

Annex B

Monitoring Results

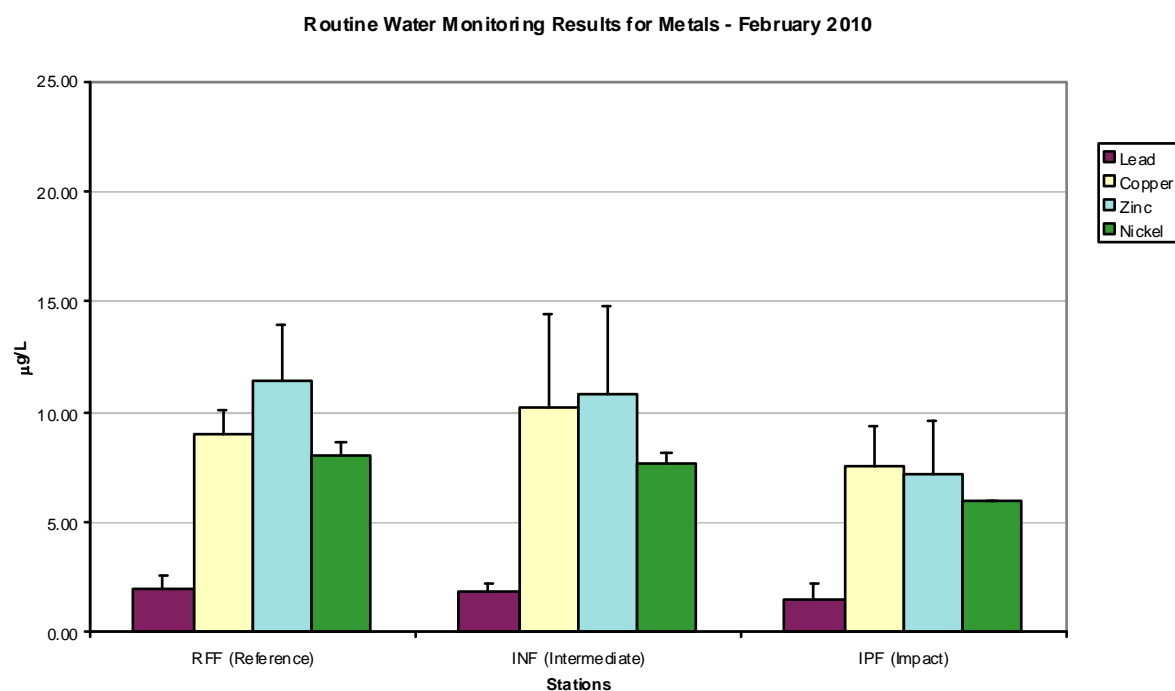


Figure 1: Concentration of Lead, Copper, Zinc and Nickel (mean \pm SD) in water samples for Routine Water Quality Monitoring for CMP IV in February 2010. Note: All other metals (As, Cd, Cr, Hg and Ag) were below limit of detection.

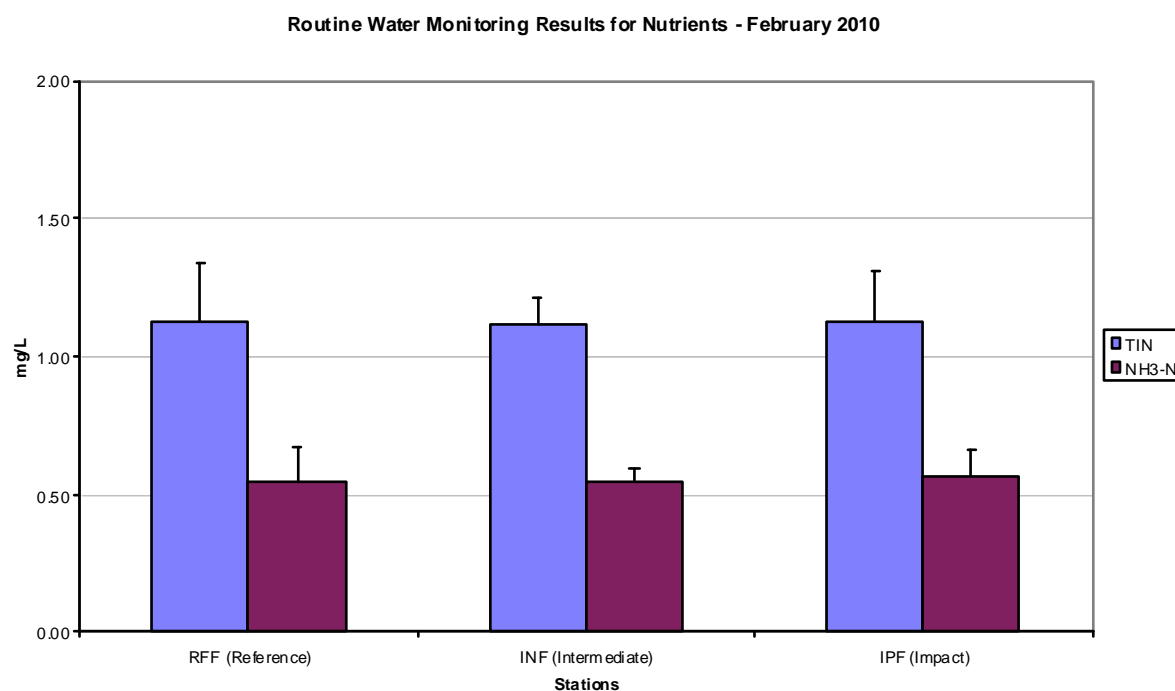


Figure 2: Concentration of Total Inorganic Nitrogen and Unionized Ammonia (mean \pm SD) in water samples for Routine Water Quality Monitoring for CMP IV in February 2010.

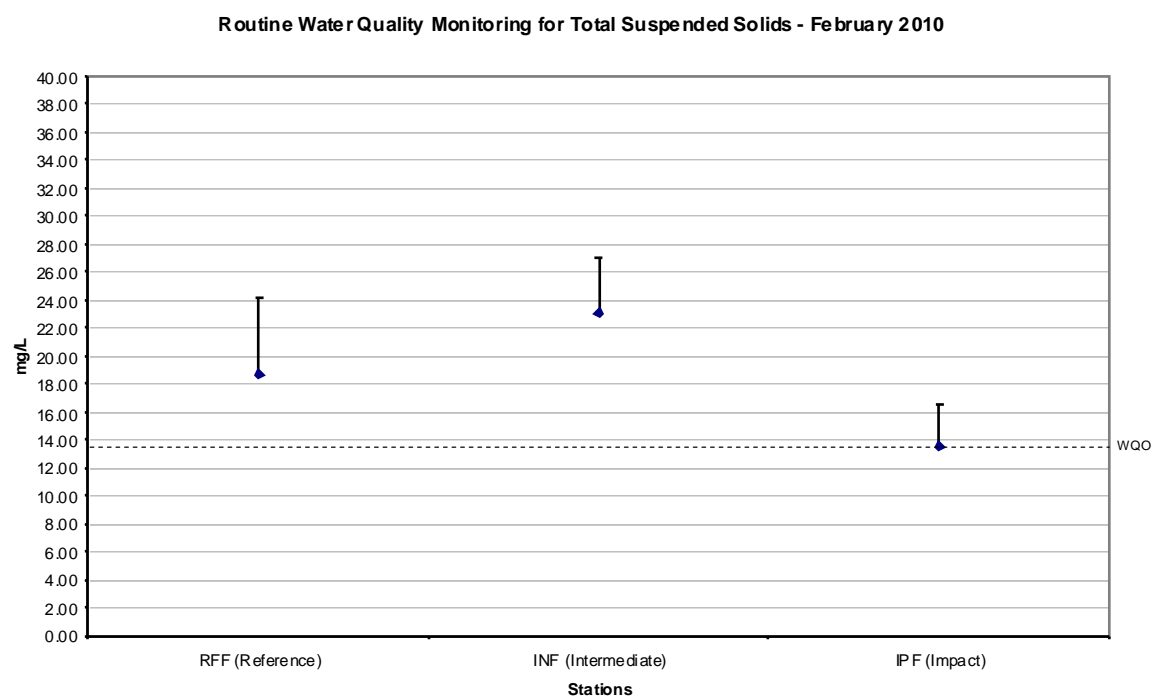


Figure 3: Concentration of Total Suspended Solids (mean \pm SD) in water samples for Routine Water Quality Monitoring for CMP IV in February 2010

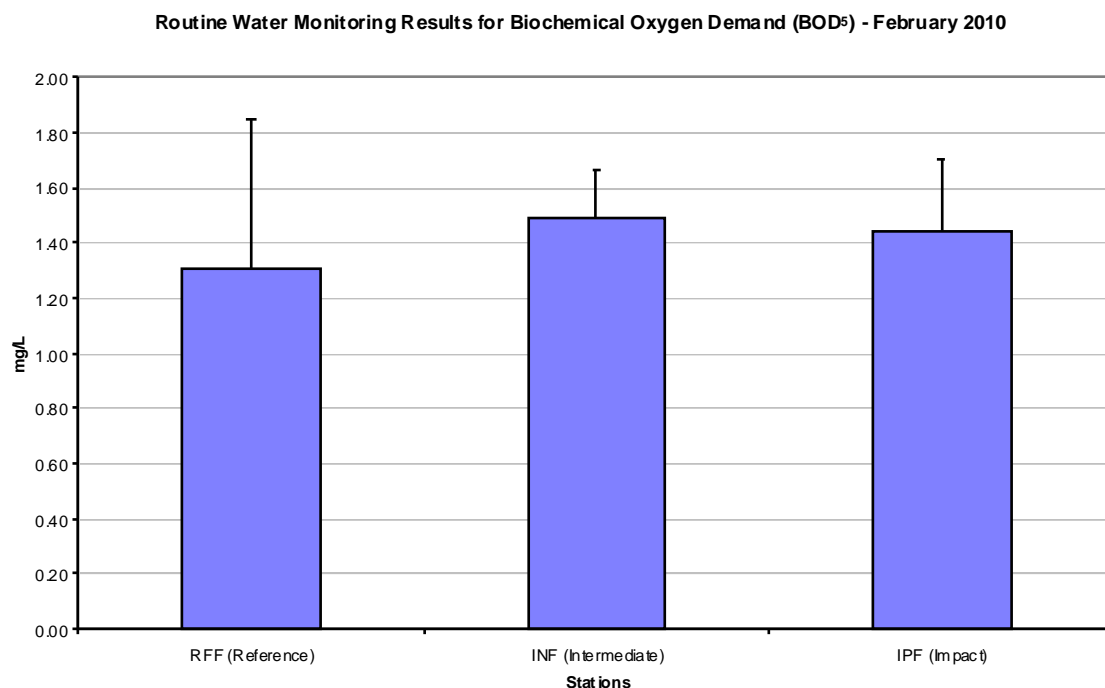


Figure 4: Concentration of Biological Oxygen Demand (mean \pm SD) during Routine Water Quality Monitoring for CMP IV in February 2010.

Source: H:\Team\EM\GMS Projects\0103262 CEDD EM&A for CMP at Sha Chau (2009 - 2013)\06 Contractor Submission (LAM)\06.8 Routine Water Quality Monitoring\Mar 10

Date: 31/03/2010

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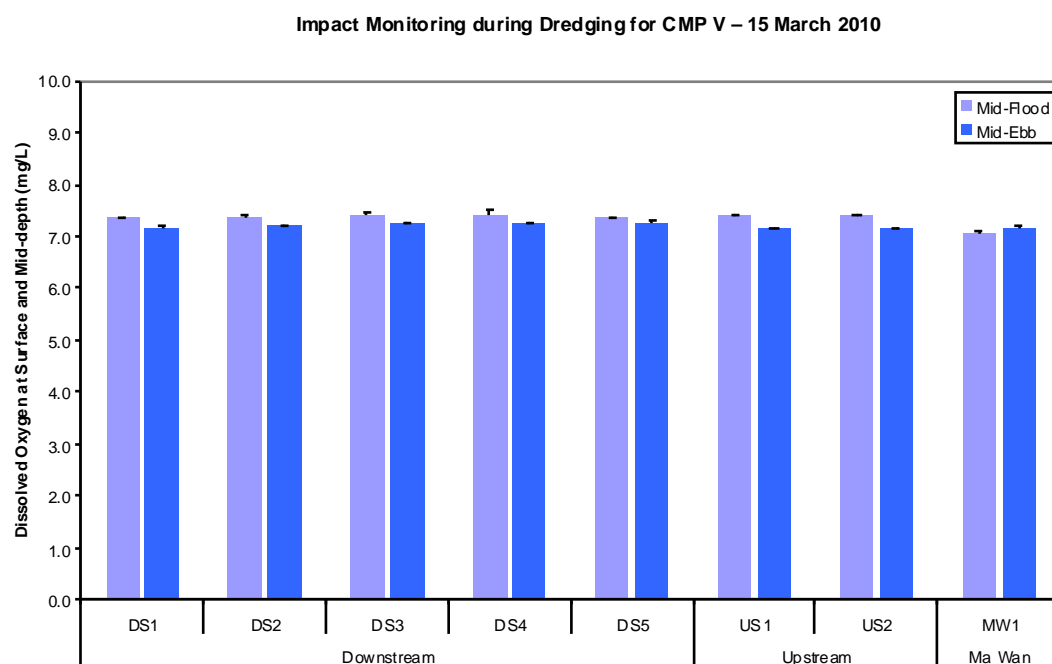


Figure 5: Depth-average DO Level (mean \pm SD) at Downstream (DS1, DS2, DS3, DS4 and DS5 stations), Upstream (US1 and US2 stations) and Ma Wan (MW1 station) during Impact Monitoring for Dredging on 15 March 2010.

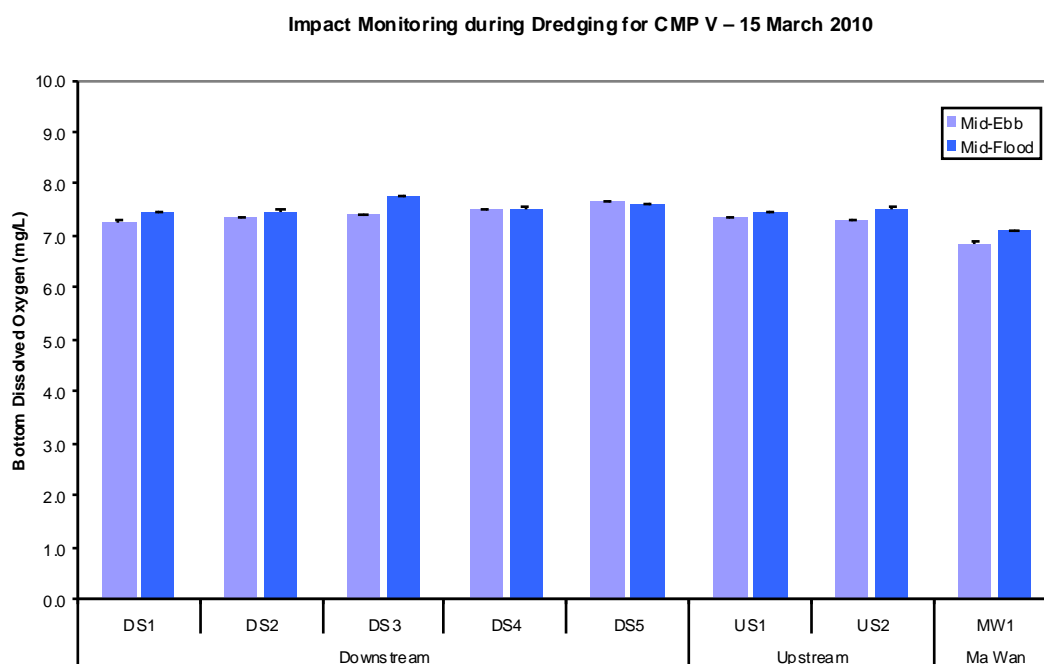


Figure 6: Bottom DO Level (mean \pm SD) at Downstream (DS1, DS2, DS3, DS4 and DS5 stations), Upstream (US1 and US2 stations) and Ma Wan (MW1 station) during Impact Monitoring for Dredging on 15 March 2010.

Impact Monitoring during Dredging for CMP V – 15 March 2010

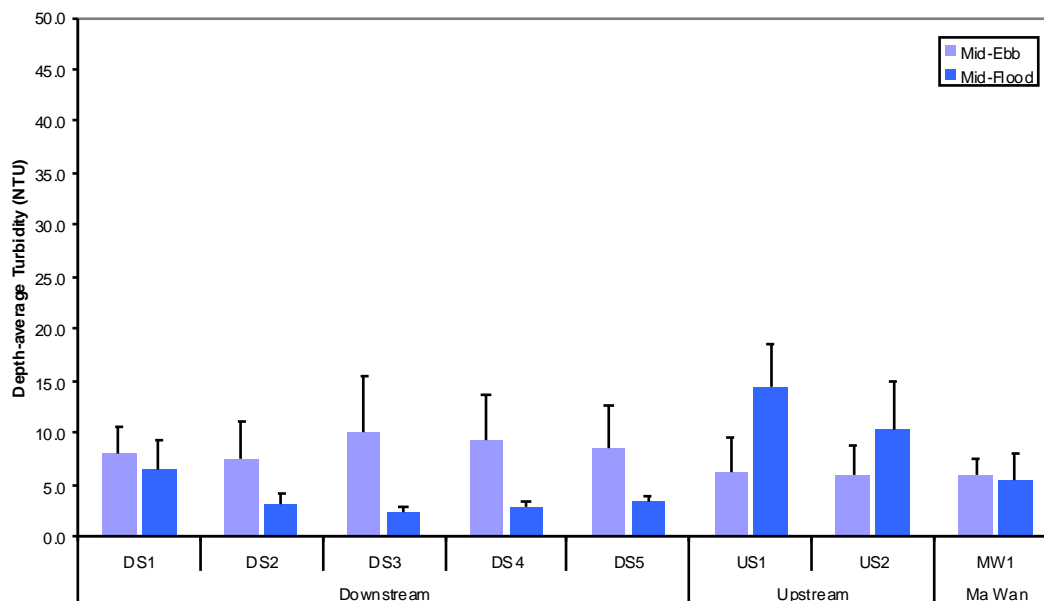


Figure 7: Depth-average Turbidity (mean \pm SD) at Downstream (DS1, DS2, DS3, DS4 and DS5 stations), Upstream (US1 and US2 stations) and Ma Wan (MW1 station) during Impact Monitoring for Dredging on 15 March 2010.

Impact Monitoring during Dredging for CMP V – 15 March 2010

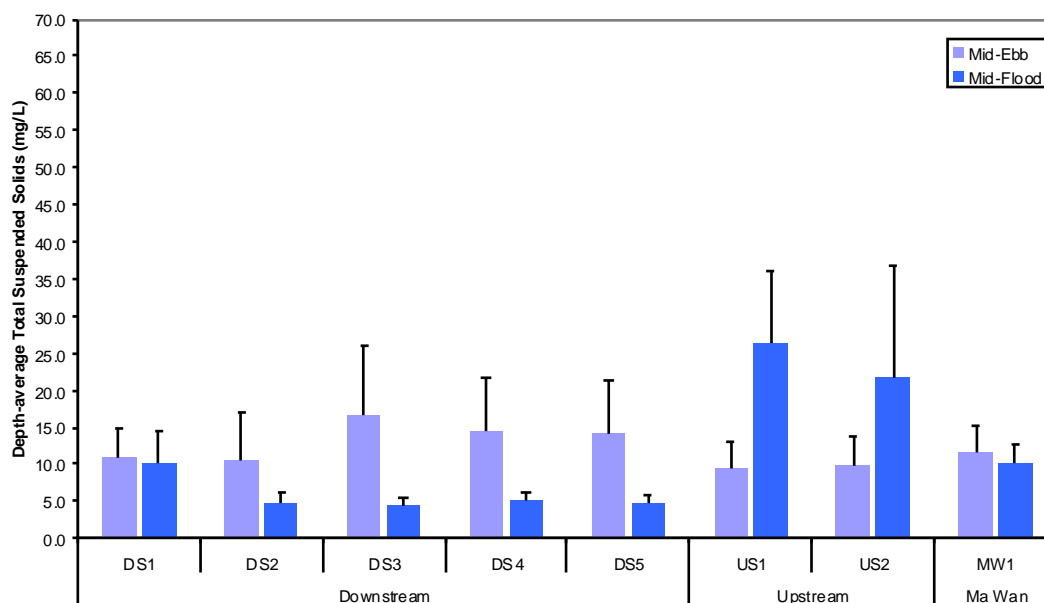


Figure 8: Depth-average Suspended Solids (mean \pm SD) at Downstream (DS1, DS2, DS3, DS4 and DS5 stations), Upstream (US1 and US2 stations) and Ma Wan (MW1 station) during Impact Monitoring for Dredging on 15 March 2010.

Table B1: Impact Water Quality Monitoring for Dredging Activities during Mid-ebb Tide for 15 March 2010

Station	Downstream (Impact)		
Time (hh:mm)	13:34-14:16		
Monitoring Depth (m)	Depth Average	Surface and Middle	Bottom
D.O. (mg/L)	N/A	7.22	7.43
Turbidity (NTU)	8.65	N/A	N/A
SS (mg/L)	13.30	N/A	N/A
Remarks	Dredging works were observed.		

Station	Upstream (Reference)		
Time (hh:mm)	13:13-13:39		
Monitoring Depth (m)	Depth Average	Surface and Middle	Bottom
D.O. (mg/L)	N/A	7.14	7.33
Turbidity (NTU)	6.06	N/A	N/A
SS (mg/L)	9.58	N/A	N/A
Remarks	Dredging works were observed.		

Station	Ma Wan		
Time (hh:mm)	14:11-14:16		
Monitoring Depth (m)	Depth Average	Surface and Middle	Bottom
D.O. (mg/L)	N/A	6.88	6.86
Turbidity (NTU)	6.07	N/A	N/A
SS (mg/L)	11.67	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)	7.43	7.33	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)	7.22	7.14	Y	Y
Turbidity (Depth-averaged)	> 28.14	I ≥ 1.2 R (7.27)	> 38.32	I ≥ 1.3 R (7.87)	8.65	6.06	Y	Y
SS (Depth-averaged)	> 37.88	I ≥ 1.2 R (11.50)	> 61.92	I ≥ 1.3 R (12.46)	13.30	9.58	Y	Y

Table B2: Impact Water Quality Monitoring for Dredging Activities during Mid-flood Tide for 15 March 2010

Station	Downstream (Impact)		
Time (hh:mm)	17:34 - 18:54		
Monitoring Depth (m)	Depth Average	Surface and Middle	Bottom
D.O. (mg/L)	N/A	7.38	7.57
Turbidity (NTU)	5.79	N/A	N/A
SS (mg/L)	5.83	N/A	N/A
Remarks	Dredging works were observed.		

Station	Upstream (Reference)		
Time (hh:mm)	18:42 - 19:07		
Monitoring Depth (m)	Depth Average	Surface and Middle	Bottom
D.O. (mg/L)	N/A	7.41	7.50
Turbidity (NTU)	12.35	N/A	N/A
SS (mg/L)	24.00	N/A	N/A
Remarks	Dredging works were observed.		

Station	Ma Wan		
Time (hh:mm)	20:21 - 20:32		
Monitoring Depth (m)	Depth Average	Surface and Middle	Bottom
D.O. (mg/L)	N/A	7.05	7.12
Turbidity (NTU)	5.38	N/A	N/A
SS (mg/L)	10.00	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)	7.57	7.5	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)	7.38	7.41	Y	Y
Turbidity (Depth-averaged)	> 28.14	I ≥ 1.2 R (14.83)	> 38.32	I ≥ 1.3 R (16.06)	5.79	12.35	Y	Y
SS (Depth-averaged)	> 37.88	I ≥ 1.2 R (28.80)	> 61.92	I ≥ 1.3 R (31.20)	5.83	24.00	Y	Y

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