

Table C1 *Summary Table of DO, Turbidity and SS Levels Recorded between 3 and 30 June 2014*

Sampling Date	Tidal Period	Station	Average DO Levels (mg/L)		Average Turbidity Level (NTU)	Average SS Level (mg/L)
			Bottom	Surface and Mid Depth		
2014/06/03	Mid-Ebb	DS1	6.42	7.56	2.08	3.88
		DS2	3.94	7.14	4.07	7.51
		DS3	6.31	8.28	2.34	4.51
		DS4	5.03	7.92	2.44	4.00
		DS5	3.82	7.19	6.21	9.07
		US1	7.25	9.50	4.43	6.02
		US2	4.61	7.74	6.23	8.17
		MW1	4.27	8.08	1.97	4.06
		THB1	5.54	7.52	7.53	5.30
		THB2	-	8.83	3.64	6.80
		WSR45C	3.96	7.10	4.53	6.13
		WSR46	4.40	7.65	3.68	6.31
	Mid-Flood	DS1	6.87	6.90	2.07	3.07
		DS2	7.42	7.30	2.50	4.58
		DS3	6.85	7.44	2.47	4.08
		DS4	6.25	7.79	1.85	3.69
		DS5	4.06	7.44	2.43	4.44
		US1	5.98	6.76	1.96	4.51
		US2	5.14	6.33	1.98	3.32
		MW1	4.06	5.54	2.69	4.58
		THB1	6.97	7.07	3.20	3.20
		THB2	-	6.40	7.36	4.03
		WSR45C	4.08	5.65	2.95	3.68
		WSR46	4.38	6.37	5.94	5.80
2014/06/05	Mid-Ebb	DS1	5.50	8.31	3.38	6.44
		DS2	3.47	6.30	3.45	6.82
		DS3	4.55	6.83	1.97	4.59
		DS4	4.44	6.70	1.57	3.98
		DS5	3.40	6.64	4.19	6.49
		US1	8.27	9.68	4.36	7.23
		US2	5.03	7.87	4.15	7.10
		MW1	3.80	6.80	1.45	3.78
		THB1	5.17	10.19	4.75	7.63
		THB2	-	9.10	4.44	5.37
		WSR45C	3.34	6.20	3.07	4.53
		WSR46	3.83	7.14	3.13	4.89
	Mid-Flood	DS1	7.64	7.57	2.96	6.25
		DS2	7.54	8.18	5.15	9.80
		DS3	7.09	8.96	1.85	4.33
		DS4	4.14	6.70	5.54	8.63
		DS5	3.67	6.64	2.89	6.47
		US1	5.97	6.93	1.70	3.63
		US2	4.34	5.97	1.74	3.11
		MW1	3.45	5.44	1.61	3.96
		THB1	6.83	7.46	5.42	6.23
		THB2	-	7.45	2.90	5.53
		WSR45C	3.57	5.27	2.96	4.71

Sampling Date	Tidal Period	Station	Average DO Levels (mg/L)		Average Turbidity Level (NTU)	Average SS Level (mg/L)
			Bottom	Surface and Mid Depth		
		WSR46	3.93	6.12	3.01	6.24
2014/06/07	Mid-Ebb	DS1	5.77	7.08	2.00	5.22
		DS2	3.03	4.98	3.12	5.27
		DS3	3.87	5.36	2.24	3.63
		DS4	4.10	5.38	1.85	3.93
		DS5	3.90	5.45	1.99	2.82
		US1	5.35	5.95	5.77	7.70
		US2	3.66	4.94	7.46	10.14
		MW1	3.01	4.36	2.34	3.53
		THB1	4.19	6.87	5.27	7.42
		THB2	-	-	-	-
	WSR45C	3.01	4.82	3.17	4.86	
	WSR46	3.18	4.80	3.33	6.26	
	Mid-Flood	DS1	5.68	7.19	10.56	10.38
		DS2	4.26	5.75	3.83	7.43
		DS3	3.60	5.71	3.91	5.19
		DS4	7.36	7.97	2.12	5.00
		DS5	4.55	7.17	4.33	6.80
		US1	2.98	6.68	2.26	3.72
		US2	2.96	4.84	3.42	7.62
		MW1	4.11	4.81	1.97	3.10
THB1		3.01	5.98	7.00	11.77	
THB2		-	-	-	-	
WSR45C	3.21	5.01	3.36	5.76		
WSR46	3.27	5.69	3.72	5.80		
2014/06/09	Mid-Ebb	DS1	5.50	6.73	4.45	8.50
		DS2	3.30	3.81	4.77	7.90
		DS3	4.07	4.57	3.37	5.71
		DS4	3.68	4.47	3.16	4.92
		DS5	3.64	4.13	3.12	4.92
		US1	5.43	6.70	4.62	6.25
		US2	3.99	4.41	3.59	6.36
		MW1	3.16	4.43	1.79	5.58
		THB1	4.25	7.39	3.43	7.05
		THB2	-	7.57	4.86	6.00
	WSR45C	3.72	4.62	3.52	5.01	
	WSR46	3.64	4.37	2.91	3.98	
	Mid-Flood	DS1	6.86	7.82	4.02	10.35
		DS2	6.82	8.77	6.12	10.93
		DS3	4.16	7.18	5.11	7.21
		DS4	5.05	7.71	4.13	7.43
		DS5	4.13	7.54	5.39	5.58
		US1	6.12	8.80	2.92	4.55
		US2	3.80	5.61	3.59	6.34
		MW1	3.37	4.49	2.59	5.62
THB1		6.13	8.27	6.37	9.28	
THB2		-	9.78	5.53	6.53	
WSR45C	3.43	5.16	3.39	5.59		
WSR46	3.60	5.97	4.41	6.44		
2014/06/11	Mid-Ebb	DS1	6.08	7.21	2.62	6.19
		DS2	3.95	5.68	3.09	7.18

Sampling Date	Tidal Period	Station	Average DO Levels (mg/L)		Average Turbidity Level (NTU)	Average SS Level (mg/L)
			Bottom	Surface and Mid Depth		
		DS3	5.08	5.87	2.32	5.03
		DS4	4.78	5.84	2.07	4.96
		DS5	5.39	6.13	2.90	6.34
		US1	5.17	6.91	3.13	5.63
		US2	4.14	6.16	4.82	7.00
		MW1	4.45	5.28	2.44	4.69
		THB1	7.09	7.75	2.60	5.53
		THB2	-	-	-	-
		WSR45C	5.49	5.84	3.45	4.62
		WSR46	4.36	5.24	4.18	5.36
	Mid-Flood	DS1	8.08	8.36	2.31	6.57
		DS2	7.96	8.37	4.99	7.58
		DS3	7.40	8.37	5.35	9.90
		DS4	8.77	8.49	4.33	9.20
		DS5	5.78	8.77	4.75	8.77
		US1	5.12	5.42	2.95	4.92
		US2	4.51	6.22	3.20	6.21
		MW1	4.19	4.50	3.94	8.48
		THB1	8.04	8.09	6.97	9.90
		THB2	-	11.24	7.93	7.50
		WSR45C	4.28	4.91	8.59	8.79
		WSR46	5.20	7.38	12.51	11.80
2014/06/13	Mid-Ebb	DS1	6.03	6.83	3.88	6.38
		DS2	4.55	5.97	4.01	6.93
		DS3	5.08	7.02	3.83	5.12
		DS4	5.23	6.91	4.29	7.44
		DS5	4.60	5.54	5.97	9.79
		US1	7.13	8.01	4.32	6.67
		US2	4.79	5.91	9.47	12.44
		MW1	4.99	5.59	3.44	5.80
		THB1	7.21	7.67	5.00	8.03
		THB2	-	7.09	3.70	5.33
		WSR45C	5.02	6.37	4.64	7.66
		WSR46	4.25	4.74	4.82	8.69
	Mid-Flood	DS1	4.93	5.06	10.40	30.68
		DS2	6.49	5.53	3.46	6.24
		DS3	6.47	6.22	4.02	5.98
		DS4	6.18	6.39	4.51	6.09
		DS5	6.44	6.60	4.56	5.61
		US1	4.49	5.04	2.76	4.37
		US2	4.31	4.95	2.72	4.62
		MW1	4.02	4.45	4.32	6.57
		THB1	5.06	5.13	4.07	4.85
		THB2	-	6.34	4.34	4.90
		WSR45C	4.34	4.55	7.85	9.83
		WSR46	4.43	4.84	7.13	8.39
2014/06/16	Mid-Ebb	DS1	5.57	5.72	5.59	6.07
		DS2	4.82	5.41	4.65	5.54
		DS3	4.96	5.47	5.09	5.96
		DS4	4.69	5.04	9.46	9.89
		DS5	4.65	5.33	8.57	5.70

Sampling Date	Tidal Period	Station	Average DO Levels (mg/L)		Average Turbidity Level (NTU)	Average SS Level (mg/L)
			Bottom	Surface and Mid Depth		
		US1	4.89	5.30	11.97	14.46
		US2	4.66	5.18	8.27	9.90
		MW1	5.25	5.50	4.42	10.98
		THB1	5.84	5.88	3.20	14.75
		THB2	-	5.56	4.50	10.90
		WSR45C	4.59	5.29	7.76	12.87
		WSR46	4.54	4.85	8.49	15.83
	Mid-Flood	DS1	5.00	5.03	5.08	10.38
		DS2	5.20	5.11	5.71	7.18
		DS3	5.11	5.18	6.34	5.68
		DS4	5.22	5.27	5.95	6.18
		DS5	4.99	5.16	9.04	6.68
		US1	4.68	4.82	6.12	12.97
		US2	4.59	4.87	9.86	15.87
		MW1	4.47	4.82	3.11	3.63
		THB1	5.02	4.98	6.38	5.53
		THB2	-	-	-	-
		WSR45C	4.60	4.78	8.48	7.33
		WSR46	4.54	4.76	12.21	9.88
2014/06/18	Mid-Ebb	DS1	5.03	5.98	4.06	3.98
		DS2	4.62	5.60	7.21	9.78
		DS3	4.78	5.70	5.79	7.56
		DS4	4.80	5.63	6.00	6.72
		DS5	4.92	5.70	5.08	8.03
		US1	5.13	5.99	6.78	7.12
		US2	4.83	5.63	7.24	6.81
		MW1	6.10	6.34	3.63	4.10
		THB1	6.20	6.50	4.57	5.47
		THB2	-	6.66	5.46	4.10
		WSR45C	5.11	6.08	10.93	8.86
		WSR46	4.96	6.07	5.47	5.44
	Mid-Flood	DS1	5.42	5.73	4.05	6.88
		DS2	5.71	5.77	3.79	5.69
		DS3	5.30	5.67	5.76	7.81
		DS4	5.04	5.85	4.20	5.71
		DS5	5.14	5.85	4.85	6.02
		US1	4.91	5.18	5.21	7.18
		US2	4.73	5.27	3.98	5.11
		MW1	4.71	5.30	8.07	6.46
		THB1	5.31	5.67	11.35	10.97
		THB2	-	5.50	3.90	2.97
		WSR45C	4.60	5.31	7.34	8.50
		WSR46	4.74	5.29	8.24	8.36
2014/06/20	Mid-Ebb	DS1	6.14	6.98	5.12	5.88
		DS2	4.46	5.76	5.71	8.41
		DS3	4.97	6.28	3.01	5.47
		DS4	4.71	5.83	6.02	7.31
		DS5	4.74	5.97	4.87	6.96
		US1	5.75	8.33	8.83	9.72
		US2	5.01	6.86	14.97	12.72
		MW1	5.20	6.09	2.64	4.24

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	THB1	6.51	8.16	6.52	8.65	
		THB2	-	5.44	8.66	6.53	
		WSR45C	4.17	6.36	8.89	9.88	
		WSR46	4.70	6.06	5.55	7.08	
		DS1	5.61	5.82	6.10	8.97	
		DS2	5.80	6.10	10.75	11.12	
		DS3	5.16	6.03	11.64	12.62	
		DS4	4.90	6.01	9.78	9.44	
		DS5	4.80	6.71	10.48	9.19	
		US1	5.28	5.78	3.68	5.01	
	US2	4.79	5.35	5.92	5.94		
	MW1	4.40	5.36	3.53	5.50		
	THB1	5.68	5.85	12.45	14.98		
	THB2	-	5.51	7.83	8.23		
	WSR45C	4.56	5.20	6.25	8.43		
	WSR46	4.69	5.47	6.28	7.10		
	2014/06/23	Mid-Ebb	DS1	4.84	5.49	4.94	5.80
			DS2	3.53	5.09	6.63	7.24
			DS3	4.52	5.05	4.46	6.50
			DS4	4.41	5.26	4.20	5.89
DS5			4.34	5.29	4.30	4.73	
US1			4.55	5.62	9.03	9.20	
US2			4.34	4.71	11.38	11.79	
MW1			3.77	4.94	4.57	5.43	
THB1			4.70	6.27	7.72	7.83	
THB2			-	-	-	-	
WSR45C		3.62	5.40	8.21	8.19		
WSR46		4.20	5.14	9.48	8.81		
Mid-Flood		DS1	5.93	5.97	5.80	7.68	
		DS2	3.97	5.32	13.44	17.17	
		DS3	3.94	5.36	10.37	10.87	
		DS4	6.37	6.54	7.72	8.80	
		DS5	6.34	6.74	7.29	8.22	
		US1	4.68	6.00	6.32	7.33	
		US2	3.93	4.94	7.93	9.59	
		MW1	3.82	4.23	8.21	7.96	
	THB1	4.50	5.74	17.32	13.02		
	THB2	-	4.44	9.66	10.53		
WSR45C	3.99	4.79	17.46	11.92			
WSR46	4.26	5.51	11.23	16.67			
2014/06/25	Mid-Ebb	DS1	5.46	5.77	5.17	5.93	
		DS2	3.66	4.92	7.83	9.46	
		DS3	4.32	5.23	6.51	8.02	
		DS4	4.48	5.05	5.89	6.21	
		DS5	4.03	4.90	10.62	8.59	
		US1	4.57	5.06	11.35	12.33	
		US2	4.39	4.79	13.35	18.90	
		MW1	3.73	5.18	4.97	8.08	
		THB1	4.19	5.62	8.72	9.28	
		THB2	-	-	-	-	
		WSR45C	3.69	4.97	8.67	8.57	

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	WSR46	3.98	5.09	7.95	8.31
		DS1	5.53	5.55	7.12	6.67
		DS2	5.59	5.69	8.70	9.40
		DS3	4.49	5.34	13.52	15.63
		DS4	5.60	5.86	11.40	13.22
		DS5	4.83	5.86	11.18	11.37
		US1	4.40	5.24	6.00	10.85
		US2	3.59	4.89	8.21	9.36
		MW1	5.72	4.01	8.53	9.58
		THB1	3.69	5.72	9.48	11.12
		THB2	-	-	-	-
		WSR45C	3.66	4.75	12.74	16.73
		WSR46	4.69	5.63	8.05	7.86
		2014/06/27	Mid-Ebb	DS1	5.60	5.92
DS2	3.41			4.99	11.02	13.93
DS3	4.31			5.44	8.89	8.22
DS4	4.08			4.90	8.54	8.16
DS5	3.97			4.83	10.02	7.69
US1	4.87			5.26	10.92	11.87
US2	4.25			4.58	10.04	12.54
MW1	4.12			4.93	7.58	7.93
THB1	4.58			5.13	13.05	9.92
THB2	-			4.37	12.86	4.13
WSR45C	3.34			4.71	13.28	10.47
WSR46	3.95			4.85	6.05	6.12
Mid-Flood	DS1		4.95	5.18	5.57	5.67
	DS2		4.55	4.74	7.98	9.66
	DS3		4.63	4.77	6.58	5.91
	DS4		4.35	4.97	8.15	6.41
	DS5		5.34	5.26	9.85	8.23
	US1		4.52	4.59	4.16	4.32
	US2		3.63	4.42	13.36	10.09
	MW1		3.23	4.38	4.29	4.22
	THB1		4.60	4.64	8.67	10.65
	THB2		-	4.73	7.49	4.10
WSR45C	3.65	4.24	12.32	9.06		
WSR46	3.53	4.43	12.31	8.77		
2014/06/30	Mid-Ebb	DS1	5.05	5.95	8.89	9.51
		DS2	4.18	5.74	8.18	7.12
		DS3	4.30	5.29	4.97	5.11
		DS4	3.81	4.81	7.71	8.58
		DS5	3.62	4.49	11.52	12.07
		US1	5.34	6.32	7.93	9.18
		US2	3.99	5.42	7.78	7.77
		MW1	4.67	4.97	5.84	6.80
		THB1	3.85	5.81	8.88	13.12
		THB2	-	4.99	5.13	5.63
		WSR45C	3.96	5.31	8.73	10.49
		WSR46	3.81	4.91	6.85	8.14
	Mid-Flood	DS1	4.80	5.27	4.25	6.55
		DS2	4.04	4.75	5.83	5.92

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	3.91	4.57	6.27	6.12
		DS4	4.60	5.50	5.84	7.43
		DS5	5.99	6.00	4.28	7.03
		US1	4.02	4.25	4.05	4.93
		US2	3.73	4.22	5.07	6.80
		MW1	3.38	4.28	4.03	8.33
		THB1	4.22	4.90	5.13	6.20
		THB2	-	4.36	6.63	4.03
		WSR45C	3.35	4.03	17.06	11.29
		WSR46	3.37	4.07	18.95	13.13

Notes:

1. Please refer to Table C2 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.
4. Only mid-depth water was sampled at Station THB2 because water depth was less than 3m.
5. Sampling at Station THB2 on 7 and 25 June 2014 was cancelled due to adverse weather condition.
6. Sampling at Station THB2 during mid-ebb tide on 11 and 23 June 2014 was cancelled due to adverse weather condition.
7. Sampling at Station THB2 during mid-flood tide on 16 June 2014 was cancelled due to adverse weather condition.

Table C2 Action and Limit Levels of Water Quality for Dredging, Backfilling and Capping Activities

Parameter	Action Level	Limit Level
Dissolved Oxygen (DO) ⁽¹⁾	<u>Surface and Mid-depth</u> ⁽²⁾ The average of the impact, WSR 45C and WSR 46 station readings are < 5%-ile of baseline data for surface and middle layer = 4.32 mg L⁻¹ and Significantly less than the reference stations mean DO (at the same tide of the same day)	<u>Surface and Mid-depth</u> ⁽²⁾ The average of the impact, WSR 45C and WSR 46 station readings are < 4 mg L⁻¹ 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 = 3.12 mg L⁻¹ 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 < 2 mg L⁻¹ and Significantly less than the reference stations mean DO (at the same tide of the same day)
Depth-averaged Suspended Solids (SS) ^{(3) (4)}	The average of the impact, WSR 45C and WSR 46 station readings are > 95%-ile of baseline data for depth average = 21.60 mg L⁻¹ 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 = 40.10 mg L⁻¹ and 130% of control station's SS at the same tide of the same day
Depth-averaged Turbidity (Tby) ^{(3) (4)}	The average of the impact, WSR 45C and WSR 46 station readings are > 95%-ile of baseline data = 25.04 NTU 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 = 32.68 NTU 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 C3 Results of Baseline Monitoring conducted for SB CMPs in July and August 2012

Parameter	Detection Limit	Stations around SB CMP			EPD Stations (NM1, NM2, NM3, NM5 and NM6)		
		Average	Min	Max	Average	Min	Max
DO (mg/L)	0.1	5.6	2.5	12.2	5.1	2.3	10.7
Turbidity (NTU)	0.1	9.5	1.5	74.9	9.6	1.9	120.1
SS (mg/L)	2	9.9	3.1	130.7	8.8	0.8	49.3
Arsenic (µg/L)	10	<10	<10	<10	<10	<10	<10
Cadmium (µg/L)	0.2	0.2	0.2	0.4	0.2	0.2	0.2
Chromium (µg/L)	1	1.5	1.0	2.0	2.0	1.0	3.0
Copper (µg/L)	1	2.3	1.0	13.0	1.2	1.0	11.0
Lead (µg/L)	1	1.3	1.0	2.0	5.0	1.0	9.0
Mercury (µg/L)	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel (µg/L)	1	2.2	1.0	7.0	2.1	1.0	5.0
Silver (µg/L)	1	<1	<1	<1	<1	<1	<1
Zinc (µg/L)	10	18.9	10.0	173.0	23.7	10.0	224.0
NH ₃ -N (mg/L)	0.01	0.1	0.0	0.4	0.1	0.0	0.4
TIN (mg/L)	0.1	0.8	0.3	1.7	0.8	0.2	1.8
BOD ₅ (mg/L)	2	<2	<2	<2	<2	<2	<2

Table C4 Water Column Profiling Results for CMP 1 on 10 June 2014

Stations	Temp (°C)	Salinity (ppt)	Turbidity (NTU)	Dissolved Oxygen (%) (mg L ⁻¹)		pH (mg L ⁻¹)	Suspended Solids (mg L ⁻¹)
WCP 1 (Downstream)	27.27	22.28	2.95	103.24	7.23	7.94	6.55
WCP 2 (Upstream)	26.62	24.84	3.35	84.55	5.90	7.85	6.98
WQO (wet season)	N/A	21.20-27.32 [#]	N/A	N/A	>4	6.5-8.5	12.00

Note: [#]Not exceeding 10% of natural ambient level which is the result obtained from the Reference Station.