

ANNEX J

MARINE WATER QUALITY MONITORING RESULTS FOR SILT CURTAIN PILOT TEST

Date: 2021/02/02

Round: 1

Dredging Work Rate: 230 m³/hr

Tidal State: Flood tide

Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth	Depth Level***	Current Velocity (m/s)	Current Direction	Temperature (°C)	Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)		
									Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value
A1	Fine	Calm	11:24	15.0	S	0.44	5	18.51	32.26	32.27	7.07	7.08	121.3	9.37	9.43	2.8	2.6	1.7	1.7	501.0	2.4
						0.29	253	18.52	32.27	7.09	7.09	122.0	9.48	9.48	2.3	2.3	1.7	1.7			
						0.13	234	17.78	32.62	6.90	6.95	110.4	8.64	8.77	1.3	1.3	2.6	2.4			
						0.33	278	17.78	32.62	6.99	6.99	113.7	8.89	8.89	1.2	1.2	2.2	2.2			
						0.38	312	17.85	31.73	9.19	9.17	113.9	8.95	8.94	1369.3	1499.2	2.8	3.1			
B1	Fine	Calm	12:03	15.0	S	0.49	292	17.84	31.77	31.75	9.14	9.14	113.7	8.93	8.94	8.94	8.94	3.4	3.4	1.0	0.8
						0.17	242	18.31	32.30	7.33	7.34	121.3	9.41	9.47	0.9	0.7	0.5	0.5			
						0.17	242	18.33	32.30	7.34	7.34	122.9	9.51	9.51	0.5	0.5	1.1	1.1			
						0.40	294	17.75	32.62	7.29	7.29	114.6	8.88	8.93	1.1	1.2	0.5	0.5			
						0.40	294	17.75	32.62	7.29	7.29	114.6	8.88	8.93	1.1	1.2	1.1	1.1			
B2	Fine	Calm	12:48	15.0	S	0.17	133	17.74	32.62	32.62	7.31	7.29	114.6	8.97	8.98	1.3	1.3	2.2	2.1	1.0	2.5
						0.28	274	17.74	32.62	7.27	7.27	114.7	8.98	8.98	1.2	1.2	2.0	2.0			
						0.27	319	18.23	32.31	7.40	7.41	121.2	9.41	9.52	0.4	0.4	2.5	2.5			
						0.27	319	18.16	32.34	7.41	7.41	123.7	9.62	9.62	0.3	0.3	2.4	2.4			
						0.07	274	17.72	32.63	7.37	7.37	114.8	8.99	8.97	1.3	1.3	3.2	2.9			
B3	Fine	Calm	12:38	15.0	B	0.09	144	17.69	32.64	32.64	7.43	7.41	110.2	8.63	8.70	1.4	1.5	3.2	3.1	1.1	1.9
						0.30	271	17.69	32.64	7.39	7.39	111.8	8.76	8.76	1.5	1.5	3.0	3.0			
						0.75	314	18.52	32.23	7.41	7.45	125.1	9.67	9.73	0.3	0.3	2.6	2.6			
						0.75	314	18.55	32.24	7.48	7.48	126.5	9.78	9.78	0.3	0.3	2.6	2.6			
						0.50	234	17.72	32.63	7.32	7.32	113.3	8.87	8.90	1.4	1.4	1.9	1.7			
B4	Fine	Calm	12:30	15.0	B	0.47	2	17.72	32.63	32.63	7.32	7.32	114.1	8.99	8.99	1.4	1.4	1.5	1.5	1.1	1.1
						0.16	15	17.69	32.60	7.42	7.38	111.2	8.71	8.71	1.5	1.5	1.4	1.4			
						0.15	207	17.69	32.60	7.34	7.34	112.0	8.78	8.75	1.5	1.5	1.4	1.4			
						0.50	295	18.37	32.28	7.35	7.37	121.6	9.42	9.52	0.5	0.4	0.5	0.5			
						0.50	295	18.66	32.19	7.39	7.39	125.0	9.62	9.62	0.3	0.3	0.5	0.5			

Remark: * DA: Depth-Averaged
 ** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
 *** S: 1 m below the sea surface; M: mid-depth; 5: 1 m above the seabed

Pilot Test Water Quality Data Log Sheet

Date: 2021/02/02

Round: 2

Dredging Work Rate: 255 m³/hr

Tidal State: Ebb tide

Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth	Depth Level***	Current Velocity (m/s)	Current Direction	Temperature (°C)		Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)			
								Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
A1	Fine	Calm	14:17	15.0	S	0.32	77	18.46	18.49	31.96	31.97	8.87	8.81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.6	33.0
						0.32	77	18.51	18.49	31.97	31.97	8.75	8.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33.4	33.4
						0.13	80	17.87	17.88	32.05	32.07	8.91	8.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	34.7	34.1
						0.31	105	17.88	17.88	32.08	32.07	8.92	8.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33.4	33.4
						0.65	62	17.82	17.81	32.01	32.03	8.79	8.82	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	36.9	37.7
B1	Fine	Calm	14:48	15.0	S	0.23	115	18.91	18.93	31.93	31.92	8.86	8.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.4	1.6
						0.23	115	18.95	18.93	31.90	31.92	8.85	8.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.8	1.8
						0.04	211	17.99	17.99	32.23	32.24	8.82	8.84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.8	2.0
						0.64	314	17.98	17.99	32.24	32.24	8.86	8.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.2	2.0
						0.21	303	17.71	17.71	32.27	32.27	8.85	8.82	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.6	3.4
B2	Fine	Calm	15:19	15.0	S	0.15	201	19.66	19.55	31.88	31.88	8.79	8.85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.3	1.3
						0.18	176	19.44	19.55	31.88	31.88	8.85	8.84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.2	1.2
						0.29	105	17.92	17.94	32.21	32.20	8.88	8.91	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.1	2.3
						0.23	200	17.95	17.94	32.18	32.20	8.94	8.94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.5	2.3
						0.30	228	17.77	17.76	32.23	32.24	8.95	8.94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.06	3.03
B3	Fine	Calm	15:10	15.0	B	0.28	166	17.74	17.72	32.24	32.25	8.93	8.94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	29.9	30.3
						0.58	235	19.19	19.13	31.98	32.00	8.83	8.85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.9	1.7
						0.58	235	19.06	19.13	32.02	32.00	8.86	8.85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.4	1.4
						0.13	233	18.05	18.05	32.22	32.21	8.86	8.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.3	2.5
						0.16	231	18.05	18.05	32.20	32.21	8.94	8.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.6	2.6
B4	Fine	Calm	14:58	15.0	B	0.15	73	17.72	17.72	32.25	32.25	8.90	8.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.6	4.0
						0.15	73	17.72	17.72	32.25	32.25	8.93	8.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.3	4.0
						0.13	20	19.13	19.13	31.89	31.89	8.87	8.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.4	1.4
						0.13	20	19.07	19.13	31.88	31.88	8.87	8.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.3	1.3
						0.31	13	18.02	18.06	32.22	32.21	8.85	8.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.5	1.5
B4	Fine	Calm	14:58	15.0	B	0.31	13	18.10	18.06	32.19	32.21	8.91	8.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.4	1.5
						0.22	158	17.72	17.72	32.24	32.25	8.96	8.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.7	1.8
						0.32	52	17.71	17.72	32.26	32.25	8.89	8.89	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.8	1.8

Remark: * DA: Depth-Averaged
 ** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
 *** S: 1 m below the sea surface; M: mid-depth; B: 1 m above the seabed

Pilot Test Water Quality Data Log Sheet

Date: 2021/02/02

Round: 3

Dredging Work Rate: 235 m³/hr

Tidal State: Ebb tide

Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth	Depth Level***	Current Velocity (m/s)	Current Direction	Temperature (°C)		Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)						
								Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value
A1	Fine	Calm	15:36	15.0	S	0.40	191	18.83	18.83	31.98	31.96	8.92	8.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22.3	22.6			
						0.66	91	18.93	18.93	31.93	31.96	8.93	8.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22.8	22.6			
						0.48	121	17.96	17.95	32.18	32.18	8.95	8.95	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.8	10.3	
						0.45	112	17.94	17.94	32.18	32.18	8.95	8.95	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.7	10.3	
						0.16	96	17.74	17.74	32.22	32.22	8.90	8.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.4	18.7	
						0.20	24	17.73	17.73	32.21	32.21	8.94	8.94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.9	18.7	
B1	Fine	Calm	15:47	15.0	S	0.10	255	19.31	19.48	31.83	31.82	8.82	8.83	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.7	2.6			
						0.10	255	19.65	19.65	31.81	31.81	8.84	8.84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.4	2.4		
						0.35	48	17.97	17.98	32.23	32.22	8.88	8.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.6	1.8	
						0.07	24	17.98	17.98	32.21	32.21	8.91	8.91	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.0	2.0	
						0.09	273	17.74	17.74	31.83	31.82	8.93	8.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.5	0.8	
						0.13	330	17.74	17.74	31.81	31.81	8.93	8.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.1	1.1	
B2	Fine	Calm	16:28	15.0	S	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.3	1.5			
						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.6	1.6	
						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.8	1.7
						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.6	1.6
						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.4	3.2
						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.0	3.0
B3	Fine	Calm	16:20	15.0	B	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.9	1.9		
						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.8	1.8
						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.0	2.8
						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.6	2.6
						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.6	4.1
						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.5	3.5
B4	Fine	Calm	16:10	15.0	S	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.4	3.2			
						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.0	3.0	
						0.27	343	17.95	17.96	32.36	32.35	8.19	8.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.6	2.4	
						0.07	59	17.97	17.97	32.34	32.34	8.18	8.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.1	2.1	
						0.07	313	17.78	17.78	32.35	32.35	8.14	8.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.8	1.8	
						0.17	109	17.77	17.77	32.37	32.37	8.19	8.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.7	1.7	

Remark: * DA: Depth-Averaged
 ** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
 *** S: 1 m below the sea surface; M: mid-depth; B: 1 m above the seabed