

**Table B1** *Summary Table of DO, Turbidity and SS Levels Recorded in December 2016 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		
2016/12/02	Mid-Ebb	DS1	6.68	6.61	9.39	12.55
		DS2	6.59	6.51	11.22	14.50
		DS3	6.54	6.48	7.24	9.47
		DS4	6.45	6.49	7.22	9.62
		DS5	6.59	6.55	6.91	9.98
		US1	6.77	6.74	8.44	11.27
		US2	6.77	6.74	9.49	11.88
	Mid-Flood	MW1	6.24	6.26	7.39	7.93
		DS1	6.76	6.81	36.78	17.67
		DS2	6.75	6.77	28.67	14.08
		DS3	6.90	6.87	25.24	11.40
		DS4	6.89	6.85	18.12	14.58
		DS5	6.90	6.84	15.29	8.72
		US1	6.89	6.85	19.93	15.78
		US2	6.81	6.79	16.92	18.08
		MW1	6.18	6.21	9.92	7.97
		2016/12/05	Mid-Ebb	DS1	6.82	6.85
DS2	6.69			6.76	5.13	6.63
DS3	6.60			6.74	4.86	5.87
DS4	6.48			6.68	5.51	12.48
DS5	6.66			6.82	4.03	4.97
US1	6.73			6.79	11.52	13.58
US2	6.76			6.80	4.63	5.55
Mid-Flood	MW1		6.09	6.13	4.23	4.68
	DS1		6.65	6.68	11.94	14.77
	DS2		6.72	6.71	11.29	12.30
	DS3		6.75	6.83	11.61	14.55
	DS4		6.84	6.85	10.43	13.03
	DS5		6.82	6.77	8.29	9.35
	US1		6.75	6.72	10.66	11.80
	US2		6.84	6.78	12.02	14.23
	MW1		6.19	6.24	5.71	7.45
	2016/12/07		Mid-Ebb	DS1	6.53	6.59
DS2		6.37		6.53	4.66	7.60
DS3		6.47		6.61	4.79	6.72
DS4		6.26		6.50	4.49	7.43
DS5		6.23		6.47	4.86	7.67
US1		6.71		6.81	4.44	6.93
US2		6.68		6.86	4.94	7.87
Mid-Flood		MW1	6.06	6.05	2.73	4.92
		DS1	6.69	6.95	11.51	12.28
		DS2	6.65	6.84	13.69	14.00
		DS3	6.79	7.04	8.99	13.53
		DS4	7.02	7.16	8.13	13.40
		DS5	7.27	7.30	5.14	15.50
		US1	6.58	6.70	5.63	7.38
		US2	6.73	6.91	5.38	6.47
		MW1	6.03	6.15	3.16	7.68

Sampling Date	Tidal Period	Station	Average DO Levels (mg/L)		Average Turbidity Level (NTU)	Average SS Level (mg/L)
			Bottom	Surface and Mid Depth		
2016/12/09	Mid-Ebb	DS1	6.93	6.83	4.04	5.28
		DS2	6.97	6.96	3.46	5.58
		DS3	6.83	6.93	3.19	8.57
		DS4	6.66	6.85	3.66	8.37
		DS5	6.86	6.85	3.71	4.12
		US1	6.74	6.86	4.66	3.70
		US2	6.85	6.93	3.56	7.48
		MW1	6.06	6.09	2.53	3.12
	Mid-Flood	DS1	6.96	6.95	4.04	4.07
		DS2	6.87	6.95	5.01	4.48
		DS3	6.77	6.89	7.93	4.22
		DS4	6.82	6.86	4.81	3.63
		DS5	6.93	6.93	2.99	4.38
		US1	6.92	6.97	3.84	5.40
		US2	7.00	7.04	6.32	5.20
		MW1	5.98	6.02	2.89	2.78
2016/12/12	Mid-Ebb	DS1	7.12	7.17	4.18	4.83
		DS2	7.09	7.19	4.32	4.25
		DS3	7.12	7.20	5.12	3.55
		DS4	7.00	7.18	5.24	4.45
		DS5	7.20	7.35	4.31	4.63
		US1	7.07	7.10	4.89	5.73
		US2	7.01	7.04	4.87	5.28
		MW1	6.14	6.20	5.06	6.57
	Mid-Flood	DS1	7.29	7.42	5.99	5.95
		DS2	7.39	7.48	7.39	7.17
		DS3	7.34	7.39	8.22	7.42
		DS4	7.37	7.45	7.20	5.97
		DS5	7.40	7.44	9.46	8.75
		US1	7.37	7.56	7.27	7.82
		US2	7.43	7.60	7.84	8.70
		MW1	6.27	6.29	5.31	5.67
2016/12/14	Mid-Ebb	DS1	7.31	7.39	4.59	10.87
		DS2	7.09	7.42	4.57	14.05
		DS3	7.05	7.36	4.46	21.45
		DS4	6.84	7.28	3.91	23.07
		DS5	6.93	7.37	6.35	24.77
		US1	7.29	7.40	4.87	9.93
		US2	7.37	7.38	5.11	12.80
		MW1	6.73	6.81	4.59	24.23
	Mid-Flood	DS1	7.22	7.17	15.17	17.50
		DS2	7.26	7.23	14.99	15.80
		DS3	7.28	7.26	15.24	22.35
		DS4	7.30	7.29	14.64	20.32
		DS5	7.13	7.02	14.19	25.70
		US1	7.21	7.22	19.33	18.53
		US2	7.21	7.22	19.68	19.57
		MW1	6.74	6.82	16.12	16.82
2016/12/16	Mid-Ebb	DS1	7.21	7.32	12.09	9.93
		DS2	7.23	7.40	3.76	4.57
		DS3	7.34	7.45	7.14	6.78
		DS4	6.92	7.26	4.79	7.62
		DS5	7.06	7.31	5.61	6.18

Sampling Date	Tidal Period	Station	Average DO Levels (mg/L)		Average Turbidity Level (NTU)	Average SS Level (mg/L)
			Bottom	Surface and Mid Depth		
	Mid-Flood	US1	7.38	7.52	4.64	4.97
		US2	7.49	7.52	5.51	5.75
		MW1	7.05	7.09	5.97	5.08
		DS1	7.32	7.30	13.07	13.07
		DS2	7.33	7.32	15.65	16.18
		DS3	7.32	7.35	13.23	11.53
		DS4	7.47	7.49	17.55	14.83
		DS5	7.48	7.44	13.16	11.48
		US1	7.36	7.31	10.15	10.23
		US2	7.30	7.28	12.36	14.32
		MW1	6.91	6.97	11.61	12.73
2016/12/19	Mid-Ebb	DS1	7.65	7.88	4.34	5.73
		DS2	7.60	7.64	4.19	5.20
		DS3	7.44	7.62	4.66	5.25
		DS4	7.36	7.58	5.01	6.00
		DS5	7.26	7.38	6.82	7.95
		US1	7.73	7.88	3.74	5.27
		US2	7.65	7.87	4.27	5.30
		MW1	7.15	7.22	3.06	4.00
	Mid-Flood	DS1	7.45	7.48	14.74	17.32
		DS2	7.45	7.52	15.49	16.52
		DS3	7.46	7.49	12.46	13.03
		DS4	7.52	7.58	8.12	9.13
		DS5	7.40	7.51	6.92	7.97
		US1	7.40	7.47	8.50	9.77
		US2	7.49	7.50	8.25	9.53
		MW1	7.14	7.20	6.99	9.20
2016/12/21	Mid-Ebb	DS1	7.44	7.50	3.16	6.60
		DS2	7.42	7.50	3.94	7.35
		DS3	7.41	7.51	4.09	6.32
		DS4	7.33	7.46	4.71	5.60
		DS5	7.45	7.52	3.89	6.18
		US1	7.37	7.49	3.34	4.73
		US2	7.41	7.53	3.52	5.28
		MW1	7.20	7.35	2.61	5.75
	Mid-Flood	DS1	7.33	7.64	6.56	12.22
		DS2	7.42	7.73	4.91	5.17
		DS3	7.52	7.71	4.46	7.60
		DS4	7.45	7.75	4.46	6.67
		DS5	7.46	7.59	5.76	7.80
		US1	7.58	7.77	4.08	5.33
		US2	7.57	7.75	4.21	7.40
		MW1	7.08	7.17	4.67	8.15
2016/12/23	Mid-Ebb	DS1	7.15	7.30	3.38	4.00
		DS2	7.18	7.34	2.95	3.43
		DS3	7.17	7.31	3.64	4.72
		DS4	6.96	7.18	3.39	4.73
		DS5	7.20	7.33	2.53	4.03
		US1	7.31	7.52	2.80	3.13
	Mid-Flood	US2	7.34	7.54	3.51	3.45
		MW1	6.98	7.06	2.37	4.02
		DS1	7.23	7.81	3.91	5.83
		DS2	7.58	7.82	5.06	9.67

Sampling Date	Tidal Period	Station	Average DO Levels (mg/L)		Average Turbidity Level (NTU)	Average SS Level (mg/L)
			Bottom	Surface and Mid Depth		
		DS3	7.34	8.07	4.63	5.88
		DS4	7.50	8.07	4.74	6.33
		DS5	7.55	8.47	5.10	5.97
		US1	7.54	8.02	3.61	6.18
		US2	7.62	7.95	4.03	5.55
		MW1	7.22	7.32	3.05	3.72
2016/12/27	Mid-Ebb	DS1	7.78	7.79	5.86	7.22
		DS2	7.73	7.86	4.76	6.08
		DS3	7.84	7.92	4.57	5.79
		DS4	7.91	8.05	4.91	5.39
		DS5	7.84	7.90	4.01	5.10
		US1	7.39	7.45	8.57	9.72
	Mid-Flood	US2	8.06	8.12	6.21	7.45
		MW1	6.90	7.00	3.64	3.93
		DS1	7.94	8.17	13.76	11.53
		DS2	7.80	7.98	10.81	11.06
		DS3	8.04	8.12	7.57	9.09
		DS4	8.27	8.34	7.55	9.71
		DS5	8.19	8.26	6.75	7.55
		US1	8.39	8.44	5.71	7.02
		US2	8.19	8.23	4.34	5.50
		MW1	7.26	7.22	4.11	3.79
2016/12/29	Mid-Ebb	DS1	7.71	7.79	4.21	6.82
		DS2	7.67	7.68	3.72	6.27
		DS3	7.57	7.60	3.41	5.70
		DS4	7.65	7.63	4.24	8.52
		DS5	7.73	7.76	4.79	8.58
		US1	7.79	7.81	4.32	6.37
	Mid-Flood	US2	7.90	7.93	5.01	7.03
		MW1	7.32	7.37	4.69	8.13
		DS1	7.66	7.66	8.02	12.48
		DS2	7.74	7.71	11.68	13.03
		DS3	7.70	7.61	10.58	12.30
		DS4	7.45	7.42	10.43	15.28
		DS5	7.40	7.34	6.46	9.72
		US1	7.66	7.62	7.84	8.20
		US2	7.67	7.65	7.74	9.22
		MW1	7.28	7.33	5.29	11.70

Notes:

1. Please refer to Table B2 below 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.

**Table B2** *Action and Limit Levels of Water Quality for Dredging, Backfilling and Capping Activities at ESC CMPs*

<b>Parameter</b>	<b>Action Level</b>	<b>Limit Level</b>
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 B3** *Water Column Profiling Results for ESC CMP Vd in December 2016*

Stations	Temp (°C)	Salinity (ppt)	Turbidity (NTU)	Dissolved Oxygen (%) (mg L <sup>-1</sup> )		pH (mg L <sup>-1</sup> )	Suspended Solids (mg L <sup>-1</sup> )
WCP 1 (Downstream)	22.53	31.05	7.72	91.00	6.58	8.04	22.53
WCP 2 (Upstream)	22.09	30.87	11.13	93.57	6.83	8.00	22.09
WQO (Dry season)	N/A	27.79 – 33.96 <sup>#</sup>	N/A	N/A	>4	6.5-8.5	13.2

**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 B4 Action and Limit Levels of Water Quality for Dredging, Backfilling and Capping Activities for SB CMPs**

<b>Parameter</b>	<b>Action Level</b>	<b>Limit Level</b>
Dissolved Oxygen (DO) <sup>(1)</sup>	<u>Surface and Mid-depth</u> <sup>(2)</sup> The average of the impact, WSR 45C and WSR 46 station readings are < 5%-ile of baseline data for surface and middle layer = <b>4.32 mg L<sup>-1</sup></b>  and  Significantly less than the reference stations mean DO (at the same tide of the same day)	<u>Surface and Mid-depth</u> <sup>(2)</sup> The average of the impact, WSR 45C and WSR 46 station readings are < <b>4 mg L<sup>-1</sup></b>  and  Significantly less than the reference stations mean DO (at the same tide of the same day)
	<u>Bottom</u> The average of the impact, WSR 45C and WSR 46 station readings are < 5%-ile of baseline data for bottom layers = <b>3.12 mg L<sup>-1</sup></b>  and  Significantly less than the reference stations mean DO (at the same tide of the same day)	<u>Bottom</u> The average of the impact station, WSR 45C and WSR 46 readings are < <b>2 mg L<sup>-1</sup></b>  and  Significantly less than the reference stations mean DO (at the same tide of the same day)
Depth-averaged Suspended Solids (SS) <sup>(3)(4)</sup>	The average of the impact, WSR 45C and WSR 46 station readings are > 95%-ile of baseline data for depth average = <b>21.60 mg L<sup>-1</sup></b>  and  120% of control station's SS at the same tide of the same day	The average of the impact, WSR 45C and WSR 46 station readings are > 99%-ile of baseline data for depth average = <b>40.10 mg L<sup>-1</sup></b>  and  130% of control station's SS at the same tide of the same day
Depth-averaged Turbidity (Tby) <sup>(3)(4)</sup>	The average of the impact, WSR 45C and WSR 46 station readings are > 95%-ile of baseline data = <b>25.04 NTU</b>  and  120% of control station's Tby at the same tide of the same day	The average of the impact, WSR 45C and WSR 46 station readings are > 99%-ile of baseline data = <b>32.68 NTU</b>  and  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) "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
- (4) For turbidity and SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

**Table B5** *Monitoring Results for Water Quality Monitoring during Capping of SB CMP in December 2016*

Sampling Period	Stations	Temp	Salinity	Turbidity	Dissolved Oxygen		pH	SS	NH3	TIN	BOD <sub>5</sub>
		(°C)	(ppt)	(NTU)	(%)	(mg L <sup>-1</sup> )	(mg L <sup>-1</sup> )	(mg L <sup>-1</sup> )	(mg L <sup>-1</sup> )	(mg L <sup>-1</sup> )	(mg L <sup>-1</sup> )
December 2016	RFF (Reference)	22.26	29.33	5.95	92.94	6.82	8.05	8.86	0.07	0.49	1.76
	IPF (Impact)	22.40	29.59	8.47	91.55	6.69	7.98	10.81	0.08	0.50	1.54
	INF (Intermediate)	22.70	30.46	7.19	86.76	6.28	8.01	8.22	0.08	0.37	1.59
	Ma Wan	22.70	30.63	6.18	84.81	6.13	8.07	6.75	0.09	0.35	1.67
	Sham Shui Kok	22.40	29.79	3.37	90.63	6.62	8.00	4.40	0.18	1.04	1.83
	Tai Mo To	22.39	29.60	4.83	92.45	6.76	8.04	7.15	0.18	1.01	1.27
	Tai Ho Bay 1	22.31	29.37	10.22	94.26	6.91	7.83	13.67	0.12	0.92	1.33
	Tai Ho Bay 2	23.17	28.71	8.73	86.82	6.29	7.95	7.53	0.16	0.92	1.97
	WQO	N/A	26.40-32.27*	N/A	N/A	>4	6.5-8.5	13.2	N/A	0.50	N/A

**Notes:**

# Not exceeding 2°C of change of the results from the Reference Station.

#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.