

Annex B

## Water Quality Monitoring Results

**Table B1**      *Action and Limit Levels of Water Quality for Dredging, Disposal and Capping Activities at ESC CMP V*

Parameter	Action Level	Limit Level
Dissolved Oxygen (DO) <sup>(1)</sup>	<u>Surface and Mid-depth</u> <sup>(2)</sup> 5%-ile of baseline data for surface and middle layer = <b>3.76 mg L<sup>-1</sup></b>	<u>Surface and Mid-depth</u> <sup>(2)</sup> 1%-ile of baseline data for surface and middle layer = <b>3.11 mg L<sup>-1</sup></b> <sup>(3)</sup>
	and	and
	Significantly less than the reference stations mean DO (at the same tide of the same day)	Significantly less than the reference stations mean DO (at the same tide of the same day)
	<u>Bottom</u> 5%-ile of baseline data for bottom layers = <b>2.96 mg L<sup>-1</sup></b>	<u>Bottom</u> The average of the impact station readings are <b>&lt;2 mg/L<sup>-1</sup></b>
	and	and
	Significantly less than the reference stations mean DO (at the same tide of the same day)	Significantly less than the reference stations mean DO (at the same tide of the same day)
Depth-averaged Suspended Solids (SS) <sup>(4) (5)</sup>	95%-ile of baseline data for depth average = <b>37.88 mg L<sup>-1</sup></b>	99%-ile of baseline data for depth average = <b>61.92 mg L<sup>-1</sup></b>
	and	and
	120% of control station's SS at the same tide of the same day	130% of control station's SS at the same tide of the same day
Depth-averaged Turbidity (Tby) <sup>(4) (5)</sup>	95%-ile of baseline data = <b>28.14 NTU</b>	99%-ile of baseline data = <b>38.32 NTU</b>
	and	and
	120% of control station's Tby at the same tide of the same day	130% of control station's Tby at the same tide of the same day

**Notes:**

- (1) For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
- (2) The Action and Limit Levels for DO for Surface & Middle layers were calculated from the combined pool of baseline surface layer data and baseline middle layer data.
- (3) Given the Action Level for DO for Surface & Middle layers has already been lower than 4 mg L<sup>-1</sup>, it is proposed to set the Limit Level at 3.11 mg L<sup>-1</sup> which is the first percentile of the baseline data.
- (4) "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
- (5) For turbidity and SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

**Table B2**      *Water Column Profiling Results for ESC CMP Vd in December 2019*

Stations	Temp (°C)	Salinity (ppt)	Turbidity (NTU)	Dissolved Oxygen		pH	Suspended Solids (mg L <sup>-1</sup> )
WCP 1 (Downstream)	19.85	33.12	7.52	94.79	7.11	8.08	8.3
WCP 2 (Upstream)	19.81	33.03	8.52	94.71	7.11	8.06	8.4
WQO (Dry Season)	N/A	29.73-36.33 <sup>#</sup>	N/A	N/A	>4	6.5-8.5	13.6

**Note:**

<sup>#</sup>Not exceeding 10% of natural ambient level which is the result obtained from the Reference Station.

Cell shaded yellow / red indicate value exceeding the Action/Limit levels.

Cell shaded grey indicate value exceeding the WQO.

**Table B3**      **Summary Table of DO, Turbidity and SS Levels Recorded in December 2019 for Impact Water Quality Monitoring during Dredging Operations of ESC CMP Vb**

Sampling Date	Tidal Period	Station	Average DO Levels (mg/L)		Average Turbidity Level (NTU)	Average SS Level (mg/L)
			Bottom	Surface and Mid Depth		
02/12/2019	Mid Ebb	US1	6.75	6.72	9.03	9.15
		US2	6.80	6.74	8.47	9.15
		DS1	6.65	6.68	9.65	10.05
		DS2	6.67	6.66	7.47	8.37
		DS3	6.71	6.66	7.07	7.40
		DS4	6.66	6.63	7.02	8.28
		DS5	6.76	6.68	6.98	7.48
		MW1	6.01	6.07	6.15	4.33
	Mid Flood	US1	6.62	6.58	9.08	10.73
		US2	6.58	6.55	10.02	13.33
		DS1	6.60	6.57	10.98	9.75
		DS2	6.72	6.65	9.05	9.17
		DS3	6.80	6.70	7.57	8.93
		DS4	6.82	6.77	7.03	8.53
		DS5	6.78	6.85	9.40	11.18
		MW1	6.12	6.11	4.72	6.15
04/12/2019	Mid Ebb	US1	6.84	6.84	7.18	8.63
		US2	6.91	6.85	5.88	7.40
		DS1	6.80	6.79	8.30	9.25
		DS2	6.71	6.74	7.68	9.17
		DS3	6.68	6.70	8.12	9.80
		DS4	6.67	6.68	8.78	10.92
		DS5	6.72	6.70	10.22	11.33
		MW1	6.44	6.46	3.28	4.42
	Mid Flood	US1	6.74	6.73	6.90	7.65
		US2	6.74	6.74	6.32	7.45
		DS1	6.69	6.75	25.78	14.52
		DS2	6.95	6.94	8.93	10.63
		DS3	7.01	6.99	7.53	8.93
		DS4	6.98	6.96	6.45	7.18
		DS5	7.10	7.07	5.53	7.33
		MW1	6.42	6.46	4.42	6.85

Notes:

1. Please refer to Table B1 above for the Action and Limit Levels for dredging activities.
2. Cell shaded yellow indicated value exceeding the Action Level criteria.
3. Cell shaded red indicated value exceeding the Limit Level criteria.