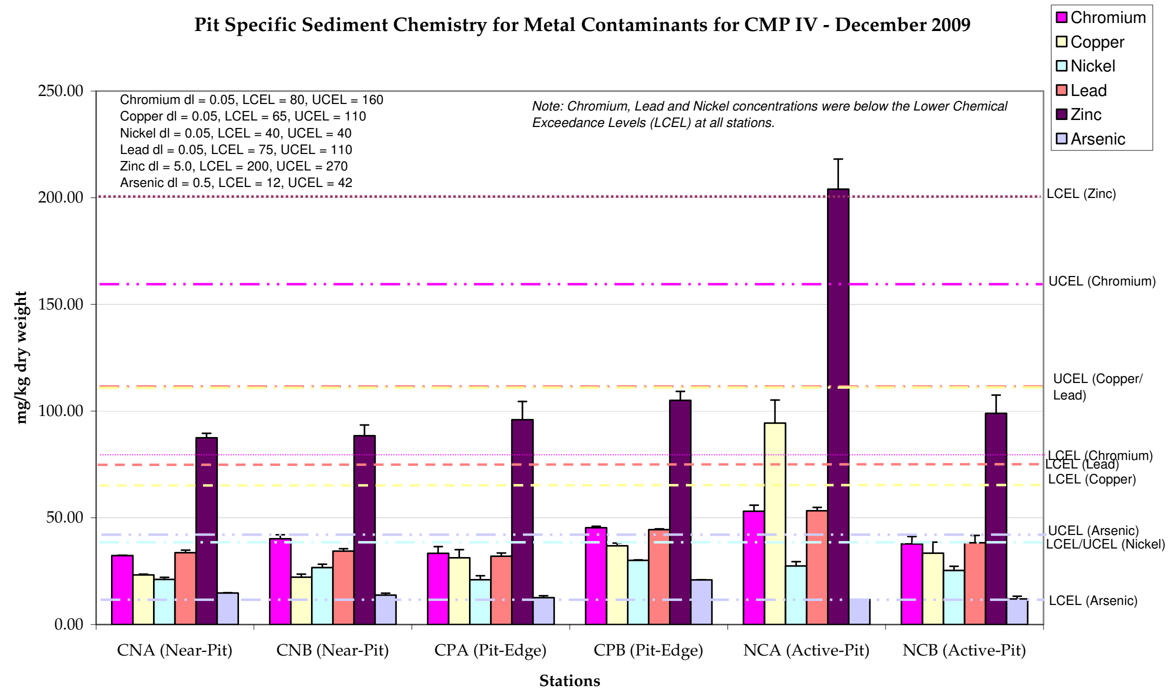

Figure 11: Concentration of Metals (Cr, Cu, Ni, Pb, Zn and As) in sediment samples for Pit Specific Sediment Chemistry for CMP IV during December 2009.

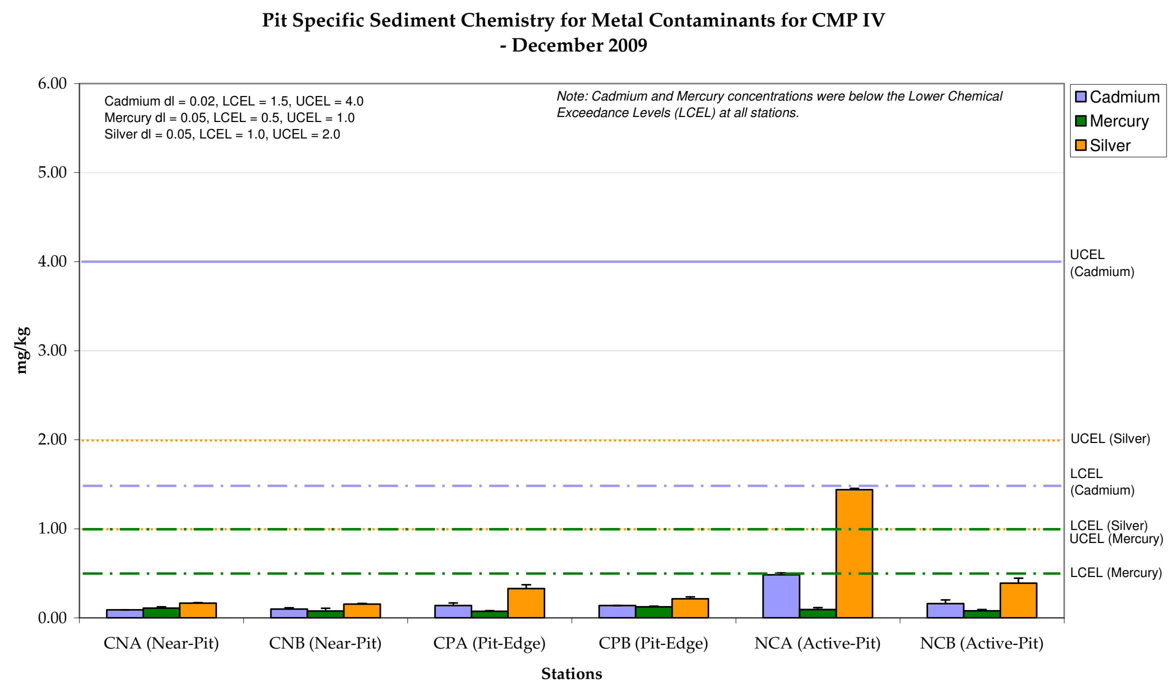

Figure 12: Concentration of Metals (Cd, Hg and Ag) in sediment samples for Pit Specific Sediment Chemistry for CMP IV during December 2009.

Source:	H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.3 Pit Specific Sediment Chemistry\Dec 2009
Date:	09/03/2010

Environmental Resources Management

ERM

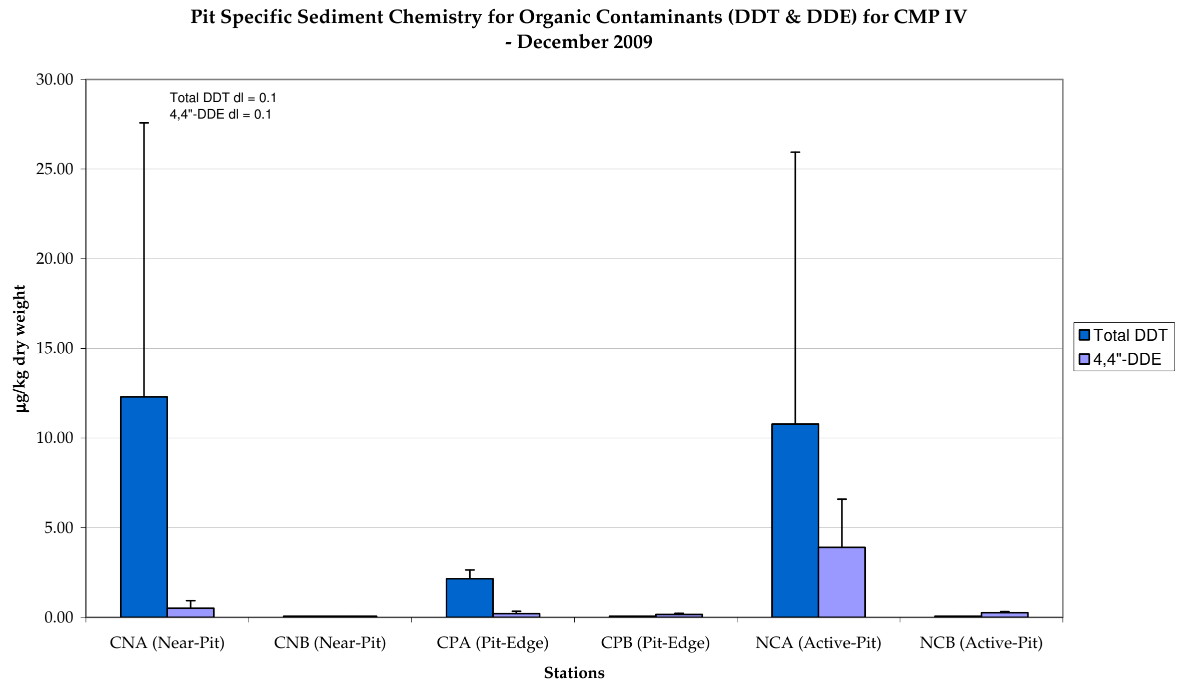

Figure 13: Concentration of DDT and DDE in sediment samples for Pit Specific Sediment Chemistry for CMP IV during December 2009.

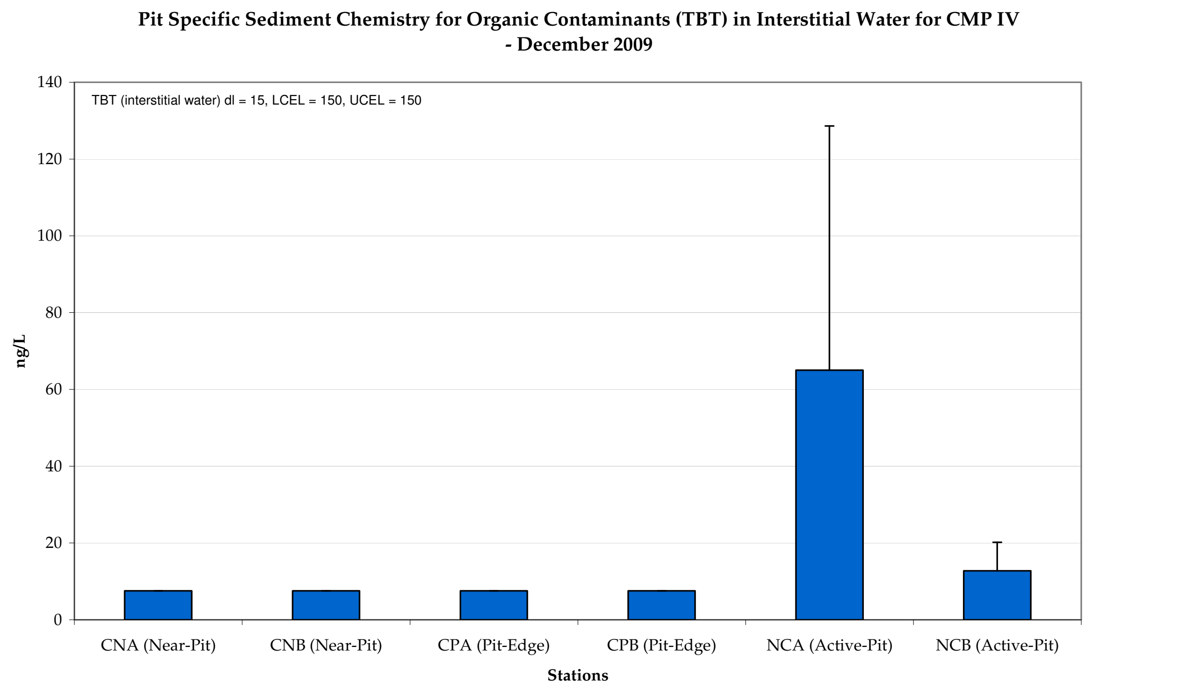

Figure 14: Concentration of Tributyltin (TBT) in interstitial water samples for Pit Specific Sediment Chemistry for CMP IV during December 2009.

Source:	H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.3 Pit Specific Sediment Chemistry\Dec 2009	**Environmental Resources Management** ERM
Date:	09/03/2010	

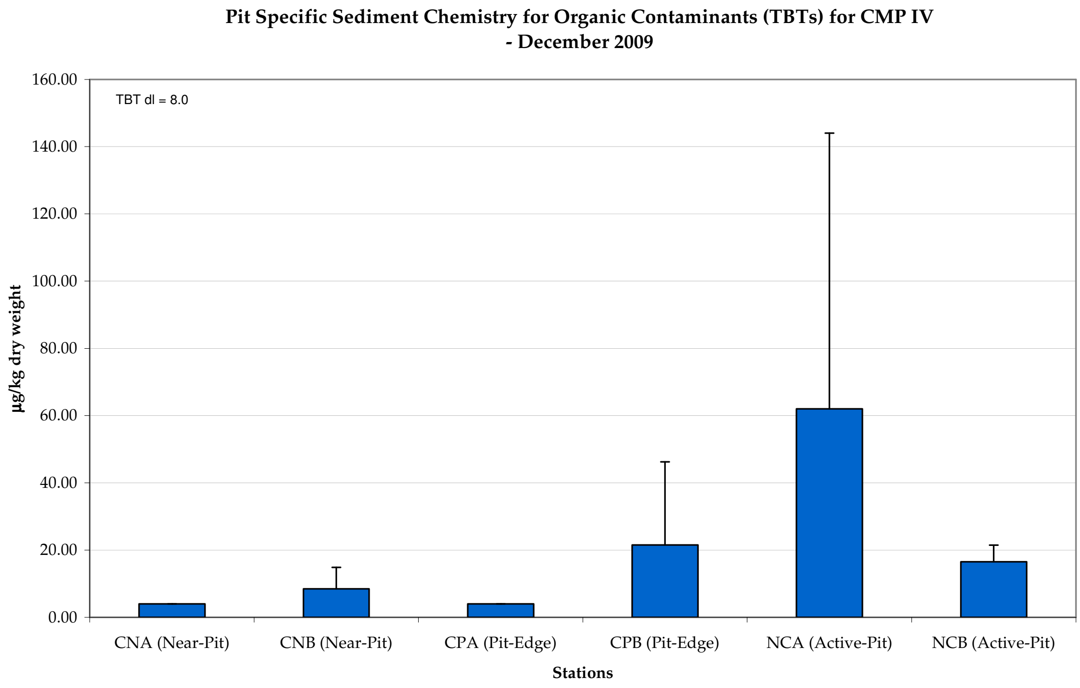

Figure 15: Concentration of Tributyltin (TBT) in sediment samples for Pit Specific Sediment Chemistry for CMP IV during December 2009.

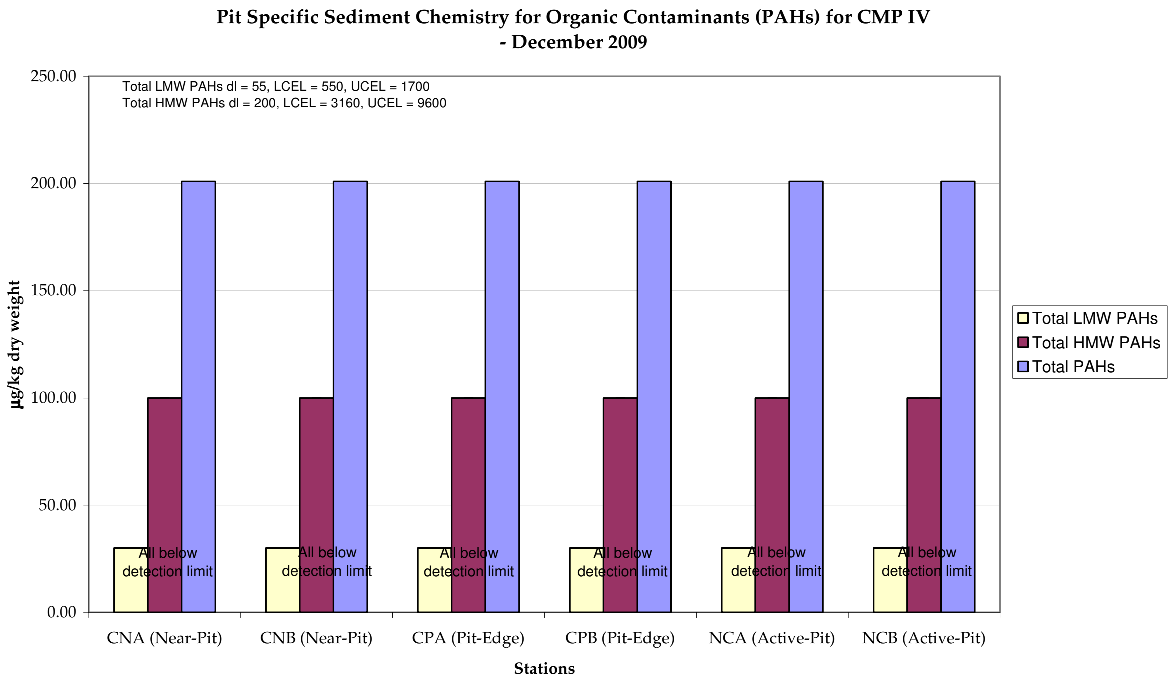

Figure 16: Concentration of Low Molecular Weight (LMW) Polyaromatic Hydrocarbons (PAHs), High Molecular Weight (HMW) PAHs and Total PAHs in sediment samples for Pit Specific Sediment Chemistry for CMP IV during December 2009.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.3 Pit Specific Sediment Chemistry\Dec 2009

Date: 09/03/2010

Environmental Resources Management

ERM

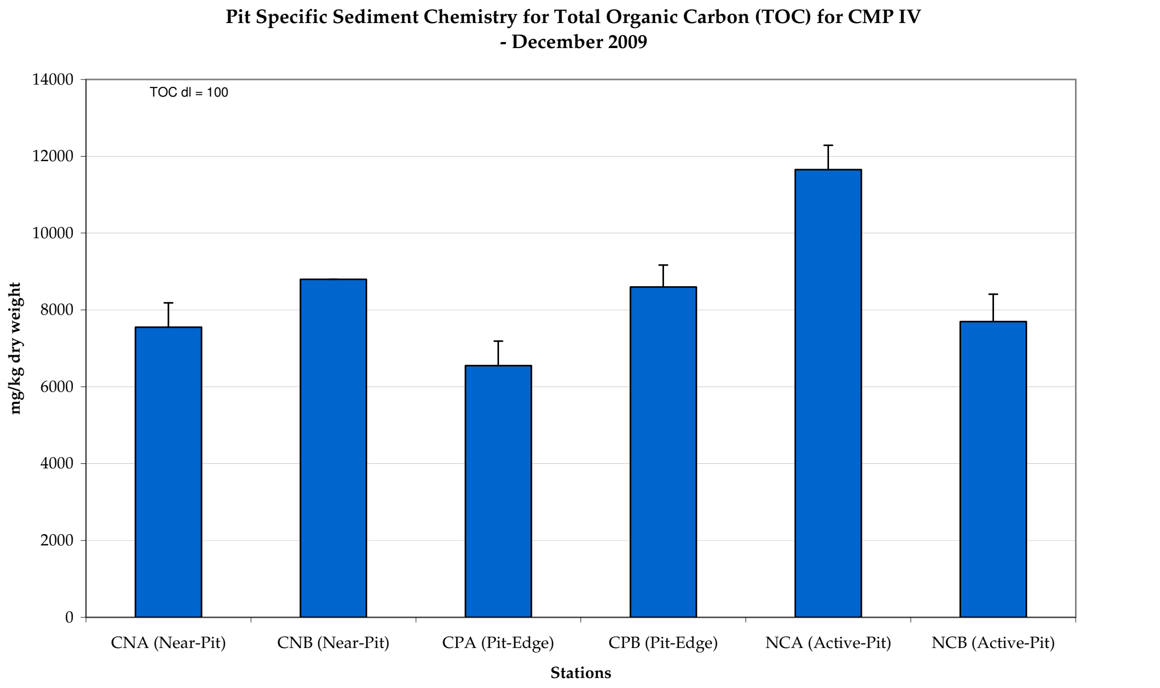

Figure 17: Concentration of Total Organic Carbon (TOC) in sediment samples for Pit Specific Sediment Chemistry for CMP IV during December 2009.

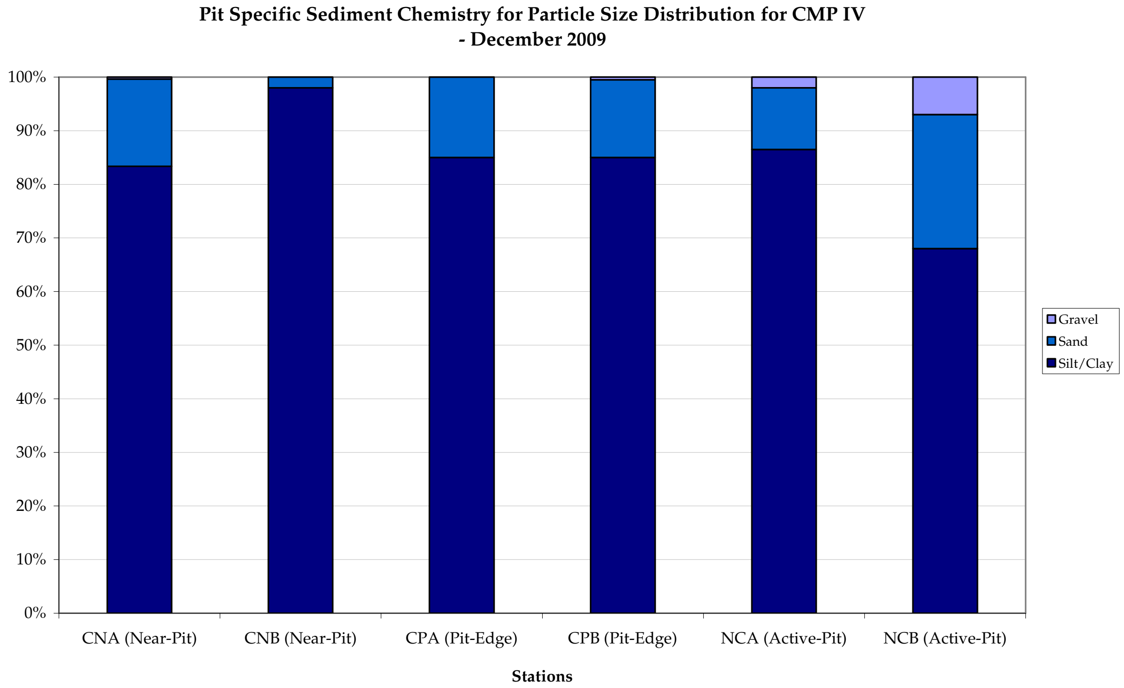

Figure 18: Particle Size Distribution (% mean) of sediment samples for Pit Specific Sediment Chemistry for CMP IV during December 2009.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.3 Pit Specific Sediment Chemistry\Dec 2009

Date: 09/03/2010

Environmental Resources Management

ERM

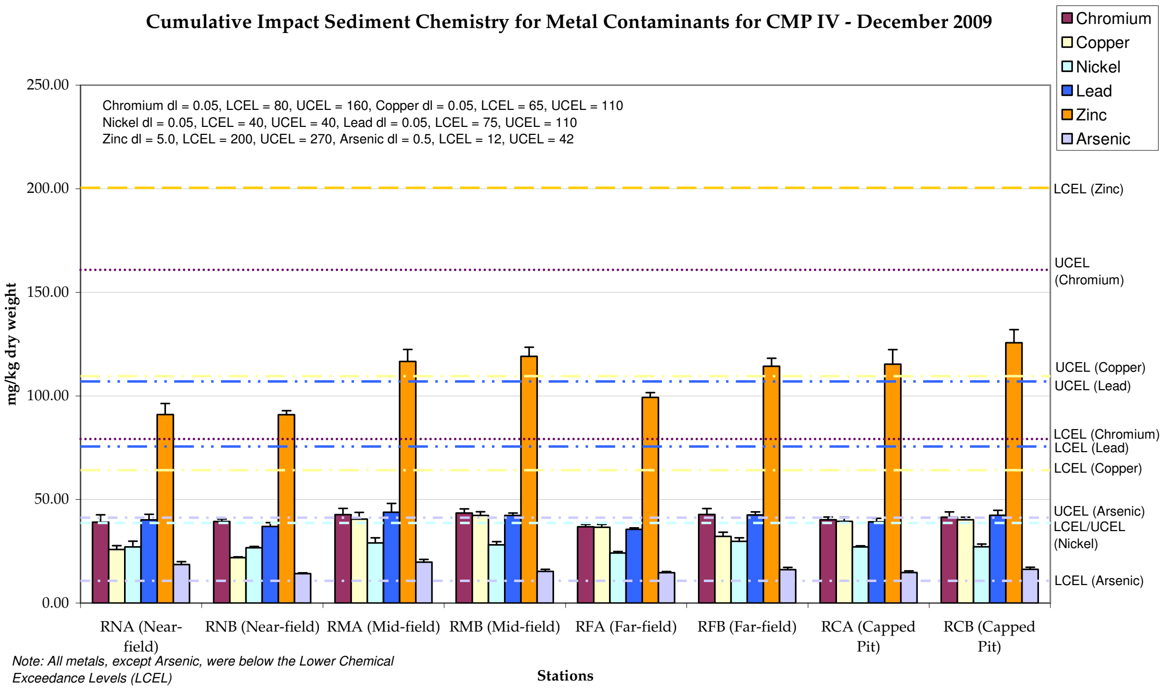

Figure 19: Concentration of Metals (Cr, Cu, Ni, Pb, Zn and As) in sediment samples for Cumulative Impact Sediment Chemistry for CMP IV during December 2009.

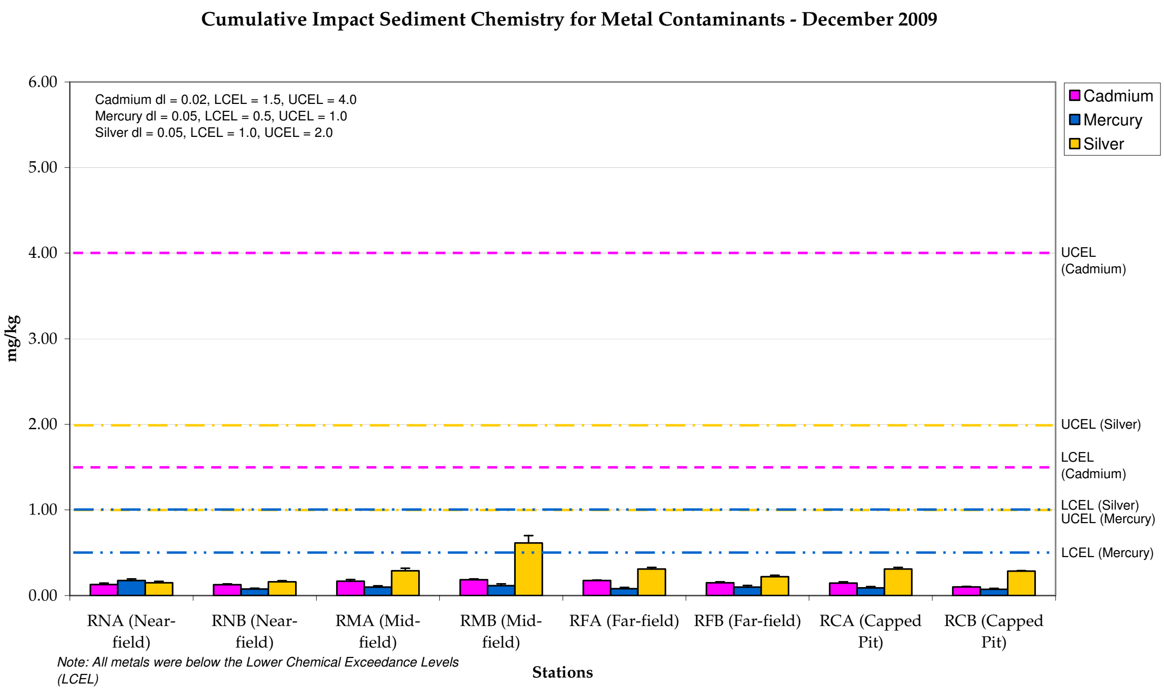

Figure 20: Concentration of Metals (Cd, Hg and Ag) in sediment samples for Cumulative Impact Sediment Chemistry for CMP IV during December 2009.

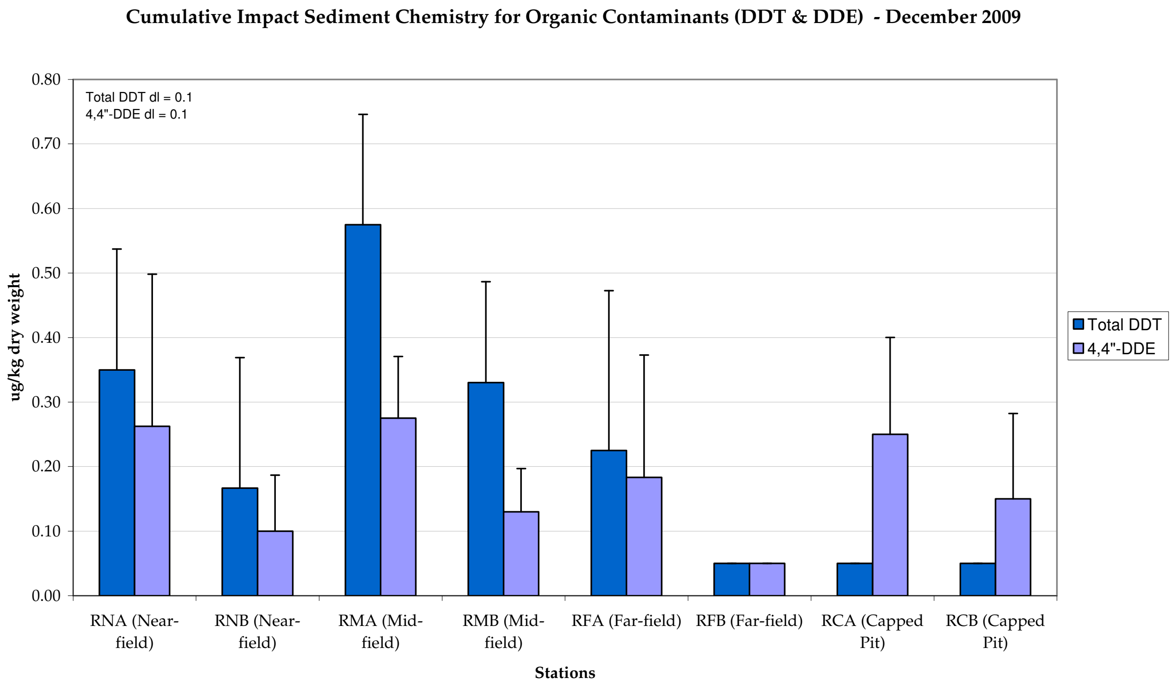

Figure 21: Concentration of DDT and DDE in sediment samples for Cumulative Impact Sediment Chemistry for CMP IV during December 2009.

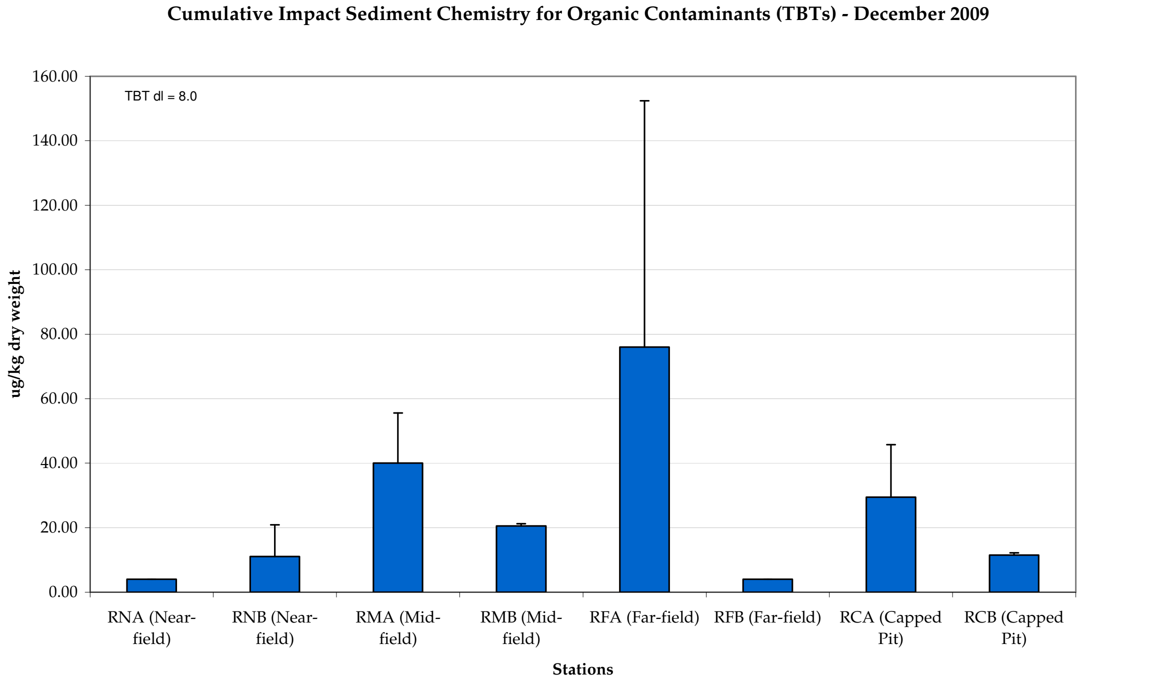

Figure 22: Concentration of Tributyltin (TBT) in sediment samples for Cumulative Impact Sediment Chemistry for CMP IV during December 2009.

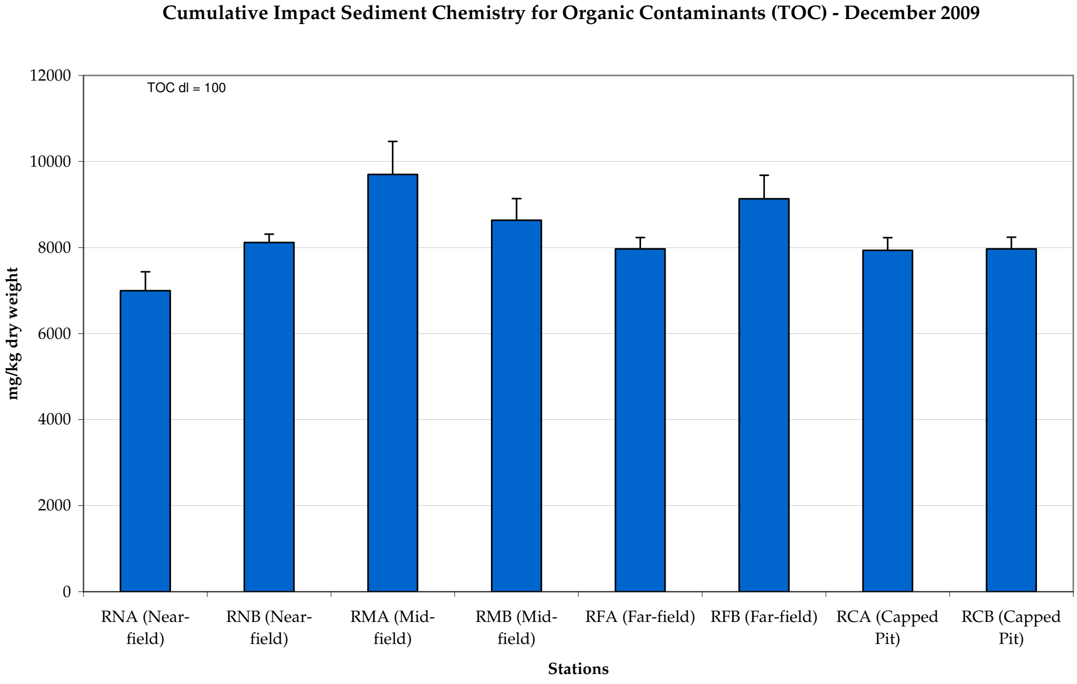

Figure 23: Concentration of Total Organic Carbon (TOC) in sediment samples for Cumulative Impact Sediment Chemistry for CMP IV during December 2009.

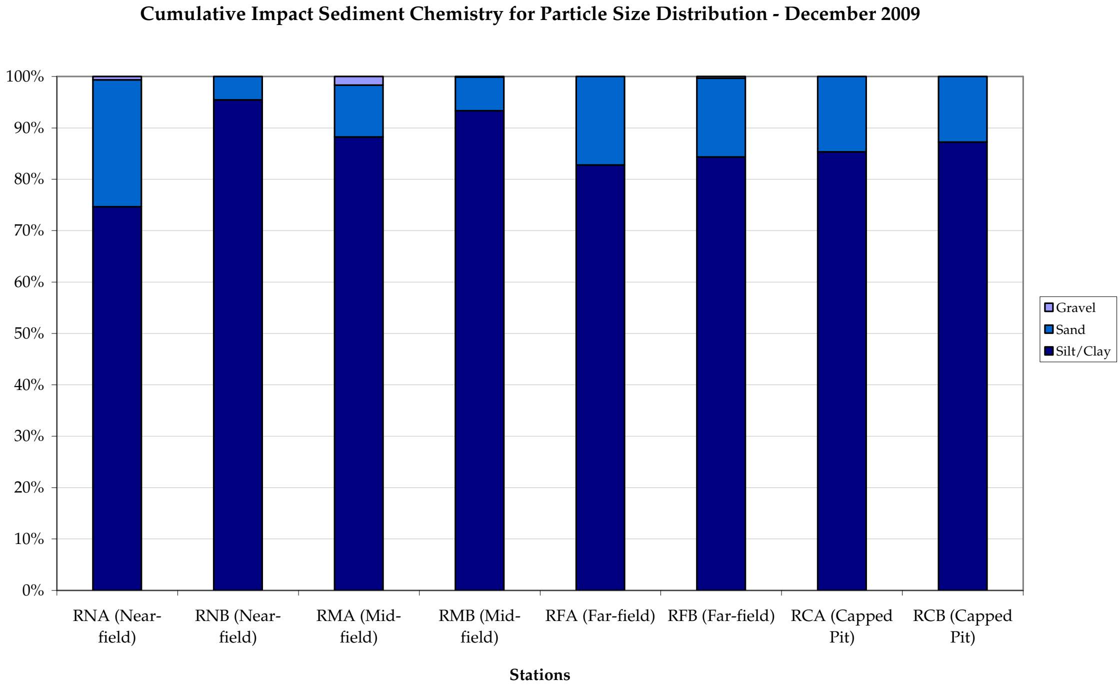

Figure 24: Particle Size Distribution (%) of sediment samples for Cumulative Impact Sediment Chemistry for CMP IV during December 2009.

Figure 25: Levels of Metals (mean ± SD) in tissues of Burrowing Fish from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Inorganic Arsenic, Cadmium and Silver were below the limit of detection at all stations.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures

Date: 10/03/2010

Environmental Resources Management

ERM

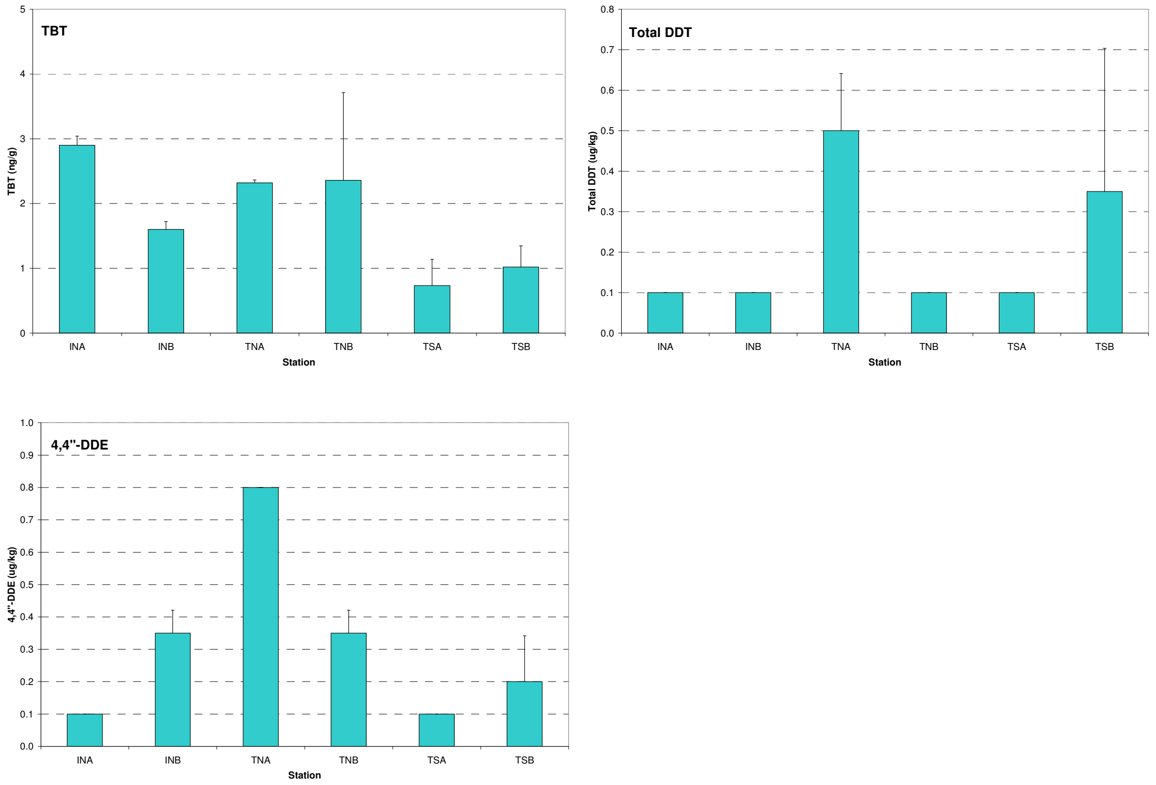

Figure 26: Levels of Organic Contaminants (mean ± SD) in tissues of Burrowing Fish from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Total PCBs were below the limit of detection at all stations.

Figure 27: Levels of Metals (mean ± SD) in tissues of Demersal/Pelagic Fish from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Inorganic Arsenic, Cadmium and Silver were below detection limits at all stations.

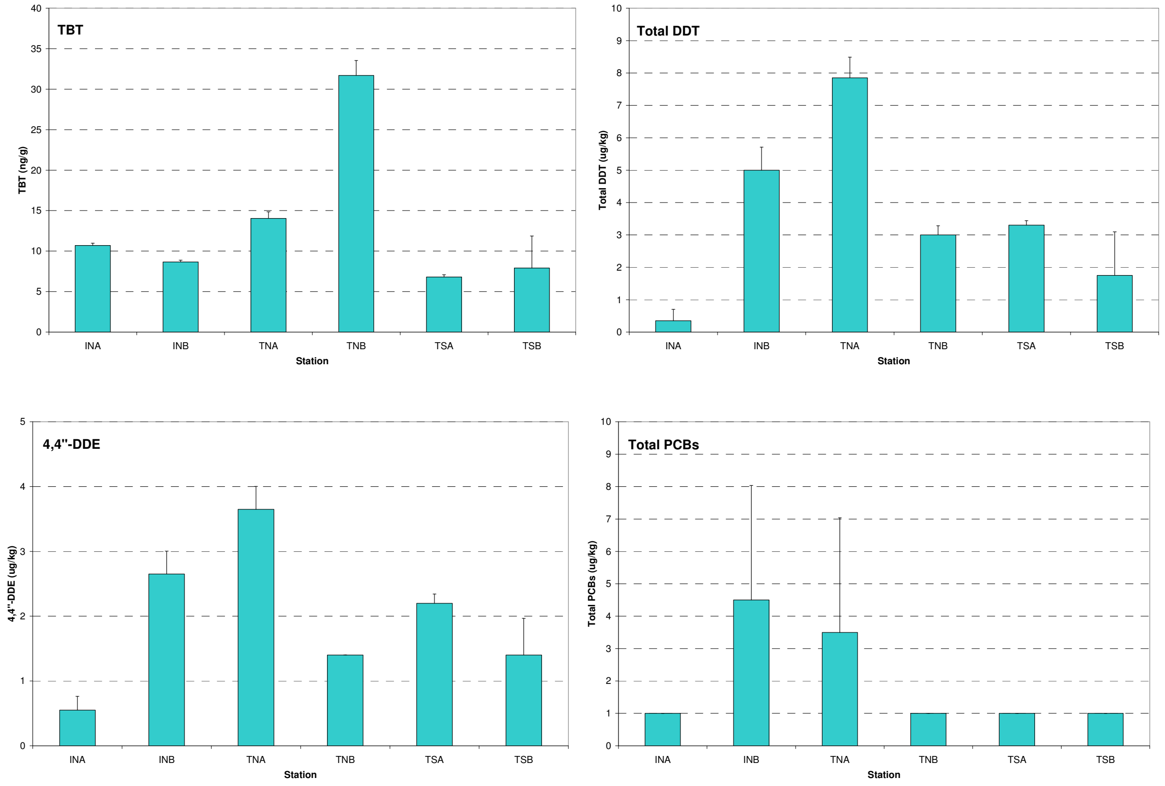

Figure 28: Levels of Organic Contaminants (mean ± SD) in tissues of Demersal/Pelagic Fish from Demersal Trawling Monitoring during July and August 2009.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures

Date: 10/03/2010

Environmental Resources Management

ERM

Figure 29: Levels of Metals (mean ± SD) in tissues of Flat Fish from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Inorganic Arsenic and Silver were below the limit of detection at all stations.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures

Date: 10/03/2010

Environmental Resources Management

ERM

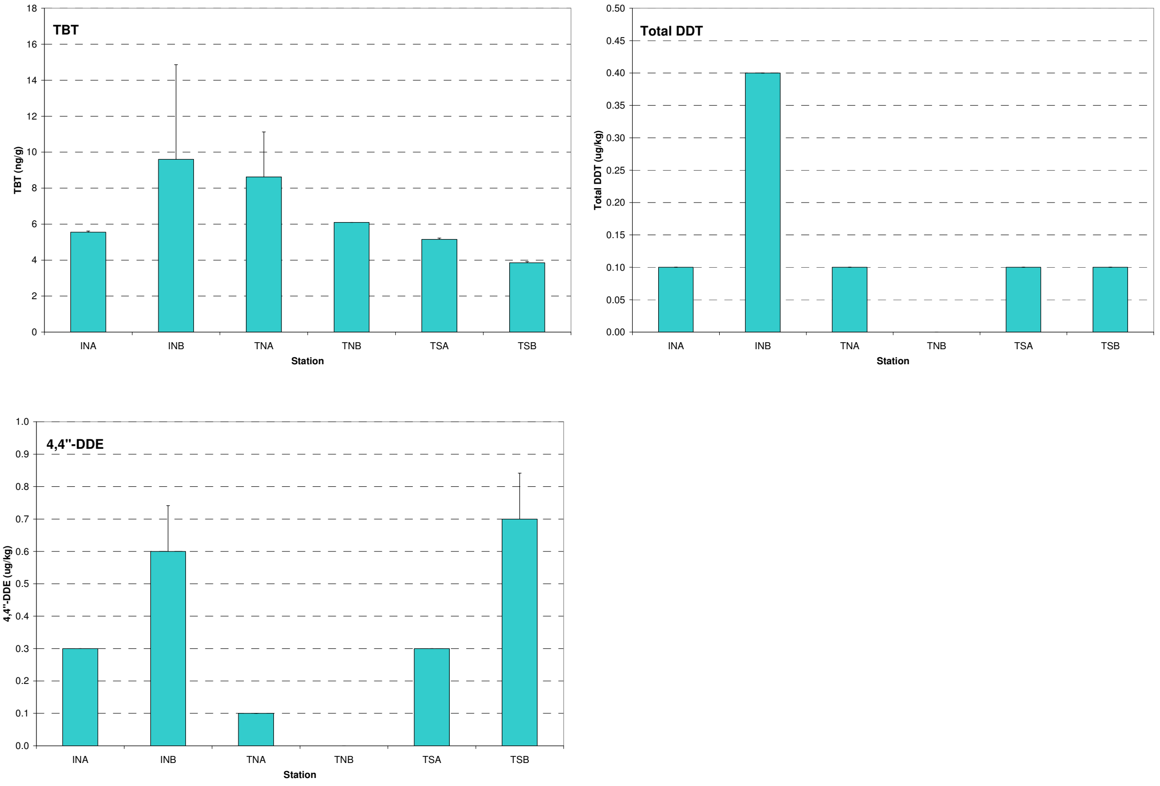

Figure 30: Levels of Organic Contaminants (mean ± SD) in tissues of Flat Fish from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Total PCBs were below the detection limit at all stations.

Figure 31: Levels of Metals (mean ± SD) in tissues of Gastropods from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Mercury were below the detection limit at all stations.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures

Date: 10/03/2010

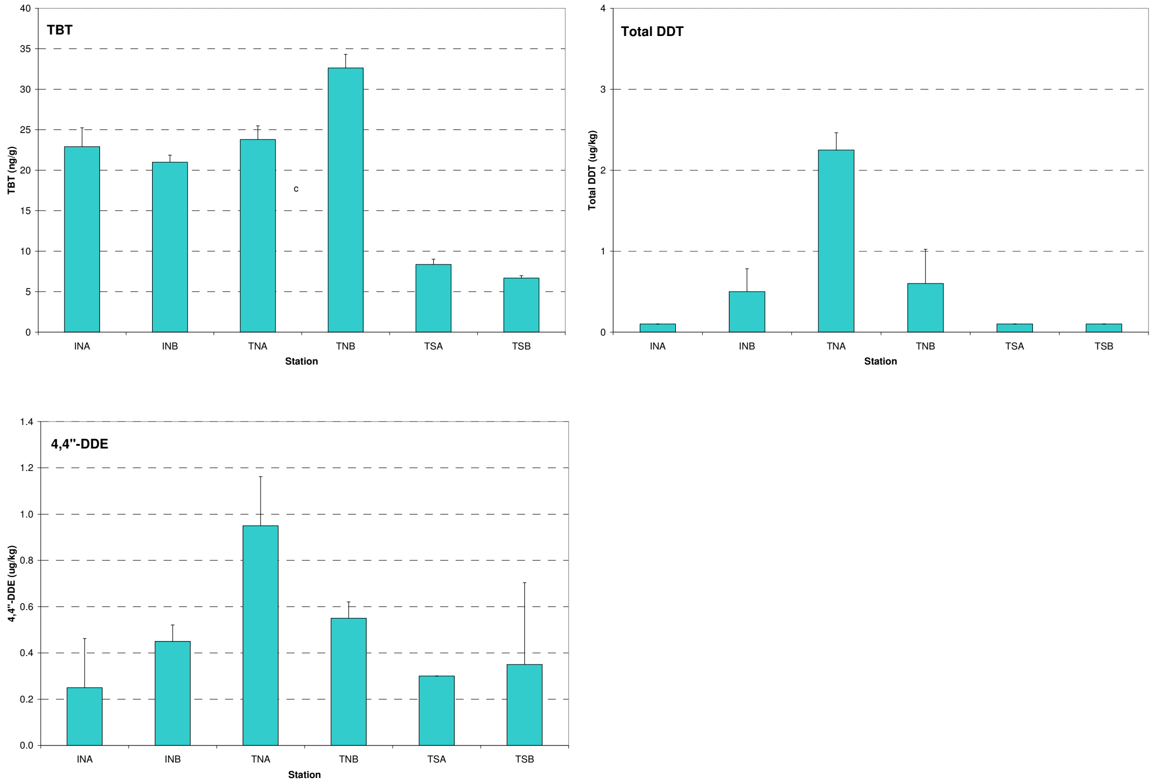

Figure 32: Levels of Organic Contaminants (mean ± SD) in tissues of Gastropods from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Total PCBs were below the detection limit at all stations.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures

Date: 10/03/2010

Environmental Resources Management

ERM

Figure 33: Levels of Metals (mean ± SD) in tissues of Prawns from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Cadmium and Mercury were below the limit of detection at all stations.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures

Date: 10/03/2010

Environmental Resources Management

ERM

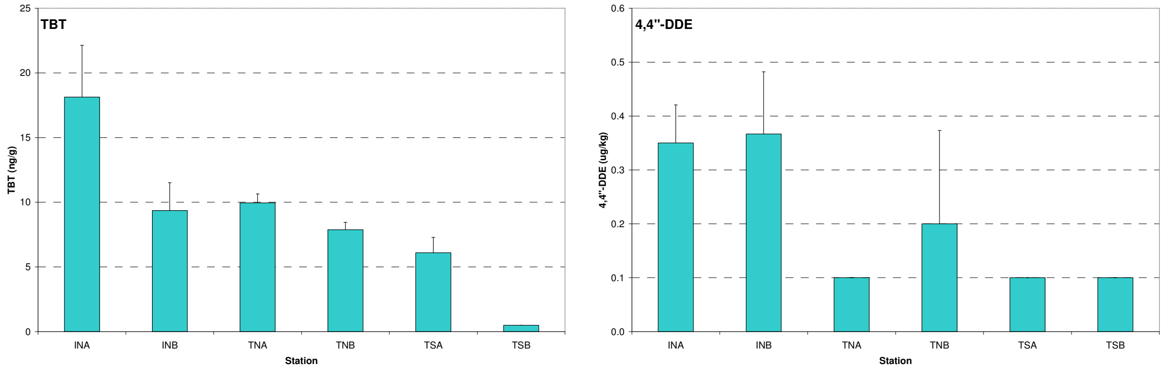

Figure 34: Levels of Organic Contaminants (mean ± SD) in tissues of Prawns from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Total DDT and Total PCB were below the limit of detection at all stations.

Source:	H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures	**Environmental Resources Management** ERM
Date:	10/03/2010	

Figure 35: Levels of Metals (mean ± SD) in tissues of Swimming Crab from Demersal Trawling Monitoring during July and August 2009. Note: Sufficient samples for all analyses were not collected from station TSB.

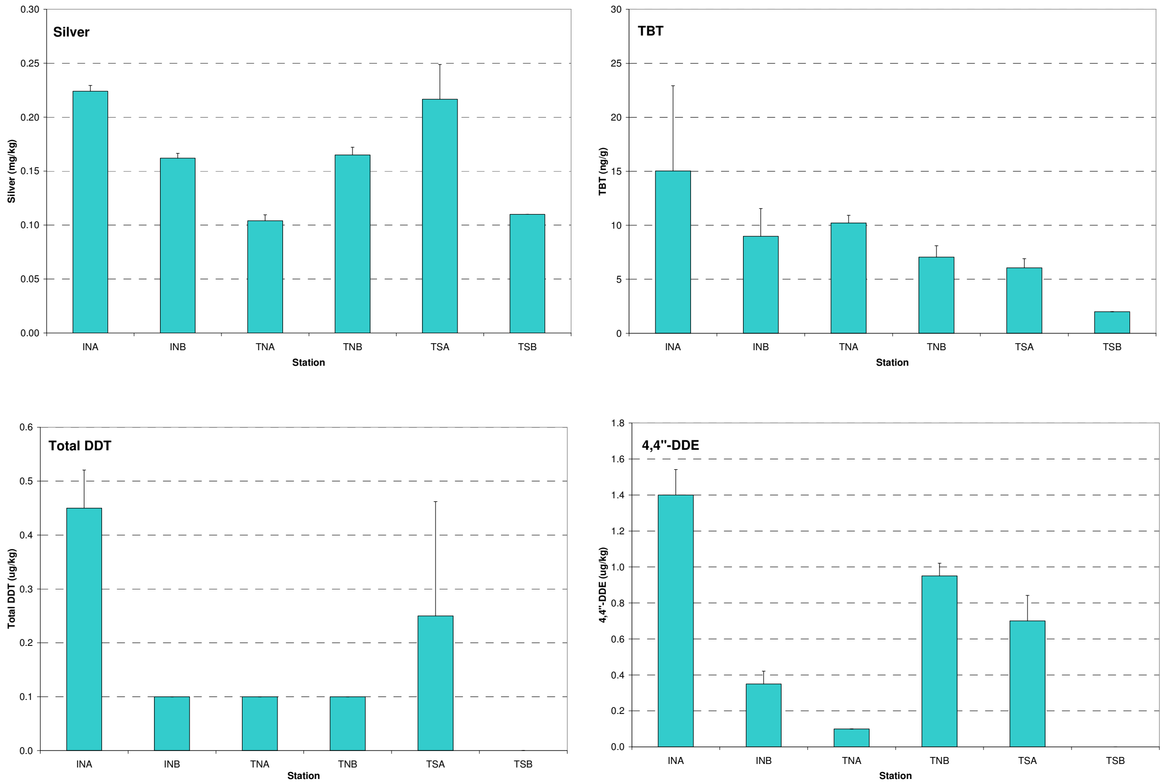

Figure 36: Levels of Silver and Organic Contaminants (mean ± SD) in tissues of Swimming Crab from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Total PCBs were below the limit of detection at all stations and sufficient samples for all analyses were not collected from station TSB.

Source:	H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures
Date:	10/03/2010

Environmental Resources Management

ERM

Figure 37: Levels of Metals (mean ± SD) in tissues of Mantis Shrimp from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Mercury were below the limit of detection at all stations and sufficient samples were not collected from stations TNA and TSA for all analyses.

Source:	H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures
Date:	10/03/2010

Environmental Resources Management

ERM

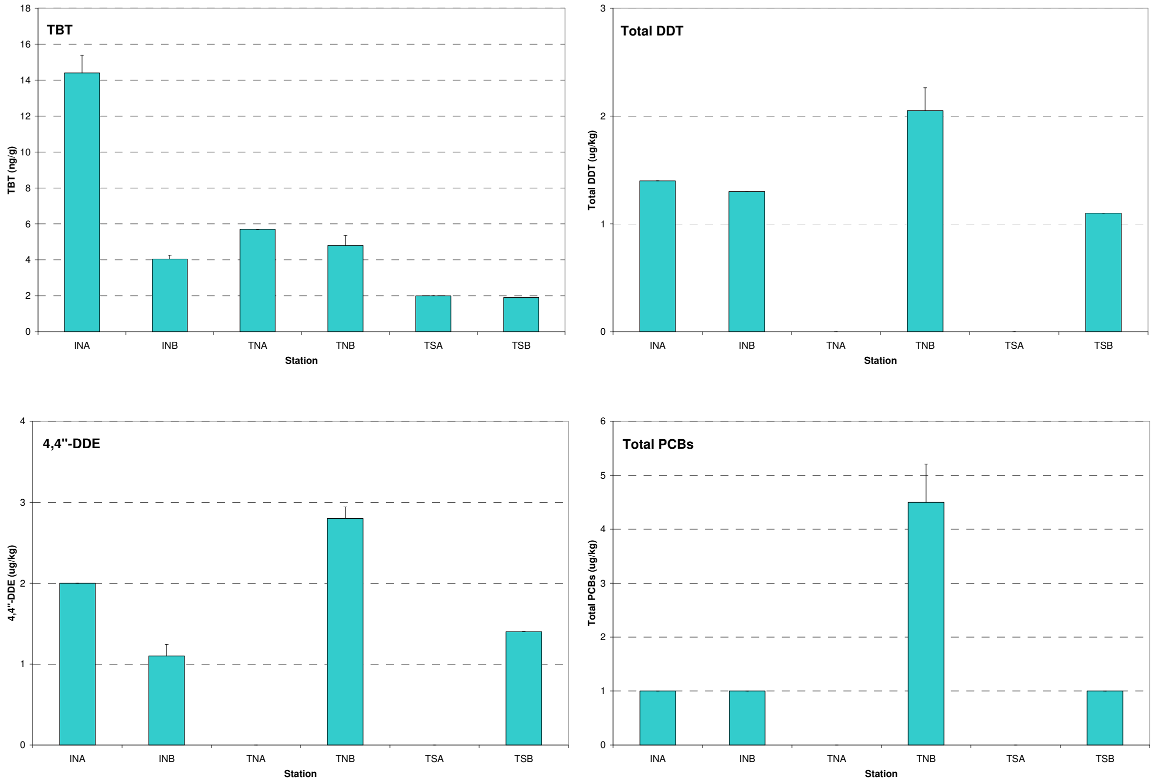

Figure 38: Levels of Organic Contaminants (mean ± SD) in tissues of Mantis Shrimp from Demersal Trawling Monitoring during July and August 2009. Note: Sufficient samples were not collected from station TNA and TSA for all analyses.

Figure 39: Levels of Metals (mean ± SD) in whole body samples of Mantis Shrimp from Demersal Trawling Monitoring during July and August 2009.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures

Date: 11/03/2010

Environmental Resources Management

ERM

Figure 40: Levels of Silver and Organic Contaminants (mean ± SD) in the whole body samples of Mantis Shrimp from Demersal Trawling Monitoring during July and August 2009.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures

Date: 11/03/2010

Environmental Resources Management

ERM

Figure 41: Levels of Metals (mean ± SD) in whole body samples of Prawns from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Mercury were below the limit of detection at all stations.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures

Date: 11/03/2010

Environmental Resources Management

ERM

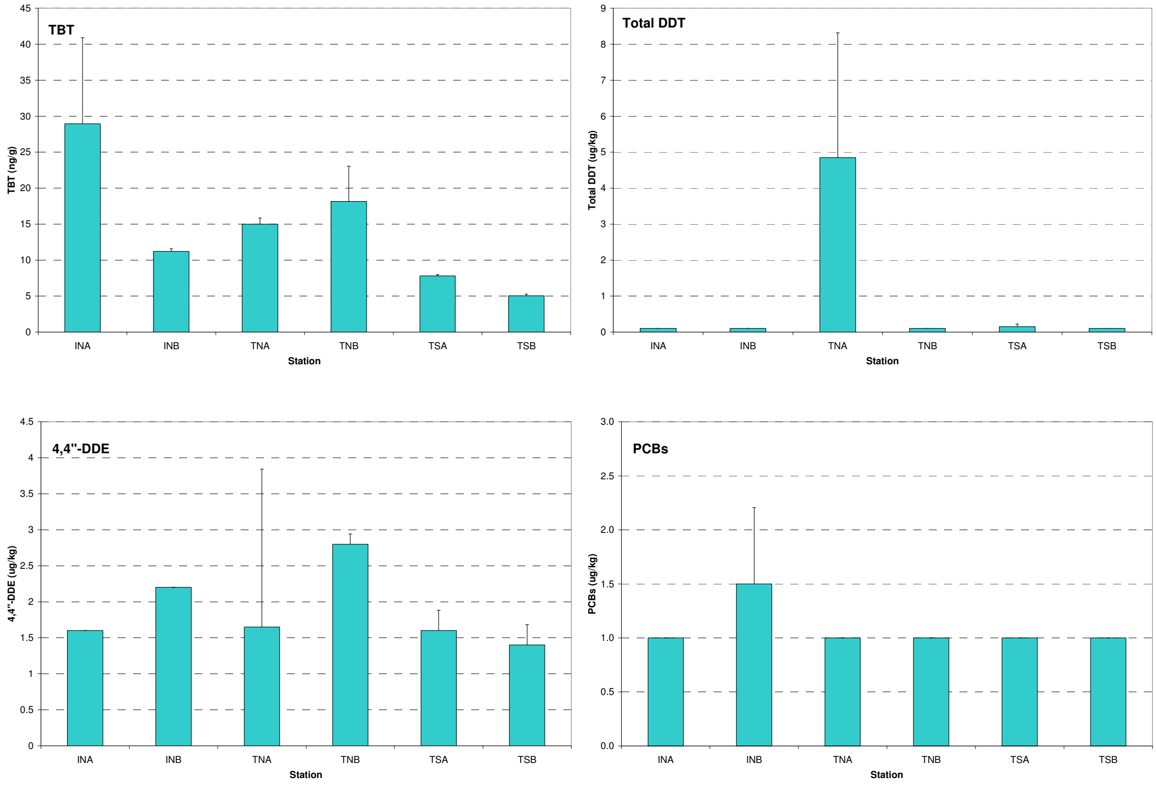

Figure 42: Levels of Organic Contaminants (mean ± SD) in the whole body samples of Prawns from Demersal Trawling Monitoring during July and August 2009.

Figure 43: Levels of Metals (mean ± SD) in whole body samples of Non-commercial Crabs from Demersal Trawling Monitoring during July and August 2009.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures

Date: 11/03/2010

Environmental Resources Management

ERM

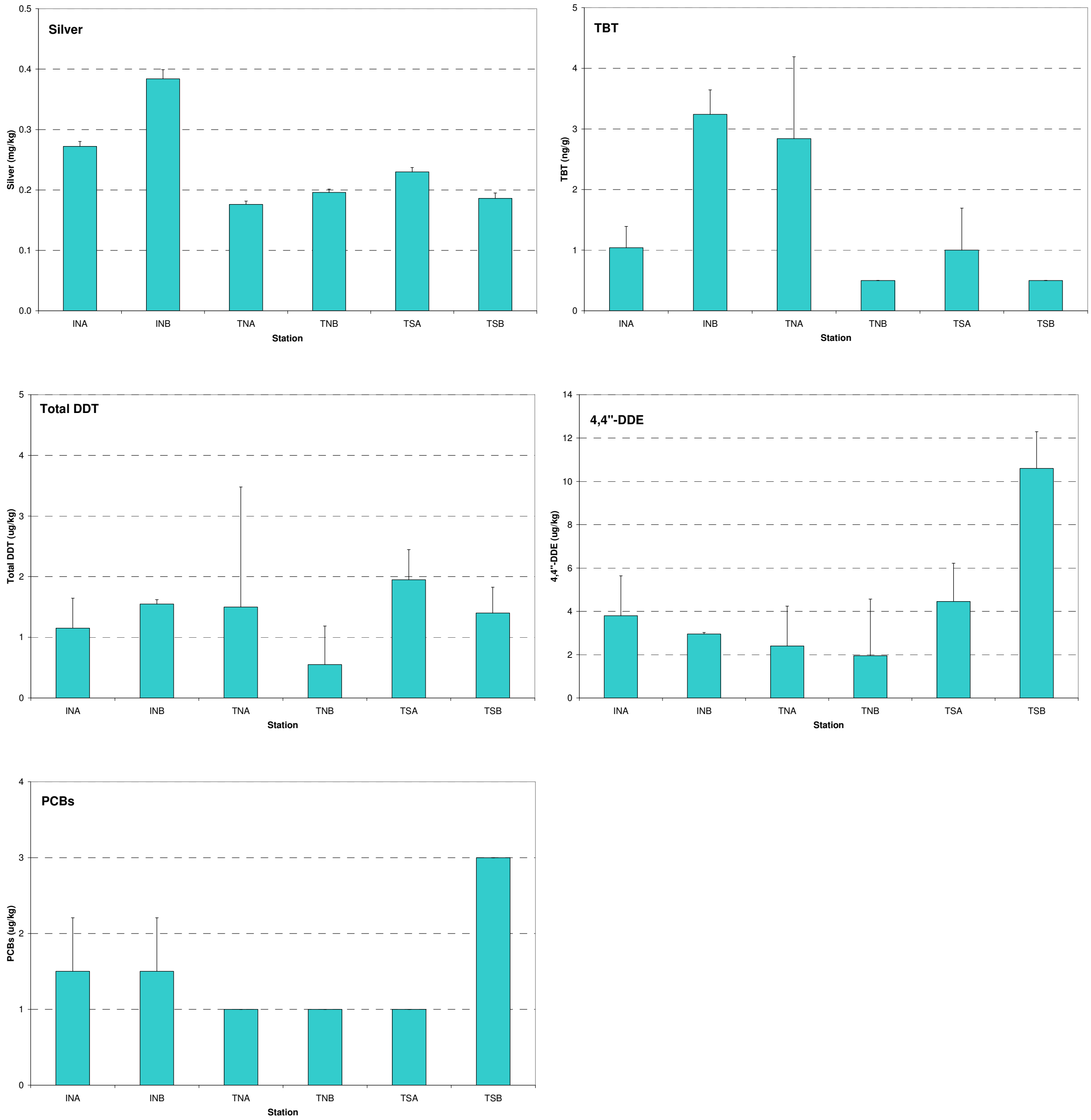

Figure 44: Levels of Silver and Organic Contaminants (mean ± SD) in the whole body samples of Swimming Crabs from Demersal Trawling Monitoring during July and August 2009.

Source:	H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures	**Environmental Resources Management** ERM
Date:	11/03/2010	

Figure 45: Levels of Metals (mean ± SD) in whole body samples of Demersal/Pelagic Fish from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Cadmium and Silver were below the limit of detection at all stations.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures

Date: 11/03/2010

Environmental Resources Management

ERM

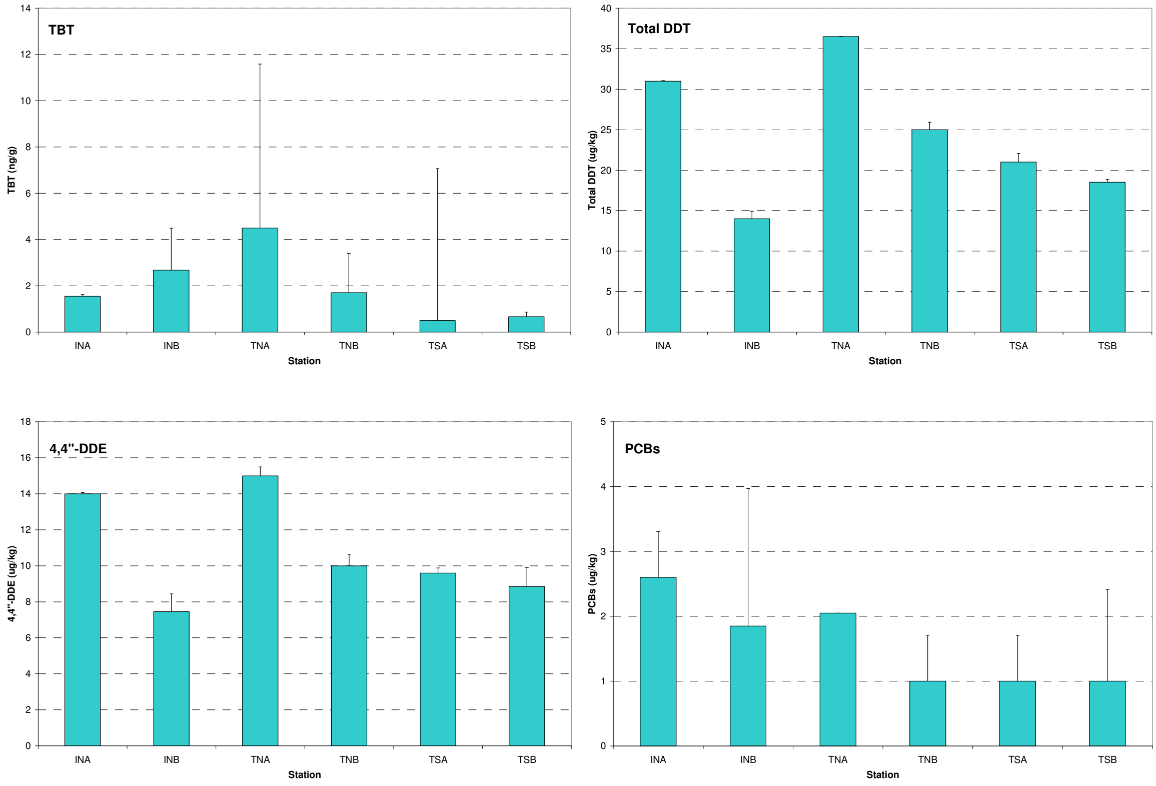

Figure 46: Levels of Organic Contaminants (mean ± SD) in the whole body samples of Demersal/Pelagic Fish from Demersal Trawling Monitoring during July and August 2009.

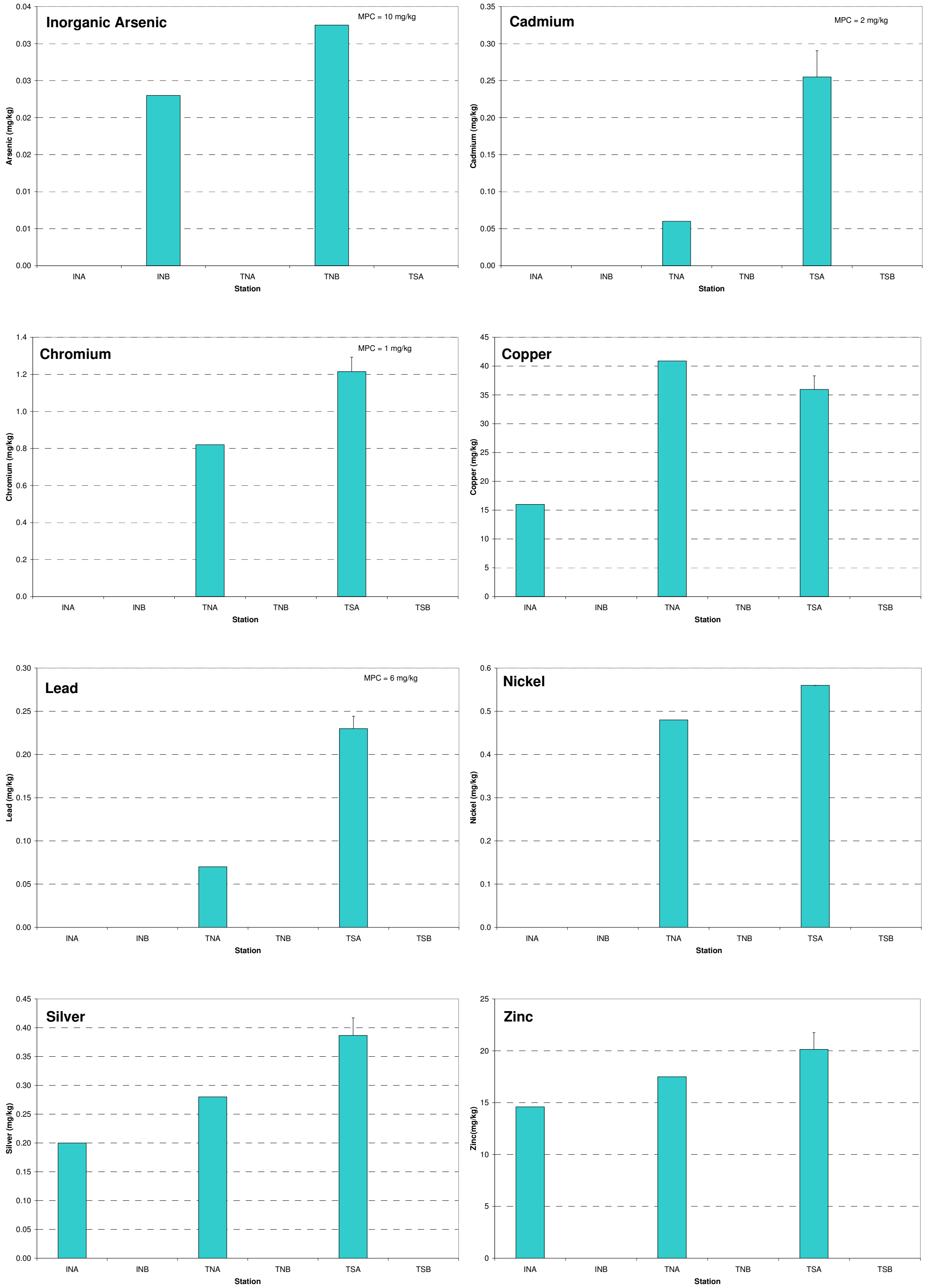

Figure 47: Levels of Metals (mean ± SD) in whole body samples of Cephalopods from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Mercury were below the limit of detection at all stations and sufficient samples for all analyses were not collected from stations INB, TNB and TSB.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures

Date: 11/03/2010

Environmental Resources Management

ERM

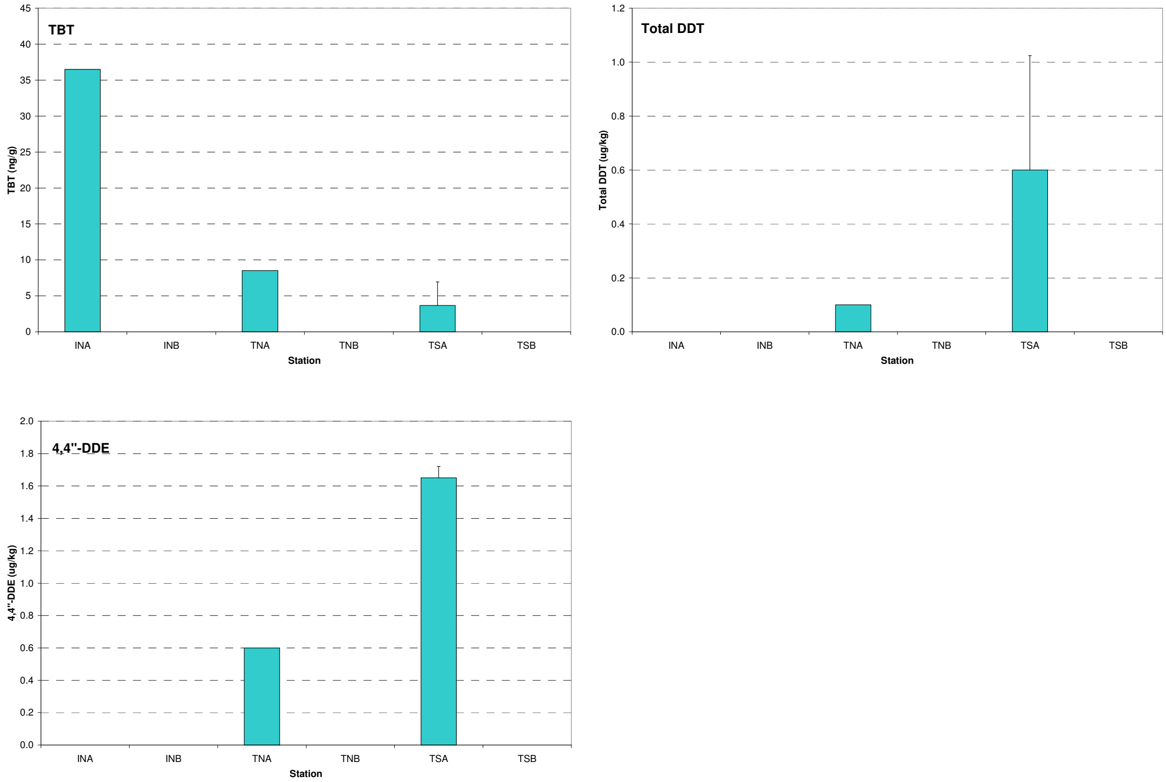

Figure 48: Levels of Organic Contaminants (mean ± SD) in the whole body samples of Cephalopods from Demersal Trawling Monitoring during July and August 2009. Note: Concentrations of Total PCB were below the limit of detection at all stations and sufficient samples for all analyses were not collected from stations INA, INB, TNB and TSB.

Source:	H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06.6 Demersal Trawling & Biota Analyses\Wet Season 2009 Biota Contaminant\Figures	Environmental Resources Management
Date:	11/03/2010	ERM

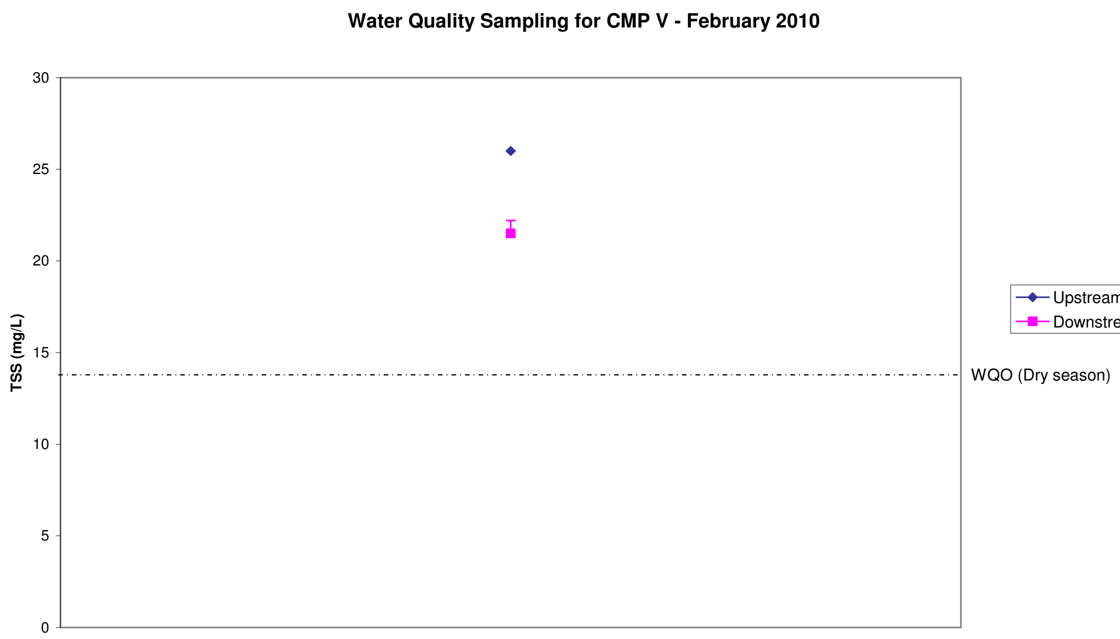

Figure 49: Levels of Total Suspended Solids (mean + SD) during Water Column Profiling for CMP V in February 2010.

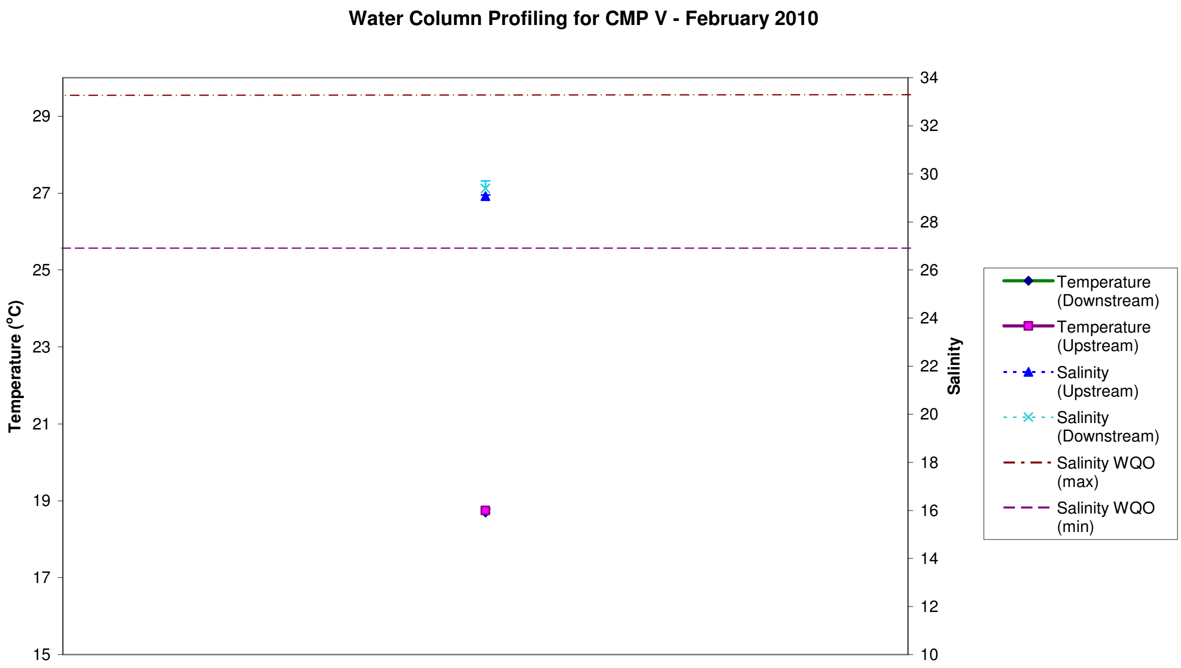

Figure 50: Salinity and Temperature (mean + SD) during Water Column Profiling for CMP V in February 2010.

Source:	H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06. 12 Water Column Profiling CMP V\Feb 2010
Date:	11/03/2010

Environmental Resources Management

ERM

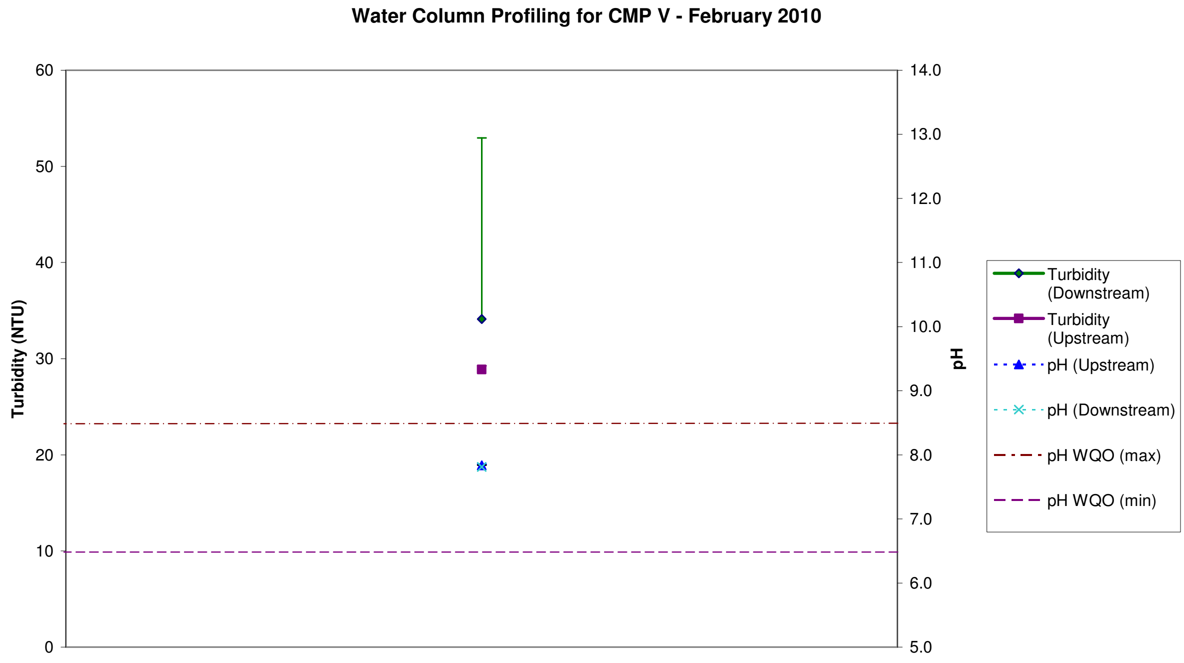

Figure 51: Turbidity and pH (mean + SD) during Water Column Profiling for CMP V in February 2010.

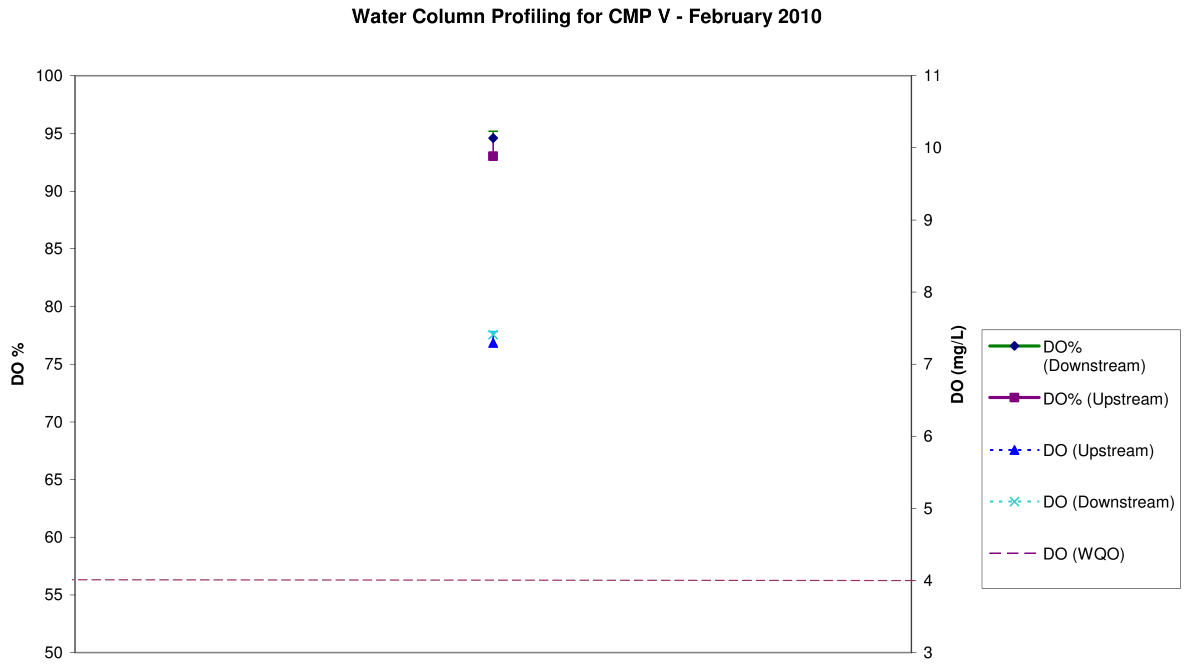

Figure 52: Dissolved Oxygen (mean + SD) during Water Column Profiling for CMP V in February 2010.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contract Submission (LAM)\06. 12 Water Column Profiling CMP V\Feb 2010

Date: 11/03/2010

Environmental Resources Management

ERM

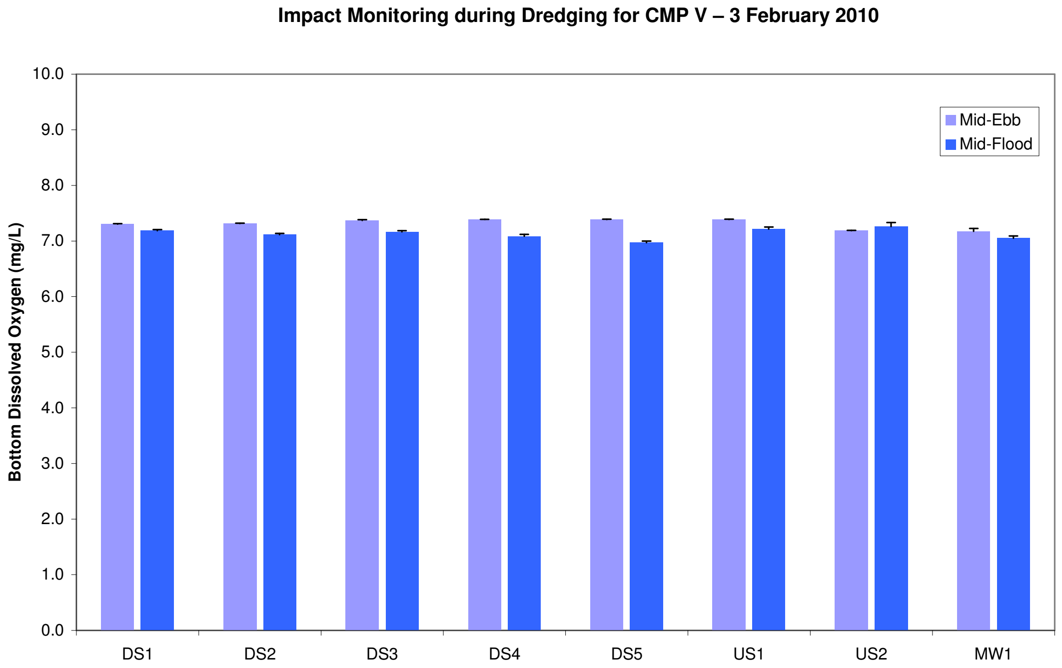

Figure 53: Bottom DO level (mean + SD) at Downstream (DS1, DS2, DS3, DS4 and DS5 stations), Upstream (US1 and US2 stations) and Ma Wan (MW1 station) during Impact Monitoring for Dredging on 3 February 2010.

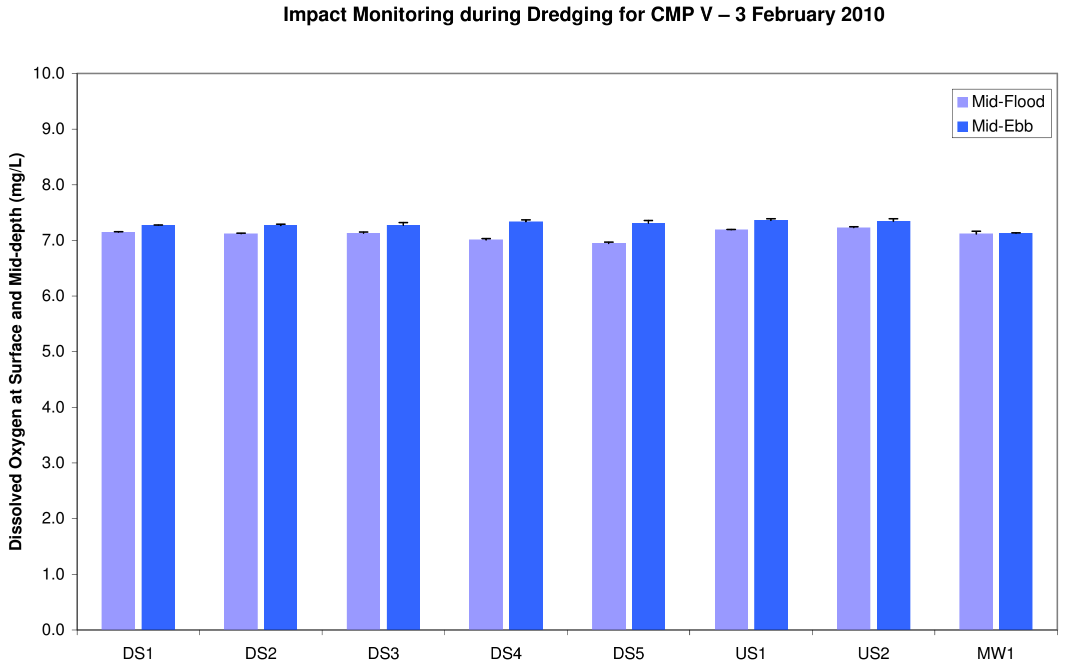

Figure 54: DO Level at Surface and Mid-depth (mean + SD) at Downstream (DS1, DS2, DS3, DS4 and DS5 stations), Upstream (US1 and US2 stations) and Ma Wan (MW1 station) during Impact Monitoring for Dredging on 3 February 2010.

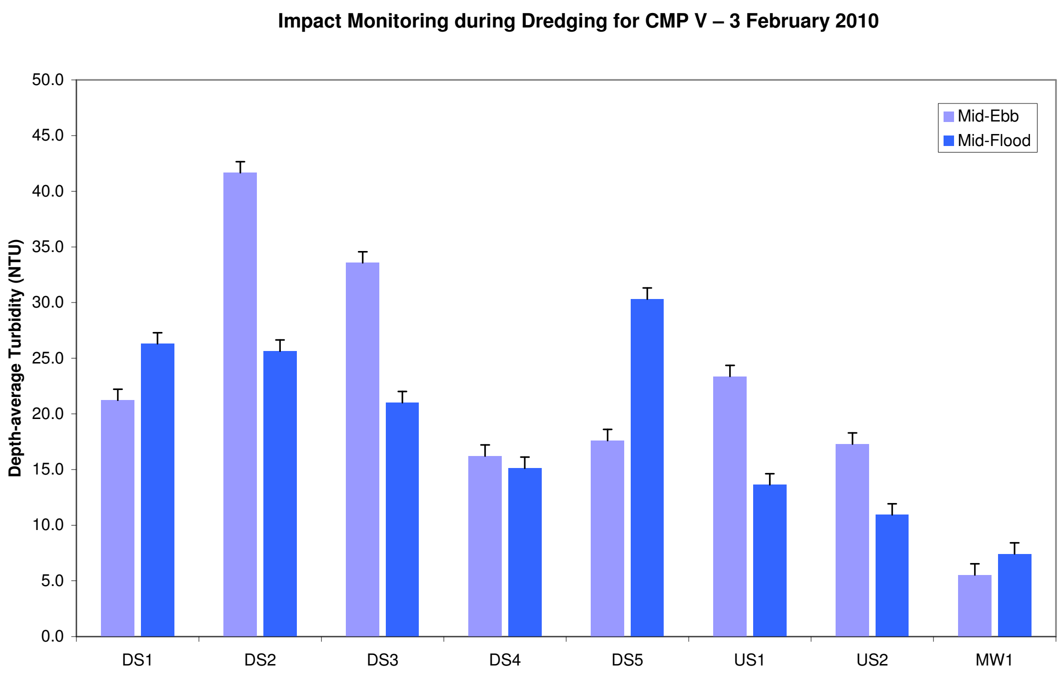

Figure 55: Depth-average Turbidity (mean + SD) at Downstream (DS1, DS2, DS3, DS4 and DS5 stations), Upstream (US1 and US2 stations) and Ma Wan (MW1 station) during Impact Monitoring for Dredging on 3 February 2010.

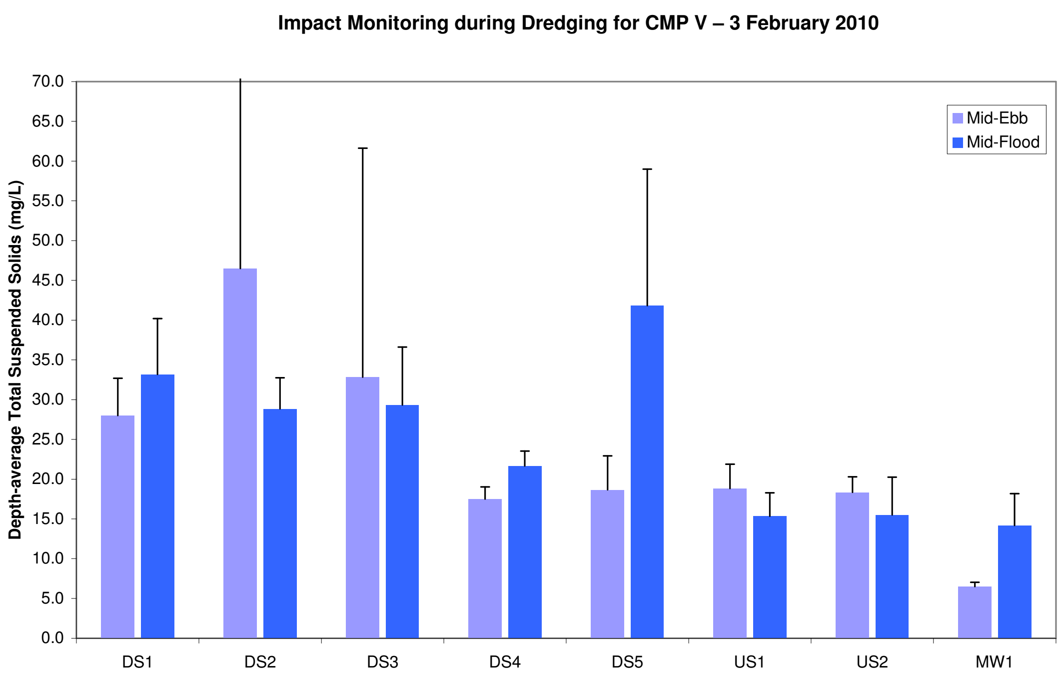

Figure 56: Depth-average Total Suspended Solids (mean + SD) at Downstream (DS1, DS2, DS3, DS4 and DS5), Upstream (US1 and US2) and Ma Wan (MW1) stations during Impact Monitoring for Dredging on 3 February 2010.

Table B1: Impact Water Quality Monitoring for Dredging Activities during Mid-ebb Tide for 3 February 2010

Station	Downstream (Impact)		
Time (hh:mm)	15:09 - 15:49		
Monitoring Depth (m)	Depth Average	Surface and Middle	Bottom
D.O. (mg/L)	N/A	7.33	7.28
Turbidity (NTU)	26.05	N/A	N/A
SS (mg/L)	28.70	N/A	N/A
Remarks	Dredging works were observed.		

Station	Upstream (Reference)		
Time (hh:mm)	14:50 - 15:02		
Monitoring Depth (m)	Depth Average	Surface and Middle	Bottom
D.O. (mg/L)	N/A	6.57	7.4
Turbidity (NTU)	20.33	N/A	N/A
SS (mg/L)	18.58	N/A	N/A
Remarks	Dredging works were observed.		

Station	Ma Wan		
Time (hh:mm)	16:37 - 16:49		
Monitoring Depth (m)	Depth Average	Surface and Middle	Bottom
D.O. (mg/L)	N/A	7.15	7.13
Turbidity (NTU)	5.53	N/A	N/A
SS (mg/L)	6.50	N/A	N/A
Remarks			

Compliance with Action and Limit Levels

Parameter	Action Level		Limit Level		Mean Value at Impact Stations	Mean Value at Reference Stations	Compliance with Action level	Compliance with Limit Level
	Impact Stations	Comparison between I and R [(a)]	Mean Value at Impact Stations	Comparison between I and R [(a)]				
DO (Bottom)	< 2.96	R significantly greater than I (t-test, $p < 0.05$)	< 2.00	R significantly greater than I (t-test, $p < 0.05$)	7.28	7.36	Y	Y
DO (Surface and Mid Depth)	< 3.76	R significantly similar to I (t-test, $p > 0.05$)	< 3.11	R significantly similar to I (t-test, $p > 0.05$)	7.33	6.57	Y	Y
Turbidity (Depth-averaged)	> 28.14	I ≥ 1.2 R (24.39)	> 38.32	I < 1.3 R (26.42)	26.05	20.33	Y	Y
SS (Depth-averaged)	> 37.88	I ≥ 1.2 R (22.30)	> 61.92	I ≥ 1.3 R (24.16)	28.70	18.58	Y	Y

Note: (a) I = Impact; R = Reference Stations

Table B2: Impact Water Quality Monitoring for Dredging Activities during Mid-flood Tide for 3 February 2010

Station	Downstream (Impact)		
Time (hh:mm)	10:27 - 11:19		
Monitoring Depth (m)	Depth Average	Surface and Middle	Bottom
D.O. (mg/L)	N/A	7.07	7.10
Turbidity (NTU)	23.67	N/A	N/A
SS (mg/L)	30.97	N/A	N/A
Remarks	Dredging works were observed.		

Station	Upstream (Reference)		
Time (hh:mm)	10:03 - 10:17		
Monitoring Depth (m)	Depth Average	Surface and Middle	Bottom
D.O. (mg/L)	N/A	7.21	7.2
Turbidity (NTU)	12.28	N/A	N/A
SS (mg/L)	15.42	N/A	N/A
Remarks	Dredging works were observed.		

Station	Ma Wan		
Time (hh:mm)	08:34 - 09:39		
Monitoring Depth (m)	Depth Average	Surface and Middle	Bottom
D.O. (mg/L)	N/A	7.12	7.05
Turbidity (NTU)	7.42	N/A	N/A
SS (mg/L)	14.17	N/A	N/A
Remarks			

Compliance with Action and Limit Levels

Parameter	Action Level		Limit Level		Mean Value at Impact Stations	Mean Value at Reference Stations	Compliance with Action level	Compliance with Limit Level
	Mean Value at Impact Stations	Comparison between I and R [(a)]	Mean Value at Impact Stations	Comparison between I and R [(a)]				
DO (Bottom)	< 2.96	R significantly greater than I (t-test, $p < 0.05$)	< 2.00	R significantly greater than I (t-test, $p < 0.05$)	7.10	7.2	Y	Y
DO (Surface and Mid Depth)	< 3.76	R significantly greater than I (t-test, $p < 0.05$)	< 3.11	R significantly greater than I (t-test, $p < 0.05$)	7.07	7.21	Y	Y
Turbidity (Depth-averaged)	> 28.14	I ≥ 1.2 R (14.74)	> 38.32	I ≥ 1.3 R (15.96)	23.67	12.28	Y	Y
SS (Depth-averaged)	> 37.88	I ≥ 1.2 R (18.50)	> 61.92	I ≥ 1.3 R (20.04)	30.97	15.42	Y	Y

Note: (a) I = Impact; R = Reference Stations

Annex C

Study Programme

ID	Task Name
1	Project Commencement
2	
3	For CMP IV and New Facility at East Sha Chau
4	
5	Submission of Draft Inception Report & Draft Programme
6	Submission of Final Inception Report & Final Programme
7	Submission of Draft Operations Manual
8	Submission of Final Operations Manual
9	**Submission of Operations Manual Updates**
17	Submission of Draft Monitoring And Audit Manual (Rev 1)
18	Submission of Final Monitoring And Audit Manual (Rev 1)
19	Submission of Draft Monitoring And Audit Manual (Rev 2)
20	Submission of Final Monitoring And Audit Manual (Rev 2)
21	**Submission of EM&A Manual Updates**
29	
30	**Monitoring Contract Works**
31	Prepare Draft Letters of Invitation, Gazette Documents & Tender Documents
32	Submission of Draft Tender Documents
33	Submission of Draft Gazette Documents
34	Submission of Final Tender Documents
35	Submission of Final Gazette Documents
36	Tendering and Tender Assessment
37	Prepare Contact Documents
38	Submission of Contract Documents
39	Administrate and Supervise Contracted Field and Laboratory Works
40	**Submission of Report on Dredging & Capping Operations**
49	**Monthly Progress Report**
101	**Quarterly EM&A Reports**
115	**Submission of Annual Review Report**
120	**Submission of Annual Risk Assessment Report**
125	**Submission of Draft Final Report**
126	**Submission of the Final Report**
127	**Submission of Draft Executive Summary Report**
128	**Submission of Final Executive Summary Reports**
129	
130	For East Tung Lung Chau Disposal Facility
131	
132	**Submission of Monitoring Results & Monthly EM&A Progress Report**
133	October 2009
134	November 2009
135	December 2009
136	January 2010

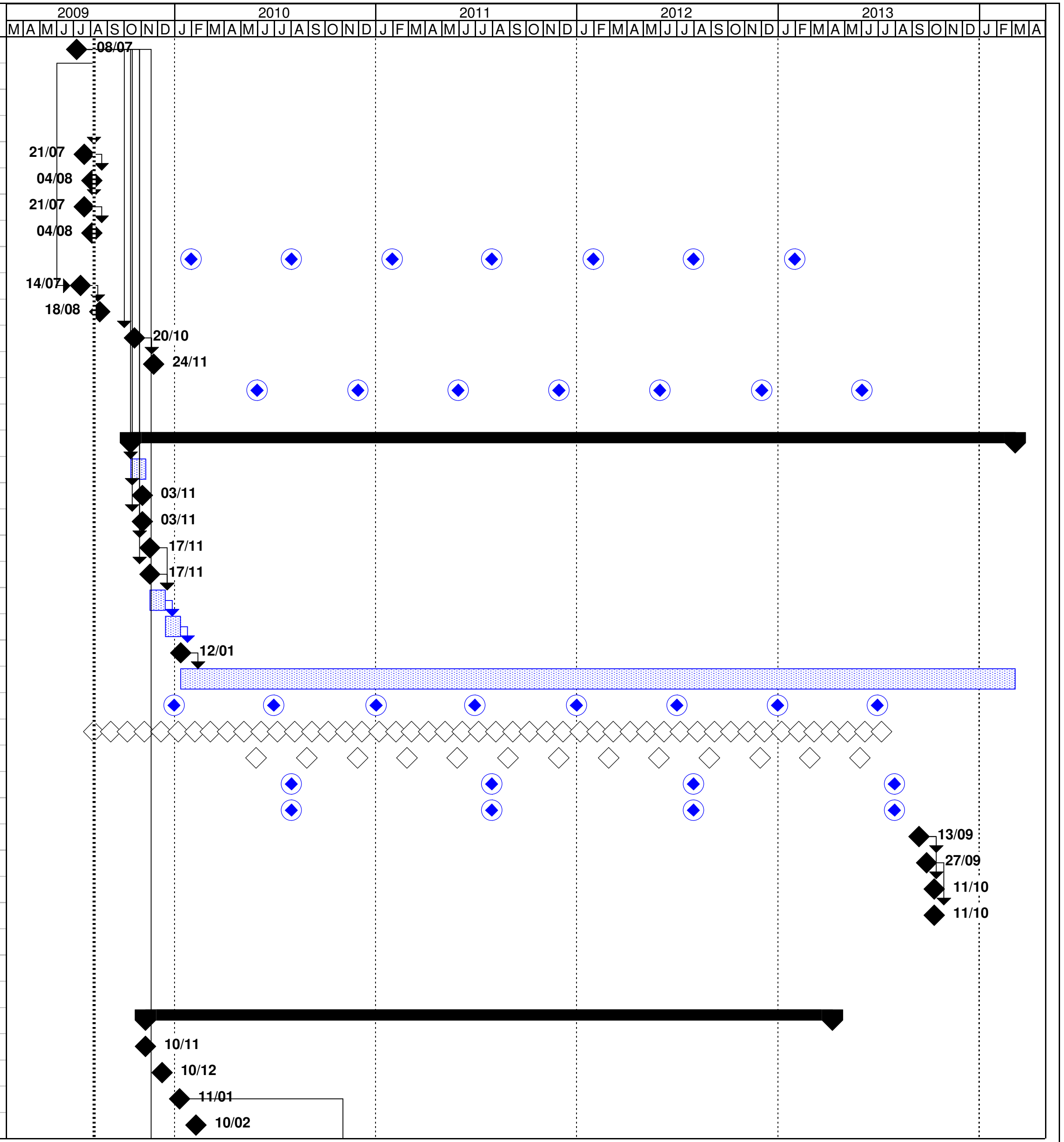

Figure 4.1 - Study Programme

Task		Milestone		Rolled Up Task	
Progress		Summary		Rolled Up Milestone	

Project: Agreement No. CE 4/2009 (EP) Environmental Monitoring and Audit for Contaminated Mud Pits at Sha Chau (2009-2013) - Investigation

ID	Task Name	Date
137	February 2010	10/03
138	March 2010	12/04
139	October 2010	10/11
140	November 2010	10/12
141	December 2010	10/01
142	January 2011	10/02
143	February 2011	10/03
144	March 2011	11/04
145	October 2011	10/11
146	November 2011	12/12
147	December 2011	10/01
148	January 2012	10/02
149	February 2012	12/03
150	March 2012	10/04
151	October 2012	12/11
152	November 2012	10/12
153	December 2012	10/01
154	January 2013	11/02
155	February 2013	11/03
156	March 2013	10/04
157	**Submission of Initial Review Report**	22/11
158	**Submission of Quarterly EM&A Report**	
159	Quarter 1 2010	01/04
160	Quarter 2 2010	01/12
161	Quarter 3 2011	01/04
162	Quarter 4 2011	01/12
163	Quarter 5 2012	02/04
164	Quarter 2 2012	03/12
165	Quarter 1 2013	01/04
166	**Submission of Annual Report**	
167	Annual Report 1 2010	28/01
168	Annual Report 2 2011	30/01
169	Annual Report 3 2012	28/01
170		
171	**Alternative / Modified Capping Design**	
172		
173	**Submission of Investigation Report**	08/12
174	**Submission of Annual Report**	
175	Capping Design Annual Report 2010	28/01
176	Capping Design Annual Report 2011	30/01
177	Capping Design Annual Report 2012	28/01

Figure 4.1 - Study Programme

Task — Milestone — Rolled Up Task

Progress — Summary — Rolled Up Milestone

Project: Agreement No. CE 4/2009 (EP) Environmental Monitoring and Audit for Contaminated Mud Pits at Sha Chau (2009-2013) - Investigation