



# **Improvement Dredging for Lamma Power Station Navigation Channel**

Baseline Water Quality Monitoring Report

October 2019

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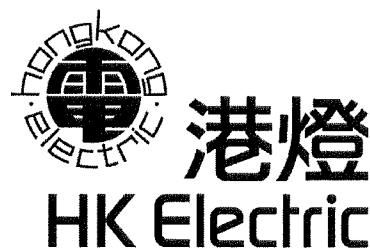
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香港電燈有限公司  
The Hongkong Electric Co., Ltd.



**ENVIRONMENTAL IMPACT ASSESSMENT (EIA) ORDINANCE, CAP. 499**

**ENVIRONMENTAL PERMIT NO. EP-535/2017**

**IMPROVEMENT DREDGING FOR  
LAMMA POWER STATION NAVIGATION CHANNEL**

Report Title	Baseline Water Quality Monitoring Report (October 2019)
Date	29 October 2019
Certified by	 (Mr. Kenneth Fung, Environmental Team Leader)
Verified by	 Mr. Y T Tang (AECOM Asia Company Limited, Independent Environmental Checker)

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# Executive Summary

An Environmental Permit (EP) (No. EP-535/2017) for the “Improvement Dredging for Lamma Power Station Navigation Channel” (the Project) was granted by the Environmental Protection Department (EPD) on 10 October 2017. To fulfil Condition 3.3 of the EP, this Baseline Water Quality Monitoring Report provides the baseline conditions of water quality parameters before the commencement of improvement dredging works.

Baseline water quality monitoring was conducted three days per week for four weeks in January (dry season), and four weeks in July and August 2019 (wet season), at mid-flood and mid-ebb tides, at 10 sensitive receiver (SR) stations, three control stations and five near stations. Monitoring of dissolved oxygen (DO), dissolved oxygen saturation (DO%), pH, temperature, turbidity, salinity and water depth were undertaken at all monitoring stations. In addition, suspended solids (SS) was monitored at SR stations and control stations. As no pertinent activities were observed in the vicinity of the monitoring stations during the baseline monitoring that would affect the monitoring results, the water quality monitoring results obtained are considered to be appropriate for adoption as the baseline water quality dataset for the Project.

The Action and Limit levels for water quality impact monitoring at SR stations and the Initial Alert levels for monitoring at near stations have been set based on the baseline water quality monitoring conducted in January, July and August 2019. The summary table of the Action and Limit levels and Initial Alert levels for water quality are presented in **Table 4.2** and **Table 5.2** of this Report respectively.

Should non-compliance of the water quality criteria occur, the Event and Action Plan and Alert Action Plan as presented in **Section 4.2** and **Section 5.2** of this Report shall be followed.

# 1 Introduction

## 1.1 Background

On 10 October 2017, the Environment Impact Assessment (EIA) Report (Register No.: AEIAR-212/2017) for the “Improvement Dredging for Lamma Power Station Navigation Channel” (the Project) was approved and an Environmental Permit (EP) (No. EP-535/2017) was issued for the construction and operation of the Project. Mott MacDonald Hong Kong Limited was commissioned by The Hongkong Electric Company, Limited to carry out the baseline water quality monitoring works of the Project. The construction phase of the Project is scheduled to commence in Q4 of 2019. This Baseline Water Quality Monitoring Report has been prepared before the commencement of improvement dredging works to fulfil Condition 3.3 of the EP.

## 1.2 Project Description

The purpose of the Project is to provide and maintain safe clearance for ocean-going marine vessels delivering coal to Lamma Power Station (LPS) via the Lamma Power Station Navigation Channel (the “Channel”), through the dredging of naturally accumulating sediment from the seabed. In order to meet the requirements for continued safe passage, this Project involves the following:

- Initial dredging and re-profiling of the Channel down to a depth<sup>1</sup> of -16.5 mPD during construction phase, with an estimated sediment quantity up to approx. 3.2 Mm<sup>3</sup>; and
- Selected high spot dredging and re-profiling of the Channel down to depth of -16.5 mPD during operation phase, approximately once 4 to 10 years with estimated dredging volume of approximately 0.9 Mm<sup>3</sup> to 2.9 Mm<sup>3</sup> respectively.

## 1.3 Purpose of this Report

This Baseline Water Quality Monitoring Report presents the water quality monitoring data obtained in January, July and August 2019. The baseline water quality monitoring has been undertaken based on the approach and methodology presented in the updated EM&A Manual.

## 1.4 Structure of the Report

The structure of the report is as follows:

- Section 1 Introduction – presents the project background, purpose and structure of this baseline water quality monitoring report;
- Section 2 Water Quality Monitoring Methodology – presents the monitoring requirements and methodology on baseline water quality monitoring;
- Section 3 Baseline Monitoring Results and Analysis – presents the baseline monitoring results, the findings of the statistical analysis and recommendations;
- Section 4 Event and Action Plan for Sensitive Receiver Stations – presents the Action and Limit levels as well as Event and Action Plan for impact water quality monitoring at sensitive receiver stations;

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<sup>1</sup> While the Project aims to dredge to a target depth of -16.5 mPD, some overdredge may occur due to the limited precision control of dredging depths in practice.

- Section 5 Alert Action Plan for Near Stations – presents the Initial Alert levels as well as Alert Action Plan for impact water quality monitoring at near stations; and
- Section 6 Revisions to Updated EM&A Manual – presents the changes to be incorporated into the updated EM&A Manual



## 2 Water Quality Monitoring Methodology

### 2.1 Monitoring Requirements

In accordance with the updated EM&A Manual, the baseline water quality monitoring was conducted to establish baseline conditions prior to the commencement of improvement dredging works. The baseline conditions for water quality were established to derive the Action and Limit levels for sensitive receiver (SR) stations and the Alert levels for near stations.

### 2.2 Monitoring Equipment and Methodology

Water samples for all monitoring parameters were collected, stored, preserved and analysed according to the Standard Methods, APHA 22<sup>nd</sup> ed. and/or other methods as agreed by the EPD. In-situ measurements at monitoring locations including dissolved oxygen (DO), dissolved oxygen saturation (DO%), pH, temperature, turbidity, salinity and water depth were collected using the equipment listed in **Table 2.1**. Water samples for suspended solids (SS) analysis were stored in high density polythene bottles, packed in ice (cooled to 4 °C without being frozen), and delivered to a HOKLAS laboratory as soon as possible after collection.

**Table 2.1: Baseline Water Quality Monitoring Equipment**

Equipment	Brand and Model	Quantity
Water Sampler	Van Dorn Water Sampler	4
Positioning Device (measurement of GPS)	Garmin eTrex Vista HCx	2
Water Depth Detector (measurement of water depth)	Lowrance Mark 5x	2
Multifunctional Meter (measurement of DO, DO%, pH, temperature, salinity and turbidity)	YSI ProDSS and YSI 6920V2	8

#### Calibration of In-situ Instruments

In-situ monitoring instruments for water quality parameters were checked, calibrated and certified by a laboratory accredited under HOKLAS before use. Responses of sensors and electrodes were checked with certified standard solutions before each use.

Wet bulb calibration for a DO meter was carried out before measurement on each monitoring day. A zero check in distilled water was performed with the turbidity probe at least once per monitoring day. The probe was then calibrated with a solution of known NTU.

Calibration certificates of the monitoring equipments used in the baseline monitoring for water quality parameters are provided in **Appendix 2.1**.

### 2.3 Laboratory Measurement / Analysis

Analysis of SS was carried out in a HOKLAS accredited laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066). Sufficient water samples were collected at each of the SR stations and control stations for carrying out the laboratory SS determination.

The SS determination works started within 24 hours after collection of the water samples. The analysis followed the APHA 2540D analytical method. The quality assurance and quality control results are presented in **Appendix 2.2**.

## 2.4 Monitoring Frequency and Duration

The baseline water quality monitoring was conducted three days per week for four weeks in January 2019 (dry season), and four weeks in July and August 2019 (wet season), at mid-flood and mid-ebb tides, at 18 water quality monitoring stations. Samples were taken at three depths (at 1m below surface, at mid-depth, and at 1m above bottom) for locations with water depth >6m. For locations with water depth between 3m and 6m, water samples were taken at two depths (surface and bottom). For locations with water depth <3m, only mid-depth was taken. Duplicate samples were taken and analysed.

## 2.5 Monitoring Locations

The baseline monitoring was conducted at a total of 18 water quality monitoring stations, comprising 10 SR stations, five near stations and three control stations. Details of the locations for baseline monitoring are shown in **Figure 2.1** and **Table 2.2**.

**Table 2.2: Locations of Baseline Water Quality Monitoring Stations**

ID	Station	Easting	Northing
SR1	HK Electric Power Station Intake	829194	808600
SR2	Hung Shing Yeh Beach	830200	808700
SR3	Lo So Shing Beach	830450	807300
SR4	Marine Ecological Habitat at Pak Kok	829600	811630
SR5	Marine Ecological Habitat at Shek Kok Tsui	828560	811100
SR6	Marine Ecological Habitat at Ha Mei Wan	829760	805520
SR7	Marine Ecological Habitat at Southwest of Lamma	829590	804520
SR8	Fish Culture Zone at Lo Tik Wan	831265	809115
SR9	Fish Culture Zone at Sok Kwu Wan	831600	807765
SR10	Fish Culture Zone at Cheung Sha Wan	819160	810780
A1	Near station for Zone 1	828543	809573
A2	Near station for Zone 2	829053	807945
A3	Near station for Zone 3	829187	807100
A4	Near station for Zone 4 (east)	829427	805520
A5	Near station for Zone 4 (south)	829267	805134
C1	Control Station 1	828000	813500
C2	Control Station 2	825000	808000
C3	Control Station 3	829000	802000

## 2.6 Monitoring Parameters

For the 10 SR stations (SR1 to SR10) and three control stations (C1 to C3), monitoring of DO, DO%, pH, temperature, turbidity, salinity, water depth and SS were undertaken. For monitoring of the five near stations (A1 to A5), only the in-situ parameters (DO, DO%, pH, temperature, turbidity, salinity and water depth) were recorded. Other relevant data were also recorded, including monitoring location, time, tidal stage, weather condition and sea condition.

## 3 Baseline Monitoring Results and Analysis

### 3.1 Baseline Water Quality Monitoring

Detailed baseline water quality monitoring results are tabulated and presented in **Appendix 3.1**. Graphical presentations of the baseline monitoring results are provided in **Appendix 3.2**.

General weather conditions throughout the baseline water quality monitoring period were recorded. The collected data are presented in **Appendix 3.1**. The weather conditions were mainly cloudy in January 2019 (dry season) and mainly fine in July and August 2019 (wet season), and the sea conditions were mainly moderate throughout the baseline monitoring period.

No pertinent activities were observed during the baseline monitoring in the vicinity of the monitoring stations that would affect the monitoring results. Moreover, no abnormal operation was recorded from the operation of the Lamma Power Station during the baseline water quality monitoring. Therefore, the water quality monitoring results obtained are considered to be appropriate for adoption as the baseline water quality dataset for the Project.

### 3.2 Statistical Analysis of the Baseline Data

During baseline monitoring, DO, DO%, pH, temperature, turbidity, salinity and SS were monitored at the control stations. However, for SR stations, only turbidity and SS are linked to the control station results during impact monitoring with respect to Action and Limit levels, while for near stations, only DO are linked to the control station results with respect to Alert levels. As such, the statistical analysis to analyse for any significant differences was conducted for turbidity and SS (between SR stations and control stations) and DO (between near stations and control stations) only.

Statistical analysis of the collected data using one-way analysis of variance (ANOVA) was conducted. SR stations and near stations were grouped according to the corresponding control station under flood tide and ebb tide conditions. The results of the ANOVA test are presented in **Table 3.1** and **Table 3.2**. No significant differences were identified for the proposed groupings. Therefore, the control stations are acceptable and representative for the purpose of impact monitoring at the corresponding SR stations and near stations.

**Table 3.1: ANOVA Test Results of SS and Turbidity**

ANOVA Test Groups		P-value (alpha = 0.05)	
Control Station	SR Stations	SS	Turbidity
<b>Flood Tide</b>			
C2	SR4, SR5, SR10	0.55	0.36
C3	SR1, SR2, SR3, SR4, SR5, SR6, SR7, SR8, SR9, SR10	0.29	0.29
<b>Ebb Tide</b>			
C1	SR1, SR2, SR3, SR4, SR5, SR6, SR7, SR8, SR9, SR10	0.26	0.18
C2	SR3, SR6, SR7	0.96	0.77

**Table 3.2: ANOVA Test Results of DO**

ANOVA Test Groups		P-value (alpha = 0.05)			
Control Station	Near Stations	Dry Season		Wet Season	
		Depth-averaged DO	Bottom DO	Depth-averaged DO	Bottom DO
<b>Flood Tide</b>					
C2	A1, A2	0.66	0.72	0.74	0.64
C3	A1, A2, A3, A4, A5	0.56	0.57	0.87	0.95
<b>Ebb Tide</b>					
C1	A1, A3, A4, A5	0.12	0.25	0.08	0.93
C2	A2, A3, A4, A5	0.71	0.75	0.19	0.56

### 3.3 Coverage of the Dissolved Oxygen Data

As specified in the updated EM&A Manual, in order to take into account the seasonal variations of the baseline DO level, separate baseline DO levels for the dry and the wet seasons will be derived both from the baseline data obtained prior to the commencement of works and EPD's routine monitoring data at station WM1, SM5, SM6 and SM7 over the last 5 years. However, when comparing the coverage of the four specified EPD stations against the coverage of the Project's SR stations, it was identified that these EPD stations cover only approx. 50% of the area that is covered by the SR stations, which makes them inadequate for covering the seasonal variations of the baseline DO level affecting the sensitive receivers of the Project.

To improve the coverage of the EPD stations relative to the SR station locations, it is recommended to expand the coverage of the EPD stations to include SM3, SM4, SM11, SM12 and SM18 as well. Consequently, the data from these nine EPD stations will be combined with the baseline data to derive the appropriate Action and Limit levels. Any outliers in the EPD data will be excluded.

## 4 Event and Action Plan for Sensitive Receiver Stations

### 4.1 Action and Limit Levels

The baseline water quality monitoring data collected in January (dry season), and in July and August 2019 (wet season) were used to determine the Action and Limit levels, using the derivation criteria specified in the updated EM&A Manual (shown in **Table 4.1**). The calculated Action and Limit levels are summarised in **Table 4.2**.

**Table 4.1: Criteria for Action and Limit Levels for Water Quality at SR Stations**

Parameters	Action Level	Limit Level
DO in mg/L (Surface, Middle & Bottom)	<u>Surface and Middle</u> 5 percentile of baseline and EPD's monitoring stations data from the last 5 years for surface and middle layer	<u>Surface and Middle</u> 4 mg/L or 1 percentile of baseline and EPD's monitoring stations data from the last 5 years for surface and middle layer 5 mg/L at Fish Culture Zones
	<u>Bottom</u> 5 percentile of baseline and EPD's monitoring stations data from the last 5 years for bottom layer	<u>Bottom</u> 2 mg/L or 1 percentile of baseline and EPD's monitoring stations data from the last 5 years for bottom layer 2 mg/L at Fish Culture Zones
SS in mg/L	95 percentile of baseline data or 120% of upstream control station at the same tide of the same day, whichever is higher For SR1, the SS action level is 90 mg/L	99 percentile of baseline data or 130% of upstream control station at the same tide of the same day, whichever is higher. For SR1, the SS limit level is 100 mg/L
Turbidity in NTU	95 percentile of baseline data or 120% of upstream control station at the same tide of the same day, whichever is higher	99 percentile of baseline data or 130% of upstream control station at the same tide of the same day, whichever is higher

Notes:

- For DO measurement, non-compliance occurs when the monitoring result is lower than the specified limits. Action and Limit Levels will be derived for wet and dry seasons separately in order to account for seasonal variation.
- For parameters other than DO, non-compliance of water quality occurs when the monitoring result is higher than the specified levels.
- Depth-averaged results are used unless specified otherwise.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary.

**Table 4.2: Calculated Action and Limit Levels**

Parameters	Action Level		Limit Level	
<b>SR1</b>				
SS in mg/L	90		100	
<b>SR2 to SR7</b>				
DO in mg/L	Wet	Dry	Wet	Dry
Surface & Middle	3.1	5.6	2.6	4
Bottom	2.4	5.8	1.9	2
SS in mg/L	9.5 OR 120% of upstream control station(s) at the same tide of the same day, whichever is higher		12.3 OR 130% of upstream control station(s) at the same tide of the same day, whichever is higher	

Parameters	Action Level		Limit Level	
Turbidity in NTU	9.7 OR 120% of upstream control station(s) at the same tide of the same day, whichever is higher		11.8 OR 130% of upstream control station(s) at the same tide of the same day, whichever is higher	
<b>SR8 to SR10</b>				
DO in mg/L	Wet	Dry	Wet	Dry
Surface & Middle	5	5.6	5	5
Bottom	2.4	5.8	2	2
SS in mg/L	9.5 OR 120% of upstream control station(s) at the same tide of the same day, whichever is higher		12.3 OR 130% of upstream control station(s) at the same tide of the same day, whichever is higher	
Turbidity in NTU	9.7 OR 120% of upstream control station(s) at the same tide of the same day, whichever is higher		11.8 OR 130% of upstream control station(s) at the same tide of the same day, whichever is higher	

Notes:

1. Wet season: April to September; Dry season: October to March.
2. For DO measurement, non-compliance occurs when the monitoring result is lower than the limits.
3. For parameters other than DO, non-compliance of water quality occurs when the monitoring result is higher than the limits.
4. Depth-averaged results are used unless specified otherwise.
5. SR1 is monitored for SS only.

## 4.2 Event and Action Plan

In the event of water quality monitoring results at SR stations exceeding the Action and/or Limit levels for water quality as defined in **Table 4.2**, the actions in accordance with the Event and Action Plan presented in **Table 4.3** shall be carried out.

**Table 4.3: Event and Action Plan for Water Quality at SR Stations**

Event	Action			
	ET	IEC	Engineer	Contractor
Action level being exceeded by one sampling day	1. Repeat in-situ measurements to confirm findings; 2. Inform IEC, Contractor and Engineer; 3. Check monitoring data, all plant, equipment and Contractor's working methods; 4. Discuss mitigation measures with IEC, Engineer and Contractor; 5. Repeat in-situ measurement on next day of exceedance.	1. Discuss with ET, Engineer and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise Engineer accordingly; 3. Verify the effectiveness of the implemented mitigation measures.	1. Discuss with IEC, ET and Contractor on the mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 3. Supervise the implemented of agreed mitigation measures.	1. Identify source(s) of impact; 2. Inform the Engineer and confirm notification of the non-compliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment; 5. Consider changes of working methods; 6. Discuss with ET, IEC and Engineer and propose mitigation measures; 7. Implement the agreed mitigation measures
Action Level being exceeded on more than one	1. Repeat in-situ measurement to confirm findings;	1. Discuss with ET, Engineer and Contractor on the mitigation measures;	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures;	1. Identify the source(s) of impact; 2. Inform the Engineer and confirm notification

**Action**

<b>Event</b>	<b>ET</b>	<b>IEC</b>	<b>Engineer</b>	<b>Contractor</b>
consecutive sampling day	2. Inform IEC, Contractor and Engineer; 3. Check monitoring data, all plant, equipment and Contractor's working methods; 4. Discuss mitigation measures with IEC, Engineer and Contractor; 5. Ensure mitigation measures are implemented; 6. Prepare to increase the monitoring frequency to daily; 7. Confirm the need for reducing dredging rates as per <b>Table 4.4</b> .	2. Review proposals on mitigation measures submitted by Contractor and advise Engineer accordingly; 3. Verify the effectiveness of the implemented mitigation measures; 4. Verify the need for reducing dredging rates as per <b>Table 4.4</b> .	2. Make agreement on the mitigation measures to be implemented; 3. Discuss with ET, IEC and Contractor on the effectiveness of the implemented mitigation measures; 4. Instruct the Contractor to reduce dredging rates as per <b>Table 4.4</b> if confirmed by ET and verified by IEC.	of the non-compliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment; 5. Consider changes of working methods; 6. Discuss with ET, IEC and Engineer and propose mitigation measures to Engineer and IEC within 3 working days of notification; 7. Implement the agreed mitigation measures; 8. As directed by the Engineer, reduce dredging rates as per <b>Table 4.4</b> .
Limit Level being exceeded by one sampling day	1. Repeat in-situ measurement to confirm findings; 2. Inform IEC, Contractor and Engineer; 3. Check monitoring data, all plant, equipment and Contractor's working methods; 4. Discuss mitigation measures with IEC, Engineer and Contractor; 5. Ensure mitigation measures are implemented; 6. Increase the monitoring frequency to daily until no exceedance of limit level.	1. Discuss with ET, Engineer and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise Engineer accordingly; 3. Verify the effectiveness of the implemented mitigation measures.	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Discuss with ET, IEC and Contractor on the effectiveness of the implemented mitigation measures.	1. Identify the source(s) of impact; 2. Inform the Engineer and confirm notification of the non-compliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment; 5. Consider changes of working methods; 6. Discuss with ET, IEC and Engineer and propose mitigation measures to Engineer and IEC within 3 working days of notification; 7. Implement the agreed mitigation measures.
Limit Level being exceeded by more than one consecutive sampling days	1. Inform IEC, Contractor and Engineer; 2. Check monitoring data, all plant, equipment and Contractor's working methods; 3. Discuss mitigation measures with IEC, Engineer and Contractor; 4. Ensure mitigation measures are implemented;	1. Discuss with ET, Engineer and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise Engineer accordingly; 3. Verify the effectiveness of the implemented mitigation measures; 4. Verify the need for reducing dredging rates as per <b>Table 4.4</b> .	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Discuss with ET, IEC and Contractor on the effectiveness of the implemented mitigation measures;	1. Identify the source(s) of impact; 1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET, IEC and Engineer and propose mitigation measures to Engineer

Event	Action			
	ET	IEC	Engineer	Contractor
	5. Confirm the need for reducing dredging rates as per <b>Table 4.4</b> ; 6. Increase the monitoring frequency to daily until no exceedance of limit level for two consecutive days.		5. Instruct the Contractor to reduce dredging rates as per <b>Table 4.4</b> if confirmed by ET and verified by IEC.	and IEC within 3 working days of notification; 6. Implement the agreed mitigation measures; 7. As directed by the Engineer, reduce dredging rates as per <b>Table 4.4</b> .

### 4.3 Reduction of Maximum Allowable Dredging Rates

Where exceedances are identified and confirmed by the ET and verified by the IEC as project-related, the maximum allowable hourly dredging rates of the Project as specified in Table 2-7 of the updated EM&A Manual shall be reduced according to **Table 4.4**. The reduced rates for the respective zone(s) and season shall apply until completion of the dredging works for the affected zone(s) and season.

**Table 4.4: Reduction of Maximum Allowable Hourly Dredging Rates due to Exceedances**

Frequency of Exceedance	No. of Consecutive Sampling Days					
	Two	Three	Four	Five	Six	More than Six
Action Level	5%	10%	15%	20%	30%	40%
Limit Level	10%	20%	30%	40%	50%	Stop all dredging works for one week. Contractor to propose changes in dredging methods, dredging rates and mitigation measures for agreement with ET and IEC before re-initiating dredging works.

Note: Where action level followed by limit level is exceeded consecutively, the larger percentage reduction shall apply (e.g. if action level is exceeded for four consecutive days, followed immediately by two consecutive days of limit level exceedance, the percentage reduction to be applied between Day 2 and Day 6 shall be 5%, 10%, 15%, 20% and 30% respectively). Similarly, where limit level followed by action level is exceeded consecutively, the larger percentage reduction also applies as action level is inherently exceeded whenever limit level is exceeded.

The above reductions apply to each improvement dredging event only, and shall not be carried forward to the next recurrent improvement dredging event, provided that the interval between recurrent improvement dredging events is greater than 12 months.



## 5 Alert Action Plan for Near Stations

### 5.1 Alert Levels

Using the derivation criteria specified in the updated EM&A Manual (shown in **Table 5.1**), the Initial Alert levels for water quality at near stations are calculated and presented in **Table 5.2**.

**Table 5.1: Criteria for Alert Levels for Water Quality at Near Stations**

Parameters	Alert Levels			
Turbidity	Near Station	Nearest Sensitive Receiver Station	AS / SR Ratio	Calculation*
	A1	SR5	3.1	= "AS / SR Ratio" multiplied by "Action level of turbidity derived at the reference sensitive receiver station (determined from baseline monitoring)"
	A2	SR1	1.9	
	A3	SR3	4.0	
	A4	SR6	3.3	
	A5	SR7	2.5	
Dissolved Oxygen	<p><u>Depth-averaged</u>                      4 mg/L or 0.1 mg/L less than the minimum baseline result<sup>#</sup> or 0.1 mg/L less than the same day control, whichever is lower.</p> <p><u>Bottom</u>                      2 mg/L or 0.1 mg/L less than the minimum baseline result or 0.1 mg/L less than the same day control, whichever is lower.</p>			

\* Applied to each near station individually

<sup>#</sup> 'Minimum baseline result' refers to the minimum DO level from baseline and EPD's monitoring stations data (from WM1, SM3, SM4, SM5, SM6, SM7, SM11, SM12 and SM18) from the last 5 years (excluding outliers), using the same method as specified in Table 2-2 of the updated EM&A Manual to determine the values for wet and dry season.

**Table 5.2: Calculated Initial Alert Levels**

Alert Level	A1	A2	A3	A4	A5
Turbidity (NTU)	30.1	18.4	38.8	32.0	24.3
DO (mg/L) – Depth-average, Dry Season	4	4	4	4	4
	OR 0.1 mg/L less than the same day control, whichever is lower				
DO (mg/L) – Bottom, Dry Season	2	2	2	2	2
	OR 0.1 mg/L less than the same day control, whichever is lower				
DO (mg/L) – Depth-average, Wet Season	3	3	3	3	3
	OR 0.1 mg/L less than the same day control, whichever is lower				
DO (mg/L) – Bottom, Wet Season	0.9	0.9	0.9	0.9	0.9
	OR 0.1 mg/L less than the same day control, whichever is lower				

Note: Wet season: April to September; Dry season: October to March.

Once the project has accumulated at least 2 months' worth of impact monitoring field data, the Initial Alert Levels should be reviewed and updated by the ET if necessary. Any changes proposed by the ET should be verified by IEC and notified to EPD prior to implementation. If there is a large discrepancy between Initial Alert Levels and field data, calculation of new Alert Levels shall be carried out and submitted to EPD for approval.

It should be noted that any changes to the locations of sensitive receivers may require redetermination of the Alert levels. Any changes proposed by the ET should be verified by IEC and notified to EPD prior to implementation.

## 5.2 Alert Action Plan

The Alert Action Plan applies to exceedances of Alert levels at the near stations (A1 to A5) only and is presented in **Table 5.3**. Exceedances at the SR stations listed in **Table 2.2** shall follow the Event and Action Plan in **Table 4.3**.

Upon identification of an exceedance of Alert level, the actions specified in **Table 5.3** shall be implemented. Where applicable, the alert related actions shall proceed in parallel with the Event and Action Plan in **Table 4.3**.

**Table 5.3: Alert Action Plan for Water Quality at Near Stations**

Action	Action By	Outcome	Follow Up Action	Follow Up Action By	
1. Repeat in-situ measurement to confirm findings	ET	No exceedance in repeat measurement	No further action required		
		Exceedance identified in repeat measurement	<i>Proceed to Action 2</i>		
2. Check relevant SR station results	ET	a. No exceedance of Action or Limit Level	Notify IEC, Engineer and Contractor	ET	
			Obtain and record Contractor's working methods and the status of existing mitigation measures implemented	ET	
			Identify any unacceptable practice	ET, IEC, Engineer	
		Rectify any unacceptable practice	Contractor		
		<i>Proceed to Action 3</i>			
		b. Exceedance of Action or Limit Level	Initiate Event and Action Plan in Table 2-4 of the EM&A Manual	ET, IEC, Engineer, Contractor	
<i>Proceed to Action 3</i>					
3. Check for repeated cases of Outcome 2a or 2b	ET	No consecutive repeats of Outcome 2a or 2b	No further action required		
			Consecutive repeats of Outcome 2a	Review Contractor's working methods / mitigation measures and discuss with IEC, Engineer and Contractor	ET
		Identify and agree on improvements such as changes in working methods and/or additional mitigation measures		ET, IEC, Engineer, Contractor	
		Implement the recommended improvements	Contractor		
		Consecutive repeats of Outcome 2b	Review Alert levels and propose revised Alert levels where necessary to prevent exceedances at SR stations (due to project activities)	ET	
			Verify the revised Alert levels	IEC	
Notify and agree with EPD on revised Alert levels	ET, Project Proponent				

All instances of exceedance of Alert levels and the subsequent actions under the Alert Action Plan shall be recorded by the ET and verified by the IEC.

## 6 Revisions to Updated EM&A Manual

As part of the baseline water quality monitoring conducted for the Project and its subsequent findings and recommendations, the following revision to the updated EM&A Manual is recommended.

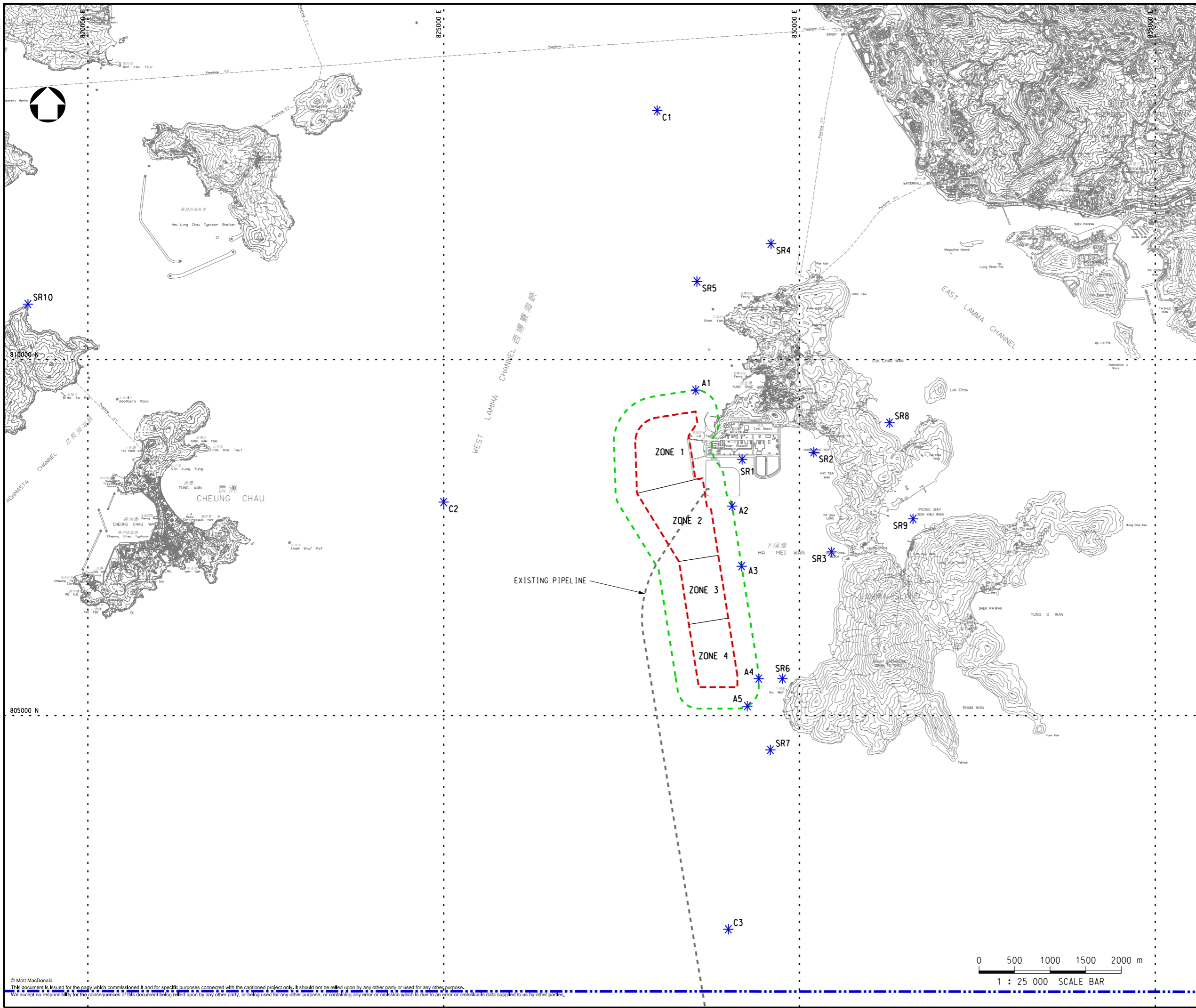
**Table 6.1: Recommended Revision to Updated EM&A Manual**

Relevant Section in Updated EM&A Manual	Original Requirement	Revisions Recommended
Section 2.6.1 and Table 2-2	In order to take into account the seasonal variations of the baseline DO level, separate baseline DO levels for the dry and the wet seasons will be derived both from the baseline data obtained prior to the commencement of works and EPD's routine monitoring data at station WM1, SM5, SM6 and SM7	Expand the coverage of the EPD stations to include SM3, SM4, SM11, SM12 and SM18 as described in Section 3.3 of this Baseline Report.

## 7 Conclusion

Baseline water quality monitoring was undertaken in January (dry season), and in July and August 2019 (wet season) in accordance with the requirements set out in the EP and the updated EM&A Manual. All monitoring instrument used were calibrated and valid calibration certificates are included in this report.

The baseline water quality monitoring was carried out three days per week for a total of eight weeks, at mid-flood and mid-ebb tides, at a total of 18 water quality monitoring stations. The weather conditions were mainly cloudy in January 2019 and mainly fine in July and August 2019, and the sea conditions were mainly moderate throughout the baseline monitoring period. The results of the baseline monitoring are provided in tables and graphical presentations in this report. As no pertinent activities were observed during the baseline water quality monitoring that would affect the monitoring results, the baseline water quality monitoring results obtained are considered to be appropriate for adoption as the baseline water quality dataset for the Project. Revisions to the Updated EM&A Manual to expand the coverage of the EPD stations are recommended.



Notes

Key to symbols

- HKSAR BOUNDARY
- PROJECT BOUNDARY
- 300m BUFFER
- \* WATER QUALITY MONITORING LOCATION

Reference drawings

P1	JUN 18	MING	FIRST ISSUE	DC	EC
Rev	Date	Drawn	Description	Ch'k'd	App'd

**MOTT  
MACDONALD**

20/F AIA Kowloon Tower  
Landmark East  
100 How Ming Street  
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T +852 2828 5757  
F +852 2827 1823  
W mottmac.com

Client

**港燈  
HK Electric**

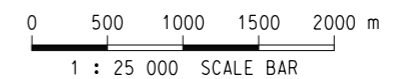
Project

**IMPROVEMENT DREDGING FOR  
LAMMA POWER STATION  
NAVIGATION CHANNEL**

Title

**WATER QUALITY MONITORING  
LOCATIONS**

Designed	DC	Eng check	DC
Drawn	MING	Coordination	DC
Dwg check	DC	Approved	EC
Scale at A1	Status	Rev	
<b>1:25000</b>	<b>PRE</b>	<b>P1</b>	
Drawing Number		<b>FIGURE 2.1</b>	



## **Appendix 2.1 Calibration Certificates**



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI010080  
Date of Issue : 08 January, 2019  
Page No. : 1 of 2

### PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.  
Flat 2207, Yu Fun House,  
Yu Chui Court, Shatin  
New Territories, Hong Kong  
Attn: Mr. Thomas WONG

### PART B – DESCRIPTION

Name of Equipment : YSI ProDSS (Multi-Parameters)  
Manufacturer : YSI (a xylem brand)  
Serial Number : 16H104233  
Date of Received : Dec 31, 2018  
Date of Calibration : Dec 31, 2018  
Date of Next Calibration<sup>(a)</sup> : Mar 31, 2019

### PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Parameter</u>	<u>Reference Method</u>
pH at 25°C	APHA 21e 4500-H <sup>+</sup> B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

### PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

#### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	3.92	-0.08	Satisfactory
7.42	7.23	-0.19	Satisfactory
10.01	10.15	0.14	Satisfactory

Tolerance of pH should be less than  $\pm 0.20$  (pH unit)

#### (2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
8.8	9.0	0.2	Satisfactory
18.0	17.3	-0.7	Satisfactory
39.5	38.9	-0.6	Satisfactory


Tolerance limit of temperature should be less than  $\pm 2.0$  (°C)

~ CONTINUED ON NEXT PAGE ~

#### Remark(s): -

- The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.
- The results relate only to the calibrated equipment as received
- The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
- "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
- The "Tolerance Limit" mentioned is referenced to YSI product specifications.

APPROVED SIGNATORY:

  
LAM Ho-ye, Emma  
Assistant Laboratory Manager





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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI010080  
Date of Issue : 08 January, 2019  
Page No. : 2 of 2

### PART D – CALIBRATION RESULTS (Cont'd)

#### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.41	0.33	-0.08	Satisfactory
5.71	5.59	-0.12	Satisfactory
7.78	7.68	-0.10	Satisfactory
9.33	9.28	-0.05	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.20$  (mg/L)

#### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)	Results
0.001	146.9	153.2	4.3	Satisfactory
0.01	1412	1350	-4.4	Satisfactory
0.1	12890	12848	-0.3	Satisfactory
0.5	58670	57860	-1.4	Satisfactory
1.0	111900	111233	-0.6	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

#### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.88	-1.2	Satisfactory
20	19.80	-1.0	Satisfactory
30	30.30	1.0	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

#### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(f)</sup> (NTU)	Tolerance <sup>(g)</sup> (%)	Results
0	0.31	--	--
10	10.08	0.8	Satisfactory
20	19.88	-0.6	Satisfactory
100	98.74	-1.3	Satisfactory
800	730.58	-8.7	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

#### Remark(s): -

<sup>(f)</sup> "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

<sup>(g)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AH100180  
Date of Issue : 26 October 2018  
Page No. : 1 of 2

### PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.  
Flat 2207, Yu Fun House,  
Yu Chui Court, Shatin,  
New Territories, Hong Kong  
Attn: Mr. Thomas WONG

### PART B – DESCRIPTION

Name of Equipment : YSI ProDSS (Multi-Parameters)  
Manufacturer : YSI (a xylem brand)  
Serial Number : 16H104234  
Date of Received : Oct 26, 2018  
Date of Calibration : Oct 26, 2018  
Date of Next Calibration<sup>(a)</sup> : Jan 26, 2019

### PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H <sup>+</sup> B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

### PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

#### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	4.05	0.05	Satisfactory
7.42	7.46	0.04	Satisfactory
10.01	9.98	-0.03	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

#### (2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10.8	10.7	-0.1	Satisfactory
23.5	23.4	-0.1	Satisfactory
45.0	45.5	0.5	Satisfactory


Tolerance limit of temperature should be less than ±2.0 (°C)

~ CONTINUED ON NEXT PAGE ~

#### Remark(s): -

- <sup>(a)</sup> The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.  
<sup>(b)</sup> The results relate only to the calibrated equipment as received  
<sup>(c)</sup> The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.  
<sup>(d)</sup> "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.  
<sup>(e)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by QPT or quoted from relevant international standards.

APPROVED SIGNATORY:

  
LAM Ho-ye, Emma  
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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AH100180  
Date of Issue : 26 October 2018  
Page No. : 2 of 2

### PART D – CALIBRATION RESULTS (Cont'd)

#### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.00	0.00	Satisfactory
1.70	1.81	0.11	Satisfactory
4.79	4.81	0.02	Satisfactory
7.70	7.74	0.04	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.20$  (mg/L)

#### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)	Results
0.001	146.9	153.0	4.2	Satisfactory
0.01	1412	1359	-3.8	Satisfactory
0.1	12890	12520	-2.9	Satisfactory
0.5	58670	57672	-1.7	Satisfactory
1.0	111900	112190	0.3	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

#### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.11	1.1	Satisfactory
20	20.47	2.3	Satisfactory
30	30.18	0.6	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

#### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(1)</sup> (NTU)	Tolerance <sup>(2)</sup> (%)	Results
0	0.40	--	--
10	9.80	-2.0	Satisfactory
20	19.36	-3.2	Satisfactory
100	102.34	2.3	Satisfactory
800	803.10	0.4	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

#### Remark(s): -

<sup>(1)</sup> "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

<sup>(2)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI010202  
Date of Issue : 24 January, 2019  
Page No. : 1 of 2

### PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.  
Flat 2207, Yu Fun House,  
Yu Chui Court, Shatin  
New Territories, Hong Kong  
Attn: Mr. Thomas WONG

### PART B – DESCRIPTION

Name of Equipment : YSI ProDSS (Multi-Parameters)  
Manufacturer : YSI (a xylem brand)  
Serial Number : 16H104234  
Date of Received : Jan 23, 2019  
Date of Calibration : Jan 23, 2019  
Date of Next Calibration<sup>(a)</sup> : Apr 23, 2019

### PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Parameter</u>	<u>Reference Method</u>
pH at 25°C	APHA 21e 4500-H <sup>+</sup> B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

### PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

#### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	3.97	-0.03	Satisfactory
7.42	7.42	0.00	Satisfactory
10.01	10.04	0.03	Satisfactory

Tolerance of pH should be less than  $\pm 0.20$  (pH unit)

#### (2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10.0	9.9	-0.1	Satisfactory
19.0	18.8	-0.2	Satisfactory
44.0	44.2	0.2	Satisfactory


Tolerance limit of temperature should be less than  $\pm 2.0$  (°C)

~ CONTINUED ON NEXT PAGE ~

#### Remark(s): -

- <sup>(a)</sup> The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.  
<sup>(b)</sup> The results relate only to the calibrated equipment as received  
<sup>(c)</sup> The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.  
<sup>(d)</sup> "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.  
<sup>(e)</sup> The "Tolerance Limit" mentioned is referenced to YSI product specifications.

APPROVED SIGNATORY: \_\_\_\_\_

  
LAM Ho-ye, Emma  
Assistant Laboratory Manager



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI010202  
Date of Issue : 24 January, 2019  
Page No. : 2 of 2

### PART D – CALIBRATION RESULTS (Cont'd)

#### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.00	0.00	Satisfactory
4.70	4.55	-0.15	Satisfactory
6.84	6.84	0.00	Satisfactory
9.08	9.08	0.00	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.20$  (mg/L)

#### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)	Results
0.001	146.9	160.1	9.0	Satisfactory
0.01	1412	1388	-1.7	Satisfactory
0.1	12890	12746	-1.1	Satisfactory
0.5	58670	57244	-2.4	Satisfactory
1.0	111900	110348	-1.4	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

#### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.96	-0.4	Satisfactory
20	20.00	0.0	Satisfactory
30	30.21	0.7	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

#### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(f)</sup> (NTU)	Tolerance <sup>(g)</sup> (%)	Results
0	0.00	--	--
10	10.00	0.0	Satisfactory
20	20.00	0.0	Satisfactory
100	97.40	-2.6	Satisfactory
800	780.90	-2.4	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

#### Remark(s): -

<sup>(f)</sup> "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

<sup>(g)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI010081  
Date of Issue : 08 January, 2019  
Page No. : 1 of 2

### PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.  
Flat 2207, Yu Fun House,  
Yu Chui Court, Shatin  
New Territories, Hong Kong  
Attn: Mr. Thomas WONG

### PART B – DESCRIPTION

Name of Equipment : YSI ProDSS (Multi-Parameters)  
Manufacturer : YSI (a xylem brand)  
Serial Number : 17E100747  
Date of Received : Dec 31, 2018  
Date of Calibration : Dec 31, 2018  
Date of Next Calibration<sup>(a)</sup> : Mar 31, 2019

### PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Parameter</u>	<u>Reference Method</u>
pH at 25°C	APHA 21e 4500-H <sup>+</sup> B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

### PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

#### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	4.08	0.08	Satisfactory
7.42	7.55	0.13	Satisfactory
10.01	10.17	0.16	Satisfactory

Tolerance of pH should be less than  $\pm 0.20$  (pH unit)

#### (2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
8.8	9.2	0.4	Satisfactory
18.0	17.6	-0.4	Satisfactory
39.5	39.3	-0.2	Satisfactory

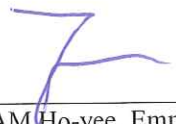
Tolerance limit of temperature should be less than  $\pm 2.0$  (°C)

~ CONTINUED ON NEXT PAGE ~

#### Remark(s): -

- <sup>(a)</sup> The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.  
<sup>(b)</sup> The results relate only to the calibrated equipment as received  
<sup>(c)</sup> The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.  
<sup>(d)</sup> "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.  
<sup>(e)</sup> The "Tolerance Limit" mentioned is referenced to YSI product specifications.

APPROVED SIGNATORY:

  
LAM Ho-ye, Emma  
Assistant Laboratory Manager



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI010081  
Date of Issue : 08 January, 2019  
Page No. : 2 of 2

### PART D – CALIBRATION RESULTS (Cont'd)

#### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.41	0.32	-0.09	Satisfactory
5.71	5.63	-0.08	Satisfactory
7.78	7.91	0.13	Satisfactory
9.33	9.23	-0.10	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.20$  (mg/L)

#### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)	Results
0.001	146.9	155.4	5.8	Satisfactory
0.01	1412	1366	-3.3	Satisfactory
0.1	12890	12823	-0.5	Satisfactory
0.5	58670	57898	-1.3	Satisfactory
1.0	111900	111575	-0.3	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

#### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.06	0.6	Satisfactory
20	20.02	0.1	Satisfactory
30	30.79	2.6	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

#### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(f)</sup> (NTU)	Tolerance <sup>(g)</sup> (%)	Results
0	0.22	--	--
10	9.89	-1.1	Satisfactory
20	20.68	3.4	Satisfactory
100	98.82	-1.2	Satisfactory
800	748.91	-6.4	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

#### Remark(s): -

<sup>(f)</sup> "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

<sup>(g)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AH100181  
Date of Issue : 26 October 2018  
Page No. : 1 of 2

### PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.  
Flat 2207, Yu Fun House,  
Yu Chui Court, Shatin,  
New Territories, Hong Kong  
Attn: Mr. Thomas WONG

### PART B – DESCRIPTION

Name of Equipment : YSI ProDSS (Multi-Parameters)  
Manufacturer : YSI (a xylem brand)  
Serial Number : 17H105557  
Date of Received : Oct 26, 2018  
Date of Calibration : Oct 26, 2018  
Date of Next Calibration<sup>(a)</sup> : Jan 26, 2019

### PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H <sup>+</sup> B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

### PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

#### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	4.07	0.07	Satisfactory
7.42	7.42	0.00	Satisfactory
10.01	10.01	0.00	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

#### (2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10.8	10.7	-0.1	Satisfactory
23.5	23.3	-0.2	Satisfactory
45.0	45.7	0.7	Satisfactory


Tolerance limit of temperature should be less than ±2.0 (°C)

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#### Remark(s): -

- <sup>(a)</sup> The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.  
<sup>(b)</sup> The results relate only to the calibrated equipment as received  
<sup>(c)</sup> The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.  
<sup>(d)</sup> "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.  
<sup>(e)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by QPT or quoted from relevant international standards.

APPROVED SIGNATORY:

  
LAM Ho-yeec, Emma  
Assistant Laboratory Manager





## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AH100181  
Date of Issue : 26 October 2018  
Page No. : 2 of 2

### PART D – CALIBRATION RESULTS (Cont'd)

#### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.00	0.00	Satisfactory
1.70	1.77	0.07	Satisfactory
4.79	4.83	0.04	Satisfactory
7.70	7.81	0.11	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.20$  (mg/L)

#### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)	Results
0.001	146.9	150.0	2.1	Satisfactory
0.01	1412	1439	1.9	Satisfactory
0.1	12890	11949	-7.3	Satisfactory
0.5	58670	58670	0.0	Satisfactory
1.0	111900	111563	-0.3	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

#### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.13	1.3	Satisfactory
20	20.16	0.8	Satisfactory
30	30.26	0.9	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

#### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(f)</sup> (NTU)	Tolerance <sup>(g)</sup> (%)	Results
0	0.30	--	--
10	9.70	-3.0	Satisfactory
20	19.76	-1.2	Satisfactory
100	98.33	-1.7	Satisfactory
800	804.22	0.5	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

Remark(s): -

<sup>(f)</sup> "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

<sup>(g)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



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# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI010203  
 Date of Issue : 24 January, 2019  
 Page No. : 1 of 2

## PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.  
 Flat 2207, Yu Fun House,  
 Yu Chui Court, Shatin  
 New Territories, Hong Kong  
 Attn: Mr. Thomas WONG

## PART B – DESCRIPTION

Name of Equipment : YSI ProDSS (Multi-Parameters)  
 Manufacturer : YSI (a xylem brand)  
 Serial Number : 17H105557  
 Date of Received : Jan 23, 2019  
 Date of Calibration : Jan 23, 2019  
 Date of Next Calibration<sup>(a)</sup> : Apr 23, 2019

## PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H <sup>+</sup> B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

## PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	4.01	0.01	Satisfactory
7.42	7.42	0.00	Satisfactory
10.01	10.03	0.02	Satisfactory

Tolerance of pH should be less than ±0.20 (pH unit)

### (2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10.0	9.9	-0.1	Satisfactory
19.0	19.1	0.1	Satisfactory
44.0	44.2	0.2	Satisfactory


Tolerance limit of temperature should be less than ±2.0 (°C)

~ CONTINUED ON NEXT PAGE ~

#### Remark(s): -

- <sup>(a)</sup> The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.
- <sup>(b)</sup> The results relate only to the calibrated equipment as received
- <sup>(c)</sup> The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
- <sup>(d)</sup> "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
- <sup>(e)</sup> The "Tolerance Limit" mentioned is referenced to YSI product specifications.

APPROVED SIGNATORY:

  
 LAM Ho-ye, Emma  
 Assistant Laboratory Manager



# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI010203  
Date of Issue : 24 January, 2019  
Page No. : 2 of 2

## PART D – CALIBRATION RESULTS (Cont'd)

### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.00	0.00	Satisfactory
4.70	4.54	-0.16	Satisfactory
6.84	6.98	0.14	Satisfactory
9.08	9.08	0.00	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.20$  (mg/L)

### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)	Results
0.001	146.9	158.8	8.1	Satisfactory
0.01	1412	1374	-2.7	Satisfactory
0.1	12890	12735	-1.2	Satisfactory
0.5	58670	57949	-1.2	Satisfactory
1.0	111900	110477	-1.3	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.91	-0.9	Satisfactory
20	20.00	0.0	Satisfactory
30	30.28	0.9	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(f)</sup> (NTU)	Tolerance <sup>(g)</sup> (%)	Results
0	0.00	--	--
10	10.00	0.0	Satisfactory
20	20.00	0.0	Satisfactory
100	98.20	-1.8	Satisfactory
800	783.00	-2.1	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

#### Remark(s): -

<sup>(f)</sup> "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

<sup>(g)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



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# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI060144  
Date of Issue : 25 June, 2019  
Page No. : 1 of 2

## PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.  
Flat 2207, Yu Fun House,  
Yu Chui Court, Shatin  
New Territories, Hong Kong  
Attn: Mr. Thomas WONG

## PART B – DESCRIPTION

Name of Equipment : YSI ProDSS (Multi-Parameters)  
Manufacturer : YSI (a xylem brand)  
Serial Number : 15M100005  
Date of Received : Jun 25, 2019  
Date of Calibration : Jun 25, 2019  
Date of Next Calibration<sup>(a)</sup> : Sep 25, 2019

## PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H <sup>+</sup> B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

## PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	4.02	0.02	Satisfactory
7.42	7.40	-0.02	Satisfactory
10.01	10.01	0.00	Satisfactory

Tolerance of pH should be less than ±0.20 (pH unit)

### (2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
15.0	15.1	0.1	Satisfactory
30.0	29.8	-0.2	Satisfactory
48.0	48.1	0.1	Satisfactory

Tolerance limit of temperature should be less than ±2.0 (°C)

~ CONTINUED ON NEXT PAGE ~

#### Remark(s): -

- <sup>(a)</sup> The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.  
<sup>(b)</sup> The results relate only to the calibrated equipment as received  
<sup>(c)</sup> The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.  
<sup>(d)</sup> "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.  
<sup>(e)</sup> The "Tolerance Limit" mentioned is referenced to YSI product specifications.

APPROVED SIGNATORY:

LAM Ho-ye, Emma  
Assistant Laboratory Manager



## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI060144  
Date of Issue : 25 June, 2019  
Page No. : 2 of 2

### PART D – CALIBRATION RESULTS (Cont'd)

#### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.45	0.03	-0.42	Satisfactory
2.88	3.26	0.38	Satisfactory
5.23	5.29	0.06	Satisfactory
8.12	7.64	-0.48	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.50$  (mg/L)

#### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)	Results
0.001	146.9	142.8	-2.8	Satisfactory
0.01	1412	1398	-1.0	Satisfactory
0.1	12890	12934	0.3	Satisfactory
0.5	58670	56361	-3.9	Satisfactory
1.0	111900	111597	-0.3	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

#### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.94	-0.6	Satisfactory
20	20.00	0.0	Satisfactory
30	30.14	0.5	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

#### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(f)</sup> (NTU)	Tolerance <sup>(g)</sup> (%)	Results
0	0.00	--	--
10	10.07	0.7	Satisfactory
20	20.11	0.5	Satisfactory
100	101.20	1.2	Satisfactory
800	804.30	0.5	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

#### Remark(s): -

<sup>(f)</sup> "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

<sup>(g)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI060143  
Date of Issue : 25 June, 2019  
Page No. : 1 of 2

### PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.  
Flat 2207, Yu Fun House,  
Yu Chui Court, Shatin  
New Territories, Hong Kong  
Attn: Mr. Thomas WONG

### PART B – DESCRIPTION

Name of Equipment : YSI ProDSS (Multi-Parameters)  
Manufacturer : YSI (a xylem brand)  
Serial Number : 17E100747  
Date of Received : Jun 25, 2019  
Date of Calibration : Jun 25, 2019  
Date of Next Calibration<sup>(a)</sup> : Sep 25, 2019

### PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H <sup>+</sup> B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

### PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

#### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	4.01	0.01	Satisfactory
7.42	7.41	-0.01	Satisfactory
10.01	10.03	0.02	Satisfactory

Tolerance of pH should be less than ±0.20 (pH unit)

#### (2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
15.0	15.2	0.2	Satisfactory
30.0	30.0	0.0	Satisfactory
48.0	47.9	-0.1	Satisfactory

Tolerance limit of temperature should be less than ±2.0 (°C)

~ CONTINUED ON NEXT PAGE ~

#### Remark(s): -

- <sup>(a)</sup> The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.  
<sup>(b)</sup> The results relate only to the calibrated equipment as received  
<sup>(c)</sup> The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.  
<sup>(d)</sup> "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.  
<sup>(e)</sup> The "Tolerance Limit" mentioned is referenced to YSI product specifications.

APPROVED SIGNATORY:

LAM Ho-ye, Emma  
Assistant Laboratory Manager



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI060143  
Date of Issue : 25 June, 2019  
Page No. : 2 of 2

### PART D – CALIBRATION RESULTS (Cont'd)

#### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.45	0.03	-0.42	Satisfactory
2.84	3.26	0.42	Satisfactory
5.21	5.29	0.08	Satisfactory
8.03	7.64	-0.39	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.50$  (mg/L)

#### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)	Results
0.001	146.9	145.1	-1.2	Satisfactory
0.01	1412	1402	-0.7	Satisfactory
0.1	12890	12921	0.2	Satisfactory
0.5	58670	56719	-3.3	Satisfactory
1.0	111900	111688	-0.2	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

#### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.96	-0.4	Satisfactory
20	20.13	0.6	Satisfactory
30	30.00	0.0	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

#### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(f)</sup> (NTU)	Tolerance <sup>(g)</sup> (%)	Results
0	0.01	--	Satisfactory
10	10.05	0.5	Satisfactory
20	20.12	0.6	Satisfactory
100	100.90	0.9	Satisfactory
800	805.40	0.7	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

**Remark(s): -**

<sup>(f)</sup> "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

<sup>(g)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI080036  
 Date of Issue : 06 Aug, 2019  
 Page No. : 1 of 2

## PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.  
 Flat 2207, Yu Fun House,  
 Yu Chui Court, Shatin  
 New Territories, Hong Kong  
 Attn: Mr. Thomas WONG

## PART B – DESCRIPTION

Name of Equipment : YSI 6920V2 (Multi-Parameters)  
 Manufacturer : YSI (a xylem brand)  
 Serial Number : 17H105557  
 Date of Received : Aug 02, 2019  
 Date of Calibration : Aug 02, 2019  
 Date of Next Calibration<sup>(a)</sup> : Nov 02, 2019

## PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H <sup>+</sup> B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

## PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	3.98	-0.02	Satisfactory
7.42	7.40	-0.02	Satisfactory
10.01	10.01	0.00	Satisfactory

Tolerance of pH should be less than ±0.20 (pH unit)

### (2) Temperature


Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
11.5	11.3	-0.2	Satisfactory
26.0	25.9	-0.1	Satisfactory
51.5	52.0	0.5	Satisfactory

Tolerance limit of temperature should be less than ±2.0 (°C)

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#### Remark(s): -

- <sup>(a)</sup> The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.  
<sup>(b)</sup> The results relate only to the calibrated equipment as received  
<sup>(c)</sup> The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.  
<sup>(d)</sup> "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.  
<sup>(e)</sup> The "Tolerance Limit" mentioned is referenced to YSI product specifications.

  
 LEE Chun-ning, Desmond  
 Senior Chemist





## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI080036  
Date of Issue : 06 Aug, 2019  
Page No. : 2 of 2

### PART D – CALIBRATION RESULTS (Cont'd)

#### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.01	0.27	0.26	Satisfactory
1.68	1.75	0.07	Satisfactory
4.52	4.81	0.29	Satisfactory
7.84	8.00	0.16	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.50$  (mg/L)

#### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S/cm}$ )	Displayed Reading ( $\mu\text{S/cm}$ )	Tolerance (%)	Results
0.001	146.9	152.6	3.9	Satisfactory
0.01	1412	1389	-1.6	Satisfactory
0.1	12890	12452	-3.4	Satisfactory
0.5	58670	58588	-0.1	Satisfactory
1.0	111900	111882	0.0	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

#### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.08	0.8	Satisfactory
20	20.35	1.8	Satisfactory
30	30.00	0.0	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

#### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(f)</sup> (NTU)	Tolerance <sup>(g)</sup> (%)	Results
0	0.00	--	Satisfactory
10	10.03	0.3	Satisfactory
20	20.11	0.5	Satisfactory
100	100.07	0.1	Satisfactory
800	800.35	0.0	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

#### Remark(s): -

<sup>(f)</sup> "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

<sup>(g)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI080035  
Date of Issue : 06 Aug, 2019  
Page No. : 1 of 2

### PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.  
Flat 2207, Yu Fun House,  
Yu Chui Court, Shatin  
New Territories, Hong Kong  
Attn: Mr. Thomas WONG

### PART B – DESCRIPTION

Name of Equipment : YSI 6920V2 (Multi-Parameters)  
Manufacturer : YSI (a xylem brand)  
Serial Number : 18A104824  
Date of Received : Aug 02, 2019  
Date of Calibration : Aug 02, 2019  
Date of Next Calibration<sup>(a)</sup> : Nov 02, 2019

### PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Parameter</u>	<u>Reference Method</u>
pH at 25°C	APHA 21e 4500-H <sup>+</sup> B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

### PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

#### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	4.01	0.01	Satisfactory
7.42	7.44	0.02	Satisfactory
10.01	10.00	-0.01	Satisfactory

Tolerance of pH should be less than  $\pm 0.20$  (pH unit)

#### (2) Temperature


Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
11.5	11.4	-0.1	Satisfactory
26.0	25.9	-0.1	Satisfactory
51.5	52.0	0.5	Satisfactory

Tolerance limit of temperature should be less than  $\pm 2.0$  (°C)

~ CONTINUED ON NEXT PAGE ~

#### Remark(s): -

- <sup>(a)</sup> The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.  
<sup>(b)</sup> The results relate only to the calibrated equipment as received  
<sup>(c)</sup> The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.  
<sup>(d)</sup> "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.  
<sup>(e)</sup> The "Tolerance Limit" mentioned is referenced to YSI product specifications.

  
LEE Chun-ning, Desmond  
Senior Chemist



## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI080035  
Date of Issue : 06 Aug, 2019  
Page No. : 2 of 2

### PART D – CALIBRATION RESULTS (Cont'd)

#### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.01	0.26	0.25	Satisfactory
1.68	1.82	0.14	Satisfactory
4.52	4.83	0.21	Satisfactory
7.84	8.04	0.20	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.50$  (mg/L)

#### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)	Results
0.001	146.9	144.3	-1.8	Satisfactory
0.01	1412	1394	-1.3	Satisfactory
0.1	12890	12677	-1.7	Satisfactory
0.5	58670	58642	0.0	Satisfactory
1.0	111900	112012	0.1	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

#### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.06	0.6	Satisfactory
20	20.22	1.1	Satisfactory
30	30.17	0.6	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

#### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(1)</sup> (NTU)	Tolerance <sup>(2)</sup> (%)	Results
0	0.01	--	Satisfactory
10	10.04	0.4	Satisfactory
20	20.09	0.4	Satisfactory
100	100.19	0.2	Satisfactory
800	801.44	0.2	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

#### Remark(s): -

<sup>(1)</sup> "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

<sup>(2)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI070143  
Date of Issue : 25 July, 2019  
Page No. : 1 of 2

### PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.  
Flat 2207, Yu Fun House,  
Yu Chui Court, Shatin  
New Territories, Hong Kong  
Attn: Mr. Thomas WONG

### PART B – DESCRIPTION

Name of Equipment : YSI 6920V2 (Multi-Parameters)  
Manufacturer : YSI (a xylem brand)  
Serial Number : 0001C6A7  
Date of Received : Jul 24, 2019  
Date of Calibration : Jul 24, 2019  
Date of Next Calibration<sup>(a)</sup> : Oct 24, 2019

### PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Parameter</u>	<u>Reference Method</u>
pH at 25°C	APHA 21e 4500-H <sup>+</sup> B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

### PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

#### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	4.08	0.08	Satisfactory
7.42	7.38	-0.04	Satisfactory
10.01	10.05	0.04	Satisfactory

Tolerance of pH should be less than  $\pm 0.20$  (pH unit)

#### (2) Temperature


Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
23.0	23.32	0.32	Satisfactory
28.0	27.65	-0.35	Satisfactory
48.0	49.6	1.6	Satisfactory

Tolerance limit of temperature should be less than  $\pm 2.0$  (°C)

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#### Remark(s): -

- <sup>(a)</sup> The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.  
<sup>(b)</sup> The results relate only to the calibrated equipment as received  
<sup>(c)</sup> The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.  
<sup>(d)</sup> "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.  
<sup>(e)</sup> The "Tolerance Limit" mentioned is referenced to YSI product specifications.

  
LEE Chun-ning, Desmond  
Senior Chemist



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI070143  
Date of Issue : 25 July, 2019  
Page No. : 2 of 2

### PART D – CALIBRATION RESULTS (Cont'd)

#### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.02	0.48	0.46	Satisfactory
3.66	3.50	-0.16	Satisfactory
5.70	5.78	0.08	Satisfactory
7.64	7.49	-0.15	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.50$  (mg/L)

#### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S/cm}$ )	Displayed Reading ( $\mu\text{S/cm}$ )	Tolerance (%)	Results
0.001	146.9	140.2	-4.56	Satisfactory
0.01	1412	1386	-1.84	Satisfactory
0.1	12890	12742	-1.15	Satisfactory
0.5	58670	56780	-3.22	Satisfactory
1.0	111900	107432	-3.99	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

#### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.95	-0.50	Satisfactory
20	19.95	-0.25	Satisfactory
30	30.04	0.13	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

#### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(f)</sup> (NTU)	Tolerance <sup>(g)</sup> (%)	Results
0	0.1	--	Satisfactory
10	9.8	-2.0	Satisfactory
20	19.4	-3.0	Satisfactory
100	97.2	-2.8	Satisfactory
800	776.3	-3.0	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

#### Remark(s): -

<sup>(f)</sup> "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

<sup>(g)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI070142  
Date of Issue : 25 July, 2019  
Page No. : 1 of 2

### PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.  
Flat 2207, Yu Fun House,  
Yu Chui Court, Shatin  
New Territories, Hong Kong  
Attn: Mr. Thomas WONG

### PART B – DESCRIPTION

Name of Equipment : YSI 6920V2 (Multi-Parameters)  
Manufacturer : YSI (a xylem brand)  
Serial Number : 00019CB2  
Date of Received : Jul 24, 2019  
Date of Calibration : Jul 24, 2019  
Date of Next Calibration<sup>(a)</sup> : Oct 24, 2019

### PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H <sup>+</sup> B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

### PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

#### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	4.02	0.02	Satisfactory
7.42	7.39	-0.03	Satisfactory
10.01	10.04	0.03	Satisfactory

Tolerance of pH should be less than  $\pm 0.20$  (pH unit)

#### (2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
23.0	22.62	0.38	Satisfactory
28.0	27.56	-0.44	Satisfactory
48.0	48.9	0.9	Satisfactory

Tolerance limit of temperature should be less than  $\pm 2.0$  (°C)

~ CONTINUED ON NEXT PAGE ~

#### Remark(s): -

- <sup>(a)</sup> The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.  
<sup>(b)</sup> The results relate only to the calibrated equipment as received  
<sup>(c)</sup> The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.  
<sup>(d)</sup> "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.  
<sup>(e)</sup> The "Tolerance Limit" mentioned is referenced to YSI product specifications.

  
LEE Chun-ning, Desmond  
Senior Chemist



## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI070142  
Date of Issue : 25 July, 2019  
Page No. : 2 of 2

### PART D – CALIBRATION RESULTS (Cont'd)

#### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.02	0.04	0.02	Satisfactory
3.66	3.56	-0.10	Satisfactory
5.70	5.86	0.16	Satisfactory
7.64	7.5	-0.14	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.50$  (mg/L)

#### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)	Results
0.001	146.9	136.8	-6.88	Satisfactory
0.01	1412	1352	-4.25	Satisfactory
0.1	12890	12754	-1.06	Satisfactory
0.5	58670	56354	-3.95	Satisfactory
1.0	111900	106531	-4.80	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

#### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.01	0.01	Satisfactory
20	19.90	-0.1	Satisfactory
30	29.82	-0.18	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

#### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(f)</sup> (NTU)	Tolerance(g) (%)	Results
0	0.1	--	Satisfactory
10	9.6	-4.0	Satisfactory
20	19.9	-0.5	Satisfactory
100	98.4	-1.6	Satisfactory
800	762.9	-4.6	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

#### Remark(s): -

<sup>(f)</sup> "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

<sup>(g)</sup> The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.

## **Appendix 2.2 Quality Assurance and Quality Control Results**



Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 2.2 – Quality Assurance and Quality Control Results

**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123655)</b>								
HK1868805-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	8	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123657)</b>								
HK1868805-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	7	0.00
HK1868805-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	8	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123658)</b>								
HK1868805-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	7	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123660)</b>								
HK1868805-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	12	11	0.00
HK1868805-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	14	14	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123661)</b>								
HK1868805-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER			Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123655)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123656)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123657)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123658)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123659)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	91.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123660)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123661)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123662)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	85	115	----	----

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 2.2 – Quality Assurance and Quality Control Results

**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123459)</b>								
HK1900036-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.00
HK1900036-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123460)</b>								
HK1900036-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.00
HK1900036-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123461)</b>								
HK1900036-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.00
HK1900036-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	3	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123462)</b>								
HK1900036-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
HK1900036-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123463)</b>								
HK1900036-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	7	0.00
HK1900036-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123464)</b>								
HK1900036-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
HK1900036-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123465)</b>								
HK1900036-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	7	0.00
HK1900036-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123466)</b>								
HK1900036-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.00
HK1900036-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123459)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123460)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	103	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2123461)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 2.2 – Quality Assurance and Quality Control Results

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2123462)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2123463)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	91.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2123464)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2123465)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2123466)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER

				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2125459)</b>								
HK1900041-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	<1	2	0.00
HK1900041-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2125460)</b>								
HK1900041-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	3	0.00
HK1900041-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2125461)</b>								
HK1900041-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	<1	2	0.00
HK1900041-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2125462)</b>								
HK1900041-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	1	2	58.8
HK1900041-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	3	37.4
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2125463)</b>								
HK1900041-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.00
HK1900041-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2125464)</b>								
HK1900041-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.00
HK1900041-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	3	4	36.3
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2125465)</b>								
HK1900041-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.00
HK1900041-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	3	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2125466)</b>								
HK1900041-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	3	0.00
HK1900041-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER

			Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2125459)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	89.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2125460)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	90.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2125461)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	----	85	115	----	----

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 Appendix 2.2 – Quality Assurance and Quality Control Results

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					Concentration	LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2125462)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2125463)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	109	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2125464)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	105	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2125465)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2125466)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	90.0	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2130548)</b>								
HK1900528-001	C1/E/S/1	EA025: Suspended Solids (SS)	---	2	mg/L	2	3	0.00
HK1900528-011	C1/F/B/1	EA025: Suspended Solids (SS)	---	2	mg/L	4	4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2130549)</b>								
HK1900528-021	C2/F/M/1	EA025: Suspended Solids (SS)	---	2	mg/L	2	2	0.00
HK1900528-031	C3/F/S/1	EA025: Suspended Solids (SS)	---	2	mg/L	3	3	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2130550)</b>								
HK1900528-041	SR1/E/B/1	EA025: Suspended Solids (SS)	---	2	mg/L	2	2	0.00
HK1900528-051	SR2/E/M/1	EA025: Suspended Solids (SS)	---	2	mg/L	3	3	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2130551)</b>								
HK1900528-061	SR3/E/S/1	EA025: Suspended Solids (SS)	---	2	mg/L	2	3	0.00
HK1900528-071	SR3/F/B/1	EA025: Suspended Solids (SS)	---	2	mg/L	3	3	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2130552)</b>								
HK1900528-081	SR4/F/M/1	EA025: Suspended Solids (SS)	---	2	mg/L	2	2	0.00
HK1900528-091	SR5/F/S/1	EA025: Suspended Solids (SS)	---	2	mg/L	4	4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2130553)</b>								
HK1900528-101	SR6/E/B/1	EA025: Suspended Solids (SS)	---	2	mg/L	5	5	0.00
HK1900528-111	SR7/E/M/1	EA025: Suspended Solids (SS)	---	2	mg/L	3	3	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2130554)</b>								
HK1900528-121	SR8/E/S/1	EA025: Suspended Solids (SS)	---	2	mg/L	5	5	0.00
HK1900528-131	SR8/F/B/1	EA025: Suspended Solids (SS)	---	2	mg/L	6	6	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2130555)</b>								
HK1900528-141	SR9/F/M/1	EA025: Suspended Solids (SS)	---	2	mg/L	3	4	0.00
HK1900528-151	SR10/F/S/1	EA025: Suspended Solids (SS)	---	2	mg/L	3	3	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER

Matrix: WATER			Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2130548)</b>											
EA025: Suspended Solids (SS)	---	2	mg/L	<2	20 mg/L	95.5	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2130549)</b>											
EA025: Suspended Solids (SS)	---	2	mg/L	<2	20 mg/L	101	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2130550)</b>											
EA025: Suspended Solids (SS)	---	2	mg/L	<2	20 mg/L	103	---	85	115	---	---

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Matrix: WATER

<i>Method: Compound</i>		<i>Method Blank (MB) Report</i>			<i>Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report</i>						
		<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Spike Concentration</i>	<i>Spike Recovery (%)</i>		<i>Recovery Limits (%)</i>		<i>RPDs (%)</i>	
						<i>LCS</i>	<i>DCS</i>	<i>Low</i>	<i>High</i>	<i>Value</i>	<i>Control Limit</i>
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2130551)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2130552)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	105	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2130553)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2130554)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2130555)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2134498)</b>								
HK1900529-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	3	4	0.00
HK1900529-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2134499)</b>								
HK1900529-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	6	0.00
HK1900529-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2134500)</b>								
HK1900529-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	3	0.00
HK1900529-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2134501)</b>								
HK1900529-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.00
HK1900529-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2134502)</b>								
HK1900529-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.00
HK1900529-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2134503)</b>								
HK1900529-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.00
HK1900529-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	8	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2134504)</b>								
HK1900529-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.00
HK1900529-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	3	4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2134505)</b>								
HK1900529-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
HK1900529-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER			Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2134498)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2134499)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2134500)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----



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Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					Concentration	LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2134501)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2134502)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2134503)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	107	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2134504)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2134505)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.0	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER

				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2135559)</b>								
HK1900867-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	1	<1	0.00
HK1900867-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2135560)</b>								
HK1900867-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	3	0.00
HK1900867-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	1	<1	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2135561)</b>								
HK1900867-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.00
HK1900867-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2135562)</b>								
HK1900867-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.00
HK1900867-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2135563)</b>								
HK1900867-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	1	1	0.00
HK1900867-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	1	2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2135564)</b>								
HK1900867-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	1	<1	0.00
HK1900867-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2135565)</b>								
HK1900867-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
HK1900867-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2135566)</b>								
HK1900867-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
HK1900867-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER

			Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2135559)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2135560)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2135561)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.0	----	85	115	----	----

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Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					Concentration	LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2135562)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2135563)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2135564)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2135565)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	110	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2135566)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2140183)</b>								
HK1901426-001	C1/E/S/1	EA025: Suspended Solids (SS)	---	2	mg/L	2	1	0.00
HK1901426-011	C1/F/B/1	EA025: Suspended Solids (SS)	---	2	mg/L	1	<1	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2140184)</b>								
HK1901426-021	C2/F/M/1	EA025: Suspended Solids (SS)	---	2	mg/L	1	1	0.00
HK1901426-031	C3/F/S/1	EA025: Suspended Solids (SS)	---	2	mg/L	3	2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2140185)</b>								
HK1901426-041	SR1/E/B/1	EA025: Suspended Solids (SS)	---	2	mg/L	<1	<1	0.00
HK1901426-051	SR2/E/M/1	EA025: Suspended Solids (SS)	---	2	mg/L	1	2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2140186)</b>								
HK1901426-061	SR3/E/S/1	EA025: Suspended Solids (SS)	---	2	mg/L	1	2	0.00
HK1901426-071	SR3/F/B/1	EA025: Suspended Solids (SS)	---	2	mg/L	2	2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2140187)</b>								
HK1901426-081	SR4/F/M/1	EA025: Suspended Solids (SS)	---	2	mg/L	1	2	0.00
HK1901426-091	SR5/F/S/1	EA025: Suspended Solids (SS)	---	2	mg/L	<1	<1	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2140188)</b>								
HK1901426-101	SR6/E/B/1	EA025: Suspended Solids (SS)	---	2	mg/L	<1	<1	0.00
HK1901426-111	SR7/E/M/1	EA025: Suspended Solids (SS)	---	2	mg/L	2	2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2140189)</b>								
HK1901426-121	SR8/E/S/1	EA025: Suspended Solids (SS)	---	2	mg/L	1	2	0.00
HK1901426-131	SR8/F/B/1	EA025: Suspended Solids (SS)	---	2	mg/L	1	<1	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2140190)</b>								
HK1901426-141	SR9/F/M/1	EA025: Suspended Solids (SS)	---	2	mg/L	2	2	0.00
HK1901426-151	SR10/F/S/1	EA025: Suspended Solids (SS)	---	2	mg/L	3	3	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER			Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2140183)</b>											
EA025: Suspended Solids (SS)	---	2	mg/L	<2	20 mg/L	97.0	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2140184)</b>											
EA025: Suspended Solids (SS)	---	2	mg/L	<2	20 mg/L	104	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2140185)</b>											
EA025: Suspended Solids (SS)	---	2	mg/L	<2	20 mg/L	103	---	85	115	---	---

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Matrix: WATER

<i>Method: Compound</i>		<i>Method Blank (MB) Report</i>			<i>Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report</i>						
		<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Spike Concentration</i>	<i>Spike Recovery (%)</i>		<i>Recovery Limits (%)</i>		<i>RPDs (%)</i>	
						<i>LCS</i>	<i>DCS</i>	<i>Low</i>	<i>High</i>	<i>Value</i>	<i>Control Limit</i>
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2140186)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2140187)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2140188)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.0	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2140189)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2140190)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	---	85	115	---	---

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 Appendix 2.2 – Quality Assurance and Quality Control Results

**Laboratory Duplicate (DUP) Report**

Matrix: WATER

				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2144521)</b>								
HK1901920-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
HK1901920-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	3	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2144522)</b>								
HK1901920-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
HK1901920-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2144523)</b>								
HK1901920-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	8	0.00
HK1901920-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	9	9	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2144524)</b>								
HK1901920-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	6	22.4
HK1901920-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2144525)</b>								
HK1901920-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	7	0.00
HK1901920-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	8	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2144526)</b>								
HK1901920-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	4	0.00
HK1901920-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	7	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2144527)</b>								
HK1901920-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.00
HK1901920-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	10	11	16.9
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2144528)</b>								
HK1901920-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	8	0.00
HK1901920-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER

		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2144521)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	110	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2144522)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2144523)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----

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Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2144524)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2144525)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2144526)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2144527)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2144528)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	105	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2147284)</b>								
HK1901923-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	4	0.00
HK1901923-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2147285)</b>								
HK1901923-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	7	0.00
HK1901923-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2147286)</b>								
HK1901923-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.00
HK1901923-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	7	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2147287)</b>								
HK1901923-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
HK1901923-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2147288)</b>								
HK1901923-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.00
HK1901923-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2147289)</b>								
HK1901923-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
HK1901923-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	5	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2147290)</b>								
HK1901923-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
HK1901923-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2147291)</b>								
HK1901923-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.00
HK1901923-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	12	12	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER			Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2147284)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	92.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2147285)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2147286)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	85	115	----	----



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Matrix: WATER

Method: Compound		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
		CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
							LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2147287)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2147288)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2147289)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2147290)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2147291)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----	

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER

				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2151901)</b>								
HK1902620-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	3	0.00
HK1902620-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	14	14	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2151902)</b>								
HK1902620-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	7	0.00
HK1902620-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	8	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2151903)</b>								
HK1902620-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	10	9	0.00
HK1902620-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2151904)</b>								
HK1902620-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.00
HK1902620-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	9	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2151905)</b>								
HK1902620-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	9	8	0.00
HK1902620-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	7	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2151906)</b>								
HK1902620-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	8	0.00
HK1902620-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	9	9	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2151907)</b>								
HK1902620-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	11	11	0.00
HK1902620-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	14	14	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2151908)</b>								
HK1902620-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	11	11	0.00
HK1902620-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	14	15	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER

			Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2151901)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2151902)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2151903)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	103	----	85	115	----	----

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Matrix: WATER

Method: Compound		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
		CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
							LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2151904)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2151905)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2151906)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	103	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2151907)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2151908)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----	

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER

				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157911)</b>								
HK1902621-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	7	0.00
HK1902621-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	8	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157912)</b>								
HK1902621-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	8	0.00
HK1902621-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	9	10	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157913)</b>								
HK1902621-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	7	0.00
HK1902621-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	7	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157914)</b>								
HK1902621-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	7	0.00
HK1902621-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	9	9	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157915)</b>								
HK1902621-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	10	11	0.00
HK1902621-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	9	9	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157916)</b>								
HK1902621-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	12	12	0.00
HK1902621-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	7	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157917)</b>								
HK1902621-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	8	0.00
HK1902621-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	8	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157918)</b>								
HK1902621-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	8	0.00
HK1902621-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER

			Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157911)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157912)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157913)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	85	115	----	----

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Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					Concentration	LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2157914)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2157915)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2157916)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2157917)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2157918)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER

				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157902)</b>								
HK1903523-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.00
HK1903523-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	9	9	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157903)</b>								
HK1903523-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.00
HK1903523-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	10	10	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157904)</b>								
HK1903523-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	5	0.00
HK1903523-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157905)</b>								
HK1903523-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	9	9	0.00
HK1903523-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157906)</b>								
HK1903523-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.00
HK1903523-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	8	7	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157907)</b>								
HK1903523-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	8	0.00
HK1903523-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	7	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157908)</b>								
HK1903523-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	4	5	0.00
HK1903523-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	6	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157909)</b>								
HK1903523-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	7	0.00
HK1903523-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	2	mg/L	7	7	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER

			Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157902)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157903)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2157904)</b>											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.5	----	85	115	----	----

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Matrix: WATER

<i>Method: Compound</i>		<i>Method Blank (MB) Report</i>			<i>Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report</i>							
		<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Spike Concentration</i>	<i>Spike Recovery (%)</i>		<i>Recovery Limits (%)</i>		<i>RPDs (%)</i>		
						<i>LCS</i>	<i>DCS</i>	<i>Low</i>	<i>High</i>	<i>Value</i>	<i>Control Limit</i>	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2157905)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.0	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2157906)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.0	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2157907)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	109	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2157908)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.0	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2157909)</b>												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----	

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER

				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2470889)</b>								
HK1930274-001	C1/E/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	5.4	5.4	0.00
HK1930274-011	C1/F/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	4.7	4.9	4.59
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2470890)</b>								
HK1930274-021	C2/F/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	5.3	5.4	2.80
HK1930274-031	C3/F/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	7.1	6.9	2.86
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2470891)</b>								
HK1930274-041	SR1/E/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	6.0	6.2	3.30
HK1930274-051	SR2/E/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	4.8	4.9	2.58
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2470892)</b>								
HK1930274-061	SR3/E/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	5.8	5.6	3.96
HK1930274-071	SR3/F/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	6.3	6.2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2470893)</b>								
HK1930274-081	SR4/F/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	7.0	7.2	3.15
HK1930274-091	SR5/F/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	4.9	5.2	5.94
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2470894)</b>								
HK1930274-101	SR6/E/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	7.4	7.1	3.46
HK1930274-111	SR7/E/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	6.2	6.1	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2470895)</b>								
HK1930274-121	SR8/E/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	9.8	9.4	3.38
HK1930274-131	SR8/F/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	5.7	5.8	2.16
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2470896)</b>								
HK1930274-141	SR9/F/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	7.8	7.6	3.56
HK1930274-151	SR10/F/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	6.0	6.4	6.01

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER

			Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2470889)</b>											
EA025: Suspended Solids (SS)	---	0.5	mg/L	<0.5	20 mg/L	99.0	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2470890)</b>											
EA025: Suspended Solids (SS)	---	0.5	mg/L	<0.5	20 mg/L	102	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2470891)</b>											
EA025: Suspended Solids (SS)	---	0.5	mg/L	<0.5	20 mg/L	99.0	---	85	115	---	---



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Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method/Compound	CAS Number	LOR	Unit	Result	Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					Concentration	LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2470892)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2470893)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2470894)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2470895)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2470896)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2476493)</b>								
HK1930298-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.6	4.9	6.90
HK1930298-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.4	8.2	1.81
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2476494)</b>								
HK1930298-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.1	4.9	4.49
HK1930298-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.8	8.0	2.53
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2476495)</b>								
HK1930298-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.2	7.4	2.76
HK1930298-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.3	7.0	4.54
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2476496)</b>								
HK1930298-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	4.2	0.00
HK1930298-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.0	9.4	5.17
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2476497)</b>								
HK1930298-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.0	7.4	5.93
HK1930298-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.7	6.6	1.50
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2476498)</b>								
HK1930298-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.8	8.0	1.58
HK1930298-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.0	5.7	6.40
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2476499)</b>								
HK1930298-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.0	6.3	4.05
HK1930298-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.0	8.3	4.29
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2476500)</b>								
HK1930298-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.0	8.4	4.59
HK1930298-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.6	7.8	2.93

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER			Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2476493)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2476494)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2476495)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----

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Matrix: WATER

<i>Method: Compound</i>		<i>Method Blank (MB) Report</i>			<i>Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report</i>						
		<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Spike Concentration</i>	<i>Spike Recovery (%)</i>		<i>Recovery Limits (%)</i>		<i>RPDs (%)</i>	
						<i>LCS</i>	<i>DCS</i>	<i>Low</i>	<i>High</i>	<i>Value</i>	<i>Control Limit</i>
<i>CAS Number</i>	<i>Method: Compound</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Spike Concentration</i>	<i>LCS</i>	<i>DCS</i>	<i>Low</i>	<i>High</i>	<i>Value</i>	<i>Control Limit</i>
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2476496)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2476497)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2476498)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2476499)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2476500)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2480544)</b>								
HK1930662-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	5.2	0.00
HK1930662-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.4	6.6	2.68
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2480545)</b>								
HK1930662-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.5	4.7	3.26
HK1930662-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.7	5.8	3.04
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2480546)</b>								
HK1930662-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.8	6.0	3.40
HK1930662-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.4	4.3	2.30
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2480547)</b>								
HK1930662-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.6	2.8	9.17
HK1930662-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	4.0	4.91
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2480548)</b>								
HK1930662-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.0	3.7	5.86
HK1930662-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	6.0	3.25
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2480549)</b>								
HK1930662-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.2	7.0	2.11
HK1930662-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.8	6.6	3.01
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2480550)</b>								
HK1930662-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.3	5.0	6.33
HK1930662-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	10.1	10.4	2.69
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2480551)</b>								
HK1930662-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.7	5.8	2.60
HK1930662-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.8	7.8	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER			Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2480544)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2480545)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2480546)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----

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Matrix: WATER

Method: Compound		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
		CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
							LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2480547)</b>												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.0	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2480548)</b>												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2480549)</b>												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2480550)</b>												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.5	----	85	115	----	----	
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2480551)</b>												
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----	

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2485515)</b>								
HK1930664-001	C1/E/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	5.1	4.8	6.06
HK1930664-011	C1/F/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	3.3	3.5	5.13
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2485516)</b>								
HK1930664-021	C2/F/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	3.8	3.5	6.18
HK1930664-031	C3/F/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	3.0	3.0	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2485517)</b>								
HK1930664-041	SR1/E/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	5.2	5.2	0.00
HK1930664-051	SR2/E/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	5.2	4.9	4.98
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2485518)</b>								
HK1930664-061	SR3/E/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	3.0	3.3	12.0
HK1930664-071	SR3/F/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	3.4	3.0	12.7
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2485519)</b>								
HK1930664-081	SR4/F/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	2.8	3.1	7.59
HK1930664-091	SR5/F/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	1.8	1.6	16.0
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2485520)</b>								
HK1930664-101	SR6/E/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	4.9	5.2	5.49
HK1930664-111	SR7/E/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	4.0	4.4	7.14
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2485521)</b>								
HK1930664-121	SR8/E/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	3.3	3.1	7.81
HK1930664-131	SR8/F/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	2.9	2.6	9.86
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2485522)</b>								
HK1930664-141	SR9/F/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	2.8	2.6	5.61
HK1930664-151	SR10/F/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	4.1	4.2	3.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER			Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2485515)</b>											
EA025: Suspended Solids (SS)	---	0.5	mg/L	<0.5	20 mg/L	98.5	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2485516)</b>											
EA025: Suspended Solids (SS)	---	0.5	mg/L	<0.5	20 mg/L	100	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2485517)</b>											
EA025: Suspended Solids (SS)	---	0.5	mg/L	<0.5	20 mg/L	101	---	85	115	---	---

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Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2485518)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2485519)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2485520)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2485521)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2485522)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2491054)</b>								
HK1930980-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.8	7.6	12.2
HK1930980-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.8	7.9	1.92
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2491055)</b>								
HK1930980-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.2	2.9	10.5
HK1930980-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.0	2.9	4.26
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2491056)</b>								
HK1930980-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	2.8	19.0
HK1930980-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.6	3.6	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2491057)</b>								
HK1930980-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.4	3.7	17.8
HK1930980-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	4.1	17.9
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2491058)</b>								
HK1930980-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.7	6.7	0.00
HK1930980-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.0	4.4	11.3
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2491059)</b>								
HK1930980-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.4	4.1	7.58
HK1930980-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.6	3.8	18.6
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2491060)</b>								
HK1930980-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.9	4.0	19.5
HK1930980-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.5	4.7	16.1
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2491061)</b>								
HK1930980-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	5.9	13.5
HK1930980-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.3	7.4	2.04

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER				Method Blank (MB) Report								Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)					
						LCS	DCS	Low	High	Value	Control Limit				
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2491054)</b>															
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	105	----	85	115	----	----				
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2491055)</b>															
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.5	----	85	115	----	----				
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2491056)</b>															
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	93.0	----	85	115	----	----				



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Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2491057)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2491058)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	93.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2491059)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	93.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2491060)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	95.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2491061)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.0	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER					Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2507234)</b>									
HK1931499-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.0	7.7	15.3	
HK1931499-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.9	6.3	7.38	
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2507235)</b>									
HK1931499-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	3.7	13.9	
HK1931499-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.8	4.6	4.77	
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2507236)</b>									
HK1931499-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.1	8.5	17.6	
HK1931499-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.9	6.7	17.1	
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2507237)</b>									
HK1931499-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.2	7.8	16.5	
HK1931499-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.3	7.5	18.1	
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2507238)</b>									
HK1931499-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.5	5.4	2.31	
HK1931499-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.2	7.2	13.0	
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2507239)</b>									
HK1931499-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	13.4	13.0	2.46	
HK1931499-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	15.7	15.1	3.74	
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2507240)</b>									
HK1931499-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.7	7.1	19.6	
HK1931499-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.0	5.0	18.0	
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2507241)</b>									
HK1931499-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	11.4	11.1	2.45	
HK1931499-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.6	7.1	6.54	

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2507234)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	106	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2507235)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	93.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2507236)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	110	----	85	115	----	----

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Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					Concentration	LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2507237)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.0	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2507238)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.5	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2507239)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	97.0	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2507240)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	97.0	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2507241)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	93.0	---	85	115	---	---

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2511761)</b>								
HK1931502-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.8	4.4	15.1
HK1931502-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	4.4	5.22
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2511762)</b>								
HK1931502-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.9	3.5	18.0
HK1931502-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	3.3	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2511763)</b>								
HK1931502-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.5	3.0	13.0
HK1931502-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	3.0	12.4
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2511764)</b>								
HK1931502-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.7	3.6	27.0
HK1931502-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	5.1	18.8
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2511765)</b>								
HK1931502-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.9	2.3	21.2
HK1931502-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.8	5.3	9.44
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2511766)</b>								
HK1931502-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.8	2.6	5.50
HK1931502-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	4.2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2511767)</b>								
HK1931502-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.1	5.2	2.91
HK1931502-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.0	7.8	2.22
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2511768)</b>								
HK1931502-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.3	4.2	2.93
HK1931502-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.4	5.6	13.7

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2511761)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	93.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2511762)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	97.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2511763)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	109	----	85	115	----	----

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Matrix: WATER		<i>Method Blank (MB) Report</i>			<i>Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report</i>						
<i>Method: Compound</i>	<i>CAS Number</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Spike Concentration</i>	<i>Spike Recovery (%)</i>		<i>Recovery Limits (%)</i>		<i>RPDs (%)</i>	
						<i>LCS</i>	<i>DCS</i>	<i>Low</i>	<i>High</i>	<i>Value</i>	<i>Control Limit</i>
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2511764)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	108	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2511765)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2511766)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	108	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2511767)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	108	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2511768)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	111	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2517239)</b>								
HK1931523-001	C1/E/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	3.0	3.2	7.29
HK1931523-011	C1/F/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	9.2	9.2	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2517240)</b>								
HK1931523-021	C2/F/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	4.1	3.5	15.9
HK1931523-031	C3/F/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	6.2	6.7	7.38
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2517241)</b>								
HK1931523-041	SR1/E/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	4.0	4.3	7.81
HK1931523-051	SR2/E/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	6.4	6.0	7.23
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2517242)</b>								
HK1931523-061	SR3/E/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	2.6	2.8	6.39
HK1931523-071	SR3/F/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	2.7	3.0	9.89
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2517243)</b>								
HK1931523-081	SR4/F/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	3.2	3.8	16.9
HK1931523-091	SR5/F/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	5.4	4.8	11.8
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2517244)</b>								
HK1931523-101	SR6/E/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	3.3	3.5	6.59
HK1931523-111	SR7/E/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	4.9	5.6	12.9
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2517245)</b>								
HK1931523-121	SR8/E/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	3.1	3.6	13.5
HK1931523-131	SR8/F/B/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	3.4	3.2	4.54
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2517246)</b>								
HK1931523-141	SR9/F/M/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	5.0	5.4	7.19
HK1931523-151	SR10/F/S/1	EA025: Suspended Solids (SS)	---	0.5	mg/L	6.5	5.6	14.4

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER			Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2517239)</b>											
EA025: Suspended Solids (SS)	---	0.5	mg/L	<0.5	20 mg/L	110	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2517240)</b>											
EA025: Suspended Solids (SS)	---	0.5	mg/L	<0.5	20 mg/L	109	---	85	115	---	---
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2517241)</b>											
EA025: Suspended Solids (SS)	---	0.5	mg/L	<0.5	20 mg/L	106	---	85	115	---	---

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Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					Concentration	LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2517242)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	97.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2517243)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	108	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2517244)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	110	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2517245)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	108	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2517246)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2520202)</b>								
HK1933542-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.8	2.4	14.4
HK1933542-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.0	2.1	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2520203)</b>								
HK1933542-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.6	3.5	4.20
HK1933542-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.9	3.4	13.5
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2520204)</b>								
HK1933542-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	4.5	15.4
HK1933542-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.6	2.8	9.26
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2520205)</b>								
HK1933542-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.3	3.7	13.8
HK1933542-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.8	6.7	15.2
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2520206)</b>								
HK1933542-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.9	3.3	15.3
HK1933542-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	5.9	13.6
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2520207)</b>								
HK1933542-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.0	1.7	13.5
HK1933542-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.0	2.3	13.8
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2520208)</b>								
HK1933542-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.3	5.0	5.33
HK1933542-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.7	2.7	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2520209)</b>								
HK1933542-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	3.9	11.6
HK1933542-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	3.9	12.3

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2520202)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2520203)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	95.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2520204)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----



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Matrix: WATER

<i>Method: Compound</i>		<i>Method Blank (MB) Report</i>			<i>Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report</i>						
		<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Spike Concentration</i>	<i>Spike Recovery (%)</i>		<i>Recovery Limits (%)</i>		<i>RPDs (%)</i>	
						<i>LCS</i>	<i>DCS</i>	<i>Low</i>	<i>High</i>	<i>Value</i>	<i>Control Limit</i>
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2520205)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	---	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2520206)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	---	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2520207)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	97.5	---	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2520208)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	---	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2520209)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	108	---	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2534893)</b>								
HK1934351-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.6	3.6	0.00
HK1934351-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.3	2.4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2534894)</b>								
HK1934351-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.3	3.2	3.86
HK1934351-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.2	3.1	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2534895)</b>								
HK1934351-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	6.6	7.09
HK1934351-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.0	1.9	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2534896)</b>								
HK1934351-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.6	2.5	0.00
HK1934351-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.3	5.8	7.44
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2534897)</b>								
HK1934351-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.9	4.0	3.15
HK1934351-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.8	2.6	7.55
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2534898)</b>								
HK1934351-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.7	2.5	8.61
HK1934351-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.5	3.4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2534899)</b>								
HK1934351-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	4.5	5.16
HK1934351-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.4	1.4	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2534900)</b>								
HK1934351-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.6	1.6	0.00
HK1934351-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.8	1.8	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2534893)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2534894)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2534895)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	93.5	----	85	115	----	----

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Matrix: WATER		<i>Method Blank (MB) Report</i>			<i>Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report</i>						
<i>Method: Compound</i>	<i>CAS Number</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Spike Concentration</i>	<i>Spike Recovery (%)</i>		<i>Recovery Limits (%)</i>		<i>RPDs (%)</i>	
						<i>LCS</i>	<i>DCS</i>	<i>Low</i>	<i>High</i>	<i>Value</i>	<i>Control Limit</i>
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2534896)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	93.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2534897)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	106	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2534898)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	104	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2534899)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	107	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2534900)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	108	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2529642)</b>								
HK1934362-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.1	2.8	12.0
HK1934362-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.4	2.6	7.04
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2529643)</b>								
HK1934362-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.7	1.9	32.6
HK1934362-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.1	2.4	13.2
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2529644)</b>								
HK1934362-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.0	3.6	18.3
HK1934362-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	3.7	7.04
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2529645)</b>								
HK1934362-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.8	4.4	17.1
HK1934362-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.6	4.0	10.4
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2529646)</b>								
HK1934362-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.6	3.4	25.2
HK1934362-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.9	3.2	10.5
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2529647)</b>								
HK1934362-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.7	3.4	25.3
HK1934362-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.2	4.0	20.8
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2529648)</b>								
HK1934362-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	3.2	7.52
HK1934362-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.2	3.8	15.7
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2529649)</b>								
HK1934362-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.2	2.8	14.3
HK1934362-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.3	2.5	8.25

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER			Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2529642)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	91.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2529643)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2529644)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	90.0	----	85	115	----	----

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Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2529645)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	106	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2529646)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	112	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2529647)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2529648)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	91.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2529649)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	108	----	85	115	----	----

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**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2537729)</b>								
HK1934367-001	C1/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.6	5.5	16.7
HK1934367-011	C1/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	19.5	19.1	2.20
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2537730)</b>								
HK1934367-021	C2/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.6	5.2	12.7
HK1934367-031	C3/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.4	5.5	0.00
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2537731)</b>								
HK1934367-041	SR1/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	12.4	12.1	2.86
HK1934367-051	SR2/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	6.8	10.5
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2537732)</b>								
HK1934367-061	SR3/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.1	9.1	0.00
HK1934367-071	SR3/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	15.6	16.7	6.49
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2537733)</b>								
HK1934367-081	SR4/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.2	7.1	12.4
HK1934367-091	SR5/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.6	7.8	3.56
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2537734)</b>								
HK1934367-101	SR6/E/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.3	7.7	5.66
HK1934367-111	SR7/E/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.3	7.4	1.36
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2537735)</b>								
HK1934367-121	SR8/E/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.2	8.8	4.17
HK1934367-131	SR8/F/B/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.3	9.8	5.22
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 2537736)</b>								
HK1934367-141	SR9/F/M/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.3	3.9	8.54
HK1934367-151	SR10/F/S/1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	6.1	0.00

**Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report**

Matrix: WATER			Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2537729)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	95.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2537730)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	92.0	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2537731)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	108	----	85	115	----	----

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Matrix: WATER

<i>Method: Compound</i>		<i>Method Blank (MB) Report</i>			<i>Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report</i>						
		<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Spike Concentration</i>	<i>Spike Recovery (%)</i>		<i>Recovery Limits (%)</i>		<i>RPDs (%)</i>	
						<i>LCS</i>	<i>DCS</i>	<i>Low</i>	<i>High</i>	<i>Value</i>	<i>Control Limit</i>
<i>CAS Number</i>											
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2537732)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	101	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2537733)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.5	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2537734)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	105	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2537735)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	112	----	85	115	----	----
<b>EA/ED: Physical and Aggregate Properties (QCLot: 2537736)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85	115	----	----

## **Appendix 3.1 Baseline Water Quality Monitoring Results**



# **Annex I Baseline Water Quality Monitoring Results (January 2019)**

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at C1 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	07:21	11.5	Surface	1.0	19.5	19.5	8.0	8.0	33.1	33.1	96.4	96.5	7.3	7.3	7.4	8.6	8.6	8.8	8	8	8
						1.0	19.5		8.0		33.1		96.5		7.3			8.6					
					Middle	5.8	19.5	19.5	8.0	8.0	33.0	33.0	98.5	98.5	7.4	7.4	8.9	8.9	8.9				
						5.8	19.5		8.0		33.0		98.5		7.4		8.9						
					Bottom	10.5	19.5	19.5	7.8	7.8	33.0	33.0	100.3	100.4	7.6	7.6	7.6	9.0	9.0				
						10.5	19.5		7.8		33.0		100.4		7.6		9.1						
3-Jan-19	Rainy	Rough	09:21	11.6	Surface	1.0	19.1	19.1	8.2	8.1	33.2	33.2	98.3	98.3	7.5	7.5	7.5	4.6	4.5	4.7	6	6	6
						1.0	19.1		8.1		33.2		98.3		7.5			4.5					
					Middle	5.8	19.1	19.1	8.1	8.1	33.2	33.2	98.2	98.2	7.5	7.5	4.5	4.5	4.5				
						5.8	19.1		8.1		33.2		98.1		7.5		4.5						
					Bottom	10.6	19.1	19.1	8.0	8.0	33.2	33.2	98.0	98.0	7.5	7.5	7.5	5.0	5.0				
						10.6	19.1		8.0		33.2		98.0		7.5		5.0						
5-Jan-19	Misty	Rough	10:37	12.1	Surface	1.0	19.1	19.1	8.0	8.0	32.9	32.9	89.8	89.9	6.8	6.8	6.9	6.4	6.4	6.9	<1	1	3
						1.0	19.1		8.0		32.9		89.9		6.8			6.5					
					Middle	6.1	19.1	19.1	7.9	7.9	32.9	32.9	90.0	90.0	6.9	6.9	6.9	6.9	6.9				
						6.1	19.1		7.9		32.9		90.0		6.9		6.9						
					Bottom	11.1	19.1	19.1	7.9	7.9	32.9	32.9	90.5	90.5	6.9	6.9	6.9	7.3	7.3				
						11.1	19.1		7.9		32.9		90.5		6.9		7.3						
8-Jan-19	Cloudy	Moderate	14:26	11.1	Surface	1.0	18.6	18.6	8.1	8.1	32.3	32.3	94.6	94.6	7.3	7.3	7.3	11.2	11.2	12.8	2	3	2
						1.0	18.6		8.1		32.3		94.6		7.3			11.2					
					Middle	5.6	18.3	18.3	8.1	8.1	32.9	32.9	94.2	94.2	7.3	7.3	13.0	13.0	13.0				
						5.6	18.3		8.1		32.9		94.2		7.3		13.1						
					Bottom	10.1	18.5	18.5	8.1	8.1	33.1	33.1	93.9	93.9	7.2	7.2	7.2	14.5	14.1				
						10.1	18.5		8.1		33.1		93.9		7.2		13.7						
10-Jan-19	Cloudy	Rough	15:32	11.7	Surface	1.0	19.1	19.1	8.1	8.1	32.8	32.8	97.7	97.6	7.4	7.4	7.4	2.4	2.4	4.1	3	4	4
						1.0	19.1		8.1		32.8		97.5		7.4			2.5					
					Middle	5.9	19.1	19.1	8.1	8.1	32.8	32.8	95.4	95.4	7.3	7.3	4.3	4.4	4.4				
						5.9	19.1		8.1		32.8		95.4		7.3		4.4						
					Bottom	10.7	19.1	19.1	8.1	8.1	32.8	32.8	94.6	94.6	7.2	7.2	5.6	5.6	5.6				
						10.7	19.1		8.1		32.8		94.6		7.2		5.7						
12-Jan-19	Misty	Rough	17:14	10.9	Surface	1.0	19.7	19.7	8.2	8.2	32.5	32.5	99.6	99.5	7.5	7.5	7.3	2.8	2.9	3.3	1	2	2
						1.0	19.6		8.2		32.5		99.3		7.5			2.9					
					Middle	5.5	19.3	19.3	8.2	8.2	32.6	32.6	92.1	92.1	7.0	7.0	3.3	3.3	3.3				
						5.5	19.3		8.2		32.6		92.0		7.0		3.4						
					Bottom	9.9	19.3	19.3	8.1	8.1	32.6	32.6	91.2	91.2	6.9	6.9	6.9	3.7	3.8				
						9.9	19.3		8.1		32.6		91.2		6.9		3.8						
15-Jan-19	Cloudy	Moderate	04:10	11.2	Surface	1.0	19.1	19.1	8.1	8.1	32.1	32.1	93.4	93.4	7.1	7.1	7.2	2.8	2.8	6.2	2	2	2
						1.0	19.1		8.1		32.1		93.4		7.2			2.8					
					Middle	5.6	19.1	19.1	7.9	7.9	32.0	32.0	93.8	93.8	7.2	7.2	1.8	1.8	1.8				
						5.6	19.1		7.9		32.0		93.8		7.2		1.9						
					Bottom	10.2	19.1	19.1	7.9	7.9	31.7	31.6	94.9	94.9	7.3	7.3	7.3	14.0	14.0				
						10.2	19.1		7.9		31.6		94.9		7.3		14.0						
17-Jan-19	Fine	Moderate	07:03	11.8	Surface	1.0	18.5	18.5	8.2	8.2	31.3	31.3	95.6	95.6	7.4	7.4	7.4	2.0	2.0	2.0	4	4	4
						1.0	18.5		8.2		31.3		95.6		7.4			2.0					
					Middle	5.9	18.5	18.5	8.2	8.2	31.3	31.3	95.7	95.7	7.4	7.4	2.1	2.0	2.0				
						5.9	18.5		8.2		31.3		95.7		7.4		2.0						
					Bottom	10.8	18.4	18.4	8.1	8.1	31.3	31.3	96.5	96.5	7.5	7.5	7.5	2.0	2.0				
						10.8	18.4		8.1		31.3		96.5		7.5		2.0						
19-Jan-19	Cloudy	Moderate	09:01	10.4	Surface	1.0	18.5	18.5	8.0	8.0	31.3	31.3	92.1	92.1	7.2	7.2	7.2	2.5	2.5	2.5	5	5	4
						1.0	18.5		8.0		31.3		92.1		7.2			2.5					
					Middle	5.2	18.5	18.5	8.0	8.0	31.3	31.3	92.0	92.0	7.2	7.2	2.6	2.6	2.6				
						5.2	18.5		8.0		31.3		92.0		7.2		2.6						
					Bottom	9.4	18.5	18.5	8.1	8.1	31.3	31.3	92.1	92.1	7.2	7.2	2.5	2.6	2.6				
						9.4	18.5		8.1		31.3		92.1		7.2		2.6						
22-Jan-19	Fine	Rough	14:09	11.2	Surface	1.0	18.6	18.6	8.1	8.1	31.1	31.1	94.8	94.9	7.4	7.4	7.4	2.5	2.5	2.6	4	4	5
						1.0	18.6		8.1		31.1		94.9		7.4			2.5					
					Middle	5.6	18.6	18.6	8.1	8.1	31.1	31.1	95.1	95.1	7.4	7.4	2.5	2.5	2.5				
						5.6	18.6		8.1		31.1		95.1		7.4		2.5						
					Bottom	10.2	18.4	18.4	8.1	8.1	31.1	31.1	94.6	94.7	7.4	7.4	2.8	2.7	2.7				
						10.2	18.4		8.1		31.1		94.7		7.4		2.7						
24-Jan-19	Sunny	Moderate	15:30	11.6	Surface	1.0	18.6	18.6	8.2	8.2	31.0	31.0	99.3	99.3	7.7	7.7	7.7	6.2	6.3	7.4	7	7	7
						1.0	18.6		8.2		31.0		99.3		7.7			6.4					
					Middle	5.8	18.6	18.6	8.2	8.2	31.0	31.0	99.0	99.0	7.7	7.7	7.6	7.6	7.6				
						5.8	18.6		8.2		31.0		99.0		7.7		7.5						
					Bottom	10.6	18.6	18.6	8.2	8.2	31.0	31.0	99.0	99.1	7.7	7.7	8.2	8.2	8.2				
						10.6	18.6		8.2		31.0		99.1		7.7		8.2						
26-Jan-19	Sunny	Moderate	17:21	12.3	Surface	1.0	18.7	18.7	8.3	8.3	31.4	31.4	115.8	115.7	9.0	9.0	9.0	1.5	1.5	3.5	5	6	6
						1.0	18.7		8.3		31.4		115.6		9.0			1.5					
					Middle	6.2	18.8	18.7	8.3	8.3	31.4	31.4	116.0	115.6	8.9	9.0	2.3	2.4	2.4				
						6.2	18.5		8.3		31.4		115.1		8.9		2.4						
					Bottom	11.3	18.5	18.6	8.3	8.3	31.4	31.4	114.8	114.9	8.9	8.9	8.9	6.7	6.7				
						11.3	18.6		8.3		31.4		115.0		8.9		6.7						

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at C1 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Moderate	15:24	11.4	Surface	1.0	19.3	19.3	8.1	8.1	33.0	33.0	94.4	94.4	7.2	7.2	7.2	9.8	9.8	9.9	7	7	8
						1.0	19.3		8.1		33.0		94.4		7.2			9.8			7		
					Middle	5.7	19.3	8.1	33.0	94.4	7.2	9.9	7	8									
						5.7	19.3	8.1	33.0	94.4	7.2	10.0	8										
					Bottom	10.4	19.3	8.1	33.0	94.5	7.2	10.1	9	9									
						10.4	19.3	8.1	33.0	94.6	7.2	10.1	8										
3-Jan-19	Cloudy	Rough	16:45	11.6	Surface	1.0	19.0	19.0	8.1	8.1	33.2	33.2	100.2	100.2	7.6	7.6	7.6	3.8	3.9	5.4	5	5	5
						1.0	19.0		8.1		33.2		100.1		7.6			3.9			4		
					Middle	5.8	19.0	8.1	33.2	99.9	7.6	4.9	4	4									
						5.8	19.0	8.1	33.2	99.9	7.6	4.8	4										
					Bottom	10.6	18.9	8.1	33.2	99.6	7.6	7.6	6	6									
						10.6	18.9	8.1	33.2	99.6	7.6	7.5	6										
5-Jan-19	Misty	Rough	17:39	11.2	Surface	1.0	19.3	19.3	8.2	8.2	32.9	32.9	93.0	93.0	7.1	7.1	7.0	5.7	5.7	6.0	<1	2	2
						1.0	19.3		8.2		32.9		92.9		7.1			5.7			2		
					Middle	5.6	19.2	8.2	32.9	91.4	7.0	5.9	1	2									
						5.6	19.2	8.2	32.9	91.4	7.0	6.0	2										
					Bottom	10.2	19.2	8.2	32.9	91.0	6.9	6.4	2	2									
						10.2	19.2	8.2	32.9	90.9	6.9	6.4	2										
8-Jan-19	Cloudy	Rough	07:27	11.3	Surface	1.0	18.5	18.5	7.9	7.9	33.2	33.2	98.6	98.6	7.6	7.6	7.6	11.5	11.5	11.5	4	4	4
						1.0	18.5		7.9		33.2		98.6		7.6			11.5			4		
					Middle	5.7	18.5	7.9	33.2	98.0	7.5	11.5	4	4									
						5.7	18.5	7.9	33.2	98.0	7.5	11.5	4										
					Bottom	10.3	18.6	7.9	33.2	98.2	7.5	11.5	4	5									
						10.3	18.6	7.9	33.2	98.2	7.5	11.5	5										
10-Jan-19	Cloudy	Rough	08:29	10.9	Surface	1.0	19.0	19.0	8.1	8.1	32.8	32.8	91.1	91.1	7.0	7.0	6.9	3.8	3.8	5.2	7	8	6
						1.0	19.0		8.1		32.8		91.1		7.0			3.8			8		
					Middle	5.5	19.0	8.1	32.8	90.8	6.9	5.4	5	5									
						5.5	19.0	8.1	32.8	90.7	6.9	5.4	5										
					Bottom	9.9	19.0	8.1	32.8	90.6	6.9	6.2	5	5									
						9.9	19.0	8.1	32.8	90.6	6.9	6.3	5										
12-Jan-19	Misty	Rough	09:25	10.5	Surface	1.0	19.1	19.1	8.2	8.2	32.5	32.5	90.3	90.3	6.9	6.9	6.9	4.5	4.5	4.8	4	4	3
						1.0	19.1		8.2		32.5		90.3		6.9			4.4			3		
					Middle	5.3	19.1	8.2	32.5	90.2	6.9	4.6	4	4									
						5.3	19.1	8.2	32.5	90.2	6.9	4.6	3										
					Bottom	9.5	19.1	8.2	32.5	90.1	6.9	5.3	2	3									
						9.5	19.1	8.2	32.5	90.1	6.9	5.5	3										
15-Jan-19	Cloudy	Moderate	13:39	11.2	Surface	1.0	19.4	19.4	8.2	8.2	32.3	32.3	95.5	95.5	7.3	7.3	7.3	1.0	1.0	1.5	2	2	2
						1.0	19.4		8.2		32.3		95.5		7.3			1.0			2		
					Middle	5.6	19.3	8.2	32.3	95.7	7.3	1.4	3	3									
						5.6	19.3	8.2	32.3	95.8	7.3	1.5	3										
					Bottom	10.2	19.3	8.2	32.3	96.2	7.3	1.9	1	1									
						10.2	19.3	8.2	32.3	96.3	7.3	1.9	<1										
17-Jan-19	Fine	Moderate	14:49	11.7	Surface	1.0	19.2	19.2	8.3	8.3	31.4	31.4	98.6	98.6	7.6	7.6	7.6	2.3	2.3	2.5	4	4	4
						1.0	19.2		8.3		31.4		98.6		7.6			2.3			4		
					Middle	5.9	18.4	8.3	31.3	96.8	7.5	2.6	3	3									
						5.9	18.4	8.3	31.3	96.8	7.5	2.6	3										
					Bottom	10.7	18.4	8.3	31.3	96.7	7.5	2.5	4	4									
						10.7	18.4	8.3	31.3	96.7	7.5	2.5	3										
19-Jan-19	Cloudy	Rough	16:19	11.6	Surface	1.0	18.7	18.7	8.1	8.1	31.3	31.3	97.0	97.0	7.5	7.5	7.5	2.1	2.1	2.2	2	2	2
						1.0	18.7		8.1		31.3		97.0		7.5			<1			2		
					Middle	5.8	18.5	8.1	31.3	95.6	7.4	2.2	1	2									
						5.8	18.5	8.1	31.3	95.6	7.4	2.2	2										
					Bottom	10.6	18.5	8.1	31.3	95.6	7.4	2.3	3	3									
						10.6	18.5	8.1	31.3	95.8	7.4	2.3	3										
22-Jan-19	Fine	Rough	06:38	11.1	Surface	1.0	18.6	18.6	8.1	8.1	31.1	31.1	90.0	90.1	7.0	7.0	7.0	4.1	4.1	4.4	8	9	12
						1.0	18.6		8.1		31.1		90.1		7.0			4.1			9		
					Middle	5.6	18.6	8.1	31.1	90.2	7.0	4.0	12	12									
						5.6	18.6	8.1	31.1	90.2	7.0	3.9	12										
					Bottom	10.1	18.5	8.0	31.1	92.2	7.2	5.2	14	15									
						10.1	18.5	8.0	31.1	92.3	7.2	5.2	15										
24-Jan-19	Sunny	Moderate	08:01	10.2	Surface	1.0	18.4	18.4	8.2	8.2	30.8	30.8	89.5	89.5	7.0	7.0	7.0	5.9	5.9	7.4	9	9	9
						1.0	18.4		8.2		30.8		89.5		7.0			5.8			9		
					Middle	5.1	18.4	8.2	30.8	89.7	7.0	7.1	10	11									
						5.1	18.4	8.2	30.8	89.7	7.0	7.1	11										
					Bottom	9.2	18.4	8.1	30.8	90.2	7.0	8.9	8	8									
						9.2	18.4	8.1	30.8	90.3	7.1	9.5	8										
26-Jan-19	Sunny	Moderate	09:16	10.5	Surface	1.0	18.4	18.4	8.2	8.2	30.8	30.8	95.7	95.7	7.5	7.5	7.5	2.6	2.6	2.8	7	7	8
						1.0	18.4		8.2		30.8		95.7		7.5			2.6			7		
					Middle	5.3	18.4	8.2	30.9	95.5	7.5	2.8	8	9									
						5.3	18.4	8.2	30.9	95.5	7.5	2.8	8										
					Bottom	9.5	18.4	8.2	30.9	95.5	7.5	2.9	9	9									
						9.5	18.4	8.2	30.9	95.5	7.5	3.0	9										

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at C2 during Mid-ebb Tide																											
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)						
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA				
1-Jan-19	Cloudy	Rough	08:51	10.9	Surface	1.0	19.0	19.0	8.1	8.1	33.1	33.1	95.0	95.0	7.3	7.3	7.2	11.0	11.0	11.8	13	13	12				
						1.0	19.0		8.1		33.1		95.0		7.3			11.0			13						
					Middle	5.5	19.0	19.0	8.1	8.1	33.1	33.1	94.9	94.9	7.2	7.2	7.2	11.5	11.4		7.2	12		12	11		
						5.5	19.0		8.1		33.1		94.9		7.2			11.4				11					
					Bottom	9.9	18.9	18.9	8.1	8.1	33.1	33.1	94.7	94.8	7.2	7.2	7.2	12.8	12.8		7.2	12.8		12.8	11	11	11
						9.9	18.9		8.1		33.1		94.8		7.2			12.8				11					
3-Jan-19	Rainy	Rough	10:47	10.5	Surface	1.0	18.8	18.8	8.2	8.2	33.3	33.3	99.5	99.5	7.6	7.6	7.6	5.5	5.5	6.7	3	4	4				
						1.0	18.8		8.2		33.3		99.4		7.6			5.6			4						
					Middle	5.3	18.8	18.8	8.2	8.2	33.3	33.3	99.2	99.2	7.6	7.6	7.6	6.4	6.6		7.6	5		5	4		
						5.3	18.8		8.2		33.3		99.2		7.6			6.8				4					
					Bottom	9.5	18.8	18.8	8.2	8.2	33.3	33.3	99.0	99.1	7.6	7.6	7.6	8.0	7.9		7.6	7.8		7.9	5	5	5
						9.5	18.8		8.2		33.3		99.1		7.6			7.6				5					
5-Jan-19	Misty	Rough	12:04	10.4	Surface	1.0	18.3	18.3	8.2	8.2	32.9	32.9	95.7	95.6	7.4	7.4	7.4	5.8	5.8	6.5	2	2	3				
						1.0	18.3		8.2		32.9		95.5		7.4			5.9			2						
					Middle	5.2	18.3	18.3	8.2	8.2	32.9	32.9	94.0	93.9	7.3	7.3	7.3	6.0	6.0		7.3	6.0		6.0	3		
						5.2	18.3		8.2		32.9		93.8		7.3			6.0				3					
					Bottom	9.4	18.3	18.3	8.1	8.1	32.9	32.9	91.2	91.2	7.0	7.0	7.0	7.4	7.5		7.0	7.4		7.5	3	3	3
						9.4	18.3		8.1		32.9		91.1		7.0			7.6				3					
8-Jan-19	Cloudy	Rough	12:54	10.8	Surface	1.0	18.6	18.6	8.2	8.2	32.9	32.9	98.1	98.1	7.5	7.5	7.4	9.6	9.6	9.9	3	3	4				
						1.0	18.6		8.2		32.9		98.1		7.5			9.6			3						
					Middle	5.4	18.7	18.7	8.2	8.2	32.6	32.6	94.9	94.9	7.3	7.3	7.3	10.0	10.0		7.3	9.9		10.0	4	4	4
						5.4	18.7		8.2		32.6		94.9		7.3			10.0				4					
					Bottom	9.8	18.6	18.6	8.2	8.2	32.3	32.3	95.3	95.3	7.4	7.4	7.4	10.1	10.1		7.4	10.1		10.1	4	4	4
						9.8	18.6		8.2		32.3		95.3		7.4			10.1				4					
10-Jan-19	Cloudy	Rough	14:11	10.9	Surface	1.0	18.6	18.6	8.1	8.1	32.5	32.5	102.1	102.1	7.9	7.9	7.8	3.6	3.6	4.5	5	5	4				
						1.0	18.6		8.1		32.5		102.0		7.9			3.6			5						
					Middle	5.5	18.6	18.6	8.1	8.1	32.5	32.5	100.4	100.3	7.7	7.7	7.7	4.1	4.3		7.7	4.1		4.3	4	4	4
						5.5	18.6		8.1		32.5		100.1		7.7			4.5				4					
					Bottom	9.9	18.9	18.9	8.1	8.1	32.9	32.9	99.2	99.2	7.6	7.6	7.6	5.6	5.6		7.6	5.6		5.6	3	3	3
						9.9	18.9		8.1		32.9		99.2		7.6			5.5				2					
12-Jan-19	Misty	Rough	15:39	10.6	Surface	1.0	18.7	18.7	8.2	8.2	32.4	32.4	102.6	102.6	7.9	7.9	7.8	2.8	2.8	3.6	2	2	2				
						1.0	18.7		8.2		32.4		102.5		7.9			2.8			<1						
					Middle	5.3	18.8	18.8	8.2	8.2	32.6	32.6	100.9	100.9	7.7	7.7	7.7	3.5	3.5		7.7	1		1	1		
						5.3	18.8		8.2		32.6		100.8		7.7			3.5				1					
					Bottom	9.6	19.0	19.0	8.2	8.2	32.7	32.7	100.5	100.5	7.7	7.7	7.7	4.5	4.5		7.7	4.6		4.5	2	2	2
						9.6	19.0		8.2		32.7		100.5		7.7			4.6				2					
15-Jan-19	Cloudy	Moderate	05:36	10.7	Surface	1.0	18.4	18.4	8.1	8.1	32.2	32.2	102.2	102.2	7.9	7.9	7.9	0.4	0.4	0.9	<1	<1	1				
						1.0	18.4		8.1		32.2		102.2		7.9			0.4			<1						
					Middle	5.4	18.8	18.9	8.1	8.1	32.4	32.4	101.5	101.7	7.8	7.8	7.8	1.1	1.1		7.8	1.1		1.1	<1	<1	<1
						5.4	18.9		8.1		32.4		101.9		7.8			1.2				<1					
					Bottom	9.7	18.7	18.7	8.1	8.1	32.7	32.7	102.7	102.7	7.9	7.9	7.9	1.4	1.3		7.9	1.4		1.3	1	1	1
						9.7	18.6		8.1		32.7		102.7		7.9			1.3				1					
17-Jan-19	Fine	Rough	08:29	10.7	Surface	1.0	18.9	18.9	8.2	8.2	31.4	31.4	91.7	91.7	7.1	7.1	7.1	3.1	3.2	3.6	8	9	7				
						1.0	18.9		8.2		31.4		91.7		7.1			3.2			9						
					Middle	5.4	18.8	18.8	8.2	8.2	31.4	31.4	91.4	91.4	7.1	7.1	7.1	3.6	3.5		7.1	3.6		3.5	6	7	7
						5.4	18.8		8.2		31.4		91.4		7.1			3.5				6					
					Bottom	9.7	18.8	18.8	8.2	8.2	31.5	31.5	91.3	91.3	7.1	7.1	7.1	4.1	4.1		7.1	4.1		4.1	6	6	6
						9.7	18.8		8.2		31.5		91.3		7.1			4.1				6					
19-Jan-19	Cloudy	Moderate	10:31	11.1	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	97.1	97.1	7.6	7.6	7.6	2.6	2.5	4.0	2	3	3				
						1.0	18.1		8.2		31.1		97.1		7.6			2.5			3						
					Middle	5.6	18.1	18.1	8.1	8.1	31.2	31.2	96.5	96.5	7.6	7.6	7.6	2.7	2.7		7.6	2.8		2.7	4	5	5
						5.6	18.1		8.1		31.2		96.5		7.6			2.7				4					
					Bottom	10.1	18.4	18.4	8.1	8.1	31.4	31.4	95.3	95.3	7.4	7.4	7.4	6.6	6.6		7.4	6.6		6.6	3	3	3
						10.1	18.4		8.1		31.4		95.3		7.4			6.6				3					
22-Jan-19	Fine	Rough	12:24	10.9	Surface	1.0	18.0	18.0	8.2	8.2	31.0	31.0	98.0	98.0	7.7	7.7	7.7	3.2	3.2	3.7	9	10	9				
						1.0	18.0		8.2		31.0		98.0		7.7			3.2			10						
					Middle	5.5	17.9	17.9	8.2	8.2	31.0	31.0	97.3	97.3	7.7	7.7	7.7	3.3	3.3		7.7	3.3		3.3	8	9	9
						5.5	17.9		8.2		31.0		97.3		7.7			3.3				8					
					Bottom	9.9	17.9	17.9	8.2	8.2	31.0	31.0	96.5	96.5	7.6	7.6	7.6	4.8	4.8		7.6	4.8		4.8	10	10	10
						9.9	17.9		8.2		31.0		96.5		7.6			4.8				10					
24-Jan-19	Sunny	Moderate	14:01	11.0	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	99.0	99.0	7.8	7.8	7.7	2.6	2.6	2.9	4	5	6				
						1.0	18.1		8.2		31.1		99.0		7.8			2.6			5						
					Middle	5.5	18.1	18.1	8.2	8.2	31.1	31.1	98.6	98.6	7.7	7.7	7.7	3.2	3.3		7.7	3.2		3.3	5	5	5
						5.5	18.1		8.2		31.1		98.5		7.7			3.3				5					
					Bottom	10.0	18.1	18.1	8.2	8.2	31.1	31.1	98.4	98.4	7.7	7.7	7.7	2.9	2.9		7.7	2.9		2.9	9	9	9
						10.0	18.1		8.2		31.1		98.4		7.7			2.9				8					
26-Jan-19	Sunny	Moderate	15:44	10.2	Surface	1.0	18.4	18.4	8.3	8.3	31.4	31.4	113.0	113.0	8.8	8.8	8.8	1.2	1.3	1.9	8	8	9				
						1.0	18.4		8.3		31.4		113.0		8.8			1.3			8						
					Middle	5.1	18.4	18.4	8.3	8.3	31.4	31.4	112.9	112.9	8.8	8.8	8.8	1.9	1.9		8.8	1.9		1.9	9	9	9
						5.1	18.4		8.3		31.4		112.9		8.8			2.0				9					
					Bottom	9.2	18.4	18.4	8.3	8.3	31.4	31.4	112.9	112.9	8.8	8.8	8.8	2.5	2.5		8.8	2.5		2.5	9	9	9
						9.2	18.4		8.3		31.4		112.9		8.8			2.6				9					

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at C2 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	13:50	11.2	Surface	1.0	19.0	19.0	8.1	8.1	33.1	33.1	95.7	95.7	7.3	7.3	7.3	7.7	7.7	7.7	7	8	7
						1.0	19.0		8.1		33.1		95.7		7.3			7.7			8		
					Middle	5.6	19.0	19.0	8.1	8.1	33.1	33.1	95.4	95.4	7.3	7.3	7.3	7.6	7.6	7.6	8	8	7
						5.6	19.0		8.1		33.1		95.3		7.3			7.6			7		
					Bottom	10.2	19.0	19.0	8.1	8.1	33.1	33.1	95.0	95.0	7.2	7.2	7.2	7.6	7.7	7.7	7	7	7
						10.2	19.0		8.1		33.1		94.9		7.2			7.7			6		
3-Jan-19	Rainy	Rough	15:08	11.5	Surface	1.0	18.8	18.8	8.2	8.2	33.3	33.3	100.0	100.0	7.6	7.6	7.6	4.5	4.5	5.5	4	4	5
						1.0	18.8		8.2		33.3		100.0		7.6			4.6			4		
					Middle	5.8	18.8	18.8	8.2	8.2	33.3	33.3	99.7	99.7	7.6	7.6	7.6	5.2	5.4	5.4	6	6	5
						5.8	18.8		8.2		33.3		99.7		7.6			5.7			5		
					Bottom	10.5	18.8	18.8	8.2	8.2	33.3	33.3	99.4	99.5	7.6	7.6	7.6	6.2	6.5	6.5	5	5	5
						10.5	18.8		8.2		33.3		99.5		7.6			6.8			5		
5-Jan-19	Misty	Rough	16:05	10.7	Surface	1.0	18.8	18.8	8.2	8.2	32.5	32.5	98.1	98.0	7.5	7.5	7.4	6.0	6.0	7.1	2	2	2
						1.0	18.7		8.2		32.5		97.8		7.5			6.0			2		
					Middle	5.4	18.7	18.7	8.2	8.2	32.7	32.7	94.8	94.7	7.3	7.3	7.3	7.0	7.2	7.2	2	2	2
						5.4	18.7		8.2		32.7		94.5		7.3			7.4			2		
					Bottom	9.7	18.7	18.7	8.2	8.2	32.8	32.8	93.4	93.4	7.2	7.2	7.2	7.9	8.1	8.1	2	3	2
						9.7	18.7		8.2		32.8		93.4		7.2			8.3			3		
8-Jan-19	Cloudy	Rough	08:44	10.7	Surface	1.0	18.6	18.7	8.1	8.1	33.1	33.2	93.7	93.7	7.2	7.2	7.2	9.3	9.3	9.3	3	3	2
						1.0	18.7		8.1		33.3		93.6		7.2			9.3			2		
					Middle	5.4	18.7	18.7	8.1	8.1	33.3	33.3	93.3	93.3	7.1	7.1	7.1	9.3	9.3	9.3	2	2	2
						5.4	18.7		8.1		33.3		93.3		7.1			9.3			2		
					Bottom	9.7	18.7	18.7	8.1	8.1	33.3	33.3	93.1	93.1	7.1	7.1	7.1	9.4	9.3	9.3	2	2	2
						9.7	18.7		8.1		33.3		93.1		7.1			9.3			2		
10-Jan-19	Cloudy	Rough	09:52	11.0	Surface	1.0	18.5	18.6	8.1	8.1	32.5	32.5	102.0	102.0	7.9	7.9	7.8	3.3	3.4	4.3	5	5	5
						1.0	18.6		8.1		32.5		101.9		7.9			3.4			5		
					Middle	5.5	18.6	18.6	8.1	8.1	32.6	32.6	100.9	100.9	7.8	7.8	7.8	4.3	4.5	4.5	5	6	5
						5.5	18.6		8.1		32.6		100.8		7.8			4.6			6		
					Bottom	10.0	18.8	18.8	8.1	8.1	32.8	32.8	100.2	100.3	7.7	7.7	7.7	5.1	5.2	5.2	5	5	5
						10.0	18.8		8.1		32.8		100.3		7.7			5.3			5		
12-Jan-19	Misty	Rough	10:56	10.9	Surface	1.0	18.8	18.8	8.2	8.2	32.4	32.4	103.5	103.4	8.0	7.9	7.9	2.4	2.4	2.8	3	4	3
						1.0	18.8		8.2		32.4		103.3		7.9			2.4			4		
					Middle	5.5	18.7	18.7	8.2	8.2	32.5	32.5	101.8	101.8	7.8	7.8	7.8	2.6	2.6	2.6	4	4	3
						5.5	18.7		8.2		32.5		101.7		7.8			2.6			3		
					Bottom	9.9	18.9	18.9	8.2	8.2	32.7	32.7	99.8	99.8	7.6	7.6	7.6	3.4	3.4	3.4	3	3	3
						9.9	18.9		8.2		32.7		99.7		7.6			3.4			3		
15-Jan-19	Cloudy	Moderate	12:11	11.1	Surface	1.0	18.6	18.6	8.2	8.2	32.2	32.2	102.2	102.2	7.9	7.9	7.8	0.2	0.2	1.8	<1	1	2
						1.0	18.6		8.2		32.2		102.1		7.9			0.2			1		
					Middle	5.6	18.7	18.8	8.2	8.2	32.4	32.4	101.4	101.5	7.8	7.8	7.8	2.9	2.9	2.9	1	2	2
						5.6	18.8		8.2		32.4		101.5		7.8			2.8			2		
					Bottom	10.1	18.8	18.8	8.2	8.2	32.4	32.3	101.8	101.8	7.8	7.8	7.8	2.2	2.2	2.2	3	3	2
						10.1	18.8		8.2		32.3		101.8		7.8			2.2			2		
17-Jan-19	Fine	Rough	13:17	10.8	Surface	1.0	18.4	18.4	8.3	8.3	31.2	31.2	98.6	98.6	7.7	7.7	7.7	1.8	1.8	1.8	5	5	4
						1.0	18.4		8.3		31.2		98.5		7.7			1.8			5		
					Middle	5.4	18.2	18.2	8.3	8.3	31.2	31.2	97.6	97.6	7.6	7.6	7.6	1.8	1.8	1.8	4	4	3
						5.4	18.2		8.3		31.2		97.6		7.6			1.8			3		
					Bottom	9.8	18.3	18.3	8.3	8.3	31.2	31.1	97.8	97.9	7.6	7.6	7.6	1.7	1.7	1.7	4	4	3
						9.8	18.3		8.3		31.1		97.9		7.6			1.7			3		
19-Jan-19	Cloudy	Rough	14:52	11.0	Surface	1.0	18.4	18.4	8.2	8.2	31.1	31.1	98.2	98.2	7.7	7.7	7.6	2.9	2.9	4.5	7	7	6
						1.0	18.4		8.2		31.1		98.2		7.7			2.9			7		
					Middle	5.5	18.2	18.2	8.2	8.2	31.2	31.2	96.6	96.6	7.6	7.6	7.6	2.7	2.7	2.7	8	8	4
						5.5	18.2		8.2		31.2		96.5		7.6			2.8			7		
					Bottom	10.0	18.2	18.2	8.2	8.2	31.3	31.3	95.9	95.9	7.5	7.5	7.5	7.9	7.8	7.8	4	4	4
						10.0	18.2		8.2		31.3		95.9		7.5			7.8			4		
22-Jan-19	Fine	Rough	08:03	10.6	Surface	1.0	17.9	17.9	8.2	8.2	31.0	31.0	97.1	97.1	7.7	7.7	7.6	3.8	3.8	4.2	9	9	7
						1.0	17.9		8.2		31.0		97.1		7.7			3.8			8		
					Middle	5.3	17.9	17.9	8.2	8.2	31.0	31.0	96.8	96.8	7.6	7.6	7.6	3.9	3.9	3.9	6	7	5
						5.3	17.9		8.2		31.0		96.8		7.6			3.9			7		
					Bottom	9.6	17.9	17.9	8.2	8.2	31.1	31.1	96.0	96.0	7.6	7.6	7.6	4.9	4.9	4.9	5	5	5
						9.6	17.9		8.2		31.1		96.0		7.6			5.0			5		
24-Jan-19	Sunny	Moderate	09:28	10.8	Surface	1.0	18.5	18.5	8.2	8.2	30.9	30.9	92.0	92.0	7.2	7.2	7.2	2.9	2.9	3.0	8	9	7
						1.0	18.5		8.2		30.9		92.0		7.2			2.9			9		
					Middle	5.4	18.5	18.5	8.2	8.2	31.0	31.0	91.9	92.0	7.2	7.2	7.2	2.9	2.9	2.9	7	7	7
						5.4	18.5		8.2		31.0		92.0		7.2			2.9			7		
					Bottom	9.8	18.5	18.5	8.2	8.2	31.0	31.0	91.8	91.8	7.2	7.2	7.2	3.4	3.4	3.4	7	7	6
						9.8	18.5		8.2		31.0		91.8		7.2			3.4			6		
26-Jan-19	Sunny	Moderate	10:44	10.8	Surface	1.0	18.3	18.3	8.3	8.3	31.4	31.4	108.0	108.0	8.4	8.4	8.4	1.7	1.7	1.9	8	8	7
						1.0	18.3		8.3		31.4		107.9		8.4			1.7			8		
					Middle	5.4	18.3	18.3	8.3	8.3	31.4	31.4	107.5	107.5	8.4	8.4	8.4	1.9	1.9	1.9	6	6	5
						5.4	18.3		8.3		31.4		107.5		8.4			1.9			5		
					Bottom	9.8	18.3	18.3	8.3	8.3	31.4	31.4	107.8	107.9	8.4	8.4	8.4	2.0	2.0	2.0	8	8	8
						9.8	18.3		8.3		31.4		107.9		8.4			2.0			8		

Remarks: DA: Depth-averaged  
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at C3 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	08:15	22.1	Surface	1.0	19.2	19.2	8.1	8.1	33.0	33.0	95.1	95.1	7.2	7.2	7.2	9.6	9.6	10.6	9	9	9
						1.0	19.2		8.1		33.0		95.1		7.2			9.6					
					Middle	11.1	19.2	19.2	8.1	8.1	33.0	33.0	94.8	94.8	7.2	7.2	10.8	10.8	9				
						11.1	19.2	8.1	33.0	94.8	7.2	10.8											
					Bottom	21.1	19.2	19.2	8.1	8.1	33.1	33.1	94.7	94.7	7.2	7.2	11.5	11.4	8				
						21.1	19.2	8.1	33.1	94.7	7.2	11.4											
3-Jan-19	Rainy	Rough	10:28	22.3	Surface	1.0	19.0	19.0	8.2	8.2	33.1	33.1	99.6	99.6	7.6	7.6	7.6	5.4	5.4	6.3	2	3	4
						1.0	19.0		8.2		33.1		99.5		7.6			5.4					
					Middle	11.2	19.0	19.0	8.2	8.2	33.1	33.1	99.1	99.1	7.6	7.6	5.9	5.9	4				
						11.2	19.0	8.2	33.1	99.1	7.6	5.9											
					Bottom	21.3	19.1	19.1	8.2	8.2	33.1	33.1	98.8	98.9	7.5	7.5	7.6	7.5	5				
						21.3	19.1	8.2	33.1	98.9	7.5	7.5											
5-Jan-19	Misty	Rough	12:03	22.1	Surface	1.0	18.2	18.2	8.2	8.2	32.0	32.0	97.0	97.0	7.6	7.5	7.5	6.1	6.1	6.2	2	2	3
						1.0	18.2		8.2		32.0		97.0		7.5			6.1					
					Middle	11.1	18.2	18.2	8.2	8.2	32.1	32.1	94.9	94.9	7.4	7.4	6.2	6.3	3				
						11.1	18.2	8.2	32.1	94.9	7.4	6.3											
					Bottom	21.1	18.3	18.3	8.2	8.2	32.3	32.3	94.7	94.7	7.3	7.3	6.1	6.1	3				
						21.1	18.3	8.2	32.3	94.6	7.3	6.1											
8-Jan-19	Cloudy	Rough	13:13	22.8	Surface	1.0	18.7	18.7	8.2	8.2	32.6	32.6	99.4	99.4	7.6	7.6	7.5	9.8	9.8	9.4	3	3	3
						1.0	18.7		8.2		32.6		99.4		7.6			9.8					
					Middle	11.4	18.5	18.5	8.2	8.2	32.6	32.6	95.5	95.5	7.4	7.4	9.1	9.1	2				
						11.4	18.5	8.2	32.6	95.5	7.4	9.1											
					Bottom	21.8	18.4	18.4	8.2	8.2	32.0	32.0	94.4	94.4	7.3	7.3	9.5	9.5	3				
						21.8	18.4	8.2	32.0	94.4	7.3	9.5											
10-Jan-19	Cloudy	Rough	14:17	22.2	Surface	1.0	18.4	18.4	8.1	8.1	32.3	32.3	102.8	102.8	8.0	8.0	7.9	2.3	2.2	2.4	6	6	5
						1.0	18.4		8.1		32.3		102.7		8.0			2.2					
					Middle	11.1	18.4	18.4	8.1	8.1	32.4	32.4	101.8	101.8	7.9	7.9	2.4	2.4	6				
						11.1	18.4	8.1	32.4	101.7	7.9	2.4											
					Bottom	21.2	18.4	18.4	8.1	8.1	32.4	32.4	101.1	101.1	7.8	7.8	2.5	2.5	4				
						21.2	18.4	8.1	32.4	101.1	7.8	2.5											
12-Jan-19	Misty	Rough	15:34	22.3	Surface	1.0	18.7	18.7	8.2	8.2	32.2	32.2	105.0	104.9	8.1	8.1	8.0	1.8	1.8	2.3	3	3	2
						1.0	18.6		8.2		32.2		104.8		8.1			1.8					
					Middle	11.2	18.4	18.4	8.2	8.2	32.3	32.3	103.3	103.3	8.0	8.0	1.9	1.9	2				
						11.2	18.4	8.2	32.3	103.3	8.0	1.9											
					Bottom	21.3	18.5	18.5	8.2	8.2	32.4	32.4	100.3	100.3	7.8	7.8	3.3	3.3	2				
						21.3	18.5	8.2	32.4	100.3	7.8	3.3											
15-Jan-19	Cloudy	Moderate	05:06	21.9	Surface	1.0	18.5	18.5	8.1	8.1	32.2	32.2	101.9	101.8	7.9	7.9	7.9	1.2	1.2	0.8	2	2	1
						1.0	18.5		8.1		32.2		101.7		7.9			1.1					
					Middle	11.0	18.5	18.5	8.1	8.1	32.2	32.2	101.5	101.6	7.9	7.9	0.6	0.6	<1				
						11.0	18.5	8.1	32.2	101.6	7.9	0.6											
					Bottom	20.9	18.5	18.5	8.1	8.1	32.2	32.2	102.5	102.5	7.9	7.9	0.6	0.6	1				
						20.9	18.4	8.1	32.3	102.5	8.0	0.6											
17-Jan-19	Fine	Rough	08:19	21.8	Surface	1.0	18.0	18.0	8.3	8.3	31.0	31.0	97.5	97.5	7.7	7.7	7.7	2.1	2.1	2.1	7	7	6
						1.0	18.0		8.3		31.0		97.5		7.7			2.1					
					Middle	10.9	18.0	18.0	8.3	8.3	31.0	31.0	97.6	97.7	7.7	7.7	2.1	2.1	6				
						10.9	18.0	8.3	31.0	97.7	7.7	2.1											
					Bottom	20.8	18.0	18.0	8.3	8.3	31.0	31.0	98.1	98.2	7.7	7.7	2.1	2.1	7				
						20.8	18.0	8.3	31.0	98.2	7.7	2.1											
19-Jan-19	Cloudy	Moderate	10:14	22.4	Surface	1.0	18.1	18.1	8.2	8.2	31.0	31.0	98.6	98.6	7.7	7.7	7.7	1.8	1.8	1.9	4	4	4
						1.0	18.1		8.2		31.0		98.6		7.7			1.8					
					Middle	11.2	18.0	18.0	8.2	8.2	31.0	31.0	97.8	97.8	7.7	7.7	1.9	1.9	4				
						11.2	18.0	8.2	31.0	97.7	7.7	1.9											
					Bottom	21.4	18.0	18.0	8.2	8.2	31.1	31.1	97.5	97.6	7.7	7.7	2.1	2.1	5				
						21.4	18.0	8.2	31.1	97.6	7.7	2.1											
22-Jan-19	Fine	Rough	12:27	22.6	Surface	1.0	18.2	18.2	8.2	8.2	31.0	31.0	99.9	99.9	7.8	7.8	7.8	2.1	2.1	2.3	7	7	6
						1.0	18.2		8.2		31.0		99.9		7.8			2.1					
					Middle	11.3	18.1	18.1	8.2	8.2	31.0	31.0	99.1	99.1	7.8	7.8	2.1	2.1	6				
						11.3	18.1	8.2	31.0	99.1	7.8	2.1											
					Bottom	21.6	18.1	18.1	8.2	8.2	31.0	31.0	97.6	97.6	7.7	7.7	2.9	2.8	5				
						21.6	18.1	8.2	31.0	97.6	7.7	2.8											
24-Jan-19	Sunny	Moderate	13:46	22.6	Surface	1.0	18.1	18.1	8.2	8.2	31.0	31.0	99.3	99.3	7.8	7.8	7.8	1.0	1.0	1.2	6	6	7
						1.0	18.1		8.2		31.0		99.3		7.8			1.0					
					Middle	11.3	18.0	18.0	8.2	8.2	31.0	31.0	98.4	98.4	7.7	7.7	1.2	1.2	7				
						11.3	18.0	8.2	31.0	98.4	7.7	1.2											
					Bottom	21.6	18.0	18.0	8.2	8.2	31.0	31.0	98.0	98.1	7.7	7.7	1.3	1.3	8				
						21.6	18.0	8.2	31.0	98.1	7.7	1.3											
26-Jan-19	Sunny	Moderate	15:43	22.5	Surface	1.0	18.4	18.4	8.3	8.3	31.4	31.4	113.0	113.0	8.8	8.8	8.8	1.1	1.1	1.2	4	5	6
						1.0	18.4		8.3		31.4		113.0		8.8			1.1					
					Middle	11.3	18.4	18.4	8.3	8.3	31.4	31.4	112.9	112.9	8.8	8.8	1.3	1.3	6				
						11.3	18.4	8.3	31.4	112.9	8.8	1.3											
					Bottom	21.5	18.4	18.4	8.3	8.3	31.4	31.4	112.9	112.9	8.8	8.8	1.3	1.3	7				
						21.5	18.4	8.3	31.4	112.9	8.8	1.3											

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at C3 during Mid-flood Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)				
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA		
1-Jan-19	Cloudy	Rough	14:08	23.1	Surface	1.0	19.3	19.3	8.1	8.1	32.9	32.9	95.9	95.9	7.3	7.3	7.3	8.2	8.2	8.1	7	7	7		
						1.0	19.3		8.1		32.9		95.9		7.3			8.2			7				
					Middle	11.6	19.3	19.3	8.1	8.1	32.9	32.9	95.8	95.8	7.3	7.3	7.3	8.1	8.1	8.1	7	8		8	7
						11.6	19.3		8.1		32.9		95.9		7.3			8.1			8				
					Bottom	22.1	19.3	19.3	8.1	8.1	32.9	32.9	96.0	96.0	7.3	7.3	7.3	8.1	8.1	8.1	7	8		7	8
						22.1	19.3		8.1		32.9		96.0		7.3			8.2			7				
3-Jan-19	Cloudy	Rough	15:00	22.8	Surface	1.0	19.0	19.0	8.2	8.2	33.1	33.1	99.8	99.8	7.6	7.6	7.6	5.9	5.9	5.8	4	4	4		
						1.0	19.0		8.2		33.1		99.7		7.6			5.9			4				
					Middle	11.4	19.0	19.0	8.1	8.1	33.1	33.1	99.5	99.5	7.6	7.6	7.6	5.8	5.8	5.8	4	4		4	4
						11.4	19.0		8.1		33.1		99.5		7.6			5.9			4				
					Bottom	21.8	19.1	19.1	8.1	8.1	33.1	33.1	99.3	99.3	7.6	7.6	7.6	5.7	5.7	5.7	5	5		5	5
						21.8	19.1		8.1		33.1		99.3		7.6			5.7			5				
5-Jan-19	Misty	Rough	16:21	21.8	Surface	1.0	18.5	18.5	8.2	8.2	32.1	32.1	99.0	99.0	7.7	7.7	7.6	6.0	6.0	6.1	2	2	2		
						1.0	18.5		8.2		32.1		99.0		7.7			6.0			2				
					Middle	10.9	18.3	18.3	8.2	8.2	32.1	32.1	96.3	96.2	7.5	7.5	7.5	6.1	6.1	6.1	2	2		2	2
						10.9	18.3		8.2		32.1		96.2		7.5			6.1			2				
					Bottom	20.8	18.3	18.3	8.2	8.2	32.2	32.2	95.2	95.2	7.4	7.4	7.4	6.1	6.1	6.1	2	2		2	2
						20.8	18.3		8.2		32.2		95.2		7.4			6.1			2				
8-Jan-19	Cloudy	Rough	08:14	22.3	Surface	1.0	18.7	18.7	8.2	8.2	33.1	33.1	93.2	93.2	7.1	7.1	7.1	10.0	10.0	10.0	3	3	3		
						1.0	18.7		8.2		33.1		93.2		7.1			10.0			3				
					Middle	11.2	18.5	18.5	8.2	8.2	33.1	33.1	92.8	92.8	7.1	7.1	7.1	10.0	10.0	10.0	2	3		3	2
						11.2	18.5		8.2		33.1		92.8		7.1			10.0			3				
					Bottom	21.3	18.6	18.6	8.2	8.2	33.1	33.1	92.8	92.8	7.1	7.1	7.1	10.1	10.1	10.1	3	3		3	3
						21.3	18.6		8.2		33.1		92.8		7.1			10.1			3				
10-Jan-19	Cloudy	Rough	09:29	21.9	Surface	1.0	18.5	18.5	8.1	8.1	32.5	32.5	102.5	102.5	7.9	7.9	7.8	3.1	3.1	3.6	5	5	4		
						1.0	18.5		8.1		32.5		102.4		7.9			3.1			4				
					Middle	11.0	18.6	18.6	8.1	8.1	32.6	32.6	101.1	101.0	7.8	7.8	7.8	3.3	3.3	3.3	4	4		4	4
						11.0	18.6		8.1		32.6		100.9		7.8			3.3			4				
					Bottom	20.9	18.8	18.8	8.1	8.1	32.8	32.8	101.1	101.2	7.7	7.8	7.8	4.3	4.4	4.4	3	3		3	3
						20.9	18.8		8.1		32.8		101.3		7.8			4.5			2				
12-Jan-19	Misty	Rough	10:41	22.4	Surface	1.0	18.4	18.4	8.2	8.2	32.2	32.2	103.0	103.0	8.0	8.0	7.9	1.6	1.6	1.6	1	1	2		
						1.0	18.4		8.2		32.2		103.0		8.0			1.6			<1				
					Middle	11.2	18.4	18.4	8.2	8.2	32.2	32.2	102.0	102.0	7.9	7.9	7.9	1.5	1.5	1.5	2	2		2	2
						11.2	18.4		8.2		32.2		101.9		7.9			1.5			2				
					Bottom	21.4	18.4	18.4	8.2	8.2	32.3	32.3	100.3	100.1	7.8	7.7	7.7	1.7	1.7	1.7	3	3		3	3
						21.4	18.4		8.2		32.3		99.9		7.7			1.6			3				
15-Jan-19	Cloudy	Moderate	12:11	23.0	Surface	1.0	18.5	18.5	8.2	8.2	32.1	32.1	101.8	101.8	7.9	7.9	7.8	0.7	0.7	5.3	3	3	2		
						1.0	18.5		8.2		32.1		101.7		7.9			0.7			2				
					Middle	11.5	18.4	18.4	8.2	8.2	32.1	32.1	101.1	100.9	7.8	7.8	7.8	0.8	0.8	0.8	1	2		2	2
						11.5	18.4		8.2		32.1		100.7		7.8			0.8			2				
					Bottom	22.0	18.5	18.6	8.2	8.2	32.0	32.0	100.2	100.3	7.7	7.7	7.7	14.4	14.5	14.5	2	2		2	2
						22.0	18.6		8.2		32.0		100.3		7.8			14.6			1				
17-Jan-19	Fine	Rough	13:19	22.0	Surface	1.0	18.5	18.5	8.3	8.3	31.2	31.2	98.7	98.7	7.7	7.7	7.7	1.7	1.7	1.7	6	6	5		
						1.0	18.4		8.3		31.2		98.7		7.7			1.7			5				
					Middle	11.0	18.3	18.3	8.3	8.3	31.2	31.2	97.9	97.9	7.7	7.7	7.7	1.7	1.7	1.7	5	6		6	5
						11.0	18.3		8.3		31.2		97.9		7.7			1.7			6				
					Bottom	21.0	18.3	18.4	8.3	8.3	31.2	31.2	97.9	98.2	7.6	7.7	7.7	1.8	1.8	1.8	4	5		5	4
						21.0	18.4		8.3		31.2		98.4		7.7			1.8			4				
19-Jan-19	Cloudy	Moderate	14:48	22.6	Surface	1.0	18.2	18.2	8.2	8.2	31.1	31.1	99.5	99.5	7.8	7.8	7.7	1.8	1.8	2.0	3	3	3		
						1.0	18.2		8.2		31.1		99.4		7.8			1.8			3				
					Middle	11.3	18.1	18.1	8.2	8.2	31.1	31.1	97.8	97.8	7.7	7.7	7.7	2.0	2.0	2.0	2	3		3	2
						11.3	18.1		8.2		31.1		97.8		7.7			2.1			2				
					Bottom	21.6	18.1	18.1	8.2	8.2	31.1	31.1	97.1	97.1	7.6	7.6	7.6	2.3	2.3	2.3	2	2		2	2
						21.6	18.1		8.2		31.1		97.1		7.6			2.3			2				
22-Jan-19	Fine	Rough	07:19	22.2	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	97.8	97.8	7.7	7.7	7.6	3.3	3.3	4.1	8	8	8		
						1.0	18.1		8.2		31.1		97.8		7.7			3.3			7				
					Middle	11.1	18.1	18.1	8.2	8.2	31.1	31.1	97.1	97.1	7.6	7.6	7.6	4.0	4.1	4.1	7	8		8	7
						11.1	18.1		8.2		31.1		97.0		7.6			4.1			8				
					Bottom	21.2	18.1	18.1	8.2	8.2	31.0	31.0	96.1	96.1	7.5	7.5	7.5	4.9	4.9	4.9	7	8		8	7
						21.2	18.1		8.2		31.0		96.0		7.5			4.8			8				
24-Jan-19	Sunny	Moderate	09:08	22.2	Surface	1.0	18.4	18.4	8.1	8.1	30.9	30.9	90.8	90.8	7.1	7.1	7.1	2.8	2.7	3.0	9	9	8		
						1.0	18.4		8.1		30.9		90.8		7.1			2.7			9				
					Middle	11.1	18.4	18.4	8.1	8.1	30.9	30.9	90.5	90.6	7.1	7.1	7.1	2.9	2.9	2.9	8	8		8	8
						11.1	18.4		8.1		30.9		90.6		7.1			3.0			8				
					Bottom	21.2	18.4	18.4	8.1	8.1	30.9	30.9	90.5	90.6	7.1	7.1	7.1	3.3	3.3	3.3	7	7		7	7
						21.2	18.4		8.1		30.9		90.6		7.1			3.3			7				
26-Jan-19	Sunny	Moderate	10:38	22.2	Surface	1.0	18.4	18.4	8.3	8.3	31.4	31.4	108.4	108.4	8.5	8.4	8.4	1.7	1.7	1.8	10	10	8		
						1.0	18.4		8.3		31.4		108.3		8.4			1.7			10				
					Middle	11.1	18.3	18.3	8.3	8.3	31.4	31.4	107.8	107.8	8.4	8.4	8.4	1.7	1.7	1.7	8	7		7	6
						11.1	18.3		8.3		31.4		107.7		8.4			1.8			6				
					Bottom	21.2	18.3	18.3	8.3	8.3	31.4	31.4	107.6	107.7	8.4	8.4	8.4	1.9	1.9	1.9	6	7		7	6
						21.2	18.3		8.3		31.4		107.7		8.4			1.9			7				

Remarks: DA: Depth-averaged  
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR1 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
1-Jan-19	Cloudy	Moderate	07:08	8.3	Surface	1.0	19.0	19.0	8.1	8.1	33.2	33.2	94.1	94.1	7.2	7.2	7.2	7.8	7.8	8.3	6	6	6	
						1.0	19.0		8.1		33.2		94.1		7.2			7.8						
					Middle	4.2	18.9	18.9	8.1	8.1	33.2	33.2	93.7	93.7	7.2	7.2	7.2	8.2	8.2		8.2	5		6
						4.2	18.9		8.1		33.2		93.7		7.2			8.3						
					Bottom	7.3	18.9	18.9	8.1	8.1	33.2	33.2	93.4	93.4	7.1	7.1	7.1	8.9	8.9		8.9	6		6
						7.3	18.9		8.1		33.2		93.3		7.1			8.9						
3-Jan-19	Rainy	Calm	09:27	8.2	Surface	1.0	18.8	18.8	8.2	8.2	33.2	33.2	99.3	99.3	7.6	7.6	7.6	4.4	4.4	5.6	5	6	5	
						1.0	18.8		8.2		33.2		99.2		7.6			4.4						
					Middle	4.1	18.8	18.8	8.2	8.2	33.2	33.2	98.6	98.6	7.5	7.5	7.5	5.4	5.1		5.1	5		5
						4.1	18.8		8.2		33.2		98.5		7.5			5.4						
					Bottom	7.2	18.7	18.7	8.2	8.2	33.3	33.3	97.9	97.9	7.5	7.5	7.5	7.5	7.4		7.4	5		5
						7.2	18.7		8.2		33.3		97.9		7.5			7.4						
5-Jan-19	Misty	Calm	10:57	8.1	Surface	1.0	19.1	19.1	8.2	8.2	32.9	32.9	95.1	95.1	7.2	7.2	7.2	7.6	7.6	8.2	2	2	2	
						1.0	19.1		8.2		32.9		95.1		7.2			7.6						
					Middle	4.1	19.2	19.2	8.1	8.1	33.0	33.0	95.1	95.1	7.2	7.2	7.2	8.5	8.5		8.5	2		2
						4.1	19.2		8.1		33.0		95.1		7.2			8.5						
					Bottom	7.1	19.2	19.2	8.1	8.1	33.0	33.0	95.4	95.4	7.3	7.3	7.3	8.7	8.7		8.7	<1		2
						7.1	19.2		8.1		33.0		95.4		7.3			8.7						
8-Jan-19	Cloudy	Moderate	14:22	8.8	Surface	1.0	18.9	18.9	8.2	8.2	32.3	32.3	90.6	90.6	6.9	6.9	7.1	12.1	12.1	10.2	2	2	2	
						1.0	18.9		8.2		32.3		90.6		6.9			12.1						
					Middle	4.4	18.9	18.9	8.2	8.2	32.4	32.4	95.1	95.1	7.3	7.3	7.3	8.2	8.2		8.2	1		2
						4.4	18.9		8.2		32.4		95.1		7.3			8.2						
					Bottom	7.8	18.8	18.8	8.2	8.2	32.4	32.4	97.5	97.5	7.5	7.5	7.5	10.4	10.4		10.4	2		2
						7.8	18.8		8.2		32.4		97.4		7.5			10.4						
10-Jan-19	Cloudy	Moderate	15:21	7.6	Surface	1.0	19.0	19.0	8.1	8.1	32.5	32.5	104.8	104.9	8.0	8.0	8.0	2.6	2.5	2.6	4	4	3	
						1.0	19.0		8.1		32.5		104.9		8.0			2.5						
					Middle	3.8	18.8	18.8	8.1	8.1	32.5	32.5	104.0	103.9	8.0	8.0	8.0	2.4	2.4		2.4	4		3
						3.8	18.8		8.1		32.5		103.8		8.0			2.5						
					Bottom	6.6	18.8	18.8	8.1	8.1	32.6	32.6	103.1	103.1	7.9	7.9	7.9	3.0	2.9		2.9	4		4
						6.6	18.8		8.1		32.6		103.1		7.9			2.9						
12-Jan-19	Misty	Calm	16:41	7.8	Surface	1.0	19.3	19.3	8.2	8.2	32.4	32.4	106.7	106.6	8.1	8.1	8.1	2.6	2.6	3.3	3	3	3	
						1.0	19.2		8.2		32.4		106.5		8.1			2.7						
					Middle	3.9	18.9	18.9	8.2	8.2	32.4	32.4	105.2	105.2	8.1	8.1	8.1	2.8	2.8		2.8	4		4
						3.9	18.9		8.2		32.4		105.2		8.1			2.8						
					Bottom	6.8	18.9	18.9	8.2	8.2	32.4	32.4	104.5	104.5	8.0	8.0	8.0	4.5	4.5		4.5	3		3
						6.8	18.9		8.2		32.4		104.4		8.0			4.4						
15-Jan-19	Cloudy	Moderate	03:56	8.1	Surface	1.0	18.9	18.9	8.2	8.2	32.4	32.4	100.9	100.9	7.7	7.7	7.7	1.7	1.7	1.8	2	2	2	
						1.0	18.9		8.2		32.4		100.9		7.7			1.7						
					Middle	4.1	18.9	18.9	8.1	8.1	32.4	32.4	100.9	100.9	7.7	7.7	7.7	1.9	1.9		1.9	2		2
						4.1	18.9		8.1		32.4		100.9		7.7			1.9						
					Bottom	7.1	18.9	18.9	8.1	8.1	32.4	32.4	101.2	101.4	7.8	7.8	7.8	<1	<1		<1	<1		<1
						7.1	18.9		8.1		32.4		101.5		7.8			<1						
17-Jan-19	Fine	Moderate	07:09	8.4	Surface	1.0	18.4	18.4	8.3	8.3	31.4	31.4	95.5	95.5	7.4	7.4	7.4	2.4	2.4	2.2	7	7	7	
						1.0	18.4		8.3		31.4		95.5		7.4			2.4						
					Middle	4.2	18.3	18.3	8.3	8.3	31.4	31.4	95.2	95.2	7.4	7.4	7.4	2.0	2.0		2.0	7		7
						4.2	18.3		8.3		31.4		95.2		7.4			2.0						
					Bottom	7.4	18.4	18.4	8.3	8.3	31.4	31.4	94.8	94.8	7.4	7.4	7.4	2.1	2.1		2.1	7		8
						7.4	18.4		8.3		31.4		94.8		7.4			2.1						
19-Jan-19	Cloudy	Moderate	09:13	8.3	Surface	1.0	18.3	18.3	8.1	8.1	31.2	31.2	97.5	97.5	7.6	7.6	7.6	2.6	2.6	2.7	6	6	5	
						1.0	18.3		8.1		31.2		97.5		7.6			2.6						
					Middle	4.2	18.3	18.3	8.1	8.1	31.3	31.3	96.9	96.9	7.6	7.6	7.6	2.6	2.6		2.6	4		5
						4.2	18.3		8.1		31.3		96.9		7.6			2.6						
					Bottom	7.3	18.3	18.3	8.1	8.1	31.3	31.3	96.8	96.9	7.6	7.6	7.6	2.8	2.8		2.8	3		3
						7.3	18.3		8.1		31.3		96.9		7.6			2.8						
22-Jan-19	Fine	Calm	13:34	8.8	Surface	1.0	18.2	18.2	8.2	8.2	31.1	31.1	98.3	98.3	7.7	7.7	7.7	3.6	3.8	6.0	7	7	8	
						1.0	18.2		8.2		31.1		98.2		7.7			3.9						
					Middle	4.4	18.1	18.1	8.2	8.2	31.1	31.1	97.6	97.7	7.7	7.7	7.7	6.5	6.5		6.5	6		7
						4.4	18.1		8.2		31.1		97.7		7.7			6.5						
					Bottom	7.8	18.2	18.2	8.1	8.1	31.1	31.1	97.3	97.3	7.6	7.6	7.6	7.8	7.9		7.9	10		10
						7.8	18.2		8.1		31.1		97.2		7.6			7.9						
24-Jan-19	Sunny	Moderate	14:52	7.0	Surface	1.0	18.4	18.4	8.2	8.2	31.1	31.1	102.3	102.3	8.0	8.0	8.0	1.6	1.6	1.6	9	9	8	
						1.0	18.4		8.2		31.1		102.3		8.0			1.6						
					Middle	3.5	18.4	18.4	8.2	8.2	31.1	31.1	102.0	102.0	8.0	8.0	8.0	1.5	1.5		1.5	8		8
						3.5	18.4		8.2		31.1		101.9		8.0			1.5						
					Bottom	6.0	18.4	18.4	8.2	8.2	31.1	31.1	101.3	101.3	7.9	7.9	7.9	1.7	1.7		1.7	7		7
						6.0	18.4		8.2		31.1		101.2		7.9			1.7						
26-Jan-19	Sunny	Moderate	16:55	6.7	Surface	1.0	18.9	18.9	8.3	8.3	31.4	31.4	115.5	115.4	8.9	8.9	8.9	1.3	1.3	1.4	4	4	4	
						1.0	18.9		8.3		31.4		115.3		8.9			1.4						
					Middle	3.4	18.8	18.8	8.3	8.3	31.4	31.4	114.6	114.5	8.9	8.9	8.9	1.4	1.4		1.4	5		5
						3.4	18.8		8.3		31.4		114.4		8.9			1.4						
					Bottom	5.7	18.8	18.8	8.3	8.3	31.4	31.4	113.9	113.9	8.8	8.8	8.8	1.4	1.4		1.4	4		4
						5.7	18.8		8.3		31.4		113.8		8.8			1.4						

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher



Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR1 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Moderate	15:19	9.1	Surface	1.0	19.2	19.2	8.1	8.1	33.1	33.1	95.6	95.6	7.3	7.3	7.3	7.9	7.9	8.0	8	8	8
						1.0	19.2		8.1		33.1		95.6		7.3			7.9					
					Middle	4.6	19.1	19.1	8.1	8.1	33.1	33.1	95.6	95.6	7.3	7.3	7.3	7.6	7.6	7.6	7	7	
						4.6	19.1		8.1		33.1		95.5		7.3			7.6					
					Bottom	8.1	18.9	19.0	8.1	8.1	33.2	33.2	95.1	95.2	7.3	7.3	7.3	8.5	8.4	8.4	9	10	
						8.1	19.0		8.1		33.2		95.3		7.3			8.4					
3-Jan-19	Cloudy	Calm	16:15	8.9	Surface	1.0	19.0	19.0	8.2	8.2	33.2	33.2	100.0	99.9	7.6	7.6	7.6	4.7	4.7	5.1	6	6	5
						1.0	18.9		8.2		33.2		99.8		7.6			4.7					
					Middle	4.5	18.9	18.9	8.2	8.2	33.2	33.2	99.2	99.2	7.6	7.6	7.6	5.1	5.1	5.1	5	5	
						4.5	18.9		8.2		33.2		99.1		7.6			5.1					
					Bottom	7.9	18.5	18.5	8.2	8.2	33.3	33.3	97.8	97.9	7.5	7.5	7.5	5.3	5.4	5.4	5	5	
						7.9	18.5		8.2		33.3		98.0		7.5			5.6					
5-Jan-19	Misty	Calm	17:43	8.0	Surface	1.0	19.3	19.3	8.2	8.2	32.7	32.7	97.3	97.3	7.4	7.4	7.4	6.2	6.3	6.8	2	3	2
						1.0	19.3		8.2		32.7		97.3		7.4			6.2					
					Middle	4.0	19.0	19.0	8.2	8.2	32.6	32.6	95.7	95.7	7.3	7.3	7.3	6.2	6.2	6.2	2	2	
						4.0	19.0		8.2		32.6		95.6		7.3			6.2					
					Bottom	7.0	19.1	19.1	8.2	8.2	32.9	32.9	93.8	93.8	7.1	7.1	7.1	7.9	7.9	7.9	1	2	
						7.0	19.1		8.2		32.9		93.7		7.1			8.0					
8-Jan-19	Cloudy	Moderate	07:09	8.1	Surface	1.0	18.6	18.6	8.2	8.2	33.3	33.3	98.0	98.1	7.5	7.5	7.6	10.7	10.7	10.7	4	4	5
						1.0	18.6		8.2		33.2		98.1		7.5			10.7					
					Middle	4.1	18.6	18.6	8.2	8.2	33.2	33.2	98.6	98.6	7.6	7.6	7.6	10.7	10.7	10.7	4	4	
						4.1	18.6		8.2		33.2		98.6		7.6			10.7					
					Bottom	7.1	18.6	18.6	8.2	8.2	33.2	33.2	98.0	98.0	7.5	7.5	7.5	10.5	10.6	10.6	6	6	
						7.1	18.6		8.2		33.3		98.0		7.5			10.7					
10-Jan-19	Fine	Moderate	08:20	8.3	Surface	1.0	18.6	18.6	8.1	8.1	32.5	32.5	101.9	101.9	7.9	7.9	7.8	2.5	2.5	2.7	6	5	5
						1.0	18.6		8.1		32.5		101.9		7.9			2.5					
					Middle	4.2	18.6	18.6	8.1	8.1	32.5	32.5	101.4	101.4	7.8	7.8	7.8	2.6	2.6	2.6	6	6	
						4.2	18.6		8.1		32.5		101.3		7.8			2.6					
					Bottom	7.3	18.6	18.6	8.1	8.1	32.5	32.5	99.7	99.6	7.7	7.7	7.7	3.0	3.0	3.0	4	4	
						7.3	18.6		8.1		32.5		99.5		7.7			3.0					
12-Jan-19	Misty	Calm	09:37	7.7	Surface	1.0	19.2	19.2	8.2	8.2	32.4	32.4	102.4	102.5	7.8	7.8	7.8	2.8	2.8	3.3	2	2	2
						1.0	19.2		8.2		32.4		102.6		7.8			2.8					
					Middle	3.9	18.9	18.9	8.2	8.2	32.5	32.5	102.7	102.7	7.9	7.9	7.9	3.2	3.3	3.3	1	2	
						3.9	18.9		8.2		32.5		102.7		7.9			3.3					
					Bottom	6.7	18.9	18.9	8.2	8.2	32.5	32.5	101.9	101.9	7.8	7.8	7.8	3.6	3.8	3.8	2	<1	
						6.7	18.9		8.2		32.5		101.8		7.8			4.0					
15-Jan-19	Cloudy	Moderate	13:20	9.0	Surface	1.0	19.2	19.2	8.2	8.2	32.4	32.4	104.0	104.0	7.9	7.9	7.9	1.8	1.8	2.3	1	2	1
						1.0	19.2		8.2		32.4		104.0		7.9			1.8					
					Middle	4.5	19.1	19.1	8.2	8.2	32.4	32.4	103.2	103.2	7.9	7.9	7.9	1.4	1.4	1.4	1	1	
						4.5	19.1		8.2		32.4		103.1		7.9			1.4					
					Bottom	8.0	18.9	18.9	8.2	8.2	32.4	32.4	101.9	101.9	7.8	7.8	7.8	3.7	3.7	3.7	1	2	
						8.0	18.9		8.2		32.4		101.9		7.8			3.7					
17-Jan-19	Fine	Moderate	14:33	8.1	Surface	1.0	18.6	18.6	8.3	8.3	31.3	31.3	98.5	98.5	7.7	7.7	7.6	1.9	1.9	4.9	5	5	6
						1.0	18.6		8.3		31.3		98.5		7.7			1.9					
					Middle	4.1	18.4	18.4	8.3	8.3	31.3	31.3	97.3	97.3	7.6	7.6	7.6	4.7	4.9	4.9	7	7	
						4.1	18.4		8.3		31.3		97.2		7.6			5.0					
					Bottom	7.1	18.5	18.5	8.3	8.3	31.4	31.4	97.3	97.4	7.6	7.6	7.6	7.8	7.9	7.9	8	7	
						7.1	18.5		8.3		31.4		97.4		7.6			8.1					
19-Jan-19	Cloudy	Moderate	15:53	8.9	Surface	1.0	18.5	18.5	8.1	8.1	31.2	31.2	98.6	98.6	7.7	7.7	7.7	2.5	2.5	2.7	3	4	3
						1.0	18.5		8.1		31.2		98.6		7.7			2.5					
					Middle	4.5	18.3	18.3	8.1	8.1	31.2	31.2	97.9	97.9	7.6	7.6	7.6	2.8	2.8	2.8	3	3	
						4.5	18.3		8.1		31.2		97.9		7.6			2.8					
					Bottom	7.9	18.3	18.3	8.1	8.1	31.2	31.2	97.8	97.8	7.6	7.6	7.6	2.8	2.8	2.8	3	3	
						7.9	18.3		8.1		31.2		97.8		7.6			2.8					
22-Jan-19	Fine	Calm	06:13	8.6	Surface	1.0	18.0	18.0	8.2	8.2	31.1	31.1	96.6	96.6	7.6	7.6	7.5	3.2	3.2	3.4	12	12	11
						1.0	18.0		8.2		31.1		96.6		7.6			3.2					
					Middle	4.3	18.0	18.0	8.2	8.2	31.1	31.1	95.3	95.3	7.5	7.5	7.5	3.4	3.4	3.4	12	12	
						4.3	18.0		8.2		31.1		95.2		7.5			3.4					
					Bottom	7.6	18.2	18.2	8.1	8.1	31.2	31.2	93.7	93.7	7.3	7.3	7.3	3.6	3.6	3.6	9	9	
						7.6	18.2		8.1		31.2		93.7		7.3			3.6					
24-Jan-19	Sunny	Moderate	08:02	8.2	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	99.2	99.2	7.8	7.8	7.8	2.7	2.7	3.0	14	15	14
						1.0	18.1		8.2		31.1		99.2		7.8			2.7					
					Middle	4.1	18.1	18.1	8.2	8.2	31.1	31.1	98.5	98.5	7.7	7.7	7.7	2.9	2.9	2.9	14	14	
						4.1	18.1		8.2		31.1		98.5		7.7			2.9					
					Bottom	7.2	18.1	18.1	8.2	8.2	31.1	31.1	98.2	98.2	7.7	7.7	7.7	3.3	3.4	3.4	14	14	
						7.2	18.1		8.2		31.1		98.2		7.7			3.4					
26-Jan-19	Sunny	Moderate	09:24	8.3	Surface	1.0	18.4	18.4	8.2	8.2	31.0	31.0	95.7	95.7	7.5	7.5	7.5	2.1	2.1	2.5	5	6	7
						1.0	18.4		8.2		31.0		95.6		7.5			2.2					
					Middle	4.2	18.4	18.4	8.2	8.2	31.0	31.0	95.3	95.3	7.4	7.4	7.4	2.4	2.4	2.4	6	7	
						4.2	18.4		8.2		31.0		95.3		7.4			2.4					
					Bottom	7.3	18.4	18.4	8.2	8.2	31.0	31.0	95.1	95.1	7.4	7.4	7.4	3.0	3.0	3.0	8	8	
						7.3	18.4		8.2		31.0		95.1		7.4			3.0					

Remarks: DA: Depth-averaged  
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR2 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
1-Jan-19	Cloudy	Moderate	07:15	6.4	Surface	1.0	18.8	18.8	8.1	8.1	33.2	33.2	93.9	93.9	7.2	7.2	7.2	8.2	8.2	9.5	6	7	7	
						1.0	18.8		8.1		33.2		93.9		7.2			8.2						
					Middle	3.2	18.8	18.8	8.1	8.1	33.2	33.2	93.5	93.5	7.2	7.2	7.2	8.5	8.5		7	8		8
						3.2	18.8		8.1		33.2		93.5		7.2			8.5						
					Bottom	5.4	18.7	18.7	8.1	8.1	33.2	33.2	92.4	92.4	7.1	7.1	7.1	11.7	11.9		7	7		7
						5.4	18.7		8.1		33.2		92.4		7.1			12.0						
3-Jan-19	Rainy	Moderate	09:35	6.5	Surface	1.0	18.7	18.7	8.2	8.2	33.2	33.2	99.4	99.4	7.6	7.6	7.6	3.5	3.6	3.6	3	3	4	
						1.0	18.7		8.2		33.2		99.3		7.6			3.6						
					Middle	3.3	18.6	18.6	8.2	8.2	33.3	33.3	99.1	99.1	7.6	7.6	7.6	3.6	3.6		4	4		4
						3.3	18.6		8.2		33.3		99.0		7.6			3.6						
					Bottom	5.5	18.3	18.3	8.2	8.2	33.3	33.3	97.6	97.6	7.5	7.5	7.5	3.6	3.6		4	5		5
						5.5	18.3		8.2		33.3		97.5		7.5			3.6						
5-Jan-19	Misty	Moderate	11:05	6.7	Surface	1.0	19.3	19.3	8.2	8.2	33.0	33.0	94.4	94.4	7.2	7.2	7.2	6.9	7.0	7.8	2	3	2	
						1.0	19.3		8.2		33.0		94.4		7.2			7.0						
					Middle	3.4	19.3	19.3	8.2	8.1	33.0	33.0	94.3	94.4	7.2	7.2	7.2	7.5	7.5		2	2		2
						3.4	19.3		8.1		33.0		94.4		7.2			7.5						
					Bottom	5.7	19.3	19.3	8.1	8.1	33.0	33.0	94.5	94.6	7.2	7.2	7.2	8.9	8.9		2	2		2
						5.7	19.3		8.1		33.0		94.6		7.2			8.9						
8-Jan-19	Cloudy	Moderate	14:11	7.1	Surface	1.0	18.9	18.9	8.2	8.2	32.5	32.5	96.9	96.9	7.4	7.4	7.3	9.4	9.4	9.7	2	2	3	
						1.0	18.9		8.2		32.5		96.9		7.4			9.4						
					Middle	3.6	18.7	18.7	8.2	8.2	32.4	32.4	93.4	93.4	7.2	7.2	7.2	9.2	9.2		3	3		3
						3.6	18.7		8.2		32.4		93.4		7.2			9.2						
					Bottom	6.1	18.8	18.8	8.2	8.2	32.5	32.5	98.6	98.6	7.6	7.6	7.6	10.6	10.6		4	4		4
						6.1	18.8		8.2		32.5		98.6		7.6			10.6						
10-Jan-19	Cloudy	Calm	15:14	7.2	Surface	1.0	18.8	18.8	8.1	8.1	32.5	32.5	104.1	104.1	8.0	8.0	8.0	3.3	3.4	3.6	5	5	4	
						1.0	18.8		8.1		32.5		104.0		8.0			3.4						
					Middle	3.6	18.8	18.8	8.1	8.1	32.5	32.5	103.5	103.4	8.0	7.9	7.9	3.6	3.6		3	3		4
						3.6	18.8		8.1		32.5		103.3		7.9			3.7						
					Bottom	6.2	18.6	18.6	8.1	8.1	32.5	32.5	101.6	101.6	7.8	7.8	7.8	3.9	3.9		4	4		4
						6.2	18.6		8.1		32.5		101.6		7.8			3.9						
12-Jan-19	Misty	Calm	16:29	7.3	Surface	1.0	19.6	19.6	8.2	8.2	32.4	32.4	108.5	108.5	8.2	8.2	8.2	2.7	2.7	4.1	5	5	3	
						1.0	19.6		8.2		32.4		108.5		8.2			2.7						
					Middle	3.7	19.0	19.0	8.2	8.2	32.4	32.4	106.2	106.2	8.1	8.1	8.1	2.9	2.9		4	4		4
						3.7	19.0		8.2		32.4		106.2		8.1			2.9						
					Bottom	6.3	19.2	19.2	8.2	8.2	32.5	32.5	106.6	106.6	8.1	8.1	8.1	6.8	6.7		1	2		2
						6.3	19.2		8.2		32.5		106.5		8.1			6.7						
15-Jan-19	Cloudy	Moderate	04:05	6.2	Surface	1.0	19.0	19.0	8.2	8.2	32.4	32.4	102.0	102.0	7.8	7.8	7.8	2.1	2.1	2.1	2	2	2	
						1.0	19.0		8.2		32.4		101.9		7.8			2.1						
					Middle	3.1	18.9	18.9	8.1	8.1	32.4	32.4	101.7	101.8	7.8	7.8	7.8	1.9	2.0		1	1		1
						3.1	18.9		8.1		32.4		101.8		7.8			2.0						
					Bottom	5.2	18.9	18.9	8.1	8.1	32.4	32.4	102.0	102.1	7.8	7.8	7.8	2.2	2.2		2	2		2
						5.2	18.9		8.1		32.4		102.1		7.8			2.3						
17-Jan-19	Fine	Moderate	07:19	7.0	Surface	1.0	18.5	18.5	8.3	8.3	31.5	31.5	94.8	94.8	7.4	7.4	7.3	2.9	2.9	3.0	6	6	8	
						1.0	18.5		8.3		31.5		94.8		7.4			2.9						
					Middle	3.5	18.5	18.5	8.3	8.3	31.5	31.5	94.5	94.5	7.3	7.3	7.3	3.1	3.1		9	9		9
						3.5	18.5		8.3		31.5		94.4		7.3			3.1						
					Bottom	6.0	18.5	18.5	8.3	8.3	31.5	31.5	93.9	94.0	7.3	7.3	7.3	3.0	3.0		10	10		10
						6.0	18.5		8.3		31.5		94.0		7.3			3.0						
19-Jan-19	Cloudy	Moderate	09:19	7.0	Surface	1.0	18.3	18.3	8.1	8.1	31.2	31.2	97.5	97.5	7.6	7.6	7.6	2.4	2.3	2.3	6	6	6	
						1.0	18.3		8.1		31.2		97.4		7.6			2.3						
					Middle	3.5	18.3	18.3	8.1	8.1	31.2	31.2	97.2	97.2	7.6	7.6	7.6	2.2	2.2		6	7		7
						3.5	18.3		8.1		31.2		97.1		7.6			2.3						
					Bottom	6.0	18.3	18.3	8.1	8.1	31.3	31.3	96.8	96.8	7.6	7.6	7.6	2.3	2.3		4	4		4
						6.0	18.3		8.1		31.3		96.8		7.6			2.3						
22-Jan-19	Fine	Calm	13:25	7.4	Surface	1.0	18.3	18.3	8.2	8.2	31.1	31.1	99.8	99.8	7.8	7.8	7.8	3.1	3.1	3.1	5	5	4	
						1.0	18.3		8.2		31.1		99.8		7.8			3.1						
					Middle	3.7	18.2	18.2	8.2	8.2	31.1	31.1	99.4	99.4	7.8	7.8	7.8	2.5	2.5		4	5		5
						3.7	18.2		8.2		31.1		99.4		7.8			2.5						
					Bottom	6.4	18.2	18.2	8.2	8.2	31.1	31.1	97.9	97.8	7.7	7.7	7.7	3.5	3.6		3	4		4
						6.4	18.2		8.2		31.1		97.7		7.7			3.6						
24-Jan-19	Sunny	Moderate	14:41	6.8	Surface	1.0	18.5	18.5	8.2	8.2	31.1	31.1	104.0	104.0	8.1	8.1	8.1	1.9	1.9	2.2	5	5	7	
						1.0	18.5		8.2		31.1		103.9		8.1			1.9						
					Middle	3.4	18.3	18.3	8.2	8.2	31.1	31.1	102.9	102.9	8.0	8.0	8.0	2.1	2.1		6	7		7
						3.4	18.3		8.2		31.1		102.9		8.0			2.1						
					Bottom	5.8	18.2	18.2	8.2	8.2	31.1	31.1	100.5	100.5	7.9	7.9	7.9	2.4	2.5		9	9		9
						5.8	18.2		8.2		31.1		100.4		7.9			2.7						
26-Jan-19	Sunny	Moderate	16:47	6.7	Surface	1.0	18.6	18.6	8.3	8.3	31.4	31.4	115.6	115.6	9.0	9.0	9.0	1.3	1.3	1.3	5	6	5	
						1.0	18.6		8.3		31.4		115.6		9.0			1.3						
					Middle	3.4	18.6	18.6	8.3	8.3	31.4	31.4	115.5	115.5	9.0	9.0	9.0	1.3	1.3		5	6		6
						3.4	18.6		8.3		31.4		115.5		9.0			1.3						
					Bottom	5.7	18.6	18.6	8.3	8.3	31.4	31.4	115.5	115.5	9.0	9.0	9.0	1.3	1.3		5	5		5
						5.7	18.6		8.3		31.4		115.5		9.0			1.3						

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at SR2 during Mid-flood Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Moderate	15:12	7.6	Surface	1.0	19.0	19.0	8.1	8.1	33.2	33.2	96.3	96.4	7.3	7.3	7.4	7.0	7.0	7.7	6	6	6
						1.0	19.0		8.1		33.2		96.4		7.3			7.0			5		
					Middle	3.8	18.9	18.9	8.1	8.1	33.2	33.2	96.5	96.5	7.4	7.4	7.2	7.2	6	6	6		
						3.8	18.9		8.1		33.2		96.5		7.4		7.2		5				
					Bottom	6.6	18.9	18.9	8.1	8.1	33.2	33.2	96.9	96.9	7.4	7.4	8.8	8.8	6	6	6		
						6.6	18.9		8.1		33.2		96.9		7.4		8.8		5				
3-Jan-19	Cloudy	Calm	16:05	7.3	Surface	1.0	18.9	18.9	8.2	8.2	33.2	33.2	101.7	101.6	7.8	7.8	7.7	3.5	3.5	3.5	5	5	6
						1.0	18.9		8.2		33.2		101.6		7.8			3.5			5		
					Middle	3.7	18.9	18.9	8.2	8.2	33.2	33.2	101.0	101.0	7.7	7.7	3.2	3.2	6	6	6		
						3.7	18.9		8.2		33.2		100.9		7.7		3.2		6				
					Bottom	6.3	18.5	18.5	8.2	8.2	33.3	33.3	97.9	98.1	7.5	7.5	3.5	3.6	6	6	6		
						6.3	18.5		8.2		33.3		98.2		7.5		3.8		5				
5-Jan-19	Misty	Calm	17:31	7.6	Surface	1.0	19.1	19.1	8.2	8.2	32.6	32.6	99.6	99.6	7.6	7.6	7.6	5.8	5.8	6.4	2	2	2
						1.0	19.0		8.2		32.6		99.6		7.6			5.8			2		
					Middle	3.8	19.1	19.1	8.2	8.2	32.6	32.6	98.9	98.8	7.6	7.5	6.0	6.0	1	1	1		
						3.8	19.1		8.2		32.6		98.7		7.5		6.0		1				
					Bottom	6.6	19.3	19.3	8.2	8.2	32.9	32.9	97.0	97.1	7.4	7.4	7.4	7.5	1	2	2		
						6.6	19.3		8.2		32.9		97.1		7.4		7.6		2				
8-Jan-19	Cloudy	Moderate	07:18	6.6	Surface	1.0	18.9	18.9	8.2	8.2	33.2	33.2	98.1	98.3	7.5	7.5	7.5	9.6	9.6	9.7	4	4	3
						1.0	18.9		8.2		33.2		98.5		7.5			9.6			3		
					Middle	3.3	18.8	18.8	8.2	8.2	33.2	33.2	98.6	98.6	7.5	7.5	9.4	9.5	2	3	3		
						3.3	18.8		8.2		33.3		98.6		7.5		9.5		2				
					Bottom	5.6	18.8	18.8	8.2	8.2	33.3	33.3	97.7	97.7	7.5	7.5	10.0	10.0	3	3	3		
						5.6	18.8		8.2		33.3		97.6		7.5		10.1		2				
10-Jan-19	Cloudy	Moderate	08:30	6.9	Surface	1.0	18.7	18.7	8.1	8.1	32.5	32.5	102.7	102.7	7.9	7.9	7.9	3.3	3.4	3.4	4	4	4
						1.0	18.7		8.1		32.5		102.7		7.9			3.4			4		
					Middle	3.5	18.7	18.7	8.1	8.1	32.5	32.5	102.5	102.5	7.9	7.9	3.3	3.3	4	4	4		
						3.5	18.7		8.1		32.5		102.5		7.9		3.3		4				
					Bottom	5.9	18.6	18.6	8.1	8.1	32.5	32.5	100.5	100.5	7.7	7.7	3.4	3.4	4	4	4		
						5.9	18.6		8.1		32.5		100.4		7.7		3.4		3				
12-Jan-19	Misty	Calm	09:45	6.4	Surface	1.0	19.2	19.2	8.2	8.2	32.5	32.5	104.1	104.1	7.9	7.9	7.8	2.7	2.7	3.0	3	4	3
						1.0	19.2		8.2		32.5		104.0		7.9			2.7			4		
					Middle	3.2	18.9	18.9	8.2	8.2	32.4	32.4	101.5	101.4	7.8	7.8	2.8	2.8	3	3	3		
						3.2	18.9		8.2		32.4		101.2		7.8		2.8		2				
					Bottom	5.4	18.9	18.9	8.2	8.2	32.5	32.5	98.3	98.3	7.5	7.5	3.4	3.4	2	2	2		
						5.4	18.9		8.2		32.5		98.3		7.5		3.4		2				
15-Jan-19	Cloudy	Moderate	13:13	7.5	Surface	1.0	19.0	19.0	8.2	8.2	32.4	32.4	102.8	102.8	7.9	7.9	7.8	2.7	2.7	3.5	<1	<1	1
						1.0	19.0		8.2		32.4		102.7		7.9			2.8			<1		
					Middle	3.8	18.9	18.9	8.2	8.2	32.4	32.4	102.1	102.1	7.8	7.8	3.3	3.4	2	2	2		
						3.8	18.9		8.2		32.4		102.1		7.8		3.4		1				
					Bottom	6.5	18.8	18.8	8.2	8.2	32.4	32.4	100.2	100.2	7.7	7.7	4.4	4.4	1	1	1		
						6.5	18.8		8.2		32.4		100.1		7.7		4.5		1				
17-Jan-19	Fine	Moderate	14:24	7.4	Surface	1.0	18.6	18.6	8.3	8.3	31.3	31.3	98.6	98.6	7.7	7.7	7.6	1.8	1.8	2.9	9	9	7
						1.0	18.6		8.3		31.3		98.6		7.7			1.8			9		
					Middle	3.7	18.3	18.3	8.3	8.3	31.3	31.3	97.4	97.4	7.6	7.6	3.0	3.1	5	5	5		
						3.7	18.3		8.3		31.3		97.4		7.6		3.1		5				
					Bottom	6.4	18.5	18.5	8.3	8.3	31.4	31.4	97.4	97.5	7.6	7.6	4.1	4.0	5	6	6		
						6.4	18.5		8.3		31.4		97.5		7.6		3.8		6				
19-Jan-19	Cloudy	Moderate	15:44	7.5	Surface	1.0	18.5	18.5	8.2	8.2	31.2	31.2	99.6	99.6	7.7	7.7	7.8	2.2	2.2	2.2	2	3	3
						1.0	18.5		8.2		31.3		99.5		7.7			2.2			3		
					Middle	3.8	18.4	18.4	8.2	8.2	31.2	31.2	100.3	100.3	7.8	7.8	2.0	2.0	2	3	2		
						3.8	18.4		8.2		31.2		100.3		7.8		2.1		3				
					Bottom	6.5	18.4	18.4	8.2	8.1	31.3	31.3	99.8	99.8	7.8	7.8	2.3	2.3	5	5	5		
						6.5	18.4		8.1		31.3		99.7		7.8		2.2		4				
22-Jan-19	Fine	Calm	06:21	7.3	Surface	1.0	18.0	18.0	8.2	8.2	31.1	31.1	97.0	97.0	7.6	7.6	7.6	2.8	2.8	3.3	6	6	10
						1.0	18.0		8.2		31.1		97.0		7.6			2.9			6		
					Middle	3.7	18.0	18.0	8.2	8.2	31.1	31.1	96.5	96.5	7.6	7.6	3.1	3.1	12	12	12		
						3.7	18.0		8.2		31.1		96.5		7.6		3.1		11				
					Bottom	6.3	18.0	18.0	8.2	8.2	31.1	31.1	94.9	94.9	7.5	7.5	3.8	3.9	12	12	12		
						6.3	18.0		8.2		31.1		94.8		7.5		4.0		12				
24-Jan-19	Sunny	Moderate	08:12	6.8	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	100.1	100.1	7.9	7.9	7.8	1.9	1.9	2.0	8	9	8
						1.0	18.1		8.2		31.1		100.1		7.9			1.9			9		
					Middle	3.4	18.1	18.1	8.2	8.2	31.1	31.1	99.6	99.6	7.8	7.8	1.7	1.7	8	8	8		
						3.4	18.1		8.2		31.1		99.6		7.8		1.7		7				
					Bottom	5.8	18.1	18.1	8.2	8.2	31.1	31.1	99.1	99.2	7.8	7.8	2.4	2.4	9	9	9		
						5.8	18.1		8.2		31.1		99.2		7.8		2.5		8				
26-Jan-19	Sunny	Moderate	09:32	6.9	Surface	1.0	18.4	18.4	8.2	8.2	31.0	31.0	96.3	96.3	7.5	7.5	7.5	1.5	1.5	1.7	7	8	10
						1.0	18.4		8.2		31.0		96.3		7.5			1.6			8		
					Middle	3.5	18.4	18.4	8.2	8.2	31.0	31.0	96.2	96.2	7.5	7.5	1.7	1.7	8	8	8		
						3.5	18.4		8.2		31.0		96.2		7.5		1.7		8				
					Bottom	5.9	18.4	18.4	8.2	8.2	31.0	31.0	96.2	96.2	7.5	7.5	1.7	1.7	13	14	13		
						5.9	18.4		8.2		31.0		96.2		7.5		1.7		14				

Remarks: DA: Depth-averaged  
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR3 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	07:28	7.4	Surface	1.0	19.1	19.1	8.1	8.1	33.1	33.1	95.1	95.1	7.2	7.2	7.2	8.2	8.2	8.2	7	7	7
						1.0	19.1		8.1		33.1		95.1		7.2			8.2					
					Middle	3.7	19.1	19.1	8.1	8.1	33.1	33.1	94.6	94.6	7.2	7.2	7.2	8.2	8.2	8.2	8	8	
						3.7	19.1		8.1		33.1		94.6		7.2			8.2					
					Bottom	6.4	18.9	18.9	8.1	8.1	33.2	33.2	93.8	93.8	7.2	7.2	7.2	8.2	8.2	8.2	6	7	
						6.4	18.9		8.1		33.2		93.8		7.2			8.2					
3-Jan-19	Rainy	Moderate	09:47	7.9	Surface	1.0	18.9	18.9	8.2	8.2	33.2	33.2	99.5	99.5	7.6	7.6	7.6	5.3	5.3	5.2	4	4	3
						1.0	18.9		8.2		33.2		99.5		7.6			5.3					
					Middle	4.0	18.9	18.9	8.2	8.2	33.2	33.2	98.9	98.9	7.5	7.5	7.5	5.2	5.2	5.2	3	3	
						4.0	18.9		8.2		33.2		98.8		7.5			5.2					
					Bottom	6.9	18.9	18.9	8.2	8.2	33.2	33.2	98.1	98.1	7.5	7.5	7.5	5.2	5.2	5.2	3	3	
						6.9	18.9		8.2		33.2		98.1		7.5			5.2					
5-Jan-19	Misty	Moderate	11:20	7.9	Surface	1.0	18.8	18.8	8.2	8.2	32.9	32.9	92.8	92.8	7.1	7.1	7.0	6.1	6.1	6.6	1	2	2
						1.0	18.8		8.2		32.9		92.7		7.1			6.1					
					Middle	4.0	18.9	18.9	8.2	8.2	32.9	32.9	90.6	90.6	6.9	6.9	6.9	6.6	6.7	6.7	2	2	
						4.0	18.9		8.2		32.9		90.5		6.9			6.7					
					Bottom	6.9	18.9	18.9	8.1	8.1	32.9	32.9	89.5	89.4	6.8	6.8	6.8	7.0	7.0	7.0	2	2	
						6.9	18.9		8.1		32.9		89.3		6.8			7.0					
8-Jan-19	Cloudy	Rough	14:02	8.5	Surface	1.0	18.8	18.8	8.2	8.2	32.5	32.5	97.7	97.7	7.5	7.5	7.4	10.5	10.5	10.3	2	3	3
						1.0	18.8		8.2		32.5		97.6		7.5			10.6					
					Middle	4.3	18.8	18.8	8.2	8.2	32.5	32.5	93.4	93.4	7.2	7.2	7.2	10.8	10.8	10.8	2	3	
						4.3	18.8		8.2		32.5		93.4		7.2			10.8					
					Bottom	7.5	18.6	18.6	8.2	8.2	32.3	32.3	98.6	98.6	7.6	7.6	7.6	9.6	9.6	9.6	3	3	
						7.5	18.6		8.2		32.3		98.6		7.6			9.6					
10-Jan-19	Cloudy	Moderate	15:05	8.3	Surface	1.0	18.7	18.7	8.1	8.1	32.5	32.5	103.6	103.6	8.0	8.0	8.0	2.9	2.9	3.0	6	6	5
						1.0	18.7		8.1		32.5		103.6		8.0			2.9					
					Middle	4.2	18.7	18.7	8.1	8.1	32.5	32.5	103.2	103.2	7.9	7.9	7.9	2.8	2.8	2.8	5	5	
						4.2	18.7		8.1		32.5		103.1		7.9			2.9					
					Bottom	7.3	18.7	18.7	8.1	8.1	32.5	32.5	102.0	102.0	7.9	7.8	7.8	3.2	3.2	3.2	5	5	
						7.3	18.7		8.1		32.5		101.9		7.8			3.2					
12-Jan-19	Misty	Moderate	16:20	8.1	Surface	1.0	19.6	19.6	8.2	8.2	32.4	32.4	107.3	107.2	8.1	8.1	8.1	2.4	2.4	4.0	2	2	2
						1.0	19.5		8.2		32.4		107.1		8.1			2.4					
					Middle	4.1	19.0	19.0	8.2	8.2	32.4	32.4	105.6	105.6	8.1	8.1	8.1	3.5	3.6	3.6	2	3	
						4.1	19.0		8.2		32.4		105.5		8.1			3.6					
					Bottom	7.1	19.0	19.0	8.2	8.2	32.4	32.4	104.7	104.6	8.0	8.0	8.0	5.9	6.1	6.1	2	2	
						7.1	19.0		8.2		32.4		104.5		8.0			6.4					
15-Jan-19	Cloudy	Moderate	04:15	7.3	Surface	1.0	18.9	18.9	8.2	8.2	32.4	32.4	101.2	101.2	7.8	7.8	7.7	2.2	2.2	2.3	1	1	2
						1.0	18.9		8.2		32.4		101.1		7.8			2.3					
					Middle	3.7	18.9	18.9	8.1	8.1	32.4	32.4	100.9	100.9	7.7	7.7	7.7	2.9	2.7	2.7	2	2	
						3.7	18.8		8.1		32.4		100.9		7.7			2.5					
					Bottom	6.3	18.8	18.8	8.1	8.1	32.4	32.4	100.9	101.0	7.8	7.8	7.8	1.9	1.9	1.9	2	2	
						6.3	18.8		8.1		32.4		101.0		7.8			1.9					
17-Jan-19	Fine	Moderate	07:29	7.8	Surface	1.0	18.3	18.3	8.3	8.3	31.3	31.3	95.7	95.7	7.5	7.5	7.5	2.6	2.6	2.7	5	6	6
						1.0	18.3		8.3		31.3		95.7		7.5			2.6					
					Middle	3.9	18.3	18.3	8.3	8.3	31.3	31.3	95.4	95.4	7.4	7.4	7.4	2.7	2.7	2.7	6	6	
						3.9	18.3		8.3		31.3		95.4		7.4			2.7					
					Bottom	6.8	18.3	18.3	8.3	8.3	31.3	31.3	95.1	95.1	7.4	7.4	7.4	3.0	2.9	2.9	5	6	
						6.8	18.3		8.3		31.3		95.1		7.4			2.9					
19-Jan-19	Cloudy	Moderate	09:28	8.3	Surface	1.0	18.2	18.2	8.1	8.1	31.2	31.2	97.6	97.6	7.6	7.6	7.6	2.1	2.1	2.4	4	4	4
						1.0	18.2		8.1		31.2		97.6		7.6			2.1					
					Middle	4.2	18.2	18.2	8.1	8.1	31.2	31.2	97.3	97.3	7.6	7.6	7.6	2.1	2.1	2.1	6	6	
						4.2	18.2		8.1		31.2		97.2		7.6			2.1					
					Bottom	7.3	18.2	18.2	8.1	8.1	31.2	31.2	97.0	97.0	7.6	7.6	7.6	2.9	2.9	2.9	3	3	
						7.3	18.2		8.1		31.2		97.0		7.6			2.9					
22-Jan-19	Fine	Moderate	13:14	8.5	Surface	1.0	18.4	18.4	8.2	8.2	31.0	31.0	99.4	99.4	7.8	7.8	7.7	2.8	2.8	3.0	5	5	6
						1.0	18.4		8.2		31.0		99.4		7.8			2.9					
					Middle	4.3	18.2	18.2	8.2	8.2	31.1	31.1	98.6	98.6	7.7	7.7	7.7	2.8	2.8	2.8	5	6	
						4.3	18.2		8.2		31.1		98.6		7.7			2.9					
					Bottom	7.5	18.2	18.2	8.2	8.2	31.1	31.1	97.5	97.5	7.6	7.6	7.6	3.4	3.4	3.4	6	6	
						7.5	18.2		8.2		31.1		97.4		7.6			3.4					
24-Jan-19	Sunny	Moderate	14:31	8.2	Surface	1.0	18.4	18.4	8.2	8.2	31.1	31.1	101.0	101.0	7.9	7.9	7.8	2.0	2.0	4.1	7	8	8
						1.0	18.4		8.2		31.1		100.9		7.9			2.1					
					Middle	4.1	18.3	18.3	8.2	8.2	31.1	31.1	99.6	99.6	7.8	7.8	7.8	3.5	3.4	3.4	7	8	
						4.1	18.3		8.2		31.1		99.6		7.8			3.4					
					Bottom	7.2	18.2	18.2	8.2	8.2	31.1	31.1	98.3	98.3	7.7	7.7	7.7	6.8	6.8	6.8	7	8	
						7.2	18.2		8.2		31.1		98.3		7.7			6.7					
26-Jan-19	Sunny	Moderate	16:30	8.5	Surface	1.0	18.6	18.6	8.3	8.3	31.4	31.4	115.6	115.6	9.0	9.0	9.0	1.2	1.2	4.3	9	9	8
						1.0	18.6		8.3		31.4		115.6		9.0			1.2					
					Middle	4.3	18.6	18.6	8.3	8.3	31.4	31.4	115.5	115.5	9.0	9.0	9.0	4.2	4.2	4.2	8	8	
						4.3	18.5		8.3		31.4		115.4		9.0			4.2					
					Bottom	7.5	18.6	18.6	8.3	8.3	31.4	31.4	115.3	115.4	9.0	9.0	9.0	7.3	7.3	7.3	8	8	
						7.5	18.6		8.3		31.4		115.4		9.0			7.4					

Remarks: DA: Depth-averaged  
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

**Water Quality Monitoring Results at SR3 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)					
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA			
1-Jan-19	Cloudy	Rough	14:57	8.7	Surface	1.0	19.2	19.2	8.1	8.1	33.1	33.1	96.2	96.2	7.3	7.3	7.3	7.7	7.7	7.7	4	4	6			
						1.0	19.2		8.1		33.1		96.2		7.3			7.7			4					
					Middle	4.4	19.2	19.2	8.1	8.1	33.1	33.1	96.1	96.1	7.3	7.3	7.3	7.7	7.7	7.7	7	7		7.7		
						4.4	19.2		8.1		33.1		96.1		7.3			7.7			6					
					Bottom	7.7	19.2	19.2	8.1	8.1	33.1	33.1	96.4	96.5	7.3	7.3	7.3	7.8	7.8	7.8	8	9			7.7	
						7.7	19.2		8.1		33.1		96.5		7.3			7.8			9					
3-Jan-19	Cloudy	Moderate	15:54	8.8	Surface	1.0	19.1	19.1	8.2	8.2	33.1	33.1	101.3	101.3	7.7	7.7	7.7	3.9	3.9	4.7	8	8	7			
						1.0	19.1		8.2		33.1		101.3		7.7			3.9			8					
					Middle	4.4	18.9	18.9	8.2	8.2	33.1	33.1	100.4	100.4	7.7	7.7	7.7	4.3	4.4	4.4	7	7		4.7		
						4.4	18.9		8.2		33.1		100.4		7.7			4.4			7					
					Bottom	7.8	18.9	18.9	8.2	8.2	33.1	33.1	100.1	100.1	7.6	7.6	7.6	5.9	6.0	6.0	6	7			4.7	
						7.8	18.9		8.2		33.1		100.1		7.6			6.0			7					
5-Jan-19	Misty	Moderate	17:14	8.2	Surface	1.0	18.9	18.9	8.2	8.2	32.4	32.4	99.5	99.5	7.6	7.6	7.6	6.5	6.5	6.9	2	2	2			
						1.0	18.9		8.2		32.4		99.5		7.6			6.4			2					
					Middle	4.1	18.8	18.8	8.2	8.2	32.4	32.4	98.9	98.9	7.6	7.6	7.6	7.1	7.4		7.4	2		2		6.9
						4.1	18.8		8.2		32.4		98.9		7.6			7.6				2				
					Bottom	7.2	18.7	18.7	8.2	8.2	32.4	32.4	97.4	97.4	7.5	7.5	7.5	7.0	7.0		7.0	2		2	6.9	
						7.2	18.7		8.2		32.4		97.3		7.5			7.0				2				
8-Jan-19	Cloudy	Rough	07:28	7.3	Surface	1.0	18.6	18.7	8.2	8.2	33.1	33.1	95.1	95.1	7.3	7.3	7.4	9.9	9.9	9.9	2	3	3			
						1.0	18.8		8.2		33.2		95.1		7.3			9.9			4					
					Middle	3.7	18.8	18.8	8.2	8.2	33.2	33.2	97.5	97.5	7.5	7.5	7.5	9.8	9.8		9.8	3		4		9.9
						3.7	18.8		8.2		33.2		97.4		7.4			9.8				4				
					Bottom	6.3	18.6	18.6	8.2	8.2	33.2	33.2	99.3	99.2	7.6	7.6	7.6	10.0	10.0		10.0	3		3	9.9	
						6.3	18.6		8.2		33.2		99.1		7.6			10.1				3				
10-Jan-19	Fine	Moderate	08:45	8.2	Surface	1.0	18.6	18.6	8.1	8.1	32.6	32.6	101.7	101.7	7.8	7.8	7.8	3.1	3.1	3.4	4	5	4			
						1.0	18.6		8.1		32.6		101.7		7.8			3.1			5					
					Middle	4.1	18.6	18.6	8.1	8.1	32.6	32.6	101.1	101.1	7.8	7.8	7.8	3.4	3.4		3.4	4		5		3.4
						4.1	18.6		8.1		32.6		101.0		7.8			3.5				5				
					Bottom	7.2	18.6	18.6	8.1	8.1	32.6	32.6	99.7	99.6	7.7	7.7	7.7	3.5	3.5		3.5	4		4	3.4	
						7.2	18.6		8.1		32.6		99.5		7.7			3.5				4				
12-Jan-19	Misty	Calm	10:00	7.8	Surface	1.0	19.0	19.0	8.2	8.2	32.4	32.4	104.1	104.1	8.0	8.0	8.0	2.3	2.3	3.0	3	4	2			
						1.0	19.0		8.2		32.4		104.0		8.0			2.3			4					
					Middle	3.9	19.0	19.0	8.2	8.2	32.4	32.4	103.9	103.9	8.0	8.0	8.0	2.3	2.3		2.3	2		2		3.0
						3.9	19.0		8.2		32.4		103.9		8.0			2.3				2				
					Bottom	6.8	18.8	18.8	8.2	8.2	32.4	32.4	102.4	102.4	7.9	7.9	7.9	4.3	4.3		4.3	2		2	3.0	
						6.8	18.8		8.2		32.4		102.3		7.9			4.4				2				
15-Jan-19	Cloudy	Moderate	12:56	8.4	Surface	1.0	19.1	19.1	8.2	8.2	32.4	32.4	102.4	102.4	7.8	7.8	7.8	1.5	1.5	2.2	2	2	2			
						1.0	19.1		8.2		32.4		102.4		7.8			1.5			<1					
					Middle	4.2	18.8	18.8	8.2	8.2	32.4	32.4	101.3	101.3	7.8	7.8	7.8	2.8	2.8		2.8	1		1		2.2
						4.2	18.8		8.2		32.4		101.3		7.8			2.8				1				
					Bottom	7.4	18.8	18.8	8.2	8.2	32.4	32.4	101.2	101.2	7.8	7.8	7.8	2.6	2.5		2.5	2		3	2.2	
						7.4	18.8		8.2		32.4		101.1		7.8			2.4				3				
17-Jan-19	Fine	Moderate	14:11	8.3	Surface	1.0	18.8	18.8	8.3	8.3	31.2	31.2	98.4	98.4	7.6	7.6	7.6	7.0	7.2	3.6	3	3	4			
						1.0	18.8		8.3		31.2		98.4		7.6			7.4			3					
					Middle	4.2	18.4	18.4	8.3	8.3	31.3	31.3	97.9	97.9	7.6	7.6	7.6	1.8	1.8		1.8	4		4		3.6
						4.2	18.4		8.3		31.3		97.8		7.6			1.8				3				
					Bottom	7.3	18.4	18.4	8.3	8.3	31.2	31.2	97.5	97.5	7.6	7.6	7.6	1.9	1.9		1.9	5		5	3.6	
						7.3	18.4		8.3		31.2		97.4		7.6			1.9				4				
19-Jan-19	Cloudy	Moderate	15:35	8.4	Surface	1.0	18.6	18.6	8.2	8.2	31.2	31.2	99.6	99.6	7.7	7.7	7.8	2.2	2.2	2.2	8	8	6			
						1.0	18.6		8.2		31.2		99.6		7.7			2.2			7					
					Middle	4.2	18.3	18.3	8.2	8.2	31.2	31.2	99.6	99.6	7.8	7.8	7.8	2.1	2.1		2.1	7		7		2.2
						4.2	18.3		8.2		31.2		99.5		7.8			2.1				6				
					Bottom	7.4	18.3	18.3	8.2	8.2	31.3	31.3	98.4	98.4	7.7	7.7	7.7	2.2	2.1		2.1	4		4	2.2	
						7.4	18.3		8.2		31.3		98.4		7.7			2.1				4				
22-Jan-19	Fine	Moderate	06:30	8.8	Surface	1.0	18.0	18.0	8.2	8.2	31.1	31.1	96.6	96.6	7.6	7.6	7.6	3.3	3.3	4.3	7	7	8			
						1.0	18.0		8.2		31.1		96.5		7.6			3.3			7					
					Middle	4.4	18.1	18.1	8.2	8.2	31.2	31.2	96.1	96.1	7.5	7.5	7.5	3.8	3.9		3.9	7		8		4.3
						4.4	18.1		8.2		31.2		96.1		7.5			4.0				8				
					Bottom	7.8	18.4	18.4	8.1	8.1	31.3	31.3	94.8	94.8	7.4	7.4	7.4	5.6	5.6		5.6	8		8	4.3	
						7.8	18.4		8.1		31.3		94.8		7.4			5.7				8				
24-Jan-19	Sunny	Moderate	08:21	8.1	Surface	1.0	18.3	18.3	8.2	8.2	31.1	31.1	98.4	98.4	7.7	7.7	7.7	2.6	2.5	3.4	9	9	8			
						1.0	18.3		8.2		31.1		98.4		7.7			2.5			8					
					Middle	4.1	18.3	18.3	8.2	8.2	31.1	31.1	97.8	97.8	7.6	7.6	7.6	1.8	1.8		1.8	8		8		3.4
						4.1	18.3		8.2		31.1		97.8		7.6			1.8				8				
					Bottom	7.1	18.3	18.3	8.2	8.2	31.1	31.1	97.3	97.4	7.6	7.6	7.6	6.0	5.9		5.9	9		9	3.4	
						7.1	18.3		8.2		31.1		97.4		7.6			5.9				8				
26-Jan-19	Sunny	Moderate	09:46	8.2	Surface	1.0	18.4	18.4	8.2	8.2	31.0	31.0	96.3	96.3	7.5	7.5	7.5	1.4	1.4	1.7	7	8	7			
						1.0	18.4		8.2		31.0		96.3		7.5			1.4			8					
					Middle	4.1	18.4	18.4	8.2	8.2	31.0	31.0	96.3	96.3	7.5	7.5	7.5	1.8	1.8		1.8	7		7		1.7
						4.1	18.4		8.2		31.0		96.3		7.5			1.8				6				
					Bottom	7.2	18.4	18.4	8.2	8.2	31.0	31.0	96.3	96.3	7.5	7.5	7.5	2.0	2.0		2.0	6		6	1.7	
						7.2	18.4		8.2		31.0		96.3		7.5			2.0				6				

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at SR4 during Mid-ebb Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	08:15	11.3	Surface	1.0	19.3	19.3	8.1	8.1	33.1	33.1	95.0	95.0	7.2	7.2	7.2	8.1	8.0	8.2	5	5	6
						1.0	19.3		8.1		33.1		95.0		7.2			8.0			5		
						5.7	19.3		8.1		33.1		94.6		7.2			7.7			6		
					Middle	5.7	19.3	19.3	8.1	8.1	33.1	33.1	94.6	94.6	7.2	7.2	7.7	7.7	6				
						5.7	19.3		8.1		33.1		94.6		7.2		7.7		6				
						10.3	19.2		19.2		8.1		8.1		33.2		33.2		94.0	94.0	7.1	7.1	
10.3	19.2	8.1	33.2	94.0	7.1	9.0	8																
10.3	19.2	8.1	33.2	94.0	7.1	9.0	8																
3-Jan-19	Rainy	Rough	10:14	10.8	Surface	1.0	19.0	19.0	8.3	8.3	33.2	33.2	99.1	99.1	7.6	7.5	7.5	4.6	4.7	4.9	4	4	5
						1.0	19.0		8.3		33.2		99.1		7.5			4.7			4		
						5.4	19.0		8.3		33.2		99.0		7.5			4.8			4		
					Middle	5.4	19.0	19.0	8.3	8.3	33.2	33.2	99.0	99.0	7.5	7.5	4.8	4.8	4				
						5.4	19.0		8.3		33.2		99.0		7.5		4.8		4				
						9.8	19.0		19.0		8.2		8.2		33.2		33.2		99.1	99.2	7.6	7.6	
9.8	19.0	8.2	33.2	99.2	7.6	5.3	7																
9.8	19.0	8.2	33.2	99.2	7.6	5.3	7																
5-Jan-19	Misty	Rough	11:29	10.6	Surface	1.0	19.0	19.0	8.1	8.1	32.9	32.9	90.9	90.9	6.9	6.9	6.9	6.8	6.9	7.0	2	2	2
						1.0	19.0		8.1		32.9		90.9		6.9			7.0			2		
						5.3	19.0		8.1		32.9		90.7		6.9			7.4			2		
					Middle	5.3	19.0	19.0	8.1	8.1	32.9	32.9	90.7	90.8	6.9	6.9	7.4	7.4	3				
						5.3	19.0		8.1		32.9		90.8		6.9		7.4		3				
						9.6	19.0		19.0		8.1		8.1		32.9		32.9		89.6	89.5	6.8	6.8	
9.6	19.0	8.1	32.9	89.3	6.8	6.8	2																
9.6	19.0	8.1	32.9	89.3	6.8	6.8	2																
8-Jan-19	Cloudy	Rough	13:31	12.3	Surface	1.0	18.4	18.4	8.2	8.2	33.2	33.2	95.7	95.7	7.4	7.4	7.4	8.0	8.0	8.4	2	2	2
						1.0	18.4		8.2		33.2		95.7		7.4			8.1			1		
						6.2	18.2		8.2		33.2		95.2		7.4			7.9			2		
					Middle	6.2	18.3	18.3	8.2	8.2	33.2	33.2	95.2	95.2	7.3	7.4	7.9	7.9	2				
						6.2	18.3		8.2		33.2		95.2		7.3		7.9		2				
						11.3	18.5		18.5		8.2		8.2		33.2		33.2		94.4	94.4	7.3	7.3	
11.3	18.5	8.2	33.2	94.4	7.3	9.4	2																
11.3	18.5	8.2	33.2	94.4	7.3	9.4	2																
10-Jan-19	Cloudy	Moderate	14:40	14.4	Surface	1.0	18.8	18.8	8.1	8.1	32.6	32.6	103.0	102.9	7.9	7.9	7.8	2.9	2.9	4.3	6	6	6
						1.0	18.8		8.1		32.6		102.8		7.9			3.0			6		
						7.2	18.8		8.1		32.6		99.5		7.6			4.4			7		
					Middle	7.2	18.8	18.8	8.1	8.1	32.6	32.6	99.4	99.5	7.6	7.6	4.3	4.3	7				
						7.2	18.8		8.1		32.6		99.4		7.6		4.3		7				
						13.4	19.0		19.0		8.1		8.1		32.8		32.8		93.2	93.3	7.1	7.1	
13.4	19.0	8.1	32.8	93.3	7.1	5.7	6																
13.4	19.0	8.1	32.8	93.3	7.1	5.7	6																
12-Jan-19	Misty	Moderate	16:10	13.6	Surface	1.0	19.2	19.2	8.2	8.2	32.5	32.5	103.0	102.9	7.8	7.8	7.7	3.5	3.5	4.1	2	3	2
						1.0	19.2		8.2		32.5		102.8		7.8			3.5			3		
						6.8	19.1		8.2		32.6		98.0		7.5			4.1			<1		
					Middle	6.8	19.1	19.1	8.2	8.2	32.6	32.6	97.9	98.0	7.5	7.5	4.1	4.1	1				
						6.8	19.1		8.2		32.6		97.9		7.5		4.1		1				
						12.6	19.2		19.2		8.2		8.2		32.6		32.6		93.0	93.1	7.1	7.1	
12.6	19.2	8.2	32.6	93.1	7.1	4.9	2																
12.6	19.2	8.2	32.6	93.1	7.1	4.9	2																
15-Jan-19	Cloudy	Calm	05:05	11.1	Surface	1.0	19.1	19.1	8.2	8.2	32.1	32.1	94.1	94.1	7.2	7.2	7.2	1.2	1.2	2.2	2	2	2
						1.0	19.1		8.2		32.1		94.1		7.2			1.2			2		
						5.6	19.0		8.2		32.1		94.9		7.3			1.6			2		
					Middle	5.6	19.0	19.0	8.2	8.2	32.1	32.1	94.9	94.9	7.3	7.3	1.6	1.6	2				
						5.6	19.0		8.2		32.1		94.9		7.3		1.6		2				
						10.1	19.1		19.1		8.2		8.2		32.0		32.0		96.2	96.3	7.4	7.4	
10.1	19.1	8.2	32.0	96.4	7.4	3.8	3																
10.1	19.1	8.2	32.0	96.4	7.4	3.8	3																
17-Jan-19	Fine	Moderate	07:51	10.7	Surface	1.0	18.4	18.4	8.3	8.3	31.3	31.3	96.2	96.2	7.5	7.5	7.5	1.9	1.9	2.0	6	6	4
						1.0	18.4		8.3		31.3		96.2		7.5			1.9			6		
						5.4	18.5		8.3		31.3		96.2		7.5			2.0			2		
					Middle	5.4	18.5	18.5	8.3	8.3	31.3	31.3	96.3	96.3	7.5	7.5	2.0	2.0	3				
						5.4	18.5		8.3		31.3		96.3		7.5		2.0		3				
						9.7	18.6		18.6		8.3		8.3		31.4		31.4		96.6	96.7	7.5	7.5	
9.7	18.6	8.3	31.4	96.7	7.5	2.2	3																
9.7	18.6	8.3	31.4	96.7	7.5	2.2	3																
19-Jan-19	Cloudy	Moderate	09:55	14.3	Surface	1.0	18.7	18.7	8.1	8.1	31.3	31.3	94.3	94.4	7.3	7.3	7.3	2.4	2.4	2.7	5	5	5
						1.0	18.7		8.1		31.3		94.4		7.3			2.4			5		
						7.2	18.7		8.1		31.3		94.9		7.4			2.6			4		
					Middle	7.2	18.7	18.7	8.1	8.1	31.3	31.3	95.0	95.0	7.4	7.4	2.6	2.6	4				
						7.2	18.7		8.1		31.3		95.0		7.4		2.6		4				
						13.3	18.5		18.5		8.1		8.1		31.3		31.3		95.7	95.7	7.4	7.4	
13.3	18.5	8.1	31.3	95.7	7.4	2.9	4																
13.3	18.5	8.1	31.3	95.7	7.4	2.9	4																
22-Jan-19	Fine	Moderate	13:05	14.2	Surface	1.0	18.4	18.4	8.2	8.2	31.2	31.2	98.5	98.5	7.7	7.7	7.7	2.7	2.7	3.0	9	9	9
						1.0	18.4		8.2		31.2		98.5		7.7			2.7			8		
						7.1	18.2		8.2		31.1		98.0		7.7			2.9			8		
					Middle	7.1	18.2	18.2	8.2	8.2	31.1	31.1	98.0	98.0	7.7	7.7	2.9	2.9	8				
						7.1	18.2		8.2		31.1		98.0		7.7		2.9		8				
						13.2	18.1		18.1		8.2		8.2		31.1		31.1		97.6	97.6	7.7	7.7	
13.2	18.1	8.2	31.1	97.5	7.7	3.4	9																
13.2	18.1	8.2	31.1	97.5	7.7	3.4	9																
24-Jan-19	Sunny	Moderate	14:30	14.8	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	99.4	99.4	7.8	7.8	7.8	2.0	2.0	2.1	7	8	9
						1.0	18.1		8.2		31.1		99.4		7.8			2.0			8		
						7.4	18.1		8.2		31.1		99.0		7.8			2.3			9		
					Middle	7.4	18.1	18.1	8.2	8.2	31.1	31.1	99.0	99.0	7.8	7.8	2.2	2.2	8				
						7.4	18.1		8.2		31.1		99.0		7.8		2.2		8				
						13.8	18.1		18.1		8.2		8.2		31.1		31.1		99.0	99.1	7.8	7.8	
13.8	18.1	8.2	31.1	99.1	7.8	2.0	12																
13.8	18.1	8.2	31.1	99.1	7.8	2.0	12																
26-Jan-19	Sunny	Moderate	16:16	14.2	Surface	1.0	18.7	18.7	8.3	8.3	31.4	31.4	115.1	115.0	8.9	8.9	8.9	1.3	1.3	1.5	10	10	8
						1.0	18.7		8.3		31.4		114.9		8.9			1.3			10		
						7.1	18.6		8.3		31.4		114.0		8.9			1.5			7		
					Middle	7.1	18.6	18.6	8.3	8.3	31.4	31.4	113.7	113.9	8.8	8.8	1.5	1.5	8				
						7.1	18.5		8.3		31.4		113.7		8.8		1.5		8				
						13.2	18.5		18.5		8.3		8.3		31.4		31.3		112.4	112.3	8.7	8.7	
13.2	1																						

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR4 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	14:30	14.7	Surface	1.0	19.3	19.3	8.1	8.1	33.2	33.2	95.9	95.9	7.3	7.3	7.3	8.4	8.4	8.7	6	6	7
						1.0	19.2		8.1		33.2		95.9		7.3			8.4					
					Middle	7.4	19.3	19.3	8.1	8.1	33.2	33.2	95.7	95.7	7.3	7.3	7.3	8.6	8.6				
						7.4	19.3		8.1		33.2		95.7		7.3			8.6					
					Bottom	13.7	19.2	19.2	8.1	8.1	33.2	33.2	95.8	95.8	7.3	7.3	7.3	9.1	9.2				
						13.7	19.2		8.1		33.2		95.8		7.3			9.2					
3-Jan-19	Rainy	Moderate	15:41	15.2	Surface	1.0	19.1	19.1	8.2	8.2	33.1	33.1	100.1	100.1	7.6	7.6	7.6	3.4	3.5	4.1	7	8	8
						1.0	19.1		8.2		33.1		100.0		7.6			3.5					
					Middle	7.6	19.0	19.0	8.2	8.2	33.2	33.2	99.2	99.2	7.6	7.6	7.6	4.1	4.2				
						7.6	19.0		8.2		33.2		99.2		7.6			4.2					
					Bottom	14.2	19.0	19.0	8.2	8.2	33.2	33.2	99.2	99.3	7.6	7.6	7.6	4.7	4.6				
						14.2	19.0		8.2		33.2		99.3		7.6			4.6					
5-Jan-19	Misty	Moderate	16:40	14.8	Surface	1.0	19.2	19.2	8.2	8.2	32.9	32.9	94.6	94.6	7.2	7.2	7.2	5.8	5.8	6.0	2	2	2
						1.0	19.2		8.2		32.9		94.6		7.2			5.8					
					Middle	7.4	19.2	19.2	8.2	8.2	32.9	32.9	94.2	94.2	7.2	7.2	7.2	5.9	5.9				
						7.4	19.2		8.2		32.9		94.2		7.2			5.9					
					Bottom	13.8	19.2	19.2	8.2	8.2	32.9	32.9	93.5	93.5	7.1	7.1	7.1	6.4	6.4				
						13.8	19.2		8.2		32.9		93.5		7.1			6.4					
8-Jan-19	Cloudy	Rough	08:14	11.1	Surface	1.0	18.8	18.8	8.1	8.1	33.2	33.2	98.0	98.0	7.5	7.5	7.5	11.3	11.3	11.4	2	2	3
						1.0	18.8		8.1		33.2		98.0		7.5			11.3					
					Middle	5.6	18.8	18.8	8.1	8.1	33.2	33.2	98.2	98.2	7.5	7.5	7.5	11.5	11.5				
						5.6	18.8		8.1		33.2		98.2		7.5			11.5					
					Bottom	10.1	18.8	18.8	8.1	8.1	33.2	33.2	95.1	95.1	7.3	7.3	7.3	11.6	11.6				
						10.1	18.8		8.1		33.2		95.1		7.3			11.6					
10-Jan-19	Fine	Rough	09:22	11.7	Surface	1.0	19.1	19.1	8.1	8.1	32.8	32.8	88.9	88.9	6.8	6.8	6.8	2.6	2.6	2.9	2	2	2
						1.0	19.1		8.1		32.8		88.9		6.8			2.6					
					Middle	5.9	19.1	19.1	8.1	8.1	32.8	32.8	89.0	89.0	6.8	6.8	6.8	2.7	2.7				
						5.9	19.1		8.1		32.8		89.0		6.8			2.7					
					Bottom	10.7	19.1	19.1	8.1	8.1	32.8	32.8	89.4	89.4	6.8	6.8	6.8	3.5	3.5				
						10.7	19.1		8.1		32.8		89.4		6.8			3.5					
12-Jan-19	Misty	Rough	10:19	11.2	Surface	1.0	19.2	19.2	8.1	8.1	32.5	32.5	89.9	89.9	6.9	6.9	6.9	3.5	3.6	3.8	<1	2	2
						1.0	19.2		8.1		32.5		89.9		6.9			3.6					
					Middle	5.6	19.2	19.2	8.1	8.1	32.6	32.6	90.2	90.2	6.9	6.9	6.9	3.7	3.7				
						5.6	19.2		8.1		32.6		90.2		6.9			3.8					
					Bottom	10.2	19.3	19.3	8.1	8.1	32.6	32.6	90.3	90.3	6.9	6.9	6.9	4.1	4.0				
						10.2	19.3		8.1		32.6		90.2		6.9			4.0					
15-Jan-19	Cloudy	Moderate	12:43	14.3	Surface	1.0	19.3	19.3	8.1	8.1	32.3	32.3	95.7	95.8	7.3	7.3	7.3	1.8	1.8	1.9	1	1	1
						1.0	19.3		8.1		32.3		95.8		7.3			1.8					
					Middle	7.2	19.2	19.2	8.2	8.2	32.4	32.4	96.2	96.2	7.3	7.3	7.3	2.0	2.0				
						7.2	19.2		8.2		32.4		96.2		7.3			2.0					
					Bottom	13.3	19.3	19.4	8.2	8.2	32.3	32.3	96.4	96.4	7.3	7.3	7.3	1.9	1.9				
						13.3	19.5		8.2		32.2		96.4		7.3			2.0					
17-Jan-19	Fine	Moderate	13:52	14.9	Surface	1.0	20.1	20.2	8.3	8.3	30.9	30.9	100.1	100.1	7.6	7.6	7.6	2.4	2.4	2.4	4	4	6
						1.0	20.2		8.3		30.8		100.0		7.6			2.4					
					Middle	7.5	18.6	18.6	8.3	8.3	31.3	31.3	97.2	97.0	7.5	7.5	7.5	2.4	2.4				
						7.5	18.5		8.3		31.3		96.8		7.5			2.4					
					Bottom	13.9	18.4	18.4	8.3	8.3	31.3	31.3	96.5	96.5	7.5	7.5	7.5	2.5	2.5				
						13.9	18.4		8.3		31.3		96.4		7.5			2.5					
19-Jan-19	Cloudy	Moderate	15:24	14.8	Surface	1.0	18.8	18.8	8.1	8.1	31.3	31.3	96.3	96.3	7.4	7.4	7.5	1.9	1.9	2.6	4	4	3
						1.0	18.8		8.1		31.3		96.3		7.4			2.0					
					Middle	7.4	18.7	18.7	8.1	8.1	31.3	31.3	96.5	96.6	7.5	7.5	7.5	2.1	2.1				
						7.4	18.7		8.1		31.3		96.6		7.5			2.1					
					Bottom	13.8	18.4	18.4	8.1	8.1	31.3	31.3	96.8	96.8	7.5	7.5	7.5	3.7	3.8				
						13.8	18.4		8.1		31.3		96.8		7.5			3.8					
22-Jan-19	Fine	Rough	07:33	11.2	Surface	1.0	18.3	18.3	8.1	8.1	31.1	31.1	92.4	92.4	7.2	7.2	7.2	3.2	3.2	3.3	6	6	7
						1.0	18.3		8.1		31.1		92.4		7.2			3.2					
					Middle	5.6	18.3	18.3	8.1	8.1	31.1	31.1	92.1	92.1	7.2	7.2	7.2	3.1	3.2				
						5.6	18.3		8.1		31.1		92.1		7.2			3.2					
					Bottom	10.2	18.3	18.3	8.1	8.1	31.1	31.1	91.5	91.5	7.1	7.1	7.1	3.6	3.6				
						10.2	18.3		8.1		31.1		91.5		7.1			3.6					
24-Jan-19	Sunny	Moderate	08:51	14.2	Surface	1.0	18.4	18.4	8.1	8.1	30.9	30.9	91.0	91.0	7.1	7.1	7.1	2.7	2.7	3.2	11	11	10
						1.0	18.4		8.1		30.9		91.0		7.1			2.7					
					Middle	7.1	18.4	18.4	8.1	8.1	30.9	30.9	91.0	91.1	7.1	7.1	7.1	3.2	3.3				
						7.1	18.4		8.1		30.9		91.1		7.1			3.3					
					Bottom	13.2	18.4	18.4	8.1	8.1	30.9	30.9	91.6	91.6	7.2	7.2	7.2	3.5	3.5				
						13.2	18.4		8.1		30.9		91.6		7.2			3.5					
26-Jan-19	Sunny	Moderate	10:14	13.7	Surface	1.0	18.4	18.4	8.2	8.2	30.8	30.8	95.8	95.8	7.5	7.5	7.5	2.3	2.3	2.6	7	7	7
						1.0	18.4		8.2		30.8		95.7		7.5			2.3					
					Middle	6.9	18.4	18.4	8.2	8.2	30.8	30.8	95.6	95.6	7.5	7.5	7.5	2.4	2.4				
						6.9	18.4		8.2		30.8		95.6		7.5			2.4					
					Bottom	12.7	18.4	18.4	8.2	8.2	30.9	30.9	95.4	95.4	7.4	7.4	7.4	3.0	3.0				
						12.7	18.4		8.2		30.9		95.4		7.4			3.0					

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at SR5 during Mid-ebb Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	08:21	13.0	Surface	1.0	19.3	19.3	8.1	8.1	33.1	33.1	94.9	94.9	7.2	7.2	7.2	7.8	7.8	7.8	7	7	7
						1.0	19.3		8.1		33.1		94.9		7.2			7.8					
					Middle	6.5	19.3	19.3	8.1	8.1	33.1	33.1	94.7	94.7	7.2	7.2	7.2	7.8	7.8	7.8	7	7	7
						6.5	19.3		8.1		33.1		94.7		7.2			7.8					
					Bottom	12.0	19.3	19.3	8.1	8.1	33.1	33.1	94.2	94.2	7.1	7.1	7.1	7.9	7.9	7.9	7	7	7
						12.0	19.3		8.1		33.1		94.1		7.1			7.9					
3-Jan-19	Rainy	Rough	10:23	12.7	Surface	1.0	18.9	18.9	8.2	8.2	33.3	33.3	100.5	100.5	7.7	7.7	7.7	5.3	5.4	5.4	5	6	6
						1.0	18.9		8.2		33.3		100.5		7.7			5.4					
					Middle	6.4	18.9	18.9	8.2	8.2	33.3	33.3	100.3	100.3	7.7	7.7	7.7	5.5	5.6	5.6	5	6	6
						6.4	18.9		8.2		33.3		100.3		7.7			5.6					
					Bottom	11.7	18.8	18.8	8.2	8.2	33.3	33.3	100.1	100.1	7.6	7.6	7.6	8.1	8.1	8.1	5	5	5
						11.7	18.8		8.2		33.3		100.1		7.6			8.2					
5-Jan-19	Misty	Rough	11:36	13.2	Surface	1.0	19.1	19.1	8.1	8.1	32.9	32.9	94.3	94.3	7.2	7.2	7.2	7.8	7.8	7.8	2	2	3
						1.0	19.1		8.1		32.9		94.3		7.2			7.8					
					Middle	6.6	19.1	19.1	8.2	8.2	32.9	32.9	93.9	93.9	7.2	7.2	7.2	9.5	9.5	9.5	2	2	2
						6.6	19.1		8.2		32.9		93.9		7.2			9.5					
					Bottom	12.2	19.0	19.0	8.2	8.2	32.9	32.9	93.2	93.2	7.1	7.1	7.1	10.2	10.1	10.1	4	4	4
						12.2	19.0		8.2		32.9		93.1		7.1			10.1					
8-Jan-19	Cloudy	Rough	13:21	12.7	Surface	1.0	18.6	18.6	8.2	8.2	33.1	33.1	95.1	95.1	7.3	7.3	7.3	8.2	8.2	8.2	2	2	2
						1.0	18.6		8.2		33.1		95.1		7.3			8.2					
					Middle	6.4	18.4	18.4	8.2	8.2	33.1	33.1	94.6	94.6	7.3	7.3	7.3	8.2	8.2	8.2	2	2	2
						6.4	18.4		8.2		33.1		94.6		7.3			8.2					
					Bottom	11.7	18.5	18.5	8.2	8.2	33.2	33.2	93.8	93.8	7.2	7.2	7.2	8.2	8.2	8.2	2	2	2
						11.7	18.5		8.2		33.2		93.8		7.2			8.2					
10-Jan-19	Cloudy	Rough	14:34	11.1	Surface	1.0	18.8	18.8	8.1	8.1	32.5	32.5	105.2	105.2	8.1	8.1	8.0	2.1	2.1	2.1	5	5	5
						1.0	18.8		8.1		32.5		105.2		8.1			2.1					
					Middle	5.6	18.7	18.7	8.1	8.1	32.6	32.6	103.2	103.2	7.9	7.9	7.9	2.2	2.2	2.2	4	4	4
						5.6	18.7		8.1		32.6		103.1		7.9			2.2					
					Bottom	10.1	18.8	18.8	8.1	8.1	32.7	32.7	101.2	101.2	7.8	7.8	7.8	3.7	3.7	3.7	5	5	5
						10.1	18.8		8.1		32.7		101.2		7.8			3.7					
12-Jan-19	Misty	Rough	16:04	11.2	Surface	1.0	18.8	18.8	8.2	8.2	32.4	32.4	103.7	103.6	8.0	8.0	7.9	3.0	3.0	3.0	2	2	2
						1.0	18.8		8.2		32.4		103.5		8.0			3.0					
					Middle	5.6	18.8	18.8	8.2	8.2	32.5	32.5	101.7	101.6	7.8	7.8	7.8	3.5	3.7	3.7	2	2	2
						5.6	18.8		8.2		32.5		101.5		7.8			3.8					
					Bottom	10.2	19.0	19.0	8.2	8.2	32.6	32.6	100.5	100.5	7.7	7.7	7.7	4.2	4.3	4.3	1	1	1
						10.2	19.0		8.2		32.6		100.4		7.7			4.4					
15-Jan-19	Cloudy	Calm	05:11	12.8	Surface	1.0	19.1	19.1	8.2	8.2	32.1	32.1	95.6	95.7	7.3	7.3	7.3	1.9	2.0	2.0	2	2	1
						1.0	19.1		8.2		32.1		95.7		7.3			2.0					
					Middle	6.4	19.1	19.1	8.2	8.2	32.1	32.1	96.1	96.1	7.4	7.4	7.4	4.1	4.1	4.1	1	1	1
						6.4	19.1		8.2		32.1		96.1		7.4			4.1					
					Bottom	11.8	19.0	19.0	8.2	8.2	32.0	32.0	96.9	97.2	7.4	7.5	7.5	3.2	3.3	3.3	<1	<1	<1
						11.8	19.0		8.2		32.0		97.4		7.5			3.3					
17-Jan-19	Fine	Moderate	08:00	12.8	Surface	1.0	18.4	18.4	8.3	8.3	31.4	31.4	96.1	96.1	7.5	7.5	7.5	2.1	2.1	2.1	5	5	5
						1.0	18.4		8.3		31.4		96.1		7.5			2.2					
					Middle	6.4	18.4	18.4	8.3	8.3	31.4	31.4	95.7	95.7	7.5	7.4	7.4	2.3	2.3	2.3	6	6	6
						6.4	18.4		8.3		31.4		95.7		7.4			2.3					
					Bottom	11.8	18.4	18.4	8.3	8.3	31.4	31.4	95.5	95.5	7.4	7.4	7.4	2.3	2.3	2.3	7	7	7
						11.8	18.4		8.3		31.4		95.5		7.4			2.3					
19-Jan-19	Cloudy	Moderate	10:05	11.0	Surface	1.0	18.4	18.4	8.1	8.1	31.3	31.3	97.1	97.1	7.6	7.6	7.5	2.3	2.3	2.3	3	3	3
						1.0	18.4		8.1		31.3		97.0		7.6			2.3					
					Middle	5.5	18.4	18.4	8.1	8.1	31.3	31.3	96.6	96.6	7.5	7.5	7.5	2.4	2.4	2.4	2	2	2
						5.5	18.4		8.1		31.3		96.6		7.5			2.5					
					Bottom	10.0	18.4	18.4	8.1	8.1	31.3	31.3	96.3	96.4	7.5	7.5	7.5	2.5	2.5	2.5	4	4	4
						10.0	18.4		8.1		31.3		96.4		7.5			2.5					
22-Jan-19	Fine	Moderate	12:54	11.6	Surface	1.0	18.3	18.3	8.2	8.2	31.1	31.1	97.7	97.7	7.6	7.6	7.6	2.9	2.9	2.9	6	6	6
						1.0	18.3		8.2		31.1		97.7		7.6			2.9					
					Middle	5.8	18.3	18.3	8.2	8.2	31.1	31.1	97.8	97.9	7.7	7.7	7.7	2.9	2.9	2.9	8	8	8
						5.8	18.3		8.2		31.1		97.9		7.7			2.9					
					Bottom	10.6	18.0	18.0	8.2	8.2	31.1	31.1	97.0	97.0	7.6	7.6	7.6	3.7	3.7	3.7	10	10	10
						10.6	18.0		8.2		31.1		96.9		7.6			3.8					
24-Jan-19	Sunny	Moderate	14:24	12.2	Surface	1.0	18.3	18.3	8.2	8.2	31.1	31.1	98.3	98.3	7.7	7.7	7.6	1.6	1.6	1.6	8	8	8
						1.0	18.3		8.2		31.1		98.2		7.7			1.6					
					Middle	6.1	18.3	18.3	8.2	8.2	31.1	31.1	97.4	97.4	7.6	7.6	7.6	2.2	2.3	2.3	8	8	8
						6.1	18.3		8.2		31.1		97.4		7.6			2.4					
					Bottom	11.2	18.3	18.3	8.2	8.2	31.1	31.1	97.3	97.3	7.6	7.6	7.6	6.0	6.1	6.1	5	5	5
						11.2	18.3		8.2		31.1		97.3		7.6			6.2					
26-Jan-19	Sunny	Moderate	16:07	12.1	Surface	1.0	19.0	19.0	8.3	8.3	31.4	31.4	116.3	116.3	9.0	9.0	8.9	1.4	1.3	1.3	7	7	7
						1.0	19.0		8.3		31.4		116.3		9.0			1.3					
					Middle	6.1	19.0	19.0	8.3	8.3	31.4	31.4	116.1	116.1	8.9	8.9	8.9	3.2	3.2	3.2	6	6	6
						6.1	19.0		8.3		31.4		116.1		8.9			3.3					
					Bottom	11.1	18.5	18.5	8.3	8.3	31.4	31.4	113.6	113.6	8.8	8.8	8.8	8.3	8.3	8.3	5	5	5
						11.1	18.5		8.3		31.4		113.6		8.8			8.3					

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher



Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR5 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
1-Jan-19	Cloudy	Rough	14:21	12.0	Surface	1.0	19.2	19.2	8.1	8.1	33.2	33.2	95.4	95.5	7.2	7.2	7.2	9.1	9.1	9.4	8	9	8	
						1.0	19.2		8.1		33.2		95.5		7.2			9.1						
					Middle	6.0	19.2	19.2	8.1	8.1	33.2	33.2	95.3	95.3	7.2	7.2	7.2	9.2	9.2		9.2	7		7
						6.0	19.2		8.1		33.2		95.3		7.2			9.2						
					Bottom	11.0	19.2	19.2	8.1	8.1	33.2	33.2	95.5	95.6	7.3	7.3	7.3	9.8	9.8		9.8	9		9
						11.0	19.2		8.1		33.2		95.6		7.3			9.8						
3-Jan-19	Rainy	Moderate	15:35	11.6	Surface	1.0	18.9	18.9	8.2	8.2	33.2	33.2	100.5	100.5	7.7	7.7	7.7	5.1	5.0	5.3	6	6	6	
						1.0	18.9		8.2		33.2		100.5		7.7			5.0						
					Middle	5.8	18.9	18.9	8.2	8.2	33.2	33.2	100.3	100.3	7.7	7.7	7.7	5.4	5.4		5.4	7		7
						5.8	18.9		8.2		33.2		100.3		7.7			5.4						
					Bottom	10.6	18.9	18.9	8.2	8.2	33.2	33.2	100.1	100.1	7.6	7.6	7.6	5.3	5.3		5.3	6		6
						10.6	18.9		8.2		33.2		100.1		7.6			5.4						
5-Jan-19	Misty	Rough	16:32	11.3	Surface	1.0	19.3	19.3	8.2	8.2	32.9	32.9	94.9	94.9	7.2	7.2	7.2	5.6	5.6	7.1	2	2	2	
						1.0	19.3		8.2		32.9		94.9		7.2			5.6						
					Middle	5.7	19.2	19.2	8.2	8.2	32.9	32.9	95.3	95.3	7.2	7.2	7.2	6.2	6.3		6.3	2		2
						5.7	19.2		8.2		32.9		95.3		7.3			6.4						
					Bottom	10.3	19.0	19.1	8.2	8.2	32.9	32.9	94.4	94.4	7.2	7.2	7.2	9.2	9.2		9.2	2		2
						10.3	19.1		8.2		32.9		94.3		7.2			9.3						
8-Jan-19	Cloudy	Rough	08:21	12.8	Surface	1.0	18.6	18.6	8.1	8.1	33.3	33.3	97.7	97.7	7.5	7.5	7.5	11.0	11.0	11.4	4	4	5	
						1.0	18.6		8.1		33.3		97.6		7.5			11.1						
					Middle	6.4	18.6	18.6	8.1	8.1	33.3	33.3	98.0	98.1	7.5	7.5	7.5	11.5	11.5		11.5	5		6
						6.4	18.6		8.1		33.3		98.1		7.5			11.5						
					Bottom	11.8	18.6	18.6	8.1	8.1	33.3	33.3	98.6	98.6	7.6	7.6	7.6	11.8	11.8		11.8	7		7
						11.8	18.6		8.1		33.3		98.6		7.6			11.7						
10-Jan-19	Fine	Moderate	09:29	11.3	Surface	1.0	19.0	19.0	8.0	8.0	32.8	32.8	92.5	92.5	7.1	7.1	7.1	3.0	3.0	4.9	6	6	5	
						1.0	19.0		8.0		32.8		92.5		7.1			3.0						
					Middle	5.7	19.0	19.0	8.1	8.1	32.8	32.8	93.5	93.6	7.1	7.1	7.1	3.1	3.1		3.1	4		4
						5.7	19.0		8.1		32.8		93.6		7.2			3.1						
					Bottom	10.3	19.0	19.0	8.1	8.1	32.8	32.8	94.8	94.8	7.3	7.2	7.2	8.8	8.7		8.7	4		5
						10.3	19.0		8.1		32.8		94.7		7.2			8.7						
12-Jan-19	Misty	Moderate	10:29	10.8	Surface	1.0	19.3	19.3	8.2	8.2	32.7	32.7	92.3	92.3	7.0	7.0	7.0	3.7	3.7	5.1	1	1	1	
						1.0	19.3		8.2		32.7		92.3		7.0			3.7						
					Middle	5.4	19.3	19.3	8.2	8.2	32.7	32.7	93.0	93.0	7.1	7.1	7.1	4.4	4.3		4.3	2		2
						5.4	19.3		8.2		32.7		93.0		7.1			4.4						
					Bottom	9.8	19.3	19.3	8.2	8.2	32.7	32.7	92.5	92.5	7.0	7.0	7.0	7.5	7.4		7.4	1		1
						9.8	19.3		8.2		32.7		92.4		7.0			7.3						
15-Jan-19	Cloudy	Moderate	12:33	11.8	Surface	1.0	19.2	19.2	8.2	8.2	32.4	32.4	101.6	101.6	7.8	7.8	7.7	2.4	2.4	2.6	<1	<1	<1	
						1.0	19.1		8.2		32.4		101.5		7.8			2.5						
					Middle	5.9	19.0	19.0	8.2	8.2	32.4	32.4	101.0	101.0	7.7	7.7	7.7	2.6	2.6		2.6	<1		<1
						5.9	19.0		8.2		32.4		101.0		7.7			2.7						
					Bottom	10.8	19.0	19.0	8.2	8.2	32.4	32.4	100.9	100.9	7.7	7.7	7.7	2.7	2.7		2.7	<1		<1
						10.8	19.0		8.2		32.4		100.8		7.7			2.8						
17-Jan-19	Fine	Moderate	13:44	11.5	Surface	1.0	18.6	18.6	8.3	8.3	31.2	31.2	98.6	98.6	7.7	7.7	7.6	1.8	1.8	2.6	8	9	8	
						1.0	18.5		8.3		31.2		98.5		7.7			1.8						
					Middle	5.8	18.3	18.3	8.3	8.3	31.3	31.3	97.8	97.8	7.6	7.6	7.6	2.5	2.6		2.6	9		9
						5.8	18.3		8.3		31.3		97.8		7.6			2.6						
					Bottom	10.5	18.4	18.4	8.3	8.3	31.3	31.3	97.7	97.7	7.6	7.6	7.6	3.6	3.5		3.5	7		8
						10.5	18.4		8.3		31.3		97.6		7.6			3.5						
19-Jan-19	Cloudy	Moderate	15:18	12.2	Surface	1.0	18.9	18.9	8.1	8.1	31.3	31.3	99.8	99.8	7.7	7.7	7.7	2.4	2.4	2.5	4	5	4	
						1.0	18.9		8.1		31.3		99.8		7.7			2.4						
					Middle	6.1	18.6	18.6	8.1	8.1	31.3	31.3	98.8	98.8	7.7	7.7	7.7	2.2	2.2		2.2	3		4
						6.1	18.6		8.1		31.3		98.7		7.7			2.2						
					Bottom	11.2	18.4	18.4	8.1	8.1	31.3	31.3	97.4	97.4	7.6	7.6	7.6	3.0	3.0		3.0	3		3
						11.2	18.4		8.1		31.3		97.4		7.6			3.0						
22-Jan-19	Fine	Rough	07:41	11.0	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	96.5	96.5	7.6	7.6	7.6	5.2	5.4	6.5	8	8	8	
						1.0	18.1		8.2		31.1		96.5		7.6			5.5						
					Middle	5.5	18.2	18.2	8.2	8.2	31.1	31.1	96.1	96.1	7.5	7.5	7.5	6.4	6.4		6.4	7		8
						5.5	18.2		8.2		31.1		96.1		7.5			6.5						
					Bottom	10.0	18.2	18.2	8.2	8.2	31.1	31.1	95.3	95.3	7.5	7.5	7.5	7.7	7.7		7.7	9		9
						10.0	18.2		8.2		31.1		95.2		7.5			7.6						
24-Jan-19	Sunny	Moderate	09:01	10.8	Surface	1.0	18.4	18.4	8.1	8.1	30.9	30.9	91.8	91.8	7.2	7.2	7.2	3.3	3.4	3.5	9	9	7	
						1.0	18.4		8.1		30.9		91.8		7.2			3.4						
					Middle	5.4	18.4	18.4	8.1	8.1	30.9	30.9	91.9	91.9	7.2	7.2	7.2	3.1	3.1		3.1	6		7
						5.4	18.4		8.1		30.9		91.9		7.2			3.0						
					Bottom	9.8	18.4	18.4	8.1	8.1	30.9	30.9	92.8	93.0	7.3	7.3	7.3	3.9	3.9		3.9	6		6
						9.8	18.4		8.1		30.9		93.1		7.3			4.0						
26-Jan-19	Sunny	Moderate	10:21	11.8	Surface	1.0	18.4	18.4	8.2	8.2	31.0	31.0	96.7	96.7	7.5	7.5	7.5	2.1	2.1	2.5	8	8	6	
						1.0	18.4		8.2		31.0		96.6		7.5			2.1						
					Middle	5.9	18.4	18.4	8.2	8.2	31.0	31.0	96.6	96.6	7.5	7.5	7.5	2.5	2.5		2.5	6		6
						5.9	18.4		8.2		31.0		96.6		7.5			2.6						
					Bottom	10.8	18.4	18.4	8.2	8.2	31.0	31.0	97.2	97.3	7.6	7.6	7.6	2.7	2.7		2.7	6		6
						10.8	18.4		8.2		31.0		97.4		7.6			2.7						

Remarks: DA: Depth-averaged  
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR6 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
1-Jan-19	Cloudy	Rough	07:43	14.5	Surface	1.0	19.2	19.2	8.1	8.1	33.0	33.0	94.9	94.9	7.2	7.2	7.2	10.5	10.5	10.3	10	11	12	
						1.0	19.2		8.1		33.0		94.9		7.2			10.5						
					Middle	7.3	19.2	19.2	8.1	8.1	33.1	33.1	94.5	94.5	7.2	7.2	7.2	10.2	10.3		10.3	12		12
						7.3	19.2		8.1		33.1		94.5		7.2			10.3						
					Bottom	13.5	19.2	19.2	8.1	8.1	33.1	33.1	94.3	94.3	7.2	7.2	7.2	10.1	10.0		10.0	12		12
						13.5	19.2		8.1		33.1		94.2		7.2			10.0						
3-Jan-19	Rainy	Moderate	09:57	15.0	Surface	1.0	18.9	18.9	8.2	8.2	33.1	33.1	99.4	99.4	7.6	7.6	7.6	5.3	5.2	6.3	2	3	3	
						1.0	18.9		8.2		33.1		99.4		7.6			5.2						
					Middle	7.5	18.9	18.9	8.2	8.2	33.1	33.1	99.2	99.2	7.6	7.6	7.6	6.0	6.0		6.0	3		4
						7.5	18.9		8.2		33.1		99.2		7.6			6.0						
					Bottom	14.0	18.9	18.9	8.2	8.2	33.2	33.2	98.8	98.8	7.5	7.5	7.5	7.6	7.7		7.7	4		4
						14.0	18.9		8.2		33.2		98.8		7.5			7.7				3		
5-Jan-19	Misty	Rough	11:29	15.3	Surface	1.0	18.4	18.4	8.2	8.2	32.2	32.2	92.9	92.9	7.2	7.2	7.2	6.3	6.3	6.3	1	2	2	
						1.0	18.4		8.2		32.2		92.9		7.2			6.3						
					Middle	7.7	18.4	18.4	8.2	8.2	32.2	32.2	91.5	91.5	7.1	7.1	7.1	6.3	6.3		6.3	2		2
						7.7	18.4		8.2		32.2		91.4		7.1			6.3						
					Bottom	14.3	18.4	18.4	8.1	8.1	32.2	32.2	89.5	89.5	6.9	6.9	6.9	6.2	6.2		6.2	2		3
						14.3	18.4		8.1		32.2		89.4		6.9			6.3						
8-Jan-19	Cloudy	Rough	13:50	14.8	Surface	1.0	18.7	18.7	8.2	8.2	31.9	31.9	86.9	86.9	6.7	6.7	6.9	13.1	13.1	10.9	2	2	3	
						1.0	18.7		8.2		31.9		86.9		6.7			13.1						
					Middle	7.4	18.7	18.7	8.2	8.2	32.3	32.3	90.3	90.3	7.0	7.0	7.0	10.2	10.2		10.2	2		2
						7.4	18.7		8.2		32.3		90.3		7.0			10.2						
					Bottom	13.8	18.6	18.6	8.2	8.2	32.2	32.2	92.8	92.8	7.2	7.2	7.2	9.5	9.5		9.5	5		6
						13.8	18.6		8.2		32.2		92.8		7.2			9.4						
10-Jan-19	Cloudy	Rough	14:56	15.1	Surface	1.0	18.7	18.7	8.1	8.1	32.5	32.5	104.0	104.0	8.0	8.0	7.9	2.4	2.4	3.3	4	4	5	
						1.0	18.7		8.1		32.5		104.0		8.0			2.4						
					Middle	7.6	18.6	18.6	8.1	8.1	32.5	32.5	102.6	102.6	7.9	7.9	7.9	3.4	3.4		3.4	5		5
						7.6	18.6		8.1		32.5		102.6		7.9			3.4						
					Bottom	14.1	18.7	18.7	8.1	8.1	32.6	32.6	102.2	102.2	7.9	7.9	7.9	4.1	4.1		4.1	6		6
						14.1	18.7		8.1		32.6		102.2		7.9			4.1						
12-Jan-19	Misty	Rough	16:08	15.2	Surface	1.0	18.8	18.8	8.2	8.2	32.3	32.3	104.1	104.1	8.0	8.0	8.0	2.6	2.6	3.6	3	3	2	
						1.0	18.8		8.2		32.3		104.0		8.0			2.6						
					Middle	7.6	18.7	18.7	8.2	8.2	32.4	32.4	103.0	103.0	7.9	7.9	7.9	3.3	3.3		3.3	2		2
						7.6	18.7		8.2		32.4		103.0		7.9			3.3						
					Bottom	14.2	18.7	18.7	8.2	8.2	32.4	32.4	102.0	102.0	7.9	7.9	7.9	5.1	5.1		5.1	1		1
						14.2	18.7		8.2		32.4		101.9		7.9			5.0						
15-Jan-19	Cloudy	Moderate	04:28	14.6	Surface	1.0	18.9	18.9	8.1	8.1	32.4	32.4	101.6	101.6	7.8	7.8	7.8	1.2	1.2	1.7	<1	2	1	
						1.0	18.9		8.1		32.4		101.6		7.8			1.2						
					Middle	7.3	18.8	18.8	8.1	8.1	32.4	32.4	101.2	101.2	7.8	7.8	7.8	1.7	1.7		1.7	<1		1
						7.3	18.8		8.1		32.4		101.2		7.8			1.8						
					Bottom	13.6	18.8	18.8	8.1	8.1	32.4	32.4	101.3	101.6	7.8	7.8	7.8	2.0	2.0		2.0	<1		<1
						13.6	18.8		8.1		32.4		101.8		7.8			2.1						
17-Jan-19	Fine	Moderate	07:40	15.1	Surface	1.0	18.2	18.2	8.3	8.3	31.2	31.2	96.4	96.4	7.5	7.5	7.5	2.2	2.2	2.2	6	6	6	
						1.0	18.2		8.3		31.2		96.3		7.5			2.2						
					Middle	7.6	18.2	18.2	8.3	8.3	31.2	31.2	95.9	95.9	7.5	7.5	7.5	2.2	2.2		2.2	7		8
						7.6	18.2		8.3		31.2		95.9		7.5			2.2						
					Bottom	14.1	18.2	18.2	8.3	8.3	31.2	31.2	95.3	95.3	7.5	7.5	7.5	2.1	2.1		2.1	5		5
						14.1	18.2		8.3		31.2		95.2		7.5			2.1						
19-Jan-19	Cloudy	Moderate	09:37	13.9	Surface	1.0	18.2	18.2	8.1	8.1	31.2	31.2	97.7	97.7	7.7	7.7	7.6	2.7	2.7	3.0	4	4	5	
						1.0	18.2		8.1		31.2		97.7		7.7			2.7						
					Middle	7.0	18.2	18.2	8.1	8.1	31.2	31.2	97.0	97.0	7.6	7.6	7.6	3.1	3.1		3.1	5		5
						7.0	18.2		8.1		31.2		97.0		7.6			3.1						
					Bottom	12.9	18.2	18.2	8.1	8.1	31.2	31.2	96.7	96.7	7.6	7.6	7.6	3.1	3.1		3.1	4		5
						12.9	18.2		8.1		31.2		96.7		7.6			3.1						
22-Jan-19	Fine	Rough	13:04	13.8	Surface	1.0	18.3	18.3	8.2	8.2	31.1	31.1	99.1	99.1	7.7	7.7	7.7	2.7	2.7	3.6	6	7	7	
						1.0	18.3		8.2		31.1		99.0		7.7			2.7						
					Middle	6.9	18.2	18.2	8.2	8.2	31.1	31.1	97.8	97.8	7.7	7.7	7.7	3.3	3.4		3.4	6		6
						6.9	18.2		8.2		31.1		97.8		7.7			3.5						
					Bottom	12.8	18.2	18.2	8.2	8.2	31.1	31.1	96.9	96.9	7.6	7.6	7.6	4.8	4.8		4.8	7		8
						12.8	18.2		8.2		31.1		96.9		7.6			4.7						
24-Jan-19	Sunny	Moderate	14:19	14.5	Surface	1.0	18.5	18.5	8.2	8.2	31.1	31.1	101.6	101.6	7.9	7.9	7.9	1.7	1.7	2.9	8	8	9	
						1.0	18.5		8.2		31.1		101.6		7.9			1.7						
					Middle	7.3	18.2	18.2	8.2	8.2	31.1	31.1	99.9	99.9	7.8	7.8	7.8	3.4	3.3		3.3	6		6
						7.3	18.2		8.2		31.1		99.9		7.8			3.3						
					Bottom	13.5	18.3	18.3	8.2	8.2	31.1	31.1	99.6	99.6	7.8	7.8	7.8	3.7	3.7		3.7	12		12
						13.5	18.3		8.2		31.1		99.6		7.8			3.7						
26-Jan-19	Sunny	Moderate	16:18	14.7	Surface	1.0	18.6	18.6	8.3	8.3	31.4	31.4	115.2	115.2	8.9	8.9	8.9	1.2	1.2	1.3	6	7	6	
						1.0	18.6		8.3		31.4		115.1		8.9			1.2						
					Middle	7.4	18.6	18.6	8.3	8.3	31.4	31.4	115.0	115.0	8.9	8.9	8.9	1.3	1.3		1.3	5		6
						7.4	18.6		8.3		31.4		115.0		8.9			1.4						
					Bottom	13.7	18.6	18.6	8.3	8.3	31.4	31.4	115.0	115.0	8.9	8.9	8.9	1.4	1.4		1.4	7		7
						13.7	18.6		8.3		31.4		115.0		8.9			1.4						

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results at SR6 during Mid-flood Tide																								
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
1-Jan-19	Cloudy	Rough	14:45	15.3	Surface	1.0	19.2	19.2	8.1	8.1	33.0	33.0	95.4	95.4	7.3	7.3	7.3	9.2	9.2	9.1	11	11	10	
						1.0	19.2		8.1		33.0		95.4		7.3			9.2			10			
					Middle	7.7	19.2	19.2	8.1	8.1	33.0	33.0	95.4	95.4	7.3	7.3	7.3	7.3	9.2		9.2	10		10
						7.7	19.2		8.1		33.0		95.4		7.3		9.2		10					
					Bottom	14.3	19.2	19.2	8.1	8.1	33.0	33.0	95.7	95.7	7.3	7.3	7.3	7.3	8.8		8.8	10		10
						14.3	19.2		8.1		33.0		95.7		7.3		8.8		10					
3-Jan-19	Cloudy	Rough	15:42	15.5	Surface	1.0	19.0	19.0	8.2	8.2	33.1	33.1	100.8	100.8	7.7	7.7	7.7	5.2	5.2	5.4	5	5	6	
						1.0	19.0		8.2		33.1		100.8		7.7			5.3			5			
					Middle	7.8	19.0	19.0	8.2	8.2	33.1	33.1	100.3	100.3	7.6	7.6	7.6	7.6	5.2		5.2	6		6
						7.8	19.0		8.2		33.1		100.3		7.6		5.2		6					
					Bottom	14.5	19.0	19.0	8.2	8.2	33.1	33.1	100.0	100.0	7.6	7.6	7.6	7.6	5.6		5.8	6		6
						14.5	19.0		8.2		33.1		100.0		7.6		6.0		6					
5-Jan-19	Misty	Moderate	17:01	14.9	Surface	1.0	18.8	18.8	8.2	8.2	32.2	32.2	99.5	99.5	7.7	7.6	7.6	5.7	5.7	5.9	2	2	2	
						1.0	18.8		8.2		32.2		99.5		7.6			5.7			2			
					Middle	7.5	18.7	18.7	8.2	8.2	32.2	32.2	98.4	98.3	7.6	7.6	7.6	7.6	5.8		5.8	3		3
						7.5	18.7		8.2		32.2		98.2		7.6		5.8		2					
					Bottom	13.9	18.6	18.6	8.2	8.2	32.3	32.3	96.4	96.4	7.4	7.4	7.4	7.4	6.1		6.1	2		2
						13.9	18.6		8.2		32.3		96.3		7.4		6.1		2					
8-Jan-19	Cloudy	Rough	07:41	14.1	Surface	1.0	18.7	18.7	8.2	8.2	33.2	33.1	93.8	93.8	7.2	7.2	7.2	10.2	10.2	10.3	5	5	4	
						1.0	18.7		8.2		33.1		93.8		7.2			10.2			4			
					Middle	7.1	18.7	18.7	8.2	8.2	33.1	33.1	93.2	93.2	7.1	7.1	7.1	7.1	10.3		10.3	3		3
						7.1	18.7		8.2		33.1		93.2		7.1		10.3		4					
					Bottom	13.1	18.7	18.7	8.2	8.2	33.1	33.1	93.3	93.3	7.1	7.1	7.1	7.1	10.3		10.3	4		4
						13.1	18.7		8.2		33.2		93.3		7.1		10.4		3					
10-Jan-19	Fine	Rough	08:55	14.6	Surface	1.0	18.5	18.5	8.1	8.1	32.4	32.4	101.6	101.6	7.9	7.9	7.8	3.1	3.1	4.0	4	4	4	
						1.0	18.4		8.1		32.4		101.6		7.9			3.1			4			
					Middle	7.3	18.4	18.4	8.1	8.1	32.4	32.4	101.1	101.1	7.8	7.8	7.8	7.8	3.5		3.5	4		4
						7.3	18.4		8.1		32.4		101.1		7.8		3.5		4					
					Bottom	13.6	18.5	18.5	8.1	8.1	32.5	32.5	100.1	100.1	7.7	7.7	7.7	7.7	5.2		5.4	5		5
						13.6	18.5		8.1		32.5		100.0		7.7		5.6		4					
12-Jan-19	Misty	Rough	10:10	14.4	Surface	1.0	18.7	18.7	8.2	8.2	32.4	32.4	103.0	103.0	7.9	7.9	7.9	2.6	2.7	4.0	<1	<1	1	
						1.0	18.7		8.2		32.4		103.0		7.9			2.7			<1			
					Middle	7.2	18.7	18.7	8.2	8.2	32.4	32.4	102.3	102.3	7.9	7.9	7.9	7.9	3.0		3.0	1		1
						7.2	18.7		8.2		32.4		102.2		7.9		3.0		1					
					Bottom	13.4	18.7	18.7	8.2	8.2	32.4	32.4	101.5	101.5	7.8	7.8	7.8	7.8	6.4		6.4	2		2
						13.4	18.7		8.2		32.4		101.4		7.8		6.4		2					
15-Jan-19	Cloudy	Moderate	12:45	15.3	Surface	1.0	18.8	18.8	8.2	8.2	32.3	32.3	101.8	101.8	7.8	7.8	7.8	1.4	1.4	1.5	<1	2	1	
						1.0	18.8		8.2		32.3		101.7		7.8			1.5			2			
					Middle	7.7	18.7	18.7	8.2	8.2	32.3	32.3	101.3	101.3	7.8	7.8	7.8	7.8	1.5		1.5	<1		2
						7.7	18.7		8.2		32.3		101.2		7.8		1.5		2					
					Bottom	14.3	18.7	18.7	8.2	8.2	32.3	32.3	101.3	101.3	7.8	7.8	7.8	7.8	1.5		1.5	<1		<1
						14.3	18.7		8.2		32.3		101.3		7.8		1.5		<1					
17-Jan-19	Fine	Moderate	13:56	14.7	Surface	1.0	18.3	18.3	8.3	8.3	31.2	31.2	97.7	97.7	7.6	7.6	7.6	2.0	2.0	2.0	7	7	6	
						1.0	18.3		8.3		31.2		97.7		7.6			2.0			7			
					Middle	7.4	18.2	18.2	8.3	8.3	31.2	31.2	97.3	97.3	7.6	7.6	7.6	7.6	2.0		2.0	6		6
						7.4	18.2		8.3		31.2		97.3		7.6		2.0		7					
					Bottom	13.7	18.2	18.2	8.3	8.3	31.2	31.2	97.2	97.2	7.6	7.6	7.6	7.6	2.0		2.0	5		5
						13.7	18.2		8.3		31.2		97.2		7.6		2.0		6					
19-Jan-19	Cloudy	Moderate	15:25	15.1	Surface	1.0	18.5	18.5	8.2	8.2	31.2	31.2	99.1	99.1	7.7	7.7	7.7	2.4	2.4	3.6	4	5	7	
						1.0	18.5		8.2		31.2		99.1		7.7			2.4			5			
					Middle	7.6	18.2	18.2	8.2	8.2	31.2	31.2	97.9	97.9	7.7	7.7	7.7	7.7	5.1		5.2	8		8
						7.6	18.2		8.2		31.2		97.9		7.7		5.3		8					
					Bottom	14.1	18.2	18.2	8.1	8.1	31.2	31.2	97.6	97.6	7.6	7.6	7.6	7.6	3.0		3.2	8		8
						14.1	18.2		8.1		31.2		97.6		7.6		3.3		7					
22-Jan-19	Fine	Rough	06:41	14.6	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	97.7	97.7	7.7	7.7	7.6	3.0	2.9	3.3	10	10	10	
						1.0	18.1		8.2		31.1		97.7		7.7			2.9			10			
					Middle	7.3	18.1	18.1	8.2	8.2	31.1	31.1	97.3	97.3	7.6	7.6	7.6	7.6	3.0		3.0	8		8
						7.3	18.1		8.2		31.1		97.3		7.6		3.0		10					
					Bottom	13.6	18.1	18.1	8.2	8.2	31.1	31.1	96.3	96.3	7.6	7.6	7.6	7.6	3.9		3.9	10		10
						13.6	18.1		8.2		31.1		96.2		7.6		4.0		9					
24-Jan-19	Sunny	Moderate	08:30	13.7	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	99.5	99.5	7.8	7.8	7.8	2.0	2.0	2.3	10	10	9	
						1.0	18.1		8.2		31.1		99.5		7.8			2.1			9			
					Middle	6.9	18.0	18.0	8.2	8.2	31.1	31.1	99.3	99.3	7.8	7.8	7.8	7.8	2.3		2.2	9		9
						6.9	18.0		8.2		31.1		99.3		7.8		2.2		8					
					Bottom	12.7	18.0	18.0	8.2	8.2	31.1	31.1	99.1	99.1	7.8	7.8	7.8	7.8	2.7		2.7	8		8
						12.7	18.0		8.2		31.1		99.1		7.8		2.7		8					
26-Jan-19	Sunny	Moderate	10:01	13.7	Surface	1.0	18.4	18.4	8.2	8.2	31.0	31.0	96.0	96.0	7.5	7.5	7.5	2.0	2.0	2.3	8	8	7	
						1.0	18.4		8.2		31.0		95.9		7.5			2.1			8			
					Middle	6.9	18.4	18.4	8.2	8.2	31.0	31.0	95.7	95.7	7.5	7.5	7.5	7.5	2.3		2.3	6		6
						6.9	18.4		8.2		31.0		95.7		7.5		2.3		6					
					Bottom	12.7	18.4	18.4	8.2	8.2	31.0	31.0	95.7	95.7	7.5	7.5	7.5	7.5	2.7		2.7	6		6
						12.7	18.4		8.2		31.0		95.7		7.5		2.7		6					

Remarks: DA: Depth-averaged  
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR7 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
1-Jan-19	Cloudy	Rough	08:01	21.9	Surface	1.0	19.2	19.2	8.1	8.1	32.9	32.9	94.5	94.5	7.2	7.2	7.2	11.6	11.6	12.0	12	12	13
						1.0	19.2		8.1		32.9		94.2		7.2			11.6			12		
					Middle	11.0	19.2	19.2	8.1	8.1	32.9	32.9	94.2	94.2	7.2	7.2	12.3	12.3	14		14		
						11.0	19.2	19.2	8.1	8.1	32.9	32.9	94.2	94.2	7.2	7.2	12.4	12.3	13		14		
					Bottom	20.9	19.2	19.2	8.1	8.1	33.0	33.0	93.9	93.9	7.1	7.1	12.0	12.0	13		14		
						20.9	19.2	19.2	8.1	8.1	33.0	33.0	93.9	93.9	7.1	7.1	12.1	12.0	14		14		
3-Jan-19	Rainy	Rough	10:14	21.6	Surface	1.0	19.1	19.1	8.2	8.2	33.1	33.1	99.5	99.5	7.6	7.6	7.6	6.0	6.0	6.1	4	4	4
						1.0	19.1		8.2		33.1		99.4		7.6			5.9			4		
					Middle	10.8	19.1	19.1	8.2	8.2	33.1	33.1	99.4	99.4	7.6	7.6	6.1	6.1	4		4		
						10.8	19.1	19.1	8.2	8.2	33.1	33.1	99.4	99.4	7.6	7.6	6.1	6.1	3		4		
					Bottom	20.6	19.1	19.1	8.2	8.2	33.1	33.1	99.2	99.2	7.5	7.5	6.3	6.3	3		3		
						20.6	19.1	19.1	8.2	8.2	33.1	33.1	99.2	99.2	7.5	7.5	6.4	6.3	3		3		
5-Jan-19	Misty	Rough	11:48	21.4	Surface	1.0	18.3	18.3	8.2	8.2	32.1	32.1	96.2	96.2	7.5	7.5	7.4	6.3	6.3	6.3	2	2	3
						1.0	18.3		8.2		32.1		96.1		7.5			6.3			2		
					Middle	10.7	18.2	18.2	8.2	8.2	32.2	32.2	95.5	95.5	7.4	7.4	6.3	6.3	3		3		
						10.7	18.2	18.2	8.2	8.2	32.2	32.2	95.5	95.5	7.4	7.4	6.3	6.3	3		3		
					Bottom	20.4	18.3	18.3	8.1	8.1	32.2	32.2	95.2	95.2	7.4	7.4	6.4	6.4	3		3		
						20.4	18.3	18.3	8.1	8.1	32.2	32.2	95.2	95.2	7.4	7.4	6.4	6.4	3		3		
8-Jan-19	Cloudy	Rough	13:29	21.8	Surface	1.0	18.7	18.7	8.2	8.2	32.2	32.2	96.8	96.8	7.5	7.5	7.5	10.1	10.1	10.1	4	4	4
						1.0	18.7		8.2		32.2		96.8		7.5			10.1			3		
					Middle	10.9	18.7	18.7	8.2	8.2	33.0	33.0	96.4	96.4	7.4	7.4	10.0	10.0	4		4		
						10.9	18.7	18.7	8.2	8.2	33.0	33.0	96.4	96.4	7.4	7.4	10.0	10.0	4		4		
					Bottom	20.8	18.7	18.7	8.2	8.2	32.8	32.8	90.2	90.2	6.9	6.9	10.2	10.2	5		5		
						20.8	18.7	18.7	8.2	8.2	32.8	32.8	90.2	90.2	6.9	6.9	10.2	10.2	4		5		
10-Jan-19	Cloudy	Rough	14:34	22.5	Surface	1.0	18.4	18.4	8.1	8.1	32.3	32.3	103.0	103.0	8.0	8.0	8.0	2.1	2.1	2.2	5	5	7
						1.0	18.4		8.1		32.3		103.0		8.0			2.1			5		
					Middle	11.3	18.4	18.4	8.1	8.1	32.3	32.3	102.5	102.5	7.9	7.9	2.3	2.3	8		8		
						11.3	18.4	18.4	8.1	8.1	32.3	32.3	102.5	102.5	7.9	7.9	2.3	2.3	8		8		
					Bottom	21.5	18.4	18.4	8.1	8.1	32.4	32.4	102.2	102.2	7.9	7.9	2.3	2.3	7		8		
						21.5	18.4	18.4	8.1	8.1	32.4	32.4	102.2	102.2	7.9	7.9	2.3	2.3	8		8		
12-Jan-19	Misty	Rough	15:48	22.6	Surface	1.0	19.2	19.2	8.2	8.2	32.4	32.4	104.8	104.8	8.0	8.0	8.0	2.3	2.3	2.8	3	4	3
						1.0	19.1		8.2		32.4		104.7		8.0			2.3			4		
					Middle	11.3	18.6	18.6	8.2	8.2	32.4	32.4	102.5	102.5	7.9	7.9	2.9	2.9	3		4		
						11.3	18.6	18.6	8.2	8.2	32.4	32.4	102.5	102.5	7.9	7.9	2.9	2.9	4		4		
					Bottom	21.6	18.6	18.6	8.2	8.2	32.4	32.4	101.0	101.0	7.8	7.8	3.3	3.3	1		1		
						21.6	18.6	18.6	8.2	8.2	32.4	32.4	101.0	101.0	7.8	7.8	3.3	3.3	1		1		
15-Jan-19	Cloudy	Moderate	04:48	21.3	Surface	1.0	18.8	18.8	8.1	8.1	32.4	32.4	101.6	101.6	7.8	7.8	7.8	1.1	1.1	1.1	2	2	2
						1.0	18.8		8.1		32.4		101.6		7.8			1.1			2		
					Middle	10.7	18.8	18.8	8.1	8.1	32.4	32.4	101.5	101.6	7.8	7.8	1.1	1.1	1		2		
						10.7	18.8	18.8	8.1	8.1	32.4	32.4	101.6	101.6	7.8	7.8	1.1	1.1	1		2		
					Bottom	20.3	18.8	18.7	8.1	8.1	32.4	32.5	102.9	102.9	7.9	7.9	1.2	1.2	2		2		
						20.3	18.6	18.7	8.1	8.1	32.5	32.5	102.9	102.9	7.9	7.9	1.1	1.2	1		2		
17-Jan-19	Fine	Rough	08:00	21.2	Surface	1.0	18.2	18.2	8.3	8.3	31.2	31.2	96.8	96.8	7.6	7.6	7.6	2.0	2.0	2.0	6	6	7
						1.0	18.2		8.3		31.2		96.8		7.6			2.0			6		
					Middle	10.6	18.2	18.2	8.3	8.3	31.2	31.2	96.4	96.4	7.5	7.5	2.0	2.0	8		8		
						10.6	18.2	18.2	8.3	8.3	31.2	31.2	96.3	96.4	7.5	7.5	2.0	2.0	8		8		
					Bottom	20.2	18.2	18.2	8.3	8.3	31.2	31.2	96.1	96.1	7.5	7.5	2.0	2.0	8		8		
						20.2	18.2	18.2	8.3	8.3	31.2	31.2	96.0	96.1	7.5	7.5	2.0	2.0	7		8		
19-Jan-19	Cloudy	Moderate	09:58	22.0	Surface	1.0	18.2	18.2	8.1	8.1	31.2	31.2	97.9	97.9	7.7	7.7	7.6	2.3	2.3	3.0	6	6	5
						1.0	18.2		8.1		31.2		97.9		7.7			2.3			6		
					Middle	11.0	18.2	18.2	8.1	8.1	31.2	31.2	97.1	97.1	7.6	7.6	3.2	3.2	6		6		
						11.0	18.2	18.2	8.1	8.1	31.2	31.2	97.1	97.1	7.6	7.6	3.2	3.2	5		6		
					Bottom	21.0	18.2	18.2	8.1	8.1	31.2	31.2	97.0	97.0	7.6	7.6	3.5	3.5	5		5		
						21.0	18.2	18.2	8.1	8.1	31.2	31.2	97.0	97.0	7.6	7.6	3.5	3.5	4		5		
22-Jan-19	Fine	Rough	12:43	21.8	Surface	1.0	18.2	18.2	8.2	8.2	31.1	31.1	98.3	98.3	7.7	7.7	7.7	3.1	3.1	4.0	10	10	9
						1.0	18.2		8.2		31.1		98.3		7.7			3.1			10		
					Middle	10.9	18.2	18.2	8.2	8.2	31.1	31.1	97.5	97.5	7.6	7.6	4.1	4.1	9		9		
						10.9	18.2	18.2	8.2	8.2	31.1	31.1	97.5	97.5	7.6	7.6	4.2	4.1	9		9		
					Bottom	20.8	18.2	18.2	8.2	8.2	31.1	31.1	96.8	96.8	7.6	7.6	4.8	4.8	7		7		
						20.8	18.2	18.2	8.2	8.2	31.1	31.1	96.8	96.8	7.6	7.6	4.7	4.8	7		7		
24-Jan-19	Sunny	Moderate	14:03	22.0	Surface	1.0	18.2	18.2	8.2	8.2	31.1	31.1	100.8	100.8	7.9	7.9	7.9	1.4	1.4	1.7	9	9	8
						1.0	18.2		8.2		31.1		100.8		7.9			1.4			8		
					Middle	11.0	18.2	18.2	8.2	8.2	31.1	31.1	100.1	100.1	7.8	7.8	1.7	1.7	7		8		
						11.0	18.2	18.2	8.2	8.2	31.1	31.1	100.1	100.1	7.8	7.8	1.7	1.7	8		8		
					Bottom	21.0	18.2	18.2	8.2	8.2	31.1	31.1	99.6	99.6	7.8	7.8	2.2	2.2	7		8		
						21.0	18.2	18.2	8.2	8.2	31.1	31.1	99.6	99.6	7.8	7.8	2.2	2.2	8		8		
26-Jan-19	Sunny	Moderate	15:56	21.9	Surface	1.0	18.5	18.5	8.3	8.3	31.4	31.4	113.2	113.2	8.8	8.8	8.8	1.6	1.6	1.9	6	6	6
						1.0	18.5		8.3		31.4		113.2		8.8			1.6			5		
					Middle	11.0	18.5	18.5	8.3	8.3	31.4	31.4	113.2	113.2	8.8	8.8	1.9	1.9	7		7		
						11.0	18.5	18.5	8.3	8.3	31.4	31.4	113.2	113.2	8.8	8.8	1.9	1.9	6		7		
					Bottom	20.9	18.5	18.5	8.3	8.3	31.4	31.4	113.1	113.1	8.8	8.8	2.2	2.2	6		6		
						20.9	18.5	18.5	8.3	8.3	31.4	31.4	113.1	113.1	8.8	8.8	2.2	2.2	6		6		

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR7 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	14:26	22.8	Surface	1.0	19.4	19.4	8.1	8.1	33.0	33.0	95.4	95.4	7.2	7.2	7.2	8.6	8.6	11.4	6	6	6
						1.0	19.4		8.1		33.0		95.4		7.2			8.6					
						11.4	19.4		8.1		33.0		94.6		7.2			11.2					
					Middle	11.4	19.4	19.4	8.1	8.1	33.0	33.0	94.6	94.6	7.2	7.2	7.2	11.2	11.3	11.4	5	5	5
						11.4	19.4		8.1		33.0		94.6		7.2			11.4					
						21.8	19.3		8.1		32.9		94.5		7.2			14.2					
					Bottom	21.8	19.3	19.3	8.1	8.1	32.9	32.9	94.5	94.5	7.2	7.2	7.2	14.2	14.2	14.2	7	7	7
						21.8	19.3		8.1		32.9		94.5		7.2			14.2					
						21.8	19.3		8.1		32.9		94.5		7.2			14.2					
3-Jan-19	Cloudy	Rough	15:18	22.5	Surface	1.0	19.1	19.1	8.2	8.2	33.1	33.1	100.0	100.0	7.6	7.6	7.6	5.3	5.3	5.4	4	4	4
						1.0	19.1		8.2		33.1		100.0		7.6			5.3					
						11.3	19.1		8.1		33.1		99.9		7.6			5.4					
					Middle	11.3	19.1	19.1	8.1	8.1	33.1	33.1	99.9	99.9	7.6	7.6	7.6	5.4	5.4	5.4	4	4	4
						11.3	19.1		8.1		33.1		99.9		7.6			5.4					
						21.5	19.1		8.1		33.1		99.8		7.6			5.6					
					Bottom	21.5	19.1	19.1	8.1	8.1	33.1	33.1	99.9	99.9	7.6	7.6	7.6	5.6	5.6	5.6	4	4	4
						21.5	19.1		8.1		33.1		99.9		7.6			5.6					
						21.5	19.1		8.1		33.1		99.9		7.6			5.6					
5-Jan-19	Misty	Rough	16:39	22.1	Surface	1.0	18.7	18.7	8.2	8.2	32.2	32.2	99.0	99.0	7.6	7.6	7.6	5.8	5.8	5.9	3	2	2
						1.0	18.7		8.2		32.2		99.0		7.6			5.8					
						11.1	18.4		8.2		32.2		97.4		7.6			5.9					
					Middle	11.1	18.4	18.4	8.2	8.2	32.2	32.2	97.4	97.4	7.5	7.5	7.5	5.9	5.9	5.9	2	2	2
						11.1	18.4		8.2		32.2		97.3		7.5			5.9					
						21.1	18.4		8.2		32.3		95.4		7.4			5.9					
					Bottom	21.1	18.4	18.4	8.2	8.2	32.3	32.3	95.4	95.4	7.4	7.4	7.4	5.9	5.9	5.9	2	2	2
						21.1	18.4		8.2		32.3		95.4		7.4			5.9					
						21.1	18.4		8.2		32.3		95.4		7.4			5.9					
8-Jan-19	Cloudy	Rough	07:55	20.7	Surface	1.0	18.6	18.6	8.2	8.2	33.1	33.1	93.9	93.9	7.2	7.2	7.2	9.8	9.8	9.7	6	6	5
						1.0	18.6		8.2		33.1		93.9		7.2			9.8					
						10.4	18.7		8.2		33.1		93.4		7.2			9.6					
					Middle	10.4	18.7	18.7	8.2	8.2	33.1	33.1	93.4	93.4	7.2	7.2	7.2	9.6	9.6	9.7	5	5	5
						10.4	18.7		8.2		33.1		93.4		7.2			9.6					
						19.7	18.4		8.2		33.1		93.3		7.2			9.7					
					Bottom	19.7	18.4	18.4	8.2	8.2	33.1	33.1	93.3	93.3	7.2	7.2	7.2	9.7	9.7	9.7	4	4	4
						19.7	18.4		8.2		33.1		93.3		7.2			9.7					
						19.7	18.4		8.2		33.1		93.3		7.2			9.7					
10-Jan-19	Cloudy	Rough	09:14	21.3	Surface	1.0	18.5	18.5	8.1	8.1	32.5	32.5	102.8	102.8	7.9	7.9	7.9	3.0	3.0	4.5	6	6	5
						1.0	18.5		8.1		32.5		102.8		7.9			3.1					
						10.7	18.6		8.1		32.6		101.5		7.8			4.0					
					Middle	10.7	18.6	18.6	8.1	8.1	32.6	32.6	101.5	101.4	7.8	7.8	7.8	4.2	4.1	4.5	6	6	6
						10.7	18.6		8.1		32.6		101.3		7.8			4.2					
						20.3	18.7		8.1		32.7		100.9		7.8			6.4					
					Bottom	20.3	18.7	18.7	8.1	8.1	32.7	32.7	100.9	100.9	7.8	7.8	7.8	6.5	6.5	6.5	5	5	5
						20.3	18.7		8.1		32.7		100.9		7.8			6.6					
						20.3	18.7		8.1		32.7		100.9		7.8			6.6					
12-Jan-19	Misty	Rough	10:25	21.4	Surface	1.0	18.7	18.7	8.2	8.2	32.4	32.4	103.5	103.5	8.0	8.0	7.9	2.4	2.4	2.5	<1	1	3
						1.0	18.7		8.2		32.4		103.5		8.0			2.4					
						10.7	18.6		8.2		32.4		102.4		7.9			2.4					
					Middle	10.7	18.6	18.6	8.2	8.2	32.4	32.4	102.4	102.4	7.9	7.9	7.9	2.4	2.4	2.5	2	2	2
						10.7	18.6		8.2		32.4		102.4		7.9			2.4					
						20.4	18.6		8.2		32.4		101.2		7.8			2.7					
					Bottom	20.4	18.6	18.6	8.2	8.2	32.4	32.4	101.2	101.2	7.8	7.8	7.8	2.7	2.7	2.7	5	5	5
						20.4	18.6		8.2		32.4		101.2		7.8			2.7					
						20.4	18.6		8.2		32.4		101.2		7.8			2.7					
15-Jan-19	Cloudy	Moderate	12:28	22.5	Surface	1.0	18.4	18.4	8.2	8.2	32.1	32.1	101.6	101.6	7.9	7.9	7.9	1.2	1.2	1.1	2	2	2
						1.0	18.4		8.2		32.1		101.6		7.9			1.2					
						11.3	18.4		8.2		32.1		101.3		7.9			1.1					
					Middle	11.3	18.4	18.4	8.2	8.2	32.1	32.1	101.3	101.3	7.9	7.9	7.9	1.1	1.1	1.1	2	2	2
						11.3	18.3		8.2		32.1		101.3		7.9			1.1					
						21.5	18.3		8.2		32.1		101.2		7.9			1.1					
					Bottom	21.5	18.3	18.3	8.2	8.2	32.1	32.1	101.2	101.2	7.9	7.9	7.9	1.1	1.1	1.1	<1	<1	<1
						21.5	18.3		8.2		32.1		101.2		7.9			1.1					
						21.5	18.3		8.2		32.1		101.2		7.9			1.1					
17-Jan-19	Fine	Rough	13:37	21.4	Surface	1.0	18.4	18.4	8.3	8.3	31.2	31.2	98.7	98.7	7.7	7.7	7.7	1.7	1.7	1.8	7	8	7
						1.0	18.4		8.3		31.2		98.6		7.7			1.7					
						10.7	18.3		8.3		31.2		97.6		7.6			1.8					
					Middle	10.7	18.2	18.3	8.3	8.3	31.2	31.2	97.5	97.6	7.6	7.6	7.6	1.8	1.8	1.8	8	8	8
						10.7	18.2		8.3		31.2		97.5		7.6			1.8					
						20.4	18.3		8.3		31.2		97.7		7.6			1.9					
					Bottom	20.4	18.3	18.3	8.3	8.3	31.2	31.2	97.8	97.8	7.6	7.6	7.6	1.9	1.9	1.9	6	7	7
						20.4	18.3		8.3		31.2		97.8		7.6			1.9					
						20.4	18.3		8.3		31.2		97.8		7.6			1.9					
19-Jan-19	Cloudy	Moderate	15:06	22.5	Surface	1.0	18.3	18.3	8.2	8.2	31.1	31.1	99.3	99.3	7.8	7.8	7.7	1.7	1.7	3.2	3	3	3
						1.0	18.3		8.2		31.1		99.3		7.8			1.7					
						11.3	18.1		8.2		31.2		96.6		7.6			3.6					
					Middle	11.3	18.1	18.1	8.2	8.2	31.2	31.2	96.6	96.6	7.6	7.6	7.6	3.6	3.6	3.2	3	3	3
						11.3	18.1		8.2		31.2		96.6		7.6			3.6					
						21.5	18.1		8.2		31.2		96.8		7.6			4.2					
					Bottom	21.5	18.1	18.1	8.2	8.2	31.2	31.2	96.9	96.9	7.6	7.6	7.6	4.3	4.3	3.2	2	3	3
						21.5	18.1		8.2		31.2		96.9		7.6			4.3					
						21.5	18.1		8.2		31.2		96.9		7.6			4.3					
22-Jan-19	Fine	Rough	07:00	21.5	Surface	1.0	18.1	18.1	8.2	8.2	31.0	31.0	98.3	98.3	7.7	7.7	7.7	2.4	2.4	2.7	7	8	8
						1.0	18.1		8.2		31.0		98.3		7.7			2.4					
						10.8	18.1		8.2		31.0		97.4		7.7			2.7					
					Middle	10.8	18.1	18.1	8.2	8.2	31.0	31.0	97.3	97.4	7.6	7.6	7.6	2.7	2.7	2.7	8	9	8
						10.8	18.1		8.2		31.0		97.3		7.6			2.7					
						20.5	18.1		8.2		31.0		96.3		7.6			3.0					
					Bottom	20.5	18.1	18.1	8.2	8.2	31.0	31.0	96.2	96.3	7.6	7.6	7.6	3.0	3.0	2.7	7	8	8
						20.5	18.1		8.2		31.0		96.2		7.6			3.0					
						20.5	18.1		8.2		31.0		96.2		7.6			3.0					
24-Jan-19	Sunny	Moderate	08:50	21.7	Surface	1.0	18.3	18.3	8.2	8.2	31.0	31.0	92.8	92.8	7.3	7.3	7.3	1.8	1.8	1.9	7	7	8
						1.0	18.3		8.2		31.0		92.8		7.3			1.8					
						10.9	18.3		8.2		31.0		93.3		7.3			2.0					
					Middle	10.9	18.3	18.3	8.2	8.2	31.0												

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at SR8 during Mid-ebb Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
1-Jan-19	Cloudy	Rough	07:40	10.7	Surface	1.0	19.3	19.3	8.1	8.1	33.1	33.1	95.3	95.4	7.2	7.2	7.3	7.9	7.9	7.7	4	5	6	
						1.0	19.3		8.1		33.1		95.4		7.2			7.9						
					Middle	5.4	19.3	19.3	8.1	8.1	33.1	33.1	97.4	97.6	7.4	7.4	7.1	7.8	7.8	7.7	6	6		7
						5.4	19.3		8.1		33.1		97.8		7.4			7.9						
					Bottom	9.7	19.2	19.2	8.2	8.2	33.1	33.1	94.0	94.0	7.1	7.1	7.1	7.4	7.4	7.7	8	7		7
						9.7	19.2		8.2		33.1		94.0		7.1			7.4						
3-Jan-19	Rainy	Rough	09:44	11.1	Surface	1.0	19.0	19.0	8.2	8.2	33.2	33.2	99.0	99.0	7.6	7.6	7.5	4.2	4.2	4.3	8	8	8	
						1.0	19.0		8.2		33.2		99.0		7.6			4.2						
					Middle	5.6	19.0	19.0	8.2	8.2	33.2	33.2	98.9	98.9	7.5	7.5	7.5	4.3	4.3	4.3	7	7		8
						5.6	19.0		8.2		33.2		98.9		7.5			4.3						
					Bottom	10.1	19.0	19.0	8.2	8.2	33.2	33.2	98.9	98.9	7.5	7.5	7.5	4.4	4.5	4.3	9	9		9
						10.1	19.0		8.2		33.2		98.9		7.5			4.5						
5-Jan-19	Misty	Moderate	10:59	11.5	Surface	1.0	19.0	19.0	8.1	8.1	32.9	32.9	91.4	91.4	7.0	7.0	7.0	6.3	6.3	6.9	2	2	3	
						1.0	19.0		8.1		32.9		91.4		7.0			6.3						
					Middle	5.8	19.0	19.0	8.1	8.1	32.9	32.9	92.1	92.1	7.0	7.0	7.0	7.0	7.0	6.9	3	4		4
						5.8	19.0		8.1		32.9		92.1		7.0			7.0						
					Bottom	10.5	19.0	19.0	8.1	8.1	32.9	32.9	91.5	91.5	7.0	7.0	7.0	7.3	7.3	6.9	4	4		4
						10.5	19.0		8.1		32.9		91.4		7.0			7.3						
8-Jan-19	Cloudy	Moderate	14:05	10.7	Surface	1.0	18.4	18.4	8.2	8.2	32.1	32.1	94.8	94.8	7.3	7.3	7.3	10.9	10.9	11.8	5	5	5	
						1.0	18.4		8.2		32.1		94.8		7.3			10.9						
					Middle	5.4	18.4	18.4	8.2	8.2	32.6	32.6	94.3	94.3	7.3	7.3	7.3	11.7	11.6	11.8	4	5		5
						5.4	18.4		8.2		32.6		94.3		7.3			11.6						
					Bottom	9.7	18.3	18.3	8.2	8.2	33.1	33.1	94.0	94.0	7.3	7.3	7.3	12.8	12.8	11.8	4	4		4
						9.7	18.3		8.2		33.1		94.0		7.3			12.8						
10-Jan-19	Cloudy	Calm	15:14	10.6	Surface	1.0	19.0	19.0	8.1	8.1	32.7	32.7	101.8	101.7	7.8	7.8	7.7	1.9	1.9	2.2	5	6	5	
						1.0	19.0		8.1		32.7		101.6		7.8			1.9						
					Middle	5.3	19.0	19.0	8.1	8.1	32.7	32.7	100.4	100.3	7.7	7.7	7.7	1.8	1.8	2.2	5	5		5
						5.3	19.0		8.1		32.7		100.2		7.7			1.9						
					Bottom	9.6	18.9	18.9	8.1	8.1	32.8	32.8	98.1	98.1	7.5	7.5	7.5	2.8	2.8	2.2	5	5		5
						9.6	18.9		8.1		32.8		98.1		7.5			2.7						
12-Jan-19	Misty	Calm	16:48	10.8	Surface	1.0	19.6	19.6	8.2	8.2	32.6	32.6	100.4	100.3	7.6	7.6	7.5	3.1	3.1	3.8	4	4	4	
						1.0	19.5		8.2		32.6		100.1		7.6			3.1						
					Middle	5.4	19.2	19.2	8.2	8.2	32.6	32.6	98.2	98.2	7.5	7.5	7.4	4.0	3.9	3.8	5	5		5
						5.4	19.2		8.2		32.6		98.1		7.5			4.0						
					Bottom	9.8	19.2	19.2	8.2	8.2	32.6	32.6	97.3	97.4	7.4	7.4	7.4	4.2	4.3	3.8	4	4		4
						9.8	19.2		8.2		32.6		97.4		7.4			4.3						
15-Jan-19	Cloudy	Moderate	04:32	10.3	Surface	1.0	19.1	19.1	8.1	8.1	32.5	32.5	99.3	99.3	7.6	7.6	7.6	2.4	2.4	3.0	1	1	2	
						1.0	19.1		8.1		32.5		99.3		7.6			2.5						
					Middle	5.2	19.1	19.1	8.1	8.1	32.5	32.5	99.5	99.6	7.6	7.6	7.7	3.8	3.8	3.0	2	2		2
						5.2	19.0		8.1		32.5		99.6		7.6			3.9						
					Bottom	9.3	19.0	19.0	8.2	8.2	32.4	32.4	100.2	100.3	7.7	7.7	7.7	2.6	2.6	3.0	2	2		2
						9.3	19.0		8.2		32.4		100.3		7.7			2.7						
17-Jan-19	Fine	Moderate	07:21	11.1	Surface	1.0	18.2	18.2	8.3	8.3	31.2	31.2	97.0	97.0	7.6	7.6	7.6	1.9	1.9	1.8	6	6	6	
						1.0	18.2		8.3		31.2		97.0		7.6			1.9						
					Middle	5.6	18.2	18.2	8.3	8.3	31.2	31.2	97.1	97.1	7.6	7.6	7.7	1.7	1.7	1.8	6	6		6
						5.6	18.2		8.3		31.2		97.1		7.6			1.7						
					Bottom	10.1	18.2	18.2	8.3	8.3	31.2	31.2	97.7	97.8	7.7	7.7	7.7	1.8	1.8	1.8	6	6		6
						10.1	18.2		8.3		31.2		97.9		7.7			1.9						
19-Jan-19	Cloudy	Moderate	09:24	11.3	Surface	1.0	18.4	18.4	8.1	8.1	31.3	31.3	95.3	95.3	7.4	7.4	7.4	2.5	2.5	2.6	4	5	4	
						1.0	18.4		8.1		31.3		95.3		7.4			2.5						
					Middle	5.7	18.4	18.4	8.1	8.1	31.3	31.3	95.0	95.0	7.4	7.4	7.4	2.4	2.4	2.6	2	3		4
						5.7	18.4		8.1		31.3		95.0		7.4			2.4						
					Bottom	10.3	18.4	18.4	8.1	8.1	31.3	31.3	94.6	94.6	7.4	7.4	7.4	2.8	2.8	2.6	4	4		4
						10.3	18.4		8.1		31.3		94.6		7.4			2.9						
22-Jan-19	Fine	Calm	13:43	11.7	Surface	1.0	18.5	18.5	8.1	8.1	31.1	31.1	95.7	95.7	7.5	7.4	7.4	2.2	2.2	3.3	11	11	11	
						1.0	18.5		8.1		31.1		95.6		7.4			2.3						
					Middle	5.9	18.4	18.4	8.1	8.1	31.1	31.1	94.1	94.1	7.3	7.3	7.2	2.3	2.3	3.3	10	10		11
						5.9	18.4		8.1		31.1		94.0		7.3			2.3						
					Bottom	10.7	18.3	18.3	8.1	8.1	31.1	31.1	92.6	92.6	7.2	7.2	7.2	5.3	5.3	3.3	11	11		11
						10.7	18.3		8.1		31.1		92.6		7.2			5.4						
24-Jan-19	Sunny	Moderate	15:09	11.9	Surface	1.0	18.6	18.6	8.2	8.2	31.0	31.0	99.2	99.2	7.7	7.7	7.7	9.0	9.1	8.1	8	9	10	
						1.0	18.6		8.2		31.0		99.2		7.7			9.1						
					Middle	6.0	18.6	18.6	8.2	8.2	31.0	31.0	99.1	99.1	7.7	7.7	7.7	7.0	7.0	8.1	11	11		11
						6.0	18.6		8.2		31.0		99.1		7.7			7.0						
					Bottom	10.9	18.5	18.5	8.2	8.2	31.0	31.0	98.8	98.8	7.7	7.7	7.7	8.4	8.4	8.1	10	10		10
						10.9	18.5		8.2		31.0		98.8		7.7			8.3						
26-Jan-19	Sunny	Moderate	16:55	12.7	Surface	1.0	18.7	18.7	8.3	8.3	31.4	31.4	115.7	115.6	9.0	9.0	8.9	2.1	2.2	5.5	4	4	4	
						1.0	18.6		8.3		31.4		115.5		9.0			2.2						
					Middle	6.4	18.5	18.5	8.3	8.3	31.4	31.4	114.7	114.7	8.9	8.9	8.9	6.6	6.6	5.5	3	4		5
						6.4	18.5		8.3		31.4		114.6		8.9			6.6						
					Bottom	11.7	18.5	18.5	8.3	8.3	31.4	31.4	114.5	114.6	8.9	8.9	8.9	7.8	7.8	5.5	5	5		5
						11.7	18.5		8.3		31.4		114.7		8.9			7.8						

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR8 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Moderate	15:06	11.7	Surface	1.0	19.3	19.3	8.1	8.1	33.0	33.0	94.8	94.8	7.2	7.2	7.2	7.8	7.8	7.9	6	6	6
						1.0	19.3		8.1		33.0		94.8		7.2			7.8					
					Middle	5.9	19.3	19.3	8.1	8.1	33.0	33.0	94.8	94.8	7.2	7.2	8.0	8.0	7				
						5.9	19.3		8.1		33.0		94.8		7.2		8.0						
					Bottom	10.7	19.3	19.3	8.1	8.1	33.0	33.0	95.2	95.3	7.2	7.2	8.1	8.1	7				
						10.7	19.3		8.1		33.0		95.3		7.2		8.1						
3-Jan-19	Cloudy	Calm	16:20	11.9	Surface	1.0	18.9	18.9	8.1	8.1	33.2	33.2	96.3	96.3	7.3	7.3	7.3	3.1	3.1	3.3	5	5	5
						1.0	18.9		8.1		33.2		96.2		7.3			3.1					
					Middle	6.0	18.9	18.9	8.1	8.1	33.2	33.2	95.8	95.8	7.3	7.3	2.9	2.9	7				
						6.0	18.9		8.1		33.2		95.7		7.3		2.9						
					Bottom	10.9	18.9	18.9	8.1	8.1	33.2	33.2	94.4	94.4	7.2	7.2	4.1	4.1	5				
						10.9	18.9		8.1		33.2		94.4		7.2		4.1						
5-Jan-19	Misty	Calm	17:14	11.4	Surface	1.0	19.5	19.5	8.2	8.2	32.9	32.9	95.2	95.2	7.2	7.2	7.2	5.3	5.3	6.0	4	4	4
						1.0	19.5		8.2		32.9		95.2		7.2			5.3					
					Middle	5.7	19.3	19.3	8.2	8.2	32.9	32.9	94.2	94.2	7.2	7.1	5.5	5.5	4				
						5.7	19.3		8.2		32.9		94.1		7.1		5.5						
					Bottom	10.4	19.0	19.0	8.2	8.2	32.9	32.9	91.8	91.8	7.0	7.0	7.2	7.2	2				
						10.4	19.0		8.2		32.9		91.8		7.0		7.2						
8-Jan-19	Cloudy	Rough	07:45	10.5	Surface	1.0	18.7	18.7	8.1	8.1	33.2	33.2	98.6	98.6	7.6	7.6	7.6	11.8	11.8	12.9	4	4	4
						1.0	18.7		8.1		33.2		98.6		7.6			11.8					
					Middle	5.3	18.7	18.7	8.0	8.0	33.2	33.2	97.7	97.7	7.5	7.5	12.6	12.6	3				
						5.3	18.7		8.0		33.2		97.6		7.5		12.6						
					Bottom	9.5	18.7	18.7	8.0	8.0	33.2	33.2	98.0	98.1	7.5	7.5	14.3	14.2	6				
						9.5	18.7		8.0		33.2		98.1		7.5		14.2						
10-Jan-19	Cloudy	Moderate	08:51	10.6	Surface	1.0	18.7	18.7	8.0	8.0	32.7	32.7	99.2	99.2	7.6	7.6	7.6	2.4	2.4	2.6	6	6	4
						1.0	18.7		8.0		32.7		99.2		7.6			2.4					
					Middle	5.3	18.8	18.8	8.1	8.1	32.7	32.7	98.8	98.8	7.6	7.6	2.6	2.6	4				
						5.3	18.8		8.1		32.7		98.8		7.6		2.6						
					Bottom	9.6	18.8	18.8	8.1	8.1	32.7	32.7	97.9	97.9	7.5	7.5	2.6	2.6	3				
						9.6	18.8		8.1		32.7		97.8		7.5		2.6						
12-Jan-19	Misty	Calm	09:48	10.6	Surface	1.0	18.9	18.9	8.2	8.2	32.5	32.5	100.1	100.1	7.7	7.7	7.6	3.3	3.3	4.0	4	4	3
						1.0	18.9		8.2		32.5		100.0		7.7			3.3					
					Middle	5.3	18.9	18.9	8.1	8.1	32.6	32.6	99.1	99.1	7.6	7.6	3.6	3.6	2				
						5.3	18.9		8.1		32.6		99.1		7.6		3.6						
					Bottom	9.6	19.0	19.0	8.1	8.1	32.6	32.6	97.2	97.2	7.4	7.4	4.9	5.0	2				
						9.6	19.0		8.1		32.6		97.1		7.4		5.0						
15-Jan-19	Cloudy	Moderate	13:20	11.3	Surface	1.0	19.5	19.5	8.2	8.2	32.4	32.4	100.4	100.4	7.6	7.6	7.6	0.7	0.7	0.6	1	1	1
						1.0	19.5		8.2		32.4		100.3		7.6			0.7					
					Middle	5.7	19.2	19.2	8.2	8.2	32.5	32.5	99.3	99.3	7.6	7.6	0.6	0.6	<1				
						5.7	19.1		8.2		32.5		99.3		7.6		0.6						
					Bottom	10.3	19.1	19.1	8.2	8.2	32.5	32.5	99.1	99.1	7.6	7.6	0.6	0.6	1				
						10.3	19.1		8.2		32.5		99.1		7.6		0.6						
17-Jan-19	Fine	Moderate	14:24	11.6	Surface	1.0	20.2	20.2	8.3	8.3	30.7	30.7	100.6	100.6	7.6	7.6	7.6	2.4	2.4	2.4	6	6	9
						1.0	20.2		8.3		30.7		100.6		7.6			2.4					
					Middle	5.8	18.5	18.5	8.3	8.3	31.3	31.3	97.6	97.6	7.6	7.6	2.3	2.3	11				
						5.8	18.5		8.3		31.3		97.5		7.6		2.3						
					Bottom	10.6	18.4	18.4	8.3	8.3	31.3	31.3	97.0	97.1	7.6	7.6	2.6	2.6	10				
						10.6	18.4		8.3		31.3		97.1		7.6		2.6						
19-Jan-19	Cloudy	Moderate	15:57	11.9	Surface	1.0	18.4	18.4	8.2	8.2	31.2	31.2	99.1	99.1	7.7	7.7	7.7	1.8	1.8	1.9	3	3	3
						1.0	18.4		8.2		31.2		99.1		7.7			1.8					
					Middle	6.0	18.4	18.4	8.1	8.1	31.2	31.2	98.5	98.5	7.7	7.7	1.8	1.8	4				
						6.0	18.4		8.1		31.2		98.5		7.7		1.8						
					Bottom	10.9	18.4	18.4	8.1	8.1	31.2	31.2	96.5	96.5	7.5	7.5	2.0	2.0	4				
						10.9	18.4		8.1		31.2		96.5		7.5		2.0						
22-Jan-19	Fine	Calm	06:56	10.8	Surface	1.0	18.3	18.3	8.1	8.1	31.1	31.1	92.6	92.6	7.2	7.2	7.2	2.9	2.9	2.9	11	11	12
						1.0	18.3		8.1		31.1		92.6		7.2			2.9					
					Middle	5.4	18.3	18.3	8.1	8.1	31.1	31.1	92.3	92.3	7.2	7.2	2.9	2.9	11				
						5.4	18.3		8.1		31.1		92.3		7.2		2.9						
					Bottom	9.8	18.2	18.2	8.1	8.1	31.1	31.1	91.6	91.6	7.2	7.2	2.9	2.9	14				
						9.8	18.2		8.1		31.1		91.6		7.2		2.9						
24-Jan-19	Sunny	Moderate	08:22	11.0	Surface	1.0	18.3	18.3	8.2	8.2	31.0	31.0	92.9	92.9	7.3	7.3	7.4	2.0	2.0	1.8	13	13	10
						1.0	18.3		8.2		31.0		92.9		7.3			2.0					
					Middle	5.5	18.2	18.2	8.2	8.2	31.1	31.1	95.1	95.1	7.5	7.5	1.8	1.9	10				
						5.5	18.2		8.2		31.1		95.1		7.5		1.9						
					Bottom	10.0	18.1	18.1	8.2	8.2	31.1	31.1	96.0	96.1	7.5	7.5	1.6	1.6	8				
						10.0	18.1		8.2		31.1		96.1		7.5		1.7						
26-Jan-19	Sunny	Moderate	09:39	11.2	Surface	1.0	18.4	18.4	8.2	8.2	30.8	30.8	95.7	95.7	7.5	7.5	7.5	2.5	2.5	4.8	8	8	7
						1.0	18.4		8.2		30.8		95.7		7.5			2.5					
					Middle	5.6	18.4	18.4	8.2	8.2	30.9	30.9	95.3	95.3	7.4	7.4	3.2	3.2	7				
						5.6	18.4		8.2		30.9		95.3		7.4		3.2						
					Bottom	10.2	18.4	18.4	8.2	8.2	30.9	30.9	95.3	95.3	7.4	7.4	8.8	8.8	7				
						10.2	18.4		8.2		30.9		95.3		7.4		8.8						

Remarks: DA: Depth-averaged  
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results at SR9 during Mid-ebb Tide																									
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)				
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA		
1-Jan-19	Cloudy	Rough	07:57	10.2	Surface	1.0	19.4	19.4	8.1	8.1	33.1	33.1	87.7	87.7	6.6	6.6	6.7	6.2	6.2	6.2	4	4	4		
						1.0	19.4		8.1		33.1		87.7		6.6			6.2			3				
					Middle	5.1	19.4	19.4	8.1	8.1	33.1	33.1	88.0	88.0	6.7	6.7	6.7	6.1	6.1	6.2	3	3		6.2	
						5.1	19.4		8.1		33.1		88.0		6.7			6.1			3				
					Bottom	9.2	19.4	19.4	8.1	8.1	33.1	33.1	89.2	89.4	6.8	6.8	6.8	6.2	6.2	6.8	4	4			6.2
						9.2	19.4		8.1		33.1		89.5		6.8			6.2			5				
3-Jan-19	Cloudy	Calm	09:55	10.4	Surface	1.0	19.0	19.0	8.2	8.2	33.2	33.2	96.5	96.5	7.4	7.4	7.3	3.2	3.2	3.2	6	6	5		
						1.0	19.0		8.2		33.2		96.4		7.4			3.1			5				
					Middle	5.2	19.0	19.0	8.2	8.2	33.2	33.2	96.2	96.2	7.3	7.3	7.3	3.2	3.2	3.2	5	5		3.2	
						5.2	19.0		8.2		33.2		96.2		7.3			3.2			5				
					Bottom	9.4	19.0	19.0	8.2	8.2	33.2	33.2	95.6	95.6	7.3	7.3	7.3	3.3	3.2	7.3	5	5			3.2
						9.4	19.0		8.2		33.2		95.6		7.3			3.2			6				
5-Jan-19	Misty	Calm	11:10	9.9	Surface	1.0	19.0	19.0	8.1	8.1	32.9	32.9	93.3	93.3	7.1	7.1	7.1	5.8	5.8	6.2	4	3	3		
						1.0	19.0		8.1		32.9		93.3		7.1			5.8			2				
					Middle	5.0	19.0	19.0	8.1	8.1	32.9	32.9	92.0	92.0	7.0	7.0	7.0	5.8	5.8	6.2	3	3		6.2	
						5.0	19.0		8.1		32.9		91.9		7.0			5.8			2				
					Bottom	8.9	19.0	19.0	8.1	8.1	32.9	32.9	88.5	88.5	6.8	6.8	6.8	6.8	6.8	6.8	3	3			6.2
						8.9	19.0		8.1		32.9		88.5		6.8			6.9			3				
8-Jan-19	Cloudy	Moderate	13:54	10.2	Surface	1.0	18.5	18.5	8.2	8.2	32.2	32.2	94.9	94.9	7.3	7.3	7.3	10.5	10.5	10.3	3	3	3		
						1.0	18.5		8.2		32.2		94.9		7.3			10.5			2				
					Middle	5.1	18.3	18.3	8.2	8.2	32.9	32.9	94.5	94.5	7.3	7.3	7.3	10.2	10.3	10.3	2	2		10.3	
						5.1	18.3		8.2		32.9		94.5		7.3			10.3			3				
					Bottom	9.2	18.2	18.2	8.2	8.2	33.1	33.1	94.3	94.3	7.3	7.3	7.3	10.1	10.0	7.3	4	4			10.3
						9.2	18.2		8.2		33.1		94.2		7.3			10.0			4				
10-Jan-19	Cloudy	Calm	15:02	10.3	Surface	1.0	18.9	18.9	8.1	8.1	32.7	32.7	102.3	102.3	7.8	7.8	7.8	2.4	2.4	2.8	3	4	5		
						1.0	18.9		8.1		32.7		102.2		7.8			2.4			4				
					Middle	5.2	18.8	18.8	8.0	8.0	32.7	32.7	100.7	100.7	7.7	7.7	7.7	2.7	2.7	7.8	5	6		2.8	
						5.2	18.8		8.0		32.7		100.6		7.7			2.7			6				
					Bottom	9.3	18.8	18.9	8.0	8.0	32.7	32.7	100.2	100.2	7.7	7.7	7.7	3.4	3.4	7.7	5	5			2.8
						9.3	18.9		8.0		32.7		100.2		7.7			3.4			5				
12-Jan-19	Misty	Calm	16:32	10.3	Surface	1.0	20.2	20.2	8.1	8.1	32.6	32.6	104.9	104.9	7.8	7.8	7.8	2.7	2.7	2.8	2	3	3		
						1.0	20.1		8.1		32.6		104.8		7.8			2.8			3				
					Middle	5.2	19.2	19.2	8.1	8.1	32.6	32.6	101.9	102.0	7.8	7.8	7.8	3.1	3.1	7.8	4	4		2.8	
						5.2	19.2		8.1		32.6		102.0		7.8			3.1			4				
					Bottom	9.3	19.1	19.1	8.1	8.1	32.6	32.6	102.2	102.2	7.8	7.8	7.8	2.7	2.7	7.8	2	2			2.8
						9.3	19.1		8.1		32.6		102.1		7.8			2.7			2				
15-Jan-19	Cloudy	Moderate	04:44	10.1	Surface	1.0	19.2	19.2	8.1	8.1	32.5	32.5	98.6	98.6	7.5	7.5	7.5	5.6	5.6	6.1	2	2	2		
						1.0	19.2		8.1		32.5		98.6		7.5			5.6			1				
					Middle	5.1	19.2	19.2	8.1	8.1	32.5	32.5	98.7	98.7	7.5	7.5	7.5	9.7	9.4	6.1	3	3		6.1	
						5.1	19.1		8.1		32.5		98.7		7.5			9.1			2				
					Bottom	9.1	19.0	19.0	8.1	8.1	32.5	32.5	98.8	98.9	7.6	7.6	7.6	3.1	3.1	7.6	2	2			6.1
						9.1	19.0		8.1		32.5		98.9		7.6			3.1			2				
17-Jan-19	Fine	Moderate	07:32	9.7	Surface	1.0	18.5	18.5	8.3	8.3	31.4	31.4	92.4	92.4	7.2	7.2	7.2	1.6	1.6	1.7	5	5	7		
						1.0	18.5		8.3		31.4		92.3		7.2			1.6			5				
					Middle	4.9	18.6	18.6	8.3	8.3	31.4	31.4	91.9	91.9	7.1	7.1	7.1	1.7	1.7	7.2	8	7		1.7	
						4.9	18.6		8.3		31.4		91.9		7.1			1.7			6				
					Bottom	8.7	18.7	18.7	8.3	8.3	31.5	31.5	93.6	93.7	7.3	7.3	7.3	1.7	1.7	7.3	9	9			1.7
						8.7	18.7		8.3		31.5		93.8		7.3			1.7			8				
19-Jan-19	Cloudy	Moderate	09:36	11.5	Surface	1.0	18.3	18.3	8.1	8.1	31.2	31.2	94.0	94.0	7.3	7.3	7.3	2.1	2.1	2.2	4	4	4		
						1.0	18.3		8.1		31.2		94.0		7.3			2.1			3				
					Middle	5.8	18.3	18.3	8.1	8.1	31.2	31.2	93.7	93.7	7.3	7.3	7.3	2.0	2.0	7.3	4	4		2.2	
						5.8	18.3		8.1		31.2		93.7		7.3			2.1			4				
					Bottom	10.5	18.3	18.3	8.1	8.1	31.2	31.2	93.4	93.4	7.3	7.3	7.3	2.4	2.5	7.3	5	5			2.2
						10.5	18.3		8.1		31.2		93.4		7.3			2.6			4				
22-Jan-19	Fine	Calm	13:28	10.8	Surface	1.0	18.4	18.4	8.1	8.1	31.1	31.1	95.2	95.2	7.4	7.4	7.4	2.6	2.6	2.9	14	15	18		
						1.0	18.4		8.1		31.1		95.2		7.4			2.6			15				
					Middle	5.4	18.4	18.4	8.1	8.1	31.1	31.1	95.0	95.0	7.4	7.4	7.4	3.0	2.9	7.4	16	17		2.9	
						5.4	18.4		8.1		31.1		95.0		7.4			3.0			17				
					Bottom	9.8	18.4	18.4	8.1	8.1	31.1	31.1	94.9	94.9	7.4	7.4	7.4	3.1	3.1	7.4	23	24			2.9
						9.8	18.4		8.1		31.1		94.9		7.4			3.1			24				
24-Jan-19	Sunny	Moderate	14:52	11.3	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	99.5	99.5	7.8	7.8	7.8	1.9	1.9	2.2	8	8	8		
						1.0	18.1		8.2		31.1		99.5		7.8			1.9			8				
					Middle	5.7	18.0	18.0	8.2	8.2	31.1	31.1	99.2	99.2	7.8	7.8	7.8	2.3	2.3	7.8	6	7		2.2	
						5.7	18.0		8.2		31.1		99.2		7.8			2.3			7				
					Bottom	10.3	18.0	18.0	8.2	8.2	31.1	31.1	99.1	99.1	7.8	7.8	7.8	2.3	2.3	7.8	9	10			2.2
						10.3	18.0		8.2		31.1		99.1		7.8			2.4			10				
26-Jan-19	Sunny	Moderate	16:39	11.5	Surface	1.0	18.7	18.7	8.3	8.3	31.4	31.4	115.6	115.6	9.0	8.9	8.9	1.3	1.3	1.4	5	5	5		
						1.0	18.7		8.3		31.4		115.5		8.9			1.4			4				
					Middle	5.8	18.5	18.5	8.3	8.3	31.4	31.4	114.8	114.8	8.9	8.9	8.9	1.5	1.4	8.9	6	6		1.4	
						5.8	18.5		8.3		31.4		114.7		8.9			1.5			5				
					Bottom	10.5	18.5	18.5	8.3	8.3	31.4	31.4	114.3	114.3	8.9	8.9	8.9	1.5	1.5	8.9	5	5			1.4
						10.5	18.4		8.3		31.4		114.2		8.9			1.6			4				

Remarks: DA: Depth-averaged  
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher



Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at **SR9** during Mid-flood Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
1-Jan-19	Cloudy	Moderate	14:55	11.2	Surface	1.0	19.4	19.4	8.1	8.1	33.1	33.1	92.1	92.1	7.0	7.0	6.9	6.7	6.7	6.4	4	4	5	
						1.0	19.4		8.1		33.1		92.1		7.0			6.7			4			
					Middle	5.6	19.4	19.4	8.1	8.1	33.0	33.0	90.9	90.9	6.9	6.9	6.9	6.2	6.2	6.2	6.2	4		5
						5.6	19.4	19.4	8.1	8.1	33.0	33.0	90.9	90.9	6.9	6.9	6.9	6.2	6.2	6.2	6.2	5		5
					Bottom	10.2	19.3	19.3	8.1	8.1	33.0	33.0	91.1	91.2	6.9	6.9	6.9	6.2	6.2	6.2	6.2	6		6
						10.2	19.3	19.3	8.1	8.1	33.0	33.0	91.2	91.2	6.9	6.9	6.9	6.2	6.2	6.2	6.2	5		6
3-Jan-19	Rainy	Moderate	16:03	11.1	Surface	1.0	19.0	19.0	8.1	8.1	33.1	33.1	99.6	99.6	7.6	7.6	7.6	3.7	3.7	3.8	5	6	5	
						1.0	19.0		8.1		33.1		99.6		7.6			3.7			6			
					Middle	5.6	19.0	19.0	8.1	8.1	33.1	33.1	99.6	99.6	7.6	7.6	7.6	3.7	3.7	3.7	3.7	5		5
						5.6	19.0	19.0	8.1	8.1	33.1	33.1	99.6	99.6	7.6	7.6	7.6	3.7	3.7	3.7	3.7	5		5
					Bottom	10.1	19.0	19.0	8.1	8.1	33.1	33.1	99.3	99.4	7.6	7.6	7.6	4.0	4.0	4.0	4.0	4		5
						10.1	19.0	19.0	8.1	8.1	33.1	33.1	99.4	99.4	7.6	7.6	7.6	4.0	4.0	4.0	4.0	4		5
5-Jan-19	Misty	Calm	16:59	10.9	Surface	1.0	19.2	19.2	8.2	8.2	32.8	32.8	95.1	95.1	7.2	7.2	7.2	5.7	5.7	5.8	5	5	5	
						1.0	19.2		8.2		32.9		95.0		7.2			5.7			5			
					Middle	5.5	19.2	19.2	8.2	8.2	32.9	32.9	93.9	93.9	7.1	7.1	7.1	5.7	5.7	5.7	5.7	4		5
						5.5	19.2	19.2	8.2	8.2	32.9	32.9	93.9	93.9	7.1	7.1	7.1	5.7	5.7	5.7	5.7	6		5
					Bottom	9.9	19.1	19.1	8.2	8.2	32.9	32.9	92.9	93.0	7.1	7.1	7.1	6.1	6.1	6.1	6.1	4		4
						9.9	19.1	19.1	8.2	8.2	32.9	32.9	93.0	93.0	7.1	7.1	7.1	6.1	6.1	6.1	6.1	4		4
8-Jan-19	Cloudy	Rough	07:56	10.3	Surface	1.0	18.6	18.6	8.1	8.1	33.2	33.2	97.5	97.5	7.5	7.5	7.6	10.8	10.8	11.8	3	3	3	
						1.0	18.6		8.1		33.2		97.4		7.5			10.8			2			
					Middle	5.2	18.6	18.6	8.1	8.1	33.2	33.2	99.3	99.2	7.6	7.6	7.6	11.3	11.3	11.3	11.3	3		3
						5.2	18.6	18.6	8.0	8.1	33.2	33.2	99.1	99.2	7.6	7.6	7.6	11.3	11.3	11.3	11.3	3		3
					Bottom	9.3	18.6	18.6	8.0	8.0	33.2	33.2	98.1	98.3	7.5	7.6	7.6	13.2	13.2	13.2	13.2	2		2
						9.3	18.6	18.6	8.0	8.0	33.2	33.2	98.5	98.3	7.6	7.6	7.6	13.2	13.2	13.2	13.2	2		2
10-Jan-19	Cloudy	Calm	09:03	10.5	Surface	1.0	18.9	18.9	8.1	8.1	32.8	32.8	98.0	98.0	7.5	7.5	7.5	1.8	1.8	2.1	3	3	4	
						1.0	18.9		8.1		32.8		98.0		7.5			1.9			3			
					Middle	5.3	18.9	18.9	8.1	8.1	32.8	32.8	97.6	97.6	7.5	7.5	7.5	1.9	1.9	1.9	1.9	4		4
						5.3	18.9	18.9	8.1	8.1	32.8	32.8	97.5	97.6	7.5	7.5	7.5	1.8	1.9	1.9	1.9	4		4
					Bottom	9.5	18.9	18.9	8.0	8.0	32.8	32.8	96.8	96.8	7.4	7.4	7.4	2.5	2.5	2.5	2.5	6		6
						9.5	18.9	18.9	8.0	8.0	32.8	32.8	96.7	96.8	7.4	7.4	7.4	2.6	2.5	2.5	2.6	6		6
12-Jan-19	Misty	Calm	10:00	10.0	Surface	1.0	19.2	19.2	8.2	8.2	32.7	32.7	99.2	99.3	7.6	7.6	7.6	2.6	2.7	4.1	5	5	4	
						1.0	19.2		8.2		32.7		99.3		7.6			2.7			4			
					Middle	5.0	19.1	19.1	8.2	8.1	32.6	32.6	99.1	99.1	7.6	7.6	7.6	2.6	2.6	2.6	2.6	4		4
						5.0	19.1	19.1	8.1	8.1	32.6	32.6	99.0	99.1	7.6	7.6	7.6	2.6	2.6	2.6	2.6	4		4
					Bottom	9.0	19.0	19.0	8.1	8.1	32.7	32.7	95.4	95.3	7.3	7.3	7.3	7.1	7.1	7.1	7.1	3		3
						9.0	19.0	19.0	8.1	8.1	32.7	32.7	95.2	95.3	7.3	7.3	7.3	7.1	7.1	7.1	7.1	3		3
15-Jan-19	Cloudy	Moderate	13:05	11.1	Surface	1.0	19.5	19.5	8.2	8.2	32.3	32.3	97.2	97.2	7.4	7.4	7.4	0.9	0.9	6.0	<1	1	2	
						1.0	19.5		8.2		32.3		97.2		7.4			0.9			1			
					Middle	5.6	19.3	19.3	8.2	8.2	32.4	32.4	96.9	97.0	7.4	7.4	7.4	1.2	1.2	1.2	1.2	2		2
						5.6	19.3	19.3	8.2	8.2	32.4	32.4	97.0	97.0	7.4	7.4	7.4	1.2	1.2	1.2	1.2	2		2
					Bottom	10.1	19.3	19.3	8.1	8.1	32.4	32.4	97.1	97.1	7.4	7.4	7.4	15.7	15.8	15.8	15.7	2		2
						10.1	19.3	19.3	8.1	8.1	32.4	32.4	97.1	97.1	7.4	7.4	7.4	15.9	15.8	15.8	15.9	<1		2
17-Jan-19	Fine	Moderate	14:11	11.1	Surface	1.0	20.2	20.2	8.3	8.3	30.8	30.7	100.2	100.3	7.6	7.6	7.6	2.6	2.6	2.6	8	8	7	
						1.0	20.2		8.3		30.6		100.3		7.6			2.6			7			
					Middle	5.6	18.4	18.4	8.3	8.3	31.3	31.3	96.5	96.5	7.5	7.5	7.5	2.6	2.6	2.6	2.6	8		8
						5.6	18.4	18.4	8.3	8.3	31.3	31.3	96.5	96.5	7.5	7.5	7.5	2.6	2.6	2.6	2.6	8		8
					Bottom	10.1	18.4	18.4	8.3	8.3	31.4	31.4	96.7	96.7	7.5	7.5	7.5	2.6	2.6	2.6	2.6	5		5
						10.1	18.4	18.4	8.3	8.3	31.4	31.4	96.7	96.7	7.5	7.5	7.5	2.6	2.6	2.6	2.6	4		5
19-Jan-19	Cloudy	Moderate	15:45	11.3	Surface	1.0	18.5	18.5	8.1	8.1	31.2	31.2	96.9	97.0	7.5	7.5	7.5	2.2	2.2	2.2	3	3	5	
						1.0	18.5		8.1		31.2		97.0		7.5			2.2			2			
					Middle	5.7	18.5	18.5	8.1	8.1	31.3	31.3	95.9	95.9	7.5	7.5	7.5	2.0	2.0	2.0	2.0	5		5
						5.7	18.5	18.5	8.1	8.1	31.3	31.3	95.9	95.9	7.5	7.5	7.5	2.0	2.0	2.0	2.0	5		5
					Bottom	10.3	18.5	18.5	8.1	8.1	31.3	31.3	95.1	95.2	7.4	7.4	7.4	2.5	2.5	2.5	2.5	6		6
						10.3	18.5	18.5	8.1	8.1	31.3	31.3	95.2	95.2	7.4	7.4	7.4	2.5	2.5	2.5	2.5	6		6
22-Jan-19	Fine	Calm	07:10	10.5	Surface	1.0	18.3	18.3	8.1	8.1	31.1	31.1	93.5	93.5	7.3	7.3	7.3	3.1	3.0	2.8	11	11	10	
						1.0	18.3		8.1		31.1		93.5		7.3			3.0			10			
					Middle	5.3	18.2	18.2	8.1	8.1	31.1	31.1	93.2	93.2	7.3	7.3	7.3	2.7	2.7	2.7	2.7	11		11
						5.3	18.2	18.2	8.1	8.1	31.1	31.1	93.2	93.2	7.3	7.3	7.3	2.7	2.7	2.7	2.7	11		11
					Bottom	9.5	18.2	18.2	8.1	8.1	31.1	31.1	92.4	92.4	7.2	7.2	7.2	2.7	2.7	2.7	2.7	9		9
						9.5	18.2	18.2	8.1	8.1	31.1	31.1	92.3	92.4	7.2	7.2	7.2	2.7	2.7	2.7	2.7	9		9
24-Jan-19	Sunny	Moderate	08:33	11.2	Surface	1.0	18.3	18.3	8.2	8.2	31.0	31.0	92.5	92.6	7.2	7.2	7.3	2.0	2.0	1.8	6	6	7	
						1.0	18.3		8.2		31.0		92.6		7.2			2.0			6			
					Middle	5.6	18.3	18.3	8.2	8.2	31.0	31.0	93.6	93.6	7.3	7.3	7.3	1.8	1.8	1.8	1.8	8		9
						5.6	18.3	18.3	8.2	8.2	31.0	31.0	93.6	93.6	7.3	7.3	7.3	1.8	1.8	1.8	1.8	9		9
					Bottom	10.2	18.2	18.2	8.2	8.2	31.1	31.1	94.9	94.9	7.4	7.4	7.4	1.6	1.6	1.6	1.6	8		8
						10.2	18.2	18.2	8.2	8.2	31.1	31.1	94.9	94.9	7.4	7.4	7.4	1.6	1.6	1.6	1.6	7		8
26-Jan-19	Sunny	Moderate	09:53	11.1	Surface	1.0	18.4	18.4	8.2	8.2	30.8	30.8	95.8	95.8	7.5	7.5	7.5	2.6	2.6	2.9	6	6	7	
						1.0	18.4		8.2		30.8		95.8		7.5			2.6			5			
					Middle	5.6	18.4	18.4	8.2	8.2	30.9	30.9	95.8	95.8	7.5	7.5	7.5	2.9	2.9	2.9	2.9	7		7
						5.6	18.4	18.4	8.2	8.2	30.9	30.9	95.8	95.8	7.5	7.5	7.5	2.9	2.9	2.9	2.9	7		7
					Bottom	10.1	18.4	18.4	8.2	8.2	30.9	30.9	95.9	96.0	7.5	7.5	7.5	3.1	3.1	3.1	3.1	7		8
						10.1	18.4	18.4	8.2	8.2	30.9	30.9	96.0	96.0	7.5	7.5	7.5	3.1	3.1	3.1	3.1	8		8

Remarks: DA: Depth-averaged  
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR10 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
1-Jan-19	Cloudy	Rough	09:22	6.8	Surface	1.0	17.9	17.9	8.1	8.1	32.8	32.8	94.9	94.9	7.4	7.4	7.4	8.4	8.4	8.7	7	7	6	
						1.0	17.9		8.1		32.8		94.9		7.4			8.5			6			
					Middle	3.4	17.9	8.1	32.8	94.8	94.8	7.4	7.4	8.6	8.6	6	6							
						3.4	17.9	8.1	32.8	94.8	94.8	7.4	7.4	8.6		6								
					Bottom	5.8	17.8	17.8	8.1	8.1	32.8	32.8	94.5	94.6	7.4	7.4	7.4	7.4	9.1		9.1	6		7
						5.8	17.8		8.1		32.8		94.6		7.4		9.1		7					
3-Jan-19	Rainy	Moderate	11:13	6.4	Surface	1.0	17.2	17.2	8.2	8.2	33.2	33.2	99.6	99.6	7.9	7.8	7.8	4.8	4.7	5.3	4	4	4	
						1.0	17.2		8.2		33.2		99.5		7.8			4.7			4			
					Middle	3.2	17.1	17.1	8.2	8.2	33.1	33.1	98.8	98.8	7.8	7.8	4.6	4.7	5		5			
						3.2	17.1		8.2		33.1		98.8		7.8		4.8		5					
					Bottom	5.4	16.8	16.8	8.2	8.2	33.1	33.1	96.8	96.8	7.7	7.7	7.7	7.7	6.4		6.5	4		3
						5.4	16.8		8.2		33.1		96.8		7.7		6.6		2					
5-Jan-19	Misty	Moderate	12:31	6.6	Surface	1.0	18.4	18.4	8.1	8.1	32.9	32.9	94.6	94.6	7.3	7.3	7.3	6.9	6.9	7.2	3	4	4	
						1.0	18.4		8.1		32.9		94.5		7.3			6.9			5			
					Middle	3.3	18.3	18.3	8.1	8.1	32.9	32.9	94.1	94.1	7.3	7.3	6.8	6.8	5		4			
						3.3	18.3		8.1		32.9		94.1		7.3		6.8		3					
					Bottom	5.6	18.2	18.2	8.1	8.1	32.9	32.9	93.5	93.5	7.2	7.2	7.2	7.2	7.9		7.8	4		4
						5.6	18.2		8.1		32.9		93.4		7.2		7.8		4					
8-Jan-19	Cloudy	Rough	12:26	6.7	Surface	1.0	18.8	18.8	8.1	8.1	31.9	31.9	93.8	93.8	7.2	7.2	7.2	10.5	10.5	10.6	<1	1	1	
						1.0	18.8		8.1		31.9		93.7		7.2			10.5			1			
					Middle	3.4	18.8	18.8	8.1	8.1	32.6	32.6	93.1	93.1	7.1	7.1	7.1	7.1	10.6		10.6	2		2
						3.4	18.8		8.1		32.6		93.1		7.1		10.6		1					
					Bottom	5.7	18.4	18.4	8.1	8.1	32.8	32.8	92.1	92.1	7.1	7.1	7.1	7.1	10.6		10.6	1		2
						5.7	18.4		8.1		32.8		92.1		7.1		10.6		2					
10-Jan-19	Cloudy	Moderate	13:43	7.0	Surface	1.0	19.0	19.0	8.1	8.1	33.0	33.0	101.7	101.7	7.8	7.8	7.7	3.9	3.8	4.7	4	4	5	
						1.0	19.0		8.1		33.0		101.6		7.8			3.8			4			
					Middle	3.5	19.0	19.0	8.1	8.1	33.0	33.0	100.9	100.8	7.7	7.7	3.6	3.6	5		5			
						3.5	19.0		8.1		33.0		100.7		7.7		3.6		4					
					Bottom	6.0	18.9	18.9	8.0	8.0	33.1	33.1	99.4	99.4	7.6	7.6	7.6	7.6	6.4		6.5	6		6
						6.0	18.9		8.0		33.1		99.4		7.6		6.7		6					
12-Jan-19	Misty	Moderate	15:09	6.7	Surface	1.0	18.8	18.8	8.1	8.1	32.4	32.4	101.9	101.8	7.8	7.8	7.8	2.9	3.0	3.4	2	2	2	
						1.0	18.8		8.1		32.5		101.7		7.8			3.0			2			
					Middle	3.4	18.8	18.8	8.1	8.1	32.6	32.6	100.9	100.9	7.7	7.7	3.7	3.7	1		2			
						3.4	18.8		8.1		32.6		100.9		7.7		3.7		2					
					Bottom	5.7	18.9	18.9	8.1	8.1	32.6	32.6	100.1	100.1	7.7	7.7	7.7	7.7	3.6		3.7	2		2
						5.7	18.9		8.1		32.6		100.0		7.7		3.7		2					
15-Jan-19	Cloudy	Moderate	06:00	6.6	Surface	1.0	19.4	19.4	8.1	8.1	32.4	32.4	98.8	98.8	7.5	7.5	7.5	3.5	3.5	5.4	<1	<1	<1	
						1.0	19.4		8.1		32.4		98.8		7.5			3.4			<1			
					Middle	3.3	19.5	19.5	8.1	8.1	32.6	32.6	98.6	98.6	7.5	7.5	6.7	6.7	<1		<1			
						3.3	19.5		8.1		32.6		98.5		7.5		6.7		<1					
					Bottom	5.6	19.5	19.5	8.1	8.1	32.7	32.7	98.7	98.7	7.5	7.5	7.5	7.5	5.7		6.0	<1		<1
						5.6	19.5		8.1		32.7		98.7		7.5		6.3		<1					
17-Jan-19	Fine	Rough	08:58	6.7	Surface	1.0	18.9	18.9	8.2	8.2	31.7	31.7	90.9	90.9	7.0	7.0	7.0	3.8	3.8	5.0	10	10	8	
						1.0	18.9		8.2		31.7		90.9		7.0			3.8			9			
					Middle	3.4	18.8	18.8	8.2	8.2	31.7	31.7	89.9	89.9	6.9	6.9	6.9	6.9	5.2		5.1	8		8
						3.4	18.8		8.2		31.7		89.8		6.9		5.0		8					
					Bottom	5.7	18.7	18.7	8.2	8.2	31.7	31.7	89.2	89.2	6.9	6.9	6.9	6.9	6.2		6.1	7		7
						5.7	18.7		8.2		31.7		89.2		6.9		6.1		7					
19-Jan-19	Cloudy	Rough	10:58	6.9	Surface	1.0	18.8	18.8	8.1	8.1	31.4	31.4	95.6	95.6	7.4	7.4	7.4	3.4	3.4	5.3	4	5	8	
						1.0	18.8		8.1		31.4		95.6		7.4			3.3			5			
					Middle	3.5	18.6	18.6	8.1	8.1	31.4	31.4	94.7	94.7	7.3	7.3	3.9	3.9	4		5			
						3.5	18.6		8.1		31.4		94.7		7.3		3.9		6					
					Bottom	5.9	18.6	18.6	8.1	8.1	31.5	31.5	93.6	93.6	7.3	7.3	7.3	7.3	8.8		8.8	14		14
						5.9	18.6		8.1		31.5		93.6		7.3		8.7		13					
22-Jan-19	Fine	Moderate	11:52	6.8	Surface	1.0	18.0	18.0	8.2	8.2	31.0	31.0	97.9	97.9	7.7	7.7	7.7	3.2	3.2	3.2	7	8	9	
						1.0	18.0		8.2		31.0		97.8		7.7			3.2			8			
					Middle	3.4	18.0	18.0	8.2	8.2	31.0	31.0	97.6	97.6	7.7	7.7	3.1	3.1	8		8			
						3.4	18.0		8.2		31.0		97.6		7.7		3.1		8					
					Bottom	5.8	17.9	17.9	8.2	8.2	31.0	31.0	96.9	96.9	7.6	7.6	7.6	7.6	3.2		3.3	11		11
						5.8	17.9		8.2		31.0		96.8		7.6		3.3		11					
24-Jan-19	Sunny	Moderate	13:38	6.8	Surface	1.0	18.3	18.3	8.2	8.2	31.1	31.1	97.1	97.1	7.6	7.6	7.6	1.8	1.8	4.9	9	9	8	
						1.0	18.3		8.2		31.1		97.1		7.6			1.8			9			
					Middle	3.4	18.3	18.3	8.2	8.2	31.1	31.1	96.9	96.9	7.6	7.6	4.6	4.7	8		8			
						3.4	18.3		8.2		31.1		96.9		7.6		4.8		7					
					Bottom	5.8	18.3	18.3	8.2	8.2	31.1	31.1	96.8	96.8	7.6	7.6	7.6	7.6	8.3		8.3	8		8
						5.8	18.3		8.2		31.1		96.8		7.6		8.4		8					
26-Jan-19	Sunny	Moderate	15:15	6.9	Surface	1.0	18.4	18.4	8.3	8.3	31.4	31.4	112.9	112.9	8.8	8.8	8.8	2.2	2.2	4.0	7	8	8	
						1.0	18.4		8.3		31.4		112.9		8.8			2.3			8			
					Middle	3.5	18.4	18.4	8.3	8.3	31.4	31.4	112.8	112.8	8.8	8.8	8.8	8.8	3.3		3.3	8		8
						3.5	18.4		8.3		31.4		112.8		8.8		3.3		8					
					Bottom	5.9	18.4	18.4	8.3	8.3	31.4	31.4	112.7	112.7	8.8	8.8	8.8	8.8	6.6		6.6	8		9
						5.9	18.4		8.3		31.4		112.7		8.8		6.6		9					

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at SR10 during Mid-flood Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	13:19	6.8	Surface	1.0	18.6	18.6	8.1	8.1	33.0	33.0	94.5	94.5	7.3	7.3	7.3	11.0	11.0	10.4	6	6	6
						1.0	18.6		8.1		33.0		94.5		7.3			10.7			6		
					Middle	3.4	18.4	18.4	8.1	8.1	33.0	33.0	94.6	94.6	7.3	7.3	10.6	6					
						3.4	18.4		8.1		33.0		94.6		7.3		10.6	6					
					Bottom	5.8	17.9	17.9	8.1	8.1	32.9	32.9	94.5	94.5	7.4	7.4	9.4	6					
						5.8	17.9		8.1		32.9		94.5		7.4		9.4	7					
3-Jan-19	Rainy	Moderate	14:42	7.1	Surface	1.0	17.3	17.3	8.1	8.1	33.1	33.1	100.7	100.7	7.9	7.9	7.9	4.1	4.1	5.0	4	4	5
						1.0	17.3		8.1		33.1		100.7		7.9			4.2			4		
					Middle	3.6	17.1	17.1	8.1	8.1	33.1	33.1	99.0	98.8	7.8	7.8	4.8	4					
						3.6	17.1		8.1		33.1		98.6		7.8		5.1	5					
					Bottom	6.1	16.8	16.8	8.1	8.1	33.1	33.1	97.5	97.5	7.8	7.8	6.0	6					
						6.1	16.8		8.1		33.1		97.5		7.8		5.9	6					
5-Jan-19	Misty	Moderate	15:39	6.5	Surface	1.0	18.6	18.6	8.1	8.1	32.9	32.9	95.5	95.4	7.4	7.3	7.3	6.7	6.8	7.5	5	5	4
						1.0	18.5		8.1		32.9		95.3		7.3			6.8			4		
					Middle	3.3	18.4	18.4	8.1	8.1	32.9	32.9	94.0	93.9	7.3	7.3	7.6	5					
						3.3	18.3		8.1		32.9		93.8		7.2		7.7	4					
					Bottom	5.5	18.3	18.3	8.1	8.1	32.9	32.9	92.4	92.4	7.1	7.1	7.9	3					
						5.5	18.3		8.1		32.9		92.3		7.1		8.2	4					
8-Jan-19	Cloudy	Rough	09:09	6.8	Surface	1.0	18.6	18.6	8.2	8.2	33.2	33.2	95.3	95.3	7.3	7.3	7.3	9.3	9.3	9.5	3	3	5
						1.0	18.6		8.2		33.2		95.2		7.3			9.3			3		
					Middle	3.4	18.6	18.6	8.2	8.2	33.1	33.1	94.2	94.2	7.2	7.2	9.6	4					
						3.4	18.6		8.2		33.1		94.2		7.2		9.6	5					
					Bottom	5.8	18.6	18.6	8.2	8.2	33.1	33.1	94.7	94.7	7.3	7.3	9.5	6					
						5.8	18.6		8.2		33.1		94.7		7.3		9.5	6					
10-Jan-19	Cloudy	Moderate	10:21	6.8	Surface	1.0	18.9	18.9	8.0	8.0	33.0	33.0	101.5	101.5	7.7	7.7	7.7	3.6	3.6	4.5	4	4	4
						1.0	18.9		8.0		33.0		101.4		7.7			3.6			4		
					Middle	3.4	18.9	18.9	8.0	8.0	33.0	33.0	101.2	101.2	7.7	7.7	3.9	4					
						3.4	18.9		8.0		33.0		101.2		7.7		3.9	4					
					Bottom	5.8	18.9	18.9	8.1	8.1	33.1	33.1	100.0	100.0	7.6	7.6	6.0	4					
						5.8	18.9		8.1		33.1		100.0		7.6		6.2	3					
12-Jan-19	Misty	Moderate	11:19	6.5	Surface	1.0	19.5	19.5	8.1	8.1	32.9	32.9	104.6	104.6	7.9	7.9	7.9	3.5	3.5	4.2	2	2	1
						1.0	19.4		8.1		32.9		104.5		7.9			3.5			<1		
					Middle	3.3	19.3	19.3	8.1	8.1	32.9	32.9	103.7	103.6	7.9	7.9	3.4	1					
						3.3	19.3		8.1		32.9		103.5		7.9		3.4	1					
					Bottom	5.5	19.2	19.2	8.1	8.1	33.0	33.0	101.2	101.2	7.7	7.7	5.7	1					
						5.5	19.2		8.1		33.0		101.2		7.7		5.7	<1					
15-Jan-19	Cloudy	Moderate	11:45	6.6	Surface	1.0	19.5	19.5	8.1	8.1	32.5	32.5	100.1	100.1	7.6	7.6	7.6	2.6	2.7	3.7	3	3	3
						1.0	19.5		8.1		32.5		100.1		7.6			2.8			3		
					Middle	3.3	19.5	19.5	8.1	8.1	32.6	32.6	99.6	99.6	7.5	7.5	3.5	3					
						3.3	19.5		8.1		32.6		99.6		7.5		3.5	2					
					Bottom	5.6	19.5	19.5	8.1	8.1	32.6	32.6	99.5	99.5	7.5	7.5	4.8	2					
						5.6	19.5		8.1		32.6		99.5		7.5		5.2	2					
17-Jan-19	Fine	Rough	12:47	6.9	Surface	1.0	18.5	18.5	8.3	8.3	31.2	31.2	98.7	98.7	7.7	7.7	7.7	1.7	1.7	1.8	5	5	6
						1.0	18.5		8.3		31.2		98.7		7.7			1.7			5		
					Middle	3.5	18.4	18.4	8.3	8.3	31.2	31.2	98.0	98.0	7.6	7.6	1.8	6					
						3.5	18.4		8.3		31.2		97.9		7.6		1.8	5					
					Bottom	5.9	18.3	18.3	8.3	8.3	31.2	31.2	97.5	97.5	7.6	7.6	1.8	8					
						5.9	18.3		8.3		31.2		97.4		7.6		1.8	8					
19-Jan-19	Cloudy	Moderate	14:21	6.8	Surface	1.0	18.8	18.8	8.1	8.1	31.4	31.4	95.7	95.7	7.4	7.4	7.3	3.4	3.4	5.5	12	12	12
						1.0	18.8		8.1		31.4		95.6		7.4			3.4			12		
					Middle	3.4	18.7	18.7	8.1	8.1	31.5	31.5	93.2	93.2	7.2	7.2	6.0	12					
						3.4	18.7		8.1		31.5		93.2		7.2		6.0	12					
					Bottom	5.8	18.7	18.7	8.1	8.1	31.5	31.5	93.5	93.6	7.2	7.2	7.3	13					
						5.8	18.7		8.1		31.5		93.6		7.2		7.2	12					
22-Jan-19	Fine	Moderate	08:26	6.6	Surface	1.0	18.5	18.5	8.1	8.1	31.2	31.2	91.6	91.6	7.1	7.1	7.1	4.6	4.6	4.7	14	15	13
						1.0	18.5		8.1		31.2		91.6		7.1			4.6			15		
					Middle	3.3	18.5	18.5	8.1	8.1	31.2	31.2	91.5	91.5	7.1	7.1	4.6	13					
						3.3	18.5		8.1		31.2		91.5		7.1		4.6	12					
					Bottom	5.6	18.5	18.5	8.1	8.1	31.2	31.2	91.9	92.0	7.2	7.2	4.8	12					
						5.6	18.5		8.1		31.2		92.0		7.2		4.7	12					
24-Jan-19	Sunny	Moderate	09:52	6.8	Surface	1.0	18.2	18.2	8.2	8.2	31.1	31.1	98.7	98.7	7.7	7.7	7.7	5.4	5.4	7.4	6	7	8
						1.0	18.2		8.2		31.1		98.7		7.7			5.4			7		
					Middle	3.4	18.2	18.2	8.2	8.2	31.1	31.1	98.5	98.5	7.7	7.7	7.7	8					
						3.4	18.2		8.2		31.1		98.5		7.7		7.8	8					
					Bottom	5.8	18.2	18.2	8.2	8.2	31.1	31.1	98.3	98.3	7.7	7.7	9.3	9					
						5.8	18.2		8.2		31.1		98.3		7.7		9.0	9					
26-Jan-19	Sunny	Moderate	11:10	6.8	Surface	1.0	18.3	18.3	8.3	8.3	31.4	31.4	108.7	108.7	8.5	8.5	8.4	1.7	1.7	2.0	7	7	7
						1.0	18.3		8.3		31.4		108.6		8.5			1.7			7		
					Middle	3.4	18.3	18.3	8.3	8.3	31.4	31.4	108.0	108.0	8.4	8.4	1.8	6					
						3.4	18.3		8.3		31.4		108.0		8.4		1.8	6					
					Bottom	5.8	18.3	18.3	8.3	8.3	31.4	31.4	108.2	108.3	8.4	8.4	2.4	7					
						5.8	18.3		8.3		31.4		108.3		8.5		2.4	8					

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at A1 during Mid-ebb Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	08:29	8.6	Surface	1.0	19.1	19.1	8.1	8.1	33.2	33.2	95.1	95.1	7.2	7.2	7.2	8.7	8.7	8.6
						1.0	19.1		8.1		33.2		95.1		7.2			8.8		
						4.3	19.1		8.1		33.2		95.0		7.2			8.6		
					Middle	4.3	19.1	8.1	33.2	95.0	7.2	8.5								
						7.6	19.1	8.1	33.2	94.8	7.2	8.5								
						7.6	19.1	8.1	33.2	94.8	7.2	8.4								
3-Jan-19	Rainy	Moderate	10:31	8.8	Surface	1.0	19.0	19.0	8.2	8.2	33.3	33.3	99.6	99.6	7.6	7.6	7.6	6.0	6.1	6.5
						1.0	19.0		8.2		33.3		99.5		7.6			6.1		
						4.4	19.0		8.2		33.3		99.2		7.6			6.3		
					Middle	4.4	19.0	8.2	33.3	99.2	7.6	6.3								
						7.8	18.9	8.2	33.3	98.8	7.5	6.9								
						7.8	18.9	8.2	33.3	98.8	7.5	7.3								
5-Jan-19	Misty	Rough	11:46	8.3	Surface	1.0	19.2	19.2	8.2	8.2	32.9	32.9	94.5	94.5	7.2	7.2	7.2	7.2	7.2	7.4
						1.0	19.2		8.2		32.9		94.5		7.2			7.5		
						4.2	19.2		8.2		32.9		94.2		7.2			7.5		
					Middle	4.2	19.2	8.2	32.9	94.2	7.2	7.5								
						7.3	19.2	8.2	33.0	93.9	7.1	7.6								
						7.3	19.2	8.2	33.0	93.9	7.1	7.6								
8-Jan-19	Cloudy	Rough	13:10	8.9	Surface	1.0	18.8	18.8	8.2	8.2	32.9	32.9	95.1	95.1	7.3	7.3	7.5	8.2	8.2	9.7
						1.0	18.8		8.2		32.9		95.1		7.3			8.2		
						4.5	18.8		8.3		32.9		98.8		7.6			10.4		
					Middle	4.5	18.8	8.3	32.9	98.8	7.6	10.3								
						7.9	18.8	8.3	33.0	93.5	7.2	10.4								
						7.9	18.8	8.3	33.0	93.5	7.2	10.5								
10-Jan-19	Cloudy	Moderate	14:26	8.4	Surface	1.0	18.7	18.7	8.1	8.1	32.5	32.5	103.6	103.6	8.0	8.0	7.9	3.0	3.0	4.2
						1.0	18.7		8.1		32.5		103.6		8.0			3.0		
						4.2	18.6		8.1		32.5		102.3		7.9			3.6		
					Middle	4.2	18.6	8.1	32.5	102.2	7.9	3.8								
						7.4	18.6	8.1	32.5	101.6	7.8	5.9								
						7.4	18.6	8.1	32.5	101.6	7.8	5.9								
12-Jan-19	Misty	Moderate	15:58	8.0	Surface	1.0	20.0	20.0	8.2	8.2	32.5	32.5	105.9	105.8	8.0	8.0	8.0	3.9	3.9	4.3
						1.0	19.9		8.2		32.5		105.6		8.0			3.9		
						4.0	19.0		8.2		32.4		104.2		8.0			3.7		
					Middle	4.0	18.9	8.2	32.4	104.1	8.0	3.7								
						7.0	18.9	8.2	32.5	101.6	7.8	5.1								
						7.0	18.9	8.2	32.5	101.5	7.8	5.4								
15-Jan-19	Cloudy	Calm	05:21	8.4	Surface	1.0	19.1	19.1	8.2	8.2	32.4	32.4	102.2	102.2	7.8	7.8	7.8	1.6	1.6	1.7
						1.0	19.1		8.2		32.4		102.1		7.8			1.7		
						4.2	19.1		8.2		32.4		102.0		7.8			1.8		
					Middle	4.2	19.1	8.2	32.4	102.1	7.8	1.8								
						7.4	19.0	8.2	32.4	101.8	7.8	1.7								
						7.4	19.0	8.2	32.3	101.6	7.8	1.8								
17-Jan-19	Fine	Moderate	08:11	8.4	Surface	1.0	18.5	18.5	8.3	8.3	31.3	31.3	96.1	96.1	7.5	7.5	7.5	2.3	2.3	2.4
						1.0	18.5		8.3		31.3		96.1		7.5			2.3		
						4.2	18.5		8.3		31.3		95.7		7.4			2.4		
					Middle	4.2	18.5	8.3	31.4	95.7	7.4	2.4								
						7.4	18.5	8.3	31.4	95.6	7.4	2.7								
						7.4	18.5	8.3	31.4	95.6	7.4	2.7								
19-Jan-19	Cloudy	Moderate	10:15	9.4	Surface	1.0	19.1	19.2	8.1	8.1	31.3	31.3	98.7	98.8	7.6	7.6	7.6	2.9	2.9	3.1
						1.0	19.2		8.1		31.3		98.8		7.6			3.0		
						4.7	18.2		8.1		31.2		96.8		7.6			3.2		
					Middle	4.7	18.2	8.1	31.2	96.8	7.6	3.2								
						8.4	18.2	8.1	31.2	96.1	7.5	3.3								
						8.4	18.2	8.1	31.2	96.0	7.5	3.3								
22-Jan-19	Fine	Moderate	12:44	9.3	Surface	1.0	18.3	18.3	8.2	8.2	31.0	31.0	99.1	99.1	7.8	7.8	7.7	2.8	2.8	3.0
						1.0	18.3		8.2		31.0		99.1		7.8			2.8		
						4.7	18.2		8.2		31.0		98.0		7.7			2.7		
					Middle	4.7	18.2	8.2	31.0	97.9	7.7	2.7								
						8.3	18.3	8.1	31.1	96.1	7.5	3.8								
						8.3	18.3	8.1	31.1	96.1	7.5	3.5								
24-Jan-19	Sunny	Moderate	14:17	9.5	Surface	1.0	18.2	18.2	8.2	8.2	31.1	31.1	100.3	100.3	7.9	7.9	7.8	2.3	2.3	2.1
						1.0	18.2		8.2		31.1		100.3		7.9			2.3		
						4.8	18.1		8.2		31.1		99.4		7.8			1.9		
					Middle	4.8	18.1	8.2	31.1	99.4	7.8	1.9								
						8.5	18.1	8.2	31.1	99.1	7.8	2.1								
						8.5	18.1	8.2	31.1	99.2	7.8	2.1								
26-Jan-19	Sunny	Moderate	15:59	9.5	Surface	1.0	18.8	18.8	8.3	8.3	31.4	31.4	115.3	115.1	8.9	8.9	8.9	1.3	1.3	1.4
						1.0	18.8		8.3		31.4		114.9		8.9			1.3		
						4.8	18.6		8.3		31.4		113.9		8.8			1.4		
					Middle	4.8	18.6	8.3	31.4	113.9	8.8	1.4								
						8.5	18.7	8.3	31.4	114.6	8.9	1.5								
						8.5	18.8	8.3	31.3	114.9	8.9	1.6								

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at A1 during Mid-flood Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	14:14	9.5	Surface	1.0	19.8	19.8	8.1	8.1	33.1	33.1	96.9	96.9	7.3	7.3	7.3	8.7	8.7	9.4
						1.0	19.8		8.1		33.1		96.9		7.3			8.7		
						4.8	19.6		8.1		33.1		96.2		7.3			9.1		
					Middle	4.8	19.6	19.6	8.1	8.1	33.1	33.1	96.2	96.2	7.2	7.2	9.0			
						8.5	19.3		8.1		33.1		95.1		7.2		10.4			
						8.5	19.3		8.1		33.1		95.2		7.2		10.5			
3-Jan-19	Rainy	Moderate	15:26	9.2	Surface	1.0	21.0	21.0	8.2	8.2	33.2	33.2	103.5	103.5	7.6	7.6	7.6	6.0	6.0	6.7
						1.0	21.0		8.2		33.2		103.5		7.6			6.0		
						4.6	18.9		8.2		33.2		99.5		7.6			5.7		
					Middle	4.6	18.9	18.9	8.2	8.2	33.2	33.2	99.5	99.5	7.6	7.6	5.9			
						8.2	18.9		8.2		33.2		99.7		7.6		8.2			
						8.2	18.9		8.2		33.2		99.8		7.6		8.2			
5-Jan-19	Misty	Moderate	16:22	8.7	Surface	1.0	19.3	19.3	8.2	8.2	32.7	32.7	97.1	97.1	7.4	7.4	7.3	6.5	6.5	6.6
						1.0	19.2		8.2		32.7		97.0		7.4			6.5		
						4.4	19.2		8.2		32.8		96.1		7.3			6.5		
					Middle	4.4	19.2	19.2	8.2	8.2	32.8	32.8	96.0	96.1	7.3	7.3	6.5			
						7.7	19.1		8.2		32.8		94.5		7.2		6.9			
						7.7	19.1		8.2		32.8		94.5		7.2		6.9			
8-Jan-19	Cloudy	Rough	08:27	8.7	Surface	1.0	18.5	18.5	8.1	8.1	33.2	33.2	99.3	99.2	7.6	7.6	7.6	11.8	11.8	11.9
						1.0	18.5		8.1		33.3		99.1		7.6			11.9		
						4.4	18.5		8.1		33.3		98.5		7.6			12.0		
					Middle	4.4	18.5	18.5	8.1	8.1	33.3	33.3	98.6	98.3	7.6	7.6	12.0			
						7.7	18.5		8.1		33.3		98.6		7.6		11.9			
						7.7	18.5		8.1		33.3		98.6		7.6		12.0			
10-Jan-19	Fine	Rough	09:37	8.6	Surface	1.0	19.5	19.5	8.1	8.1	32.6	32.6	103.9	103.8	7.9	7.9	7.8	3.3	3.3	3.4
						1.0	19.4		8.1		32.6		103.7		7.9			3.3		
						4.3	18.7		8.1		32.6		101.0		7.8			3.1		
					Middle	4.3	18.7	18.7	8.1	8.1	32.6	32.6	101.1	101.1	7.8	7.8	3.1			
						7.6	18.7		8.1		32.6		98.5		7.6		3.8			
						7.6	18.7		8.1		32.6		98.1		7.5		3.7			
12-Jan-19	Misty	Moderate	10:40	8.3	Surface	1.0	19.2	19.2	8.2	8.2	32.5	32.5	101.8	101.7	7.8	7.7	7.7	3.3	3.4	4.4
						1.0	19.2		8.2		32.5		101.5		7.7			3.4		
						4.2	19.1		8.2		32.7		100.4		7.7			4.0		
					Middle	4.2	19.1	19.1	8.2	8.2	32.7	32.7	100.4	100.4	7.7	7.7	4.1			
						7.3	19.1		8.2		32.7		99.2		7.6		5.4			
						7.3	19.1		8.2		32.7		99.1		7.6		6.1			
15-Jan-19	Cloudy	Moderate	12:27	9.3	Surface	1.0	19.1	19.1	8.2	8.2	32.4	32.4	101.8	101.7	7.8	7.8	7.8	2.9	2.9	3.3
						1.0	19.0		8.2		32.4		101.6		7.8			3.0		
						4.7	18.9		8.2		32.4		101.0		7.7			3.5		
					Middle	4.7	18.9	18.9	8.2	8.2	32.4	32.4	101.0	101.0	7.7	7.7	3.5			
						8.3	19.1		8.2		32.3		100.9		7.7		3.5			
						8.3	19.1		8.2		32.2		100.9		7.7		3.4			
17-Jan-19	Fine	Moderate	13:34	8.9	Surface	1.0	18.5	18.5	8.3	8.3	31.3	31.3	98.3	98.3	7.7	7.7	7.6	1.8	1.8	3.4
						1.0	18.5		8.3		31.3		98.2		7.7			1.9		
						4.5	18.4		8.3		31.3		97.4		7.6			3.6		
					Middle	4.5	18.4	18.4	8.3	8.3	31.3	31.3	97.4	97.4	7.6	7.6	3.7			
						7.9	18.5		8.3		31.4		97.5		7.6		4.8			
						7.9	18.5		8.3		31.4		97.5		7.6		4.8			
19-Jan-19	Cloudy	Moderate	15:07	9.5	Surface	1.0	18.8	18.8	8.1	8.1	31.3	31.3	99.2	99.1	7.7	7.7	7.6	2.6	2.6	3.5
						1.0	18.8		8.1		31.3		99.0		7.7			2.6		
						4.8	18.3		8.1		31.3		97.2		7.6			2.4		
					Middle	4.8	18.3	18.3	8.1	8.1	31.3	31.3	97.1	97.2	7.6	7.6	2.3			
						8.5	18.3		8.1		31.3		96.3		7.5		5.5			
						8.5	18.3		8.1		31.3		96.3		7.5		5.5			
22-Jan-19	Fine	Rough	07:48	8.9	Surface	1.0	18.0	18.0	8.2	8.2	31.1	31.1	96.9	96.9	7.6	7.6	7.6	4.4	4.3	4.7
						1.0	17.9		8.2		31.1		96.9		7.6			4.3		
						4.5	18.0		8.2		31.1		96.3		7.6			4.9		
					Middle	4.5	18.0	18.0	8.2	8.2	31.1	31.1	96.3	96.3	7.6	7.6	5.0			
						7.9	18.0		8.2		31.1		96.0		7.5		4.9			
						7.9	18.0		8.2		31.1		95.9		7.5		4.9			
24-Jan-19	Sunny	Moderate	09:12	9.1	Surface	1.0	18.2	18.2	8.2	8.2	31.1	31.1	98.7	98.7	7.7	7.7	7.7	5.8	5.9	7.5
						1.0	18.2		8.2		31.1		98.7		7.7			5.9		
						4.6	18.2		8.2		31.1		98.6		7.7			7.0		
					Middle	4.6	18.2	18.2	8.2	8.2	31.1	31.1	98.6	98.6	7.7	7.7	7.0			
						8.1	18.2		8.2		31.1		98.4		7.7		10.0			
						8.1	18.2		8.2		31.1		98.4		7.7		9.4			
26-Jan-19	Sunny	Moderate	10:29	9.2	Surface	1.0	18.4	18.4	8.2	8.2	31.0	31.0	96.2	96.2	7.5	7.5	7.5	2.0	2.0	2.2
						1.0	18.4		8.2		31.0		96.2		7.5			2.0		
						4.6	18.4		8.2		31.0		95.9		7.5			2.1		
					Middle	4.6	18.4	18.4	8.2	8.2	31.0	31.0	95.8	95.9	7.5	7.5	2.1			
						8.2	18.4		8.2		31.0		96.0		7.5		2.4			
						8.2	18.4		8.2		31.0		96.0		7.5		2.4			

Remarks: DA: Depth-averaged  
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results at A2 during Mid-ebb Tide																									
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)							
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA					
1-Jan-19	Cloudy	Rough	08:47	9.7	Surface	1.0	19.1	19.1	8.1	8.1	33.2	33.2	94.6	94.6	7.2	7.2	7.2	8.2	8.2	9.5					
						1.0	19.1		8.1		33.2		94.6		7.2			8.2							
						4.9	19.1		8.1		33.2		94.2		7.2			8.5							
					3-Jan-19	Rainy	Moderate	11:00	9.3	Surface	1.0	18.9	18.9	8.2	8.2	33.1	33.1	99.5	99.5	7.6	7.6	7.6	5.9	6.0	6.0
											1.0	18.9		8.2		33.1		99.5		7.6			6.0		
											4.7	18.9		8.2		33.2		99.2		7.6			6.7		
5-Jan-19	Misty	Moderate	12:34	9.4						Surface	1.0	19.1	19.1	8.2	8.2	32.9	32.9	93.1	93.1	7.1	7.1	7.1	7.2	7.2	7.4
											1.0	19.1		8.2		32.9		93.0		7.1			7.2		
											4.7	19.1		8.2		32.9		92.5		7.0			7.5		
					8-Jan-19	Cloudy	Rough	12:44	10.1	Surface	1.0	18.7	18.7	8.2	8.2	32.4	32.4	100.2	100.2	7.7	7.7	7.6	9.8	9.8	9.9
											1.0	18.7		8.2		32.4		100.2		7.7			9.8		
											5.1	18.8		8.2		32.4		97.0		7.4			9.8		
10-Jan-19	Cloudy	Moderate	13:44	10.5						Surface	1.0	18.9	18.9	8.1	8.1	32.5	32.5	103.7	103.7	7.9	7.9	7.9	2.9	2.9	3.2
											1.0	18.9		8.1		32.5		103.7		7.9			3.0		
											5.3	18.6		8.1		32.5		102.6		7.9			2.8		
					12-Jan-19	Misty	Moderate	15:03	10.4	Surface	1.0	19.2	19.2	8.2	8.2	32.3	32.3	106.1	106.1	8.1	8.1	8.1	2.1	2.1	2.5
											1.0	19.2		8.2		32.3		106.1		8.1			2.1		
											5.2	18.8		8.2		32.3		104.6		8.0			2.4		
15-Jan-19	Cloudy	Calm	05:43	9.9						Surface	1.0	19.0	19.0	8.2	8.2	32.4	32.4	101.6	101.6	7.8	7.8	7.8	1.6	1.7	2.0
											1.0	19.0		8.2		32.4		101.5		7.8			1.7		
											5.0	18.9		8.2		32.4		101.0		7.7			2.0		
					17-Jan-19	Fine	Moderate	08:54	9.6	Surface	1.0	18.5	18.5	8.3	8.3	31.3	31.3	95.5	95.5	7.4	7.4	7.4	3.1	3.1	3.2
											1.0	18.5		8.3		31.3		95.5		7.4			3.2		
											4.8	18.5		8.3		31.3		95.2		7.4			3.3		
19-Jan-19	Cloudy	Moderate	10:45	10.2						Surface	1.0	18.2	18.2	8.1	8.1	31.2	31.2	98.5	98.5	7.7	7.7	7.7	2.7	2.7	2.5
											1.0	18.2		8.1		31.2		98.5		7.7			2.7		
											5.1	18.2		8.1		31.2		98.3		7.7			2.5		
					22-Jan-19	Fine	Moderate	11:58	10.1	Surface	1.0	18.3	18.3	8.2	8.2	31.1	31.1	97.9	97.9	7.7	7.7	7.7	4.1	4.1	3.6
											1.0	18.3		8.2		31.1		97.9		7.7			4.1		
											5.1	18.1		8.2		31.0		97.4		7.7			3.4		
24-Jan-19	Sunny	Moderate	13:17	9.4						Surface	1.0	18.1	18.1	8.3	8.3	31.1	31.1	100.2	100.2	7.9	7.9	7.8	1.5	1.5	1.6
											1.0	18.1		8.3		31.1		100.2		7.9			1.5		
											4.7	18.1		8.3		31.1		99.8		7.8			1.6		
					26-Jan-19	Sunny	Moderate	15:14	13.5	Surface	1.0	18.9	18.8	8.3	8.3	31.4	31.4	115.9	115.5	8.9	8.9	8.9	1.3	1.3	1.4
											1.0	18.7		8.3		31.4		115.1		8.9			1.3		
											6.8	18.6		8.3		31.4		114.4		8.9			1.4		
Bottom	12.5	18.6	18.7	8.3						8.3	31.4	31.4	114.3	114.4	8.9	8.9	8.9	8.9	8.9	8.9	1.5	1.5			
	12.5	18.7		8.3							31.4		114.5		8.9		1.5								

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at A2 during Mid-flood Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	13:30	10.6	Surface	1.0	19.1	19.1	8.1	8.1	32.9	32.9	95.1	95.1	7.2	7.2	7.2	9.9	9.9	9.4
						1.0	19.1		8.1		32.9		95.1		7.2			9.9		
						5.3	19.2		8.1		33.0		95.1		7.2			9.2		
					Middle	5.3	19.2	8.1	33.0	95.1	7.2	9.2								
						9.6	19.2	8.1	33.0	95.4	7.3	9.2								
						9.6	19.2	8.1	33.0	95.4	7.3	9.2								
3-Jan-19	Rainy	Moderate	14:31	10.7	Surface	1.0	19.1	19.1	8.2	8.2	33.2	33.2	100.4	100.3	7.6	7.6	7.6	4.2	4.4	6.0
						1.0	19.0		8.2		33.2		99.1		7.6			4.5		
						5.4	18.9		8.2		33.2		99.2		7.6			6.4		
					Middle	5.4	18.9	8.2	33.2	99.2	7.6	6.3								
						Bottom	9.7	18.5	8.2	33.3	98.3	7.6	7.2							
							9.7	18.5	8.2	33.3	98.5	7.6	7.2							
5-Jan-19	Misty	Moderate	15:50	10.4	Surface	1.0	19.0	19.0	8.2	8.2	32.7	32.7	94.1	94.0	7.2	7.2	7.2	8.0	8.1	8.3
						1.0	19.0		8.2		32.7		93.9		7.2			8.2		
						5.2	19.0		8.2		32.7		94.3		7.2			8.0		
					Middle	5.2	19.0	8.2	32.7	94.3	7.2	7.9								
						Bottom	9.4	19.1	8.2	32.9	91.7	7.0	9.0							
							9.4	19.1	8.2	32.9	91.7	7.0	9.1							
8-Jan-19	Cloudy	Rough	08:42	9.5	Surface	1.0	18.6	18.7	8.2	8.2	33.3	33.2	98.2	98.2	7.5	7.5	7.4	9.7	9.7	9.8
						1.0	18.7		8.2		33.1		98.2		7.5			9.7		
						4.8	18.7		8.1		33.1		95.1		7.3			9.8		
					Middle	4.8	18.7	8.1	33.1	95.1	7.3	9.8								
						Bottom	8.5	18.7	8.1	33.2	97.5	7.5	9.9							
							8.5	18.7	8.1	33.2	97.4	7.5	9.9							
10-Jan-19	Fine	Moderate	10:05	9.2	Surface	1.0	18.8	18.8	8.1	8.1	32.6	32.6	101.9	101.9	7.8	7.8	7.8	3.6	3.6	3.8
						1.0	18.8		8.1		32.6		101.9		7.8			3.6		
						4.6	18.8		8.1		32.6		101.4		7.8			3.7		
					Middle	4.6	18.8	8.1	32.6	101.4	7.8	3.7								
						Bottom	8.2	18.8	8.1	32.6	98.1	7.5	4.0							
							8.2	18.8	8.1	32.6	97.9	7.5	4.0							
12-Jan-19	Misty	Moderate	11:19	9.5	Surface	1.0	18.8	18.8	8.2	8.2	32.4	32.4	103.4	103.4	7.9	7.9	7.9	3.1	3.1	3.8
						1.0	18.8		8.2		32.4		103.3		7.9			3.1		
						4.8	18.8		8.2		32.4		102.7		7.9			3.4		
					Middle	4.8	18.8	8.2	32.4	102.6	7.9	3.4								
						Bottom	8.5	18.8	8.2	32.4	101.3	7.8	4.9							
							8.5	18.8	8.2	32.4	101.2	7.8	4.9							
15-Jan-19	Cloudy	Moderate	11:39	10.4	Surface	1.0	19.0	19.0	8.2	8.2	32.4	32.4	101.8	101.8	7.8	7.8	7.8	2.0	2.2	3.8
						1.0	19.0		8.2		32.4		101.7		7.8			2.3		
						5.2	18.9		8.2		32.4		101.1		7.8			3.6		
					Middle	5.2	18.9	8.2	32.4	101.1	7.8	3.6								
						Bottom	9.4	18.9	8.2	32.4	101.0	7.7	5.4							
							9.4	18.9	8.2	32.4	100.9	7.7	5.7							
17-Jan-19	Fine	Moderate	12:50	10.6	Surface	1.0	18.5	18.5	8.3	8.3	31.2	31.2	98.4	98.4	7.7	7.7	7.6	1.8	1.9	5.4
						1.0	18.5		8.3		31.2		98.4		7.7			1.9		
						5.3	18.3		8.3		31.3		97.7		7.6			3.0		
					Middle	5.3	18.4	8.3	31.3	97.7	7.6	3.1								
						Bottom	9.6	18.5	8.3	31.2	97.9	7.6	11.4							
							9.6	18.5	8.3	31.2	97.9	7.6	11.3							
19-Jan-19	Cloudy	Moderate	14:19	10.7	Surface	1.0	18.5	18.5	8.2	8.2	31.2	31.2	99.3	99.3	7.7	7.7	7.7	2.2	2.2	3.3
						1.0	18.5		8.2		31.2		99.2		7.7			2.2		
						5.4	18.3		8.1		31.2		97.4		7.6			3.2		
					Middle	5.4	18.3	8.1	31.2	97.4	7.6	3.2								
						Bottom	9.7	18.3	8.1	31.2	97.6	7.6	4.5							
							9.7	18.3	8.1	31.2	97.8	7.6	4.6							
22-Jan-19	Fine	Moderate	07:54	9.4	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	97.3	97.3	7.6	7.6	7.6	3.4	3.4	4.0
						1.0	18.1		8.2		31.1		97.3		7.6			3.4		
						4.7	18.1		8.2		31.1		96.5		7.6			3.8		
					Middle	4.7	18.1	8.2	31.1	96.5	7.6	3.8								
						Bottom	8.4	18.1	8.2	31.1	94.8	7.4	4.8							
							8.4	18.1	8.2	31.1	94.7	7.4	4.7							
24-Jan-19	Sunny	Moderate	09:39	10.0	Surface	1.0	18.3	18.3	8.2	8.2	31.1	31.1	97.1	97.1	7.6	7.6	7.6	1.9	1.9	3.3
						1.0	18.3		8.2		31.1		97.1		7.6			1.9		
						5.0	18.3		8.2		31.1		96.7		7.6			2.0		
					Middle	5.0	18.3	8.2	31.1	96.7	7.6	2.0								
						Bottom	9.0	18.3	8.2	31.1	96.4	7.5	6.0							
							9.0	18.3	8.2	31.1	96.5	7.5	6.0							
26-Jan-19	Sunny	Moderate	11:10	9.8	Surface	1.0	18.4	18.4	8.2	8.2	31.0	31.0	95.9	95.9	7.5	7.5	7.5	1.9	2.0	2.3
						1.0	18.4		8.2		31.0		95.9		7.5			2.0		
						4.9	18.4		8.2		31.0		95.2		7.4			2.4		
					Middle	4.9	18.4	8.2	31.0	95.2	7.4	2.4								
						Bottom	8.8	18.4	8.2	31.0	95.1	7.4	2.7							
							8.8	18.4	8.2	31.0	95.2	7.4	2.6							

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at A3 during Mid-ebb Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	08:40	10.4	Surface	1.0	19.4	19.4	8.1	8.1	33.2	33.2	95.7	95.7	7.2	7.2	7.2	8.0	8.0	8.4
						1.0	19.4		8.1		33.2		95.7		7.2			8.1		
						5.2	19.3		8.1		33.2		95.2		7.2			7.9		
					Middle	5.2	19.3	8.1	33.2	95.2	7.2	7.9								
						9.4	19.2	8.1	33.2	94.4	7.2	9.4								
						9.4	19.2	8.1	33.2	94.4	7.2	9.4								
3-Jan-19	Rainy	Moderate	10:49	10.1	Surface	1.0	19.0	19.0	8.2	8.2	33.1	33.1	99.5	99.5	7.6	7.6	7.6	7.1	7.0	8.6
						1.0	19.0		8.2		33.1		99.5		7.6			7.0		
						5.1	19.0		8.2		33.1		99.1		7.6			8.7		
					Middle	5.1	19.0	8.2	33.1	99.1	7.6	8.7								
						9.1	18.9	8.2	33.1	98.7	7.5	10.3								
						9.1	18.9	8.2	33.1	98.7	7.5	10.1								
5-Jan-19	Misty	Rough	12:23	9.6	Surface	1.0	18.6	18.6	8.2	8.2	32.8	32.8	92.9	92.9	7.1	7.1	7.1	6.2	6.2	6.5
						1.0	18.6		8.2		32.8		92.9		7.1			6.4		
						4.8	18.6		8.2		32.8		92.3		7.1			6.5		
					Middle	4.8	18.6	8.2	32.8	92.3	7.1	6.5								
						8.6	18.7	8.2	32.8	93.2	7.2	6.9								
						8.6	18.7	8.2	32.8	93.3	7.2	6.8								
8-Jan-19	Cloudy	Rough	12:50	10.8	Surface	1.0	18.6	18.6	8.2	8.2	32.4	32.4	98.0	98.0	7.6	7.6	7.6	9.7	9.7	9.9
						1.0	18.6		8.2		32.4		98.0		7.6			9.7		
						5.4	18.6		8.2		32.3		92.2		7.1			9.8		
					Middle	5.4	18.6	8.2	32.3	92.2	7.1	9.8								
						9.8	18.7	8.2	32.2	82.8	6.4	10.3								
						9.8	18.7	8.2	32.2	82.8	6.4	10.3								
10-Jan-19	Cloudy	Rough	13:55	10.8	Surface	1.0	18.5	18.5	8.1	8.1	32.4	32.4	102.7	102.7	7.9	7.9	7.9	2.8	2.8	3.8
						1.0	18.5		8.1		32.4		102.7		7.9			2.8		
						5.4	18.5		8.1		32.4		102.0		7.9			3.5		
					Middle	5.4	18.5	8.1	32.4	102.0	7.9	3.5								
						9.8	18.5	8.1	32.4	101.2	7.8	5.2								
						9.8	18.5	8.1	32.4	101.2	7.8	5.4								
12-Jan-19	Misty	Moderate	15:13	10.7	Surface	1.0	18.9	19.0	8.2	8.2	32.3	32.3	104.7	104.8	8.0	8.0	8.0	2.5	2.5	2.6
						1.0	19.0		8.2		32.3		104.8		8.0			2.5		
						5.4	18.7		8.2		32.3		103.9		8.0			2.5		
					Middle	5.4	18.7	8.2	32.3	103.9	8.0	2.5								
						9.7	18.7	8.2	32.3	103.3	8.0	2.9								
						9.7	18.7	8.2	32.3	103.2	7.9	2.9								
15-Jan-19	Cloudy	Moderate	05:34	10.2	Surface	1.0	19.3	19.3	8.1	8.1	32.4	32.4	103.1	102.9	7.8	7.8	7.8	1.1	1.2	1.4
						1.0	19.2		8.1		32.4		102.7		7.8			1.2		
						5.1	18.9		8.1		32.4		101.9		7.8			1.5		
					Middle	5.1	18.9	8.1	32.4	101.9	7.8	1.5								
						9.2	18.9	8.1	32.4	102.2	7.8	1.6								
						9.2	18.9	8.1	32.4	102.3	7.8	1.7								
17-Jan-19	Fine	Moderate	08:45	9.5	Surface	1.0	18.2	18.2	8.3	8.3	31.2	31.2	96.3	96.3	7.5	7.5	7.5	2.1	2.0	2.0
						1.0	18.2		8.3		31.2		96.3		7.5			2.0		
						4.8	18.2		8.3		31.2		95.8		7.5			2.0		
					Middle	4.8	18.2	8.3	31.2	95.7	7.5	2.0								
						8.5	18.2	8.3	31.3	95.4	7.5	2.0								
						8.5	18.2	8.3	31.3	95.4	7.5	2.0								
19-Jan-19	Cloudy	Moderate	10:36	10.7	Surface	1.0	18.2	18.2	8.1	8.1	31.2	31.2	97.4	97.4	7.6	7.6	7.6	2.8	2.8	3.8
						1.0	18.2		8.1		31.2		97.4		7.6			2.8		
						5.4	18.2		8.1		31.2		96.8		7.6			3.3		
					Middle	5.4	18.2	8.1	31.2	96.8	7.6	3.3								
						9.7	18.3	8.1	31.3	96.3	7.5	5.3								
						9.7	18.3	8.1	31.3	96.3	7.5	5.3								
22-Jan-19	Fine	Moderate	12:07	10.0	Surface	1.0	18.5	18.5	8.2	8.2	31.1	31.1	99.7	99.7	7.8	7.8	7.8	2.7	2.7	2.9
						1.0	18.5		8.2		31.1		99.7		7.8			2.7		
						5.0	18.1		8.2		31.1		98.5		7.7			2.9		
					Middle	5.0	18.1	8.2	31.1	98.5	7.7	2.9								
						9.0	18.1	8.2	31.1	97.9	7.7	2.9								
						9.0	18.1	8.2	31.1	97.8	7.7	3.1								
24-Jan-19	Sunny	Moderate	13:22	11.0	Surface	1.0	18.2	18.2	8.3	8.3	31.1	31.1	100.2	100.2	7.8	7.8	7.8	1.3	1.3	1.5
						1.0	18.2		8.3		31.1		100.2		7.8			1.3		
						5.5	18.1		8.3		31.0		98.9		7.8			1.5		
					Middle	5.5	18.1	8.3	31.0	98.9	7.8	1.5								
						10.0	18.0	8.3	31.0	98.7	7.8	1.8								
						10.0	18.0	8.3	31.0	98.8	7.8	1.7								
26-Jan-19	Sunny	Moderate	15:23	11.3	Surface	1.0	18.6	18.6	8.3	8.3	31.4	31.4	115.5	115.5	9.0	9.0	9.0	1.3	1.3	1.4
						1.0	18.6		8.3		31.4		115.5		9.0			1.3		
						5.7	18.5		8.3		31.4		115.3		9.0			1.5		
					Middle	5.7	18.5	8.3	31.4	115.2	9.0	1.5								
						10.3	18.5	8.3	31.4	115.2	9.0	1.5								
						10.3	18.5	8.3	31.4	115.2	9.0	1.5								

Remarks: DA: Depth-averaged  
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher



Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at A3 during Mid-flood Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	13:40	11.1	Surface	1.0	19.2	19.2	8.1	8.1	32.9	32.9	94.7	94.7	7.2	7.2	7.2	13.8	13.8	14.0
						1.0	19.2		8.1		32.9		94.7		7.2			13.8		
					Middle	5.6	19.2	19.2	8.1	8.1	32.9	32.9	94.4	94.4	7.2	7.2	7.2	14.0	14.0	
						5.6	19.2		8.1		32.9		94.4		7.2			14.0		
					Bottom	10.1	19.2	19.2	8.1	8.1	33.0	33.0	94.5	94.5	7.2	7.2	7.2	14.3	14.3	
						10.1	19.2		8.1		33.0		94.5		7.2			14.3		
3-Jan-19	Cloudy	Rough	14:40	10.3	Surface	1.0	19.0	19.0	8.2	8.2	33.1	33.1	100.7	100.7	7.7	7.7	7.6	5.0	5.0	5.5
						1.0	19.0		8.2		33.1		100.6		7.7			5.0		
					Middle	5.2	19.0	19.0	8.2	8.2	33.1	33.1	99.9	99.8	7.6	7.6	7.6	5.2	5.2	
						5.2	19.0		8.2		33.1		99.7		7.6			5.3		
					Bottom	9.3	19.0	19.0	8.2	8.2	33.1	33.1	99.3	99.3	7.6	7.6	7.6	6.4	6.4	
						9.3	19.0		8.2		33.1		99.2		7.6			6.5		
5-Jan-19	Misty	Moderate	16:00	10.5	Surface	1.0	19.3	19.3	8.2	8.2	32.4	32.4	99.3	99.3	7.6	7.6	7.4	5.8	5.8	6.9
						1.0	19.2		8.2		32.4		99.3		7.6			5.9		
					Middle	5.3	18.9	18.9	8.2	8.2	32.7	32.7	94.6	94.6	7.2	7.2	7.2	7.2	7.1	
						5.3	18.9		8.2		32.7		94.5		7.2			7.1		
					Bottom	9.5	19.1	19.1	8.2	8.2	32.8	32.8	94.4	94.5	7.2	7.2	7.2	7.7	7.6	
						9.5	19.1		8.2		32.8		94.5		7.2			7.6		
8-Jan-19	Cloudy	Rough	08:34	10.2	Surface	1.0	18.5	18.5	8.2	8.2	33.2	33.1	93.5	93.5	7.2	7.2	7.2	10.1	10.1	10.0
						1.0	18.5		8.2		33.1		93.4		7.2			10.1		
					Middle	5.1	18.5	18.5	8.2	8.2	33.1	33.1	93.3	93.3	7.2	7.2	7.2	10.0	10.0	
						5.1	18.5		8.2		33.1		93.3		7.2			10.0		
					Bottom	9.2	18.5	18.5	8.2	8.2	33.1	33.1	93.4	93.4	7.2	7.2	7.2	10.0	10.0	
						9.2	18.5		8.2		33.1		93.4		7.2			10.0		
10-Jan-19	Fine	Rough	09:57	9.5	Surface	1.0	18.6	18.6	8.1	8.1	32.5	32.5	103.0	103.0	7.9	7.9	7.9	2.8	2.8	3.0
						1.0	18.6		8.1		32.5		103.0		7.9			2.8		
					Middle	4.8	18.5	18.5	8.1	8.1	32.5	32.5	102.5	102.5	7.9	7.9	7.9	3.0	3.0	
						4.8	18.5		8.1		32.5		102.4		7.9			3.0		
					Bottom	8.5	18.5	18.5	8.1	8.1	32.5	32.5	100.8	100.8	7.8	7.8	7.8	3.3	3.3	
						8.5	18.5		8.1		32.5		100.7		7.8			3.3		
12-Jan-19	Misty	Moderate	11:09	9.1	Surface	1.0	18.8	18.8	8.2	8.2	32.4	32.4	102.9	102.9	7.9	7.9	7.9	2.5	2.5	2.8
						1.0	18.8		8.2		32.4		102.8		7.9			2.5		
					Middle	4.6	18.6	18.6	8.2	8.2	32.4	32.4	101.4	101.4	7.8	7.8	7.8	2.7	2.7	
						4.6	18.6		8.2		32.4		101.3		7.8			2.7		
					Bottom	8.1	18.7	18.7	8.2	8.2	32.4	32.4	98.6	98.6	7.6	7.6	7.6	3.2	3.2	
						8.1	18.7		8.2		32.4		98.5		7.6			3.2		
15-Jan-19	Cloudy	Moderate	11:49	10.7	Surface	1.0	18.6	18.6	8.2	8.2	32.2	32.2	101.3	101.3	7.8	7.8	7.8	0.9	1.0	1.5
						1.0	18.6		8.2		32.2		101.3		7.8			1.0		
					Middle	5.4	18.7	18.7	8.2	8.2	32.3	32.3	101.2	101.2	7.8	7.8	7.8	1.7	1.7	
						5.4	18.7		8.2		32.3		101.2		7.8			1.8		
					Bottom	9.7	18.7	18.7	8.2	8.2	32.3	32.3	101.2	101.2	7.8	7.8	7.8	1.9	1.9	
						9.7	18.7		8.2		32.3		101.2		7.8			1.9		
17-Jan-19	Fine	Moderate	12:58	10.1	Surface	1.0	18.3	18.3	8.3	8.3	31.2	31.2	97.9	97.9	7.6	7.6	7.6	2.0	2.0	2.2
						1.0	18.3		8.3		31.2		97.8		7.6			2.0		
					Middle	5.1	18.2	18.2	8.3	8.3	31.2	31.2	97.3	97.3	7.6	7.6	7.6	2.2	2.2	
						5.1	18.2		8.3		31.2		97.3		7.6			2.2		
					Bottom	9.1	18.2	18.2	8.3	8.3	31.2	31.2	97.0	97.0	7.6	7.6	7.6	2.3	2.3	
						9.1	18.2		8.3		31.2		97.0		7.6			2.3		
19-Jan-19	Cloudy	Moderate	14:26	10.8	Surface	1.0	18.6	18.6	8.2	8.2	31.2	31.2	99.4	99.4	7.7	7.7	7.7	2.1	2.1	2.8
						1.0	18.6		8.2		31.2		99.4		7.7			2.2		
					Middle	5.4	18.2	18.2	8.2	8.2	31.2	31.2	98.2	98.2	7.7	7.7	7.7	2.3	2.3	
						5.4	18.2		8.2		31.2		98.2		7.7			2.3		
					Bottom	9.8	18.3	18.3	8.2	8.2	31.3	31.3	97.9	97.9	7.6	7.6	7.6	3.9	3.9	
						9.8	18.3		8.2		31.3		97.9		7.7			3.9		
22-Jan-19	Fine	Moderate	07:45	10.7	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.0	97.1	97.1	7.6	7.6	7.6	3.8	3.8	4.0
						1.0	18.1		8.2		31.0		97.1		7.6			3.8		
					Middle	5.4	18.0	18.0	8.2	8.2	31.0	31.0	96.6	96.6	7.6	7.6	7.6	3.9	3.9	
						5.4	18.0		8.2		31.0		96.6		7.6			3.9		
					Bottom	9.7	18.0	18.0	8.2	8.2	31.0	31.0	94.9	94.9	7.5	7.5	7.5	4.2	4.2	
						9.7	18.0		8.2		31.0		94.8		7.5			4.2		
24-Jan-19	Sunny	Moderate	09:30	10.5	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	99.5	99.5	7.8	7.8	7.8	1.8	1.7	1.9
						1.0	18.1		8.2		31.1		99.4		7.8			1.7		
					Middle	5.3	18.1	18.1	8.2	8.2	31.1	31.1	98.7	98.7	7.8	7.8	7.8	1.9	1.9	
						5.3	18.1		8.2		31.1		98.7		7.8			1.9		
					Bottom	9.5	18.1	18.1	8.2	8.2	31.1	31.1	98.7	98.7	7.7	7.7	7.7	2.0	2.0	
						9.5	18.1		8.2		31.1		98.7		7.7			2.0		
26-Jan-19	Sunny	Moderate	11:03	10.5	Surface	1.0	18.4	18.4	8.2	8.2	31.0	31.0	95.9	95.9	7.5	7.5	7.5	2.3	2.3	2.6
						1.0	18.4		8.2		31.0		95.9		7.5			2.3		
					Middle	5.3	18.4	18.4	8.2	8.2	31.0	31.0	95.7	95.7	7.5	7.5	7.5	2.7	2.7	
						5.3	18.4		8.2		31.0		95.7		7.5			2.7		
					Bottom	9.5	18.4	18.4	8.2	8.2	31.0	31.0	95.7	95.7	7.5	7.5	7.5	2.7	2.7	
						9.5	18.4		8.2		31.0		95.7		7.5			2.8		

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results at <b>A4</b> during Mid-ebb Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	07:48	16.1	Surface	1.0	19.3	19.3	8.1	8.1	33.0	33.0	94.8	94.8	7.2	7.2	7.2	10.9	10.9	13.8
						1.0	19.3		8.1		33.0		94.8		7.2			10.9		
					Middle	8.1	19.3	19.3	8.1	8.1	33.0	33.0	94.3	94.3	7.2	7.2	7.2	11.7	11.6	
						8.1	19.3		8.1		33.0		94.3		7.2			11.6		
					Bottom	15.1	19.2	19.2	8.1	8.1	33.1	33.1	94.0	94.0	7.1	7.1	7.1	18.7	18.7	
						15.1	19.2		8.1		33.1		94.0		7.1			18.8		
3-Jan-19	Rainy	Moderate	10:02	15.9	Surface	1.0	18.9	18.9	8.2	8.2	33.1	33.1	99.9	99.9	7.6	7.6	7.6	5.7	5.7	6.3
						1.0	18.9		8.2		33.1		99.9		7.6			5.7		
					Middle	8.0	18.9	18.9	8.2	8.2	33.1	33.1	99.5	99.5	7.6	7.6	7.6	6.1	6.2	
						8.0	18.9		8.2		33.1		99.4		7.6			6.2		
					Bottom	14.9	18.9	18.9	8.2	8.2	33.2	33.2	98.8	98.8	7.5	7.5	7.5	6.9	7.1	
						14.9	18.9		8.2		33.2		98.8		7.5			7.3		
5-Jan-19	Misty	Rough	11:33	15.8	Surface	1.0	18.2	18.2	8.2	8.2	32.2	32.2	93.3	93.3	7.3	7.3	7.3	6.3	6.3	6.3
						1.0	18.2		8.2		32.2		93.3		7.3			6.3		
					Middle	7.9	18.2	18.2	8.1	8.1	32.2	32.2	92.6	92.6	7.2	7.2	7.2	6.3	6.3	
						7.9	18.2		8.1		32.2		92.6		7.2			6.3		
					Bottom	14.8	18.3	18.3	8.2	8.2	32.2	32.2	92.6	92.6	7.2	7.2	7.2	6.4	6.5	
						14.8	18.3		8.2		32.2		92.6		7.2			6.5		
8-Jan-19	Cloudy	Rough	13:42	15.7	Surface	1.0	18.8	18.8	8.2	8.2	32.1	32.1	100.1	100.1	7.7	7.7	7.7	9.4	9.4	9.7
						1.0	18.8		8.2		32.1		100.1		7.7			9.4		
					Middle	7.9	18.5	18.5	8.2	8.2	32.5	32.5	96.8	96.8	7.5	7.5	7.5	9.5	9.5	
						7.9	18.5		8.2		32.5		96.8		7.5			9.5		
					Bottom	14.7	18.4	18.4	8.3	8.3	33.1	33.1	91.9	91.9	7.1	7.1	7.1	10.2	10.2	
						14.7	18.4		8.3		33.1		91.9		7.1			10.2		
10-Jan-19	Cloudy	Rough	14:49	15.7	Surface	1.0	18.5	18.5	8.1	8.1	32.5	32.5	102.5	102.5	7.9	7.9	7.9	2.7	2.7	3.0
						1.0	18.5		8.1		32.5		102.4		7.9			2.7		
					Middle	7.9	18.5	18.5	8.1	8.1	32.5	32.5	102.0	102.0	7.9	7.9	7.9	2.8	2.8	
						7.9	18.5		8.1		32.5		102.0		7.9			2.8		
					Bottom	14.7	18.5	18.5	8.1	8.1	32.5	32.5	101.5	101.5	7.8	7.8	7.8	3.4	3.4	
						14.7	18.5		8.1		32.5		101.5		7.8			3.3		
12-Jan-19	Misty	Rough	16:03	15.5	Surface	1.0	19.2	19.2	8.2	8.2	32.4	32.4	105.4	105.4	8.0	8.0	8.0	2.3	2.3	3.2
						1.0	19.2		8.2		32.4		105.4		8.0			2.4		
					Middle	7.8	18.7	18.7	8.2	8.2	32.4	32.4	103.0	103.0	7.9	7.9	7.9	3.2	3.2	
						7.8	18.7		8.2		32.4		102.9		7.9			3.2		
					Bottom	14.5	18.7	18.7	8.2	8.2	32.4	32.4	102.0	102.0	7.9	7.9	7.9	3.9	3.9	
						14.5	18.7		8.2		32.4		102.0		7.9			4.0		
15-Jan-19	Cloudy	Moderate	04:33	16.1	Surface	1.0	18.9	18.9	8.1	8.1	32.4	32.4	101.8	101.8	7.8	7.8	7.8	1.3	1.4	1.3
						1.0	18.9		8.1		32.4		101.8		7.8			1.4		
					Middle	8.1	18.9	18.9	8.1	8.1	32.4	32.4	101.6	101.7	7.8	7.8	7.8	1.2	1.2	
						8.1	18.9		8.1		32.4		101.8		7.8			1.3		
					Bottom	15.1	18.8	18.7	8.1	8.1	32.5	32.5	102.8	102.8	7.9	7.9	7.9	1.5	1.4	
						15.1	18.6		8.1		32.5		102.8		7.9			1.4		
17-Jan-19	Fine	Moderate	07:46	15.7	Surface	1.0	18.2	18.2	8.3	8.3	31.2	31.2	96.7	96.7	7.6	7.6	7.6	2.1	2.1	2.9
						1.0	18.2		8.3		31.2		96.7		7.6			2.1		
					Middle	7.9	18.2	18.2	8.3	8.3	31.2	31.2	96.1	96.1	7.5	7.5	7.5	2.1	2.1	
						7.9	18.2		8.3		31.2		96.1		7.5			2.1		
					Bottom	14.7	18.2	18.2	8.3	8.3	31.2	31.2	95.2	95.2	7.5	7.4	7.4	4.5	4.5	
						14.7	18.2		8.3		31.2		95.1		7.4			4.5		
19-Jan-19	Cloudy	Moderate	09:44	16.1	Surface	1.0	18.2	18.2	8.1	8.1	31.2	31.2	97.8	97.9	7.7	7.7	7.7	2.6	2.6	3.1
						1.0	18.2		8.1		31.2		97.9		7.7			2.6		
					Middle	8.1	18.1	18.1	8.1	8.1	31.2	31.2	97.0	97.0	7.6	7.6	7.6	3.0	3.1	
						8.1	18.1		8.1		31.2		97.0		7.6			3.1		
					Bottom	15.1	18.1	18.1	8.1	8.1	31.2	31.2	96.8	96.8	7.6	7.6	7.6	3.5	3.5	
						15.1	18.1		8.1		31.2		96.8		7.6			3.5		
22-Jan-19	Fine	Rough	12:56	15.6	Surface	1.0	18.3	18.3	8.2	8.2	31.1	31.1	99.5	99.5	7.8	7.8	7.8	2.2	2.2	2.5
						1.0	18.3		8.2		31.1		99.5		7.8			2.2		
					Middle	7.8	18.2	18.2	8.2	8.2	31.1	31.1	98.5	98.5	7.7	7.7	7.7	2.4	2.4	
						7.8	18.2		8.2		31.1		98.5		7.7			2.4		
					Bottom	14.6	18.1	18.1	8.2	8.2	31.1	31.1	97.5	97.5	7.6	7.6	7.6	2.9	2.9	
						14.6	18.1		8.2		31.1		97.4		7.6			2.9		
24-Jan-19	Sunny	Moderate	14:14	20.1	Surface	1.0	18.2	18.2	8.2	8.2	31.1	31.1	100.5	100.5	7.9	7.9	7.9	1.2	1.2	2.2
						1.0	18.2		8.2		31.1		100.4		7.9			1.2		
					Middle	10.1	18.1	18.1	8.2	8.2	31.1	31.1	98.5	98.5	7.7	7.7	7.7	1.8	1.8	
						10.1	18.1		8.2		31.1		98.5		7.7			1.9		
					Bottom	19.1	18.1	18.1	8.2	8.2	31.1	31.1	97.9	97.9	7.7	7.7	7.7	3.6	3.6	
						19.1	18.1		8.2		31.1		97.9		7.7			3.6		
26-Jan-19	Sunny	Moderate	16:09	20.2	Surface	1.0	18.6	18.6	8.3	8.3	31.4	31.4	115.1	115.1	8.9	8.9	8.9	2.0	2.0	2.1
						1.0	18.6		8.3		31.4		115.1		8.9			2.0		
					Middle	10.1	18.6	18.6	8.3	8.3	31.4	31.4	115.0	115.0	8.9	8.9	8.9	2.1	2.1	
						10.1	18.6		8.3		31.4		115.0		8.9			2.2		
					Bottom	19.2	18.6	18.6	8.3	8.3	31.4	31.4	114.9	114.9	8.9	8.9	8.9	2.2	2.2	
						19.2	18.6		8.3		31.4		114.8		8.9			2.3		

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at A4 during Mid-flood Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	14:41	16.1	Surface	1.0	19.2	19.2	8.1	8.1	33.0	33.0	95.1	95.1	7.2	7.2	7.2	11.2	11.2	11.7
						1.0	19.2		8.1		33.0		95.1		7.2			11.2		
						8.1	19.2		8.1		33.0		94.9		7.2			11.2		
					Middle	8.1	19.2	8.1	33.0	94.9	7.2	11.2								
						8.1	19.2	8.1	33.0	94.9	7.2	11.2								
						15.1	19.2	8.1	33.0	94.8	7.2	12.6								
Bottom	15.1	19.2	8.1	33.0	94.8	7.2	12.8													
3-Jan-19	Cloudy	Rough	15:35	16.4	Surface	1.0	19.1	19.1	8.2	8.2	33.1	33.1	100.1	100.1	7.6	7.6	7.6	5.8	5.9	6.2
						1.0	19.1		8.2		33.1		100.1		7.6			6.0		
						8.2	19.1		8.2		33.1		99.7		7.6			6.3		
					Middle	8.2	19.0	8.2	33.1	99.7	7.6	6.3								
						8.2	19.0	8.2	33.1	99.6	7.6	6.4								
						15.4	19.0	8.2	33.1	99.6	7.6	6.3								
Bottom	15.4	19.0	8.2	33.1	99.6	7.6	6.3													
5-Jan-19	Misty	Rough	16:54	15.6	Surface	1.0	18.6	18.6	8.2	8.2	32.2	32.2	99.0	99.0	7.6	7.6	7.6	5.8	5.8	5.9
						1.0	18.6		8.2		32.2		99.0		7.6			5.8		
						7.8	18.4		8.2		32.3		97.5		7.6			5.9		
					Middle	7.8	18.4	8.2	32.3	97.5	7.6	5.9								
						7.8	18.4	8.2	32.3	97.5	7.6	5.9								
						14.6	18.4	8.2	32.3	97.2	7.5	5.9								
Bottom	14.6	18.4	8.2	32.3	97.2	7.5	5.9													
8-Jan-19	Cloudy	Rough	07:45	15.8	Surface	1.0	18.8	18.7	8.2	8.2	33.1	33.1	94.3	94.3	7.2	7.2	7.2	9.6	9.6	9.7
						1.0	18.6		8.2		33.1		94.2		7.2			9.6		
						7.9	18.6		8.2		33.1		93.5		7.2			9.6		
					Middle	7.9	18.6	8.2	33.1	93.5	7.2	9.6								
						7.9	18.6	8.2	33.1	93.5	7.2	9.6								
						14.8	18.6	8.2	33.1	93.5	7.2	9.7								
Bottom	14.8	18.6	8.2	33.1	93.5	7.2	9.7													
10-Jan-19	Fine	Rough	09:01	15.4	Surface	1.0	18.4	18.4	8.1	8.1	32.4	32.4	101.7	101.7	7.9	7.9	7.8	3.4	3.4	3.6
						1.0	18.4		8.1		32.4		101.7		7.9			3.4		
						7.7	18.5		8.1		32.5		101.3		7.8			3.4		
					Middle	7.7	18.5	8.1	32.5	101.3	7.8	3.4								
						7.7	18.5	8.1	32.5	101.3	7.8	3.4								
						14.4	18.5	8.1	32.5	98.8	7.6	4.0								
Bottom	14.4	18.5	8.1	32.5	98.5	7.6	4.0													
12-Jan-19	Misty	Rough	10:14	14.7	Surface	1.0	18.6	18.6	8.2	8.2	32.4	32.4	102.7	102.7	7.9	7.9	7.9	3.3	3.3	3.8
						1.0	18.6		8.2		32.4		102.7		7.9			3.3		
						7.4	18.7		8.2		32.4		102.3		7.9			2.8		
					Middle	7.4	18.7	8.2	32.4	102.3	7.9	2.8								
						7.4	18.7	8.2	32.4	102.3	7.9	2.8								
						13.7	18.7	8.2	32.4	101.3	7.8	5.2								
Bottom	13.7	18.7	8.2	32.4	101.2	7.8	5.7													
15-Jan-19	Cloudy	Moderate	12:38	16.2	Surface	1.0	18.6	18.6	8.2	8.2	32.2	32.2	101.6	101.6	7.8	7.8	7.8	0.9	0.9	0.8
						1.0	18.6		8.2		32.2		101.5		7.8			0.9		
						8.1	18.6		8.2		32.3		101.4		7.8			0.8		
					Middle	8.1	18.6	8.2	32.3	101.4	7.8	0.8								
						8.1	18.6	8.2	32.3	101.4	7.8	0.8								
						15.2	18.6	8.2	32.3	101.3	7.8	0.8								
Bottom	15.2	18.6	8.2	32.2	101.4	7.8	0.8													
17-Jan-19	Fine	Moderate	13:50	15.4	Surface	1.0	18.5	18.5	8.3	8.3	31.2	31.2	98.8	98.8	7.7	7.7	7.6	1.7	1.7	1.9
						1.0	18.5		8.3		31.2		98.7		7.7			1.7		
						7.7	18.2		8.3		31.2		97.0		7.6			2.0		
					Middle	7.7	18.2	8.3	31.2	97.0	7.6	2.0								
						7.7	18.2	8.3	31.2	97.0	7.6	2.0								
						14.4	18.2	8.3	31.2	96.8	7.6	2.1								
Bottom	14.4	18.2	8.3	31.2	96.9	7.6	2.1													
19-Jan-19	Cloudy	Moderate	15:21	15.8	Surface	1.0	18.3	18.3	8.2	8.2	31.2	31.2	98.3	98.3	7.7	7.7	7.6	2.5	2.5	2.8
						1.0	18.3		8.2		31.2		98.3		7.7			2.5		
						7.9	18.1		8.1		31.2		96.9		7.6			2.9		
					Middle	7.9	18.1	8.1	31.2	96.9	7.6	2.9								
						7.9	18.1	8.1	31.2	96.9	7.6	2.9								
						14.8	18.2	8.2	31.2	97.1	7.6	2.9								
Bottom	14.8	18.2	8.2	31.2	97.1	7.6	2.9													
22-Jan-19	Fine	Rough	06:48	15.4	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	97.8	97.8	7.7	7.7	7.6	2.7	2.7	2.9
						1.0	18.1		8.2		31.1		97.7		7.7			2.8		
						7.7	18.1		8.2		31.1		97.0		7.6			2.8		
					Middle	7.7	18.1	8.2	31.1	96.9	7.6	2.9								
						7.7	18.1	8.2	31.1	96.9	7.6	2.9								
						14.4	18.0	8.2	31.1	95.7	7.5	3.1								
Bottom	14.4	18.0	8.2	31.1	95.6	7.5	3.1													
24-Jan-19	Sunny	Moderate	08:38	15.9	Surface	1.0	18.4	18.4	8.2	8.2	30.8	30.8	89.7	89.7	7.0	7.0	7.0	6.4	6.4	6.4
						1.0	18.4		8.2		30.8		89.7		7.0			6.3		
						8.0	18.4		8.2		30.8		90.0		7.0			6.1		
					Middle	8.0	18.4	8.2	30.8	90.0	7.0	6.1								
						8.0	18.4	8.2	30.8	90.0	7.0	6.1								
						14.9	18.4	8.2	30.8	91.3	7.1	6.9								
Bottom	14.9	18.4	8.2	30.8	91.5	7.1	6.8													
26-Jan-19	Sunny	Moderate	10:09	15.4	Surface	1.0	18.5	18.5	8.2	8.2	31.3	31.3	102.4	102.4	8.0	8.0	8.0	2.2	2.2	2.4
						1.0	18.5		8.2		31.3		102.4		8.0			2.2		
						7.7	18.5		8.2		31.3		102.3		8.0			2.4		
					Middle	7.7	18.5	8.2	31.3	102.3	8.0	2.4								
						7.7	18.5	8.2	31.3	102.3	8.0	2.4								
						14.4	18.5	8.2	31.3	102.4	8.0	2.5								
Bottom	14.4	18.5	8.2	31.3	102.4	8.0	2.5													

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at A5 during Mid-ebb Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	07:55	20.3	Surface	1.0	19.3	19.3	8.1	8.1	33.0	33.0	94.6	94.6	7.2	7.2	7.2	11.2	11.2	12.8
						1.0	19.3		8.1		33.0		94.6		7.2			11.3		
						10.2	19.3		8.1		33.0		94.2		7.2			13.0		
					Middle	10.2	19.3	8.1	33.0	94.2	7.2	13.1								
						19.3	19.2	8.1	33.1	93.9	7.1	14.5								
						19.3	19.2	8.1	33.1	93.9	7.1	13.7								
3-Jan-19	Rainy	Moderate	10:08	19.8	Surface	1.0	18.9	18.9	8.2	8.2	33.1	33.1	99.6	99.6	7.6	7.6	7.6	7.4	7.4	7.8
						1.0	18.9		8.2		33.1		99.6		7.6			7.4		
						9.9	18.9		8.2		33.1		99.1		7.6			7.0		
					Middle	9.9	18.9	8.2	33.1	99.0	7.6	7.1								
						18.8	18.9	8.2	33.2	98.6	7.5	9.0								
						18.8	18.9	8.2	33.2	98.7	7.5	8.9								
5-Jan-19	Misty	Rough	11:41	20.2	Surface	1.0	18.2	18.2	8.1	8.1	32.2	32.2	93.0	93.0	7.2	7.2	7.2	6.2	6.2	6.3
						1.0	18.2		8.1		32.2		92.9		7.2			6.2		
						10.1	18.3		8.1		32.2		91.6		7.1			6.2		
					Middle	10.1	18.3	8.1	32.2	91.5	7.1	6.2								
						19.2	18.3	8.1	32.2	90.8	7.0	6.4								
						19.2	18.3	8.1	32.2	90.7	7.0	6.4								
8-Jan-19	Cloudy	Rough	13:36	21.1	Surface	1.0	18.9	18.9	8.2	8.2	32.5	32.5	95.8	95.8	7.3	7.3	7.2	8.9	8.9	8.6
						1.0	18.9		8.2		32.5		95.8		7.3			8.9		
						10.6	18.8		8.2		32.9		92.2		7.1			8.5		
					Middle	10.6	18.8	8.2	32.9	92.2	7.1	8.5								
						20.1	18.6	8.2	33.1	91.8	7.0	8.4								
						20.1	18.6	8.2	33.1	91.8	7.0	8.4								
10-Jan-19	Cloudy	Rough	14:43	21.6	Surface	1.0	18.5	18.5	8.1	8.1	32.5	32.5	102.8	102.8	7.9	7.9	7.9	2.8	2.8	2.7
						1.0	18.5		8.1		32.5		102.8		7.9			2.8		
						10.8	18.5		8.1		32.5		102.3		7.9			2.7		
					Middle	10.8	18.5	8.1	32.5	102.3	7.9	2.7								
						20.6	18.5	8.1	32.5	101.2	7.8	2.7								
						20.6	18.5	8.1	32.5	100.9	7.8	2.7								
12-Jan-19	Misty	Rough	15:58	21.4	Surface	1.0	18.8	18.8	8.2	8.2	32.3	32.3	104.6	104.6	8.0	8.0	8.0	2.4	2.4	2.8
						1.0	18.8		8.2		32.3		104.6		8.0			2.4		
						10.7	18.7		8.2		32.4		103.2		7.9			2.9		
					Middle	10.7	18.7	8.2	32.4	103.1	7.9	2.9								
						20.4	18.6	8.2	32.4	101.8	7.9	3.2								
						20.4	18.6	8.2	32.3	101.9	7.9	3.1								
15-Jan-19	Cloudy	Moderate	04:39	20.2	Surface	1.0	18.9	18.9	8.1	8.1	32.4	32.4	101.8	101.8	7.8	7.8	7.8	1.1	1.1	1.2
						1.0	18.9		8.1		32.4		101.8		7.8			1.1		
						10.1	18.9		8.1		32.4		101.6		7.8			1.2		
					Middle	10.1	18.9	8.1	32.4	101.7	7.8	1.2								
						19.2	18.9	8.1	32.4	102.4	7.9	1.3								
						19.2	18.8	8.1	32.4	102.6	7.9	1.3								
17-Jan-19	Fine	Rough	07:53	19.9	Surface	1.0	18.2	18.2	8.3	8.3	31.2	31.2	96.5	96.5	7.6	7.6	7.5	2.2	2.2	2.1
						1.0	18.2		8.3		31.2		96.5		7.6			2.2		
						10.0	18.2		8.3		31.2		95.7		7.5			2.1		
					Middle	10.0	18.2	8.3	31.2	95.6	7.5	2.1								
						18.9	18.2	8.3	31.2	95.0	7.4	2.1								
						18.9	18.2	8.3	31.2	94.9	7.4	2.1								
19-Jan-19	Cloudy	Moderate	09:50	20.6	Surface	1.0	18.2	18.2	8.1	8.1	31.2	31.2	98.3	98.3	7.7	7.7	7.7	2.4	2.4	2.4
						1.0	18.2		8.1		31.2		98.3		7.7			2.4		
						10.3	18.2		8.1		31.2		97.4		7.6			2.4		
					Middle	10.3	18.2	8.1	31.2	97.4	7.6	2.4								
						19.6	18.1	8.1	31.2	96.9	7.6	2.5								
						19.6	18.1	8.1	31.2	96.9	7.6	2.5								
22-Jan-19	Fine	Rough	12:51	21.3	Surface	1.0	18.3	18.3	8.2	8.2	31.1	31.1	99.6	99.6	7.8	7.8	7.7	2.1	2.1	2.8
						1.0	18.3		8.2		31.1		99.6		7.8			2.1		
						10.7	18.2		8.2		31.1		97.5		7.6			2.7		
					Middle	10.7	18.2	8.2	31.1	97.4	7.6	2.7								
						20.3	18.2	8.2	31.1	96.8	7.6	3.7								
						20.3	18.2	8.2	31.1	96.9	7.6	3.6								
24-Jan-19	Sunny	Moderate	14:09	21.1	Surface	1.0	18.3	18.3	8.2	8.2	31.1	31.1	100.5	100.5	7.9	7.9	7.8	1.4	1.4	2.6
						1.0	18.3		8.2		31.1		100.5		7.9			1.4		
						10.6	18.1		8.2		31.1		98.2		7.7			2.8		
					Middle	10.6	18.1	8.2	31.1	98.2	7.7	2.6								
						20.1	18.1	8.2	31.1	98.4	7.7	3.7								
						20.1	18.1	8.2	31.1	98.5	7.7	3.6								
26-Jan-19	Sunny	Moderate	16:05	21.3	Surface	1.0	18.6	18.6	8.3	8.3	31.4	31.4	114.4	114.4	8.9	8.9	8.9	1.7	1.7	1.8
						1.0	18.6		8.3		31.4		114.3		8.9			1.7		
						10.7	18.6		8.3		31.4		113.8		8.8			1.8		
					Middle	10.7	18.6	8.3	31.4	113.6	8.8	1.9								
						20.3	18.6	8.3	31.4	112.5	8.7	1.9								
						20.3	18.6	8.3	31.4	112.1	8.7	2.0								

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results at A5 during Mid-flood Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
1-Jan-19	Cloudy	Rough	14:35	21.3	Surface	1.0	19.4	19.4	8.1	8.1	32.9	32.9	95.5	95.5	7.2	7.2	7.2	9.2	9.2	10.6
						1.0	19.4		8.1		32.9		94.9		7.2			10.1		
						10.7	19.3		8.1		32.9		94.9		7.2			10.4		
					Middle	10.7	19.3	8.1	32.9	94.9	7.2	10.4								
						20.3	19.3	8.1	32.9	94.7	7.2	12.3								
						20.3	19.3	8.1	32.9	94.7	7.2	12.5								
3-Jan-19	Cloudy	Rough	15:29	21.7	Surface	1.0	19.1	19.1	8.2	8.2	33.1	33.1	100.0	100.0	7.6	7.6	7.6	5.5	5.5	6.3
						1.0	19.1		8.2		33.1		99.6		7.6			5.5		
						10.9	19.1		8.1		33.1		99.6		7.6			5.8		
					Middle	10.9	19.0	8.1	33.1	99.6	7.6	5.8								
						20.7	19.0	8.1	33.1	99.2	7.6	7.8								
						20.7	19.0	8.1	33.1	99.2	7.6	7.7								
5-Jan-19	Misty	Rough	16:45	21.2	Surface	1.0	18.6	18.6	8.2	8.2	32.2	32.2	99.3	99.3	7.7	7.7	7.6	5.8	5.7	5.9
						1.0	18.6		8.2		32.2		99.2		7.7			6.0		
						10.6	18.4		8.2		32.3		96.6		7.5			6.0		
					Middle	10.6	18.4	8.2	32.3	96.6	7.5	6.0								
						20.2	18.4	8.2	32.3	95.9	7.4	6.0								
						20.2	18.4	8.2	32.3	95.8	7.4	6.0								
8-Jan-19	Cloudy	Rough	07:49	19.9	Surface	1.0	18.8	18.8	8.2	8.2	33.1	33.1	94.7	94.7	7.2	7.2	7.2	9.8	9.8	9.7
						1.0	18.8		8.2		33.1		94.7		7.2			9.8		
						10.0	18.8		8.2		33.1		94.3		7.2			9.7		
					Middle	10.0	18.8	8.2	33.1	94.2	7.2	9.7								
						18.9	18.8	8.2	33.2	93.9	7.2	9.7								
						18.9	18.8	8.2	33.2	94.0	7.2	9.7								
10-Jan-19	Cloudy	Rough	09:08	20.8	Surface	1.0	18.4	18.4	8.1	8.1	32.4	32.4	101.7	101.7	7.9	7.9	7.8	3.3	3.3	3.3
						1.0	18.4		8.1		32.4		101.6		7.9			3.3		
						10.4	18.4		8.1		32.4		100.8		7.8			3.3		
					Middle	10.4	18.4	8.1	32.4	100.8	7.8	3.3								
						19.8	18.4	8.1	32.4	98.7	7.6	3.4								
						19.8	18.4	8.1	32.4	98.5	7.6	3.4								
12-Jan-19	Misty	Rough	10:19	20.6	Surface	1.0	18.7	18.7	8.2	8.2	32.4	32.4	103.5	103.5	8.0	8.0	7.9	2.4	2.4	2.7
						1.0	18.7		8.2		32.4		103.5		8.0			2.4		
						10.3	18.7		8.2		32.4		102.7		7.9			2.4		
					Middle	10.3	18.7	8.2	32.4	102.6	7.9	2.4								
						19.6	18.6	8.2	32.4	101.5	7.8	3.3								
						19.6	18.6	8.2	32.4	101.5	7.8	3.2								
15-Jan-19	Cloudy	Moderate	12:34	21.4	Surface	1.0	18.5	18.5	8.2	8.2	32.1	32.1	101.9	101.9	7.9	7.9	7.9	0.8	0.8	0.8
						1.0	18.5		8.2		32.1		101.8		7.9			0.8		
						10.7	18.4		8.2		32.1		101.3		7.9			0.8		
					Middle	10.7	18.4	8.2	32.1	101.3	7.9	0.8								
						20.4	18.4	8.2	32.1	101.2	7.8	0.9								
						20.4	18.4	8.2	32.1	101.1	7.8	0.9								
17-Jan-19	Fine	Rough	13:43	21.3	Surface	1.0	18.4	18.4	8.3	8.3	31.2	31.2	98.3	98.3	7.7	7.7	7.6	1.8	1.8	1.9
						1.0	18.4		8.3		31.2		98.2		7.7			1.8		
						10.7	18.2		8.3		31.2		97.1		7.6			1.9		
					Middle	10.7	18.2	8.3	31.2	97.1	7.6	1.9								
						20.3	18.2	8.3	31.2	97.2	7.6	2.0								
						20.3	18.2	8.3	31.2	97.3	7.6	2.0								
19-Jan-19	Cloudy	Moderate	15:16	21.0	Surface	1.0	18.4	18.4	8.2	8.2	31.2	31.2	98.9	99.0	7.7	7.7	7.7	2.4	2.4	2.8
						1.0	18.4		8.2		31.2		99.0		7.7			2.4		
						10.5	18.1		8.1		31.2		96.8		7.6			3.0		
					Middle	10.5	18.1	8.1	31.2	96.8	7.6	3.0								
						20.0	18.2	8.1	31.2	96.9	7.6	3.1								
						20.0	18.2	8.2	31.2	96.9	7.6	3.1								
22-Jan-19	Fine	Rough	06:53	20.1	Surface	1.0	18.1	18.1	8.2	8.2	31.1	31.1	97.6	97.6	7.7	7.7	7.6	2.5	2.5	2.7
						1.0	18.1		8.2		31.1		97.6		7.7			2.5		
						10.1	18.1		8.2		31.1		96.9		7.6			2.8		
					Middle	10.1	18.1	8.2	31.1	96.9	7.6	2.8								
						19.1	18.0	8.2	31.1	95.8	7.5	2.8								
						19.1	18.0	8.2	31.1	95.7	7.5	2.8								
24-Jan-19	Sunny	Moderate	08:43	20.4	Surface	1.0	18.3	18.3	8.2	8.2	31.0	31.0	92.5	92.5	7.2	7.2	7.3	1.9	1.9	1.8
						1.0	18.3		8.2		31.0		92.5		7.2			1.9		
						10.2	18.3		8.2		31.0		93.3		7.3			2.0		
					Middle	10.2	18.3	8.2	31.0	93.3	7.3	2.0								
						19.4	18.2	8.2	31.1	93.8	7.3	1.7								
						19.4	18.2	8.2	31.1	93.7	7.3	1.7								
26-Jan-19	Sunny	Moderate	10:16	20.3	Surface	1.0	18.5	18.5	8.2	8.2	31.3	31.3	102.4	102.4	8.0	8.0	8.0	2.0	2.0	2.1
						1.0	18.5		8.2		31.3		102.4		8.0			2.0		
						10.2	18.5		8.2		31.3		102.4		8.0			2.2		
					Middle	10.2	18.5	8.2	31.3	102.4	8.0	2.2								
						19.3	18.5	8.2	31.3	102.5	8.0	2.2								
						19.3	18.5	8.2	31.3	102.5	8.0	2.3								

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

## **Annex II Baseline Water Quality Monitoring Results (July and August 2019)**

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at **C1** during Mid-ebb Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
16-Jul-19	Fine	Moderate	12:24	11.1	Surface	1.0	26.6	26.6	8.0	8.0	24.2	24.1	72.8	72.7	5.1	5.1	4.1	2.2	2.1	4.5	5.4	5.4	5.3
						1.0	26.6		8.0		24.1		72.6		5.1			2.1			5.3		
					Middle	5.6	25.2	25.2	7.9	7.9	30.4	30.4	43.6	43.7	3.0	3.0	2.6	2.1	2.2		5.4	5.4	
						5.6	25.2		7.9		30.4		43.7		3.0			2.2			5.3		
					Bottom	10.1	24.6	24.6	7.9	7.9	32.7	32.8	38.2	38.4	2.6	2.6	2.6	9.3	9.3		5.2	5.1	
						10.1	24.6		7.9		32.8		38.4		2.7			9.3			4.9		
18-Jul-19	Sunny	Moderate	13:53	11.4	Surface	1.0	26.1	26.1	7.8	7.8	25.2	25.2	69.6	69.5	4.9	4.9	4.2	2.4	2.4	3.3	4.6	4.7	4.7
						1.0	26.1		7.8		25.3		69.3		4.9			2.4			4.7		
					Middle	5.7	24.6	24.6	7.7	7.7	30.5	30.5	50.5	50.5	3.5	3.5	3.5	3.7	3.6		4.5	4.6	
						5.7	24.6		7.7		30.5		50.5		3.5			3.6			4.7		
					Bottom	10.4	24.5	24.5	7.7	7.7	31.3	31.3	50.5	50.6	3.5	3.5	3.5	3.9	3.9		4.8	5.0	
						10.4	24.5		7.7		31.4		50.6		3.5			3.9			5.1		
20-Jul-19	Cloudy	Moderate	14:46	11.4	Surface	1.0	26.7	26.7	7.8	7.8	22.8	22.8	64.0	64.0	4.5	4.5	4.0	5.6	5.6	8.7	5.2	5.3	6.8
						1.0	26.7		7.8		22.8		63.9		4.5			5.6			5.4		
					Middle	5.7	25.3	25.3	7.8	7.8	28.6	28.6	50.4	50.4	3.5	3.5	3.5	11.8	11.9		6.6	6.8	
						5.7	25.3		7.8		28.6		50.4		3.5			12.1			6.9		
					Bottom	10.4	24.9	24.9	7.8	7.8	30.6	30.6	47.1	47.2	3.3	3.3	3.3	8.6	8.6		8.4	8.3	
						10.4	24.9		7.8		30.6		47.2		3.3			8.6			8.1		
23-Jul-19	Cloudy	Rough	16:04	11.2	Surface	1.0	28.5	28.5	8.0	8.0	27.6	27.6	148.7	148.7	9.8	9.8	7.9	1.7	1.7	2.0	5.1	5.3	4.5
						1.0	28.5		8.0		27.6		148.7		9.8			1.7			5.4		
					Middle	5.6	27.8	27.8	7.9	7.9	30.9	30.9	91.4	91.4	6.0	6.0	4.2	1.9	1.9		4.1	4.2	
						5.6	27.8		7.9		30.9		91.4		6.0			2.0			4.3		
					Bottom	10.2	24.6	24.6	7.9	7.9	32.9	32.9	60.9	60.9	4.2	4.2	4.2	2.4	2.4		4.2	4.1	
						10.2	24.6		7.9		32.9		60.9		4.2			2.4			4.0		
25-Jul-19	Sunny	Moderate	17:45	11.6	Surface	1.0	30.5	30.5	8.7	8.7	23.0	23.0	204.7	204.7	13.5	13.5	11.8	4.6	4.6	4.7	6.8	7.1	6.1
						1.0	30.5		8.7		23.0		204.7		13.5			4.6			7.4		
					Middle	5.8	28.3	28.3	8.6	8.6	25.0	25.0	149.0	149.0	10.1	10.1	5.2	5.0	5.0		6.1	6.3	
						5.8	28.3		8.6		25.0		148.7		10.1			5.0			6.4		
					Bottom	10.6	25.4	25.4	8.2	8.2	29.7	29.7	74.5	74.8	5.2	5.2	5.2	4.5	4.5		5.5	5.1	
						10.6	25.4		8.2		29.7		74.8		5.2			4.5			4.6		
3-Aug-19	Rainy	Rough	12:27	11.2	Surface	1.0	26.3	26.3	7.9	7.9	26.8	26.8	76.1	76.1	5.3	5.3	5.2	4.2	4.2	5.3	9.0	8.6	6.6
						1.0	26.3		7.9		26.8		76.1		5.3			4.3			8.1		
					Middle	5.6	26.5	26.5	7.9	7.9	27.8	27.8	74.9	74.9	5.2	5.2	5.1	5.1	5.1		5.7	6.3	
						5.6	26.5		7.9		27.8		74.9		5.2			5.1			6.8		
					Bottom	10.2	26.7	26.7	7.9	7.9	29.1	29.1	75.1	75.1	5.1	5.1	5.1	6.7	6.7		5.6	5.0	
						10.2	26.7		7.9		29.1		75.1		5.1			6.6			4.4		
6-Aug-19	Fine	Moderate	16:54	12.1	Surface	1.0	27.9	27.9	8.0	8.0	25.3	25.3	76.1	76.1	5.2	5.2	5.1	2.3	2.3	3.6	3.8	4.0	3.9
						1.0	27.9		8.0		25.3		76.1		5.2			2.3			4.1		
					Middle	6.1	27.4	27.4	8.1	8.1	27.3	27.3	73.3	73.3	5.0	5.0	4.7	3.9	3.9		3.7	3.6	
						6.1	27.4		8.1		27.3		73.3		5.0			3.9			3.4		
					Bottom	11.1	27.1	27.1	8.1	8.1	29.5	29.5	70.2	70.2	4.7	4.7	4.7	4.7	4.7		4.6	4.1	
						11.1	27.1		8.1		29.5		70.2		4.7			4.7			3.6		
8-Aug-19	Fine	Moderate	04:42	11.4	Surface	1.0	27.7	27.7	7.9	7.9	26.7	26.7	75.6	75.6	5.1	5.1	5.3	4.6	4.6	4.3	3.0	3.5	3.6
						1.0	27.7		7.9		26.7		75.6		5.1			4.7			3.9		
					Middle	5.7	27.8	27.8	7.9	7.9	28.4	28.4	82.8	82.9	5.6	5.6	5.6	4.2	4.1		3.6	3.7	
						5.7	27.8		7.9		28.4		82.9		5.6			4.1			3.7		
					Bottom	10.4	27.7	27.7	7.9	7.9	28.8	28.8	83.3	83.4	5.6	5.6	5.6	4.2	4.2		3.8	3.7	
						10.4	27.7		7.9		28.8		83.4		5.6			4.2			3.6		
10-Aug-19	Fine	Moderate	07:25	11.6	Surface	1.0	28.3	28.3	8.0	8.0	26.7	26.7	90.7	90.7	6.1	6.1	5.8	4.9	4.9	5.7	2.8	3.0	3.1
						1.0	28.3		8.0		26.7		90.6		6.1			4.9			3.2		
					Middle	5.8	27.7	27.7	8.0	8.0	29.7	29.7	83.2	83.1	5.6	5.5	4.6	4.6	4.6		2.9	3.1	
						5.8	27.7		8.0		29.7		83.0		5.5			4.5			3.3		
					Bottom	10.6	27.4	27.4	7.9	7.9	30.3	30.3	66.4	70.4	4.4	4.6	4.6	7.7	7.7		3.6	3.1	
						10.6	27.4		7.9		30.3		70.4		4.7			7.7			2.6		
13-Aug-19	Fine	Moderate	11:38	12.5	Surface	1.0	29.4	29.4	7.8	7.8	23.8	23.8	98.9	98.7	6.6	6.6	4.8	2.2	2.2	2.7	3.6	3.7	4.0
						1.0	29.4		7.8		23.8		98.5		6.6			2.2			3.8		
					Middle	6.3	27.3	27.3	7.5	7.5	30.3	30.3	45.6	45.6	3.1	3.1	3.4	3.3	3.3		3.5	3.8	
						6.3	27.3		7.5		30.4		45.6		3.1			3.3			4.0		
					Bottom	11.5	26.5	26.5	7.5	7.5	32.8	32.7	50.4	50.7	3.4	3.4	3.4	2.7	2.7		4.7	4.5	
						11.5	26.5		7.5		32.7		50.7		3.4			2.7			4.2		
15-Aug-19	Fine	Rough	12:44	11.9	Surface	1.0	28.8	28.8	7.7	7.7	24.5	24.6	75.4	75.4	5.1	5.1	4.3	2.6	2.6	10.5	3.1	2.6	2.5
						1.0	28.8		7.7		24.7		75.4		5.1			2.5			2.1		
					Middle	6.0	27.4	27.4	7.6	7.6	29.0	29.0	53.4	53.4	3.6	3.6	3.4	6.7	6.8		2.9	2.7	
						6.0	27.4		7.6		29.0		53.3		3.6			6.8			2.4		
					Bottom	10.9	27.2	27.2	7.6	7.6	30.9	30.9	51.3	51.4	3.4	3.4	3.4	22.0	22.1		2.0	2.2	
						10.9	27.2		7.6		30.9		51.4		3.4			22.1			2.3		
17-Aug-19	Fine	Moderate	13:36	11.3	Surface	1.0	27.5	27.5	7.9	7.9	28.1	28.1	68.9	68.8	4.7	4.7	4.0	2.4	2.5	3.7	4.6	4.6	5.2
						1.0	27.4		7.9		28.1		68.6		4.6			2.5			4.5		
					Middle	5.7	27.1	27.1	7.9	7.9	30.9	30.9	51.1	51.6	3.4	3.4	3.4	3.9	3.9		5.4	4.9	
						5.7	27.1		7.9		30.8		51.6		3.5			3.9			4.3		
					Bottom	10.3	25.4	25.4	7.9	7.9	34.0	34.0	49.5	49.8	3.4	3.4	3.4	4.7	4.7		5.8	6.2	
						10.3	25.4		7.9		34.0		49.8		3.4			4.7			6.6		

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

**Water Quality Monitoring Results at C1 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)					
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA			
16-Jul-19	Cloudy	Moderate	03:23	11.4	Surface	1.0	27.1	27.1	8.2	8.2	22.8	22.8	75.5	75.5	5.2	5.2	4.5	1.4	1.4	3.4	4.5	4.6	4.9			
						1.0	27.1		8.2		22.8		75.5		5.2			1.3			4.7					
					Middle	5.7	25.2	25.2	8.0	7.9	29.7	29.7	55.5	55.3	3.8	3.8	4.5	2.7	2.7	3.4	2.7	2.7		3.4	5.3	5.1
						5.7	25.2		7.9		29.7		55.0		3.8			2.7			4.9					
					Bottom	10.4	23.6	23.6	7.9	7.9	33.5	33.5	42.0	42.1	2.9	2.9	2.9	6.1	6.1	2.9	6.1	6.1		2.9	4.7	5.0
						10.4	23.6		7.9		33.5		42.2		2.9			6.1			5.2					
18-Jul-19	Fine	Moderate	04:55	10.3	Surface	1.0	25.5	25.5	7.7	7.7	28.5	28.5	72.2	72.2	5.0	5.0	4.2	1.5	1.5	4.8	7.2	7.2	7.6			
						1.0	25.5		7.7		28.5		72.2		5.0			1.5			7.1					
					Middle	5.2	23.6	23.6	7.6	7.6	34.1	34.1	47.7	47.8	3.3	3.3	4.2	2.8	2.8	4.8	2.8	2.8		4.8	7.4	7.3
						5.2	23.6		7.6		34.1		47.8		3.3			2.8			7.1					
					Bottom	9.3	23.2	23.2	7.5	7.5	34.7	34.7	44.4	44.5	3.1	3.1	3.1	10.2	10.2	3.1	10.2	10.2		3.1	8.4	8.3
						9.3	23.2		7.5		34.7		44.5		3.1			10.3			8.2					
20-Jul-19	Cloudy	Moderate	06:00	10.7	Surface	1.0	25.6	25.6	7.8	7.8	28.7	28.7	60.7	60.7	4.2	4.2	3.7	4.4	4.5	8.0	5.7	5.8	6.1			
						1.0	25.6		7.8		28.7		60.6		4.2			4.5			5.9					
					Middle	5.4	25.2	25.2	7.8	7.8	30.7	30.7	47.0	47.0	3.3	3.3	3.7	5.2	5.1	8.0	5.1	5.1		8.0	5.5	5.7
						5.4	25.2		7.8		30.7		47.0		3.3			5.1			5.9					
					Bottom	9.7	24.6	24.6	7.7	7.7	33.0	33.0	33.5	33.5	2.3	2.3	2.3	14.4	14.4	2.3	14.4	14.4		2.3	6.4	6.7
						9.7	24.6		7.7		33.0		33.5		2.3			14.4			7.0					
23-Jul-19	Cloudy	Moderate	07:51	15.5	Surface	1.0	25.3	25.3	7.9	7.9	29.3	29.3	56.2	56.3	3.9	3.9	3.8	0.5	0.5	2.0	2.8	3.0	3.1			
						1.0	25.3		7.9		29.3		56.4		3.9			0.5			3.1					
					Middle	7.8	24.9	24.9	7.8	7.8	31.4	31.5	53.5	53.4	3.7	3.7	3.8	0.9	1.0	2.0	1.1	1.0		2.0	2.7	3.0
						7.8	24.9		7.8		31.5		53.2		3.7			1.1			3.3					
					Bottom	14.5	24.0	24.0	7.9	7.9	33.5	33.5	39.2	39.3	2.7	2.7	2.7	4.4	4.5	2.7	4.4	4.5		2.7	3.3	3.3
						14.5	24.0		7.9		33.5		39.4		2.7			4.7			3.2					
25-Jul-19	Fine	Moderate	10:00	10.4	Surface	1.0	27.5	27.5	8.0	8.0	24.6	24.6	106.2	106.1	7.3	7.3	6.0	4.8	4.8	5.1	4.5	4.7	5.5			
						1.0	27.5		8.0		24.6		106.0		7.3			4.8			4.9					
					Middle	5.2	25.9	25.9	7.8	7.8	27.9	27.9	67.7	67.7	4.7	4.7	6.0	4.8	4.8	5.1	4.8	4.8		5.1	4.8	4.4
						5.2	25.9		7.8		27.9		67.6		4.7			4.8			4.0					
					Bottom	9.4	24.9	24.9	7.8	7.8	31.0	31.0	60.1	60.3	4.2	4.2	4.2	5.8	5.8	4.2	5.8	5.8		4.2	7.8	7.4
						9.4	24.9		7.8		31.0		60.5		4.2			5.7			7.0					
3-Aug-19	Cloudy	Moderate	21:05	10.9	Surface	1.0	26.7	26.7	7.9	7.9	24.5	24.5	74.6	74.6	5.2	5.2	5.0	4.6	4.6	8.5	6.9	6.4	5.6			
						1.0	26.7		7.9		24.5		74.5		5.2			4.6			5.8					
					Middle	5.5	26.5	26.5	7.9	7.9	25.5	25.5	69.3	69.4	4.8	4.8	5.0	8.6	8.3	8.5	8.1	8.3		8.5	5.5	5.2
						5.5	26.5		7.9		25.5		69.4		4.8			8.1			4.9					
					Bottom	9.9	26.5	26.5	7.9	7.9	26.0	26.0	68.4	68.4	4.8	4.8	4.8	12.3	12.5	4.8	12.7	12.5		4.8	5.9	5.4
						9.9	26.5		7.9		26.0		68.4		4.8			12.7			4.8					
6-Aug-19	Fine	Moderate	08:33	11.4	Surface	1.0	27.4	27.4	7.8	7.8	25.1	25.1	72.1	72.1	5.0	5.0	5.0	2.2	2.2	2.0	5.3	4.8	4.7			
						1.0	27.4		7.8		25.1		72.1		5.0			2.2			4.3					
					Middle	5.7	27.3	27.3	7.9	7.9	26.8	26.8	72.6	72.6	5.0	5.0	5.0	2.6	2.6	2.0	2.6	2.6		2.0	5.3	4.8
						5.7	27.3		7.9		26.8		72.6		5.0			2.6			4.2					
					Bottom	10.4	27.3	27.3	7.9	7.9	27.7	27.7	74.3	74.3	5.0	5.0	5.0	1.3	1.3	2.0	1.3	1.3		2.0	4.2	4.6
						10.4	27.3		7.9		27.7		74.3		5.0			1.3			5.0					
8-Aug-19	Sunny	Moderate	13:12	12.1	Surface	1.0	28.9	28.9	8.1	8.1	27.4	27.4	122.1	119.4	8.1	7.9	6.8	4.4	4.4	6.0	8.0	7.5	8.5			
						1.0	28.8		8.1		27.4		116.6		7.7			4.4			7.0					
					Middle	6.1	27.7	27.7	8.0	8.0	29.1	29.1	85.2	85.2	5.7	5.7	6.8	3.8	3.8	6.0	3.8	3.8		6.0	9.7	9.5
						6.1	27.7		8.0		29.1		85.1		5.7			3.8			9.2					
					Bottom	11.1	27.2	27.2	8.0	8.0	30.8	30.8	73.7	73.8	4.9	4.9	4.9	9.9	9.9	4.9	9.9	9.9		4.9	9.2	8.7
						11.1	27.2		8.0		30.8		73.8		4.9			10.0			8.1					
10-Aug-19	Fine	Moderate	16:32	13.5	Surface	1.0	28.3	28.3	7.9	7.9	27.2	27.2	90.1	90.1	6.0	6.0	5.7	1.7	1.7	2.7	5.0	4.8	3.6			
						1.0	28.3		7.9		27.2		90.0		6.0			1.7			4.5					
					Middle	6.8	27.7	27.7	7.9	7.9	30.2	30.2	82.4	82.3	5.5	5.5	5.7	1.3	1.3	2.7	1.3	1.3		2.7	3.3	3.5
						6.8	27.7		7.9		30.2		82.2		5.5			1.3			3.6					
					Bottom	12.5	27.4	27.4	7.8	7.8	30.9	30.9	65.7	68.4	4.4	4.6	4.6	5.1	5.1	4.6	5.1	5.1		4.6	2.0	2.5
						12.5	27.4		7.8		30.9		71.0		4.7			5.1			3.0					
13-Aug-19	Cloudy	Moderate	02:23	11.2	Surface	1.0	28.9	28.9	7.7	7.7	24.8	24.8	91.1	91.1	6.1	6.1	5.4	1.6	1.6	1.6	1.7	1.7	2.0			
						1.0	28.9		7.7		24.8		91.0		6.1			1.6			1.6					
					Middle	5.6	28.3	28.3	7.6	7.6	28.3	28.3	71.9	71.5	4.8	4.8	5.4	1.7	1.7	1.6	1.7	1.7		1.6	2.0	2.0
						5.6	28.3		7.6		28.3		71.1		4.7			1.6			2.0					
					Bottom	10.2	26.9	26.9	7.4	7.4	32.3	32.3	54.9	55.2	3.7	3.7	3.7	1.6	1.6	3.7	1.6	1.6		3.7	2.3	2.4
						10.2	26.9		7.4		32.3		55.5		3.7			1.6			2.4					
15-Aug-19	Cloudy	Rough	03:47	11.5	Surface	1.0	28.6	28.6	7.7	7.7	26.0	26.0	85.3	85.3	5.7	5.7	5.2	2.0	2.0	4.2	1.7	1.7	1.9			
						1.0	28.6		7.7		26.0		85.2		5.7			2.0			1.7					
					Middle	5.8	28.2	28.2	7.6	7.6	28.4	28.4	69.7	69.6	4.6	4.6	5.2	2.9	3.0	4.2	3.0	3.0		4.2	2.0	1.7
						5.8	28.2		7.6		28.4		69.4		4.6			3.0			1.3					
					Bottom	10.5	25.3	25.3	7.4	7.4	34.0	34.0	50.1	50.3	3.4	3.4	3.4	7.6	7.5	3.4	7.4	7.5		3.4	2.4	2.3
						10.5	25.4		7.4		34.0		50.4		3.4			7.4			2.1					
17-Aug-19	Cloudy	Moderate	05:22	11.3	Surface	1.0	27.8	27.8	7.8	7.8	26.3	26.3	78.9	78.8	5.4	5.4	4.6	2.7	2.6	7.5	5.6	6.1	10.8			
						1.0	27.7		7.8		26.3		78.7		5.4			2.5			6.6					
					Middle	5.7	26.8	26.8	7.7	7.7	31.4	31.4	56.2	56.1	3.8	3.8	4.6	8.1	8.3	7.5	8.6	8.3		7.5	6.5	6.7
						5.7	26.8		7.7		31.5		55.9		3.8			8.6			6.9					
					Bottom	10.																				



**Water Quality Monitoring Results at C2 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)				
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA		
16-Jul-19	Fine	Moderate	10:50	11.2	Surface	1.0	28.5	28.5	8.6	8.6	22.1	22.1	193.6	193.4	13.2	13.1	8.4	1.4	1.4	2.0	4.0	3.8	3.8		
						1.0	28.5		8.6		22.1		193.1		13.1			1.4			3.6				
					Middle	5.6	26.1	26.1	7.9	7.9	27.3	27.3	54.0	53.6	3.7	3.7		2.2	2.2		4.0	3.9			
						5.6	26.1		7.9		27.4		53.1		3.7			2.2			3.7				
					Bottom	10.2	24.7	24.7	7.9	7.9	33.7	33.7	38.0	38.1	2.6	2.6		2.6	2.6		2.5	2.5		3.9	3.9
						10.2	24.7		7.9		33.7		38.2		2.6			2.5			3.8				
18-Jul-19	Sunny	Moderate	12:12	10.7	Surface	1.0	26.6	26.6	8.0	8.0	25.9	25.9	121.1	121.0	8.4	8.4	6.0	2.3	2.3	3.5	7.7	7.8	7.7		
						1.0	26.6		8.0		26.0		120.9		8.4			2.3			7.8				
					Middle	5.4	25.3	25.3	7.7	7.7	29.9	29.9	53.5	53.3	3.7	3.7		1.9	1.9		7.8	8.0			
						5.4	25.3		7.7		29.9		53.1		3.7			1.9			8.2				
					Bottom	9.7	23.8	23.8	7.7	7.7	34.6	34.6	38.8	38.9	2.7	2.7		2.7	2.7		6.3	6.3		7.1	7.3
						9.7	23.8		7.7		34.6		39.0		2.7			6.3			7.4				
20-Jul-19	Rainy	Moderate	13:12	10.7	Surface	1.0	27.0	27.0	8.1	8.1	26.6	26.6	98.8	98.7	6.8	6.8	5.1	4.5	4.5	6.5	4.9	4.8	5.4		
						1.0	27.0		8.1		26.6		98.5		6.8			4.5			4.7				
					Middle	5.4	25.7	25.7	7.8	7.8	29.9	29.9	49.3	49.1	3.4	3.4		4.9	4.9		5.4	5.3			
						5.4	25.7		7.8		29.9		48.9		3.4			4.9			5.2				
					Bottom	9.7	24.2	24.2	7.8	7.8	33.7	33.7	34.9	35.0	2.4	2.4		2.4	2.4		10.2	10.2		5.9	6.0
						9.7	24.2		7.8		33.7		35.0		2.4			10.2			6.1				
23-Jul-19	Cloudy	Moderate	14:43	11.7	Surface	1.0	27.3	27.3	8.3	8.3	26.7	26.7	144.6	143.7	9.8	9.7	6.2	0.5	0.5	1.4	4.4	4.3	3.9		
						1.0	27.3		8.3		26.7		142.8		9.7			0.5			4.1				
					Middle	5.9	24.3	24.3	7.8	7.8	33.4	33.4	37.8	38.1	2.6	2.6		1.1	1.0		3.7	3.6			
						5.9	24.3		7.8		33.4		38.3		2.7			3.5							
					Bottom	10.7	24.2	24.2	7.8	7.8	33.7	33.7	43.9	44.2	3.0	3.1		3.1	3.1		2.7	2.7		3.6	3.8
						10.7	24.2		7.8		33.7		44.5		3.1			2.7			4.0				
25-Jul-19	Sunny	Moderate	16:17	11.0	Surface	1.0	30.6	30.6	8.7	8.7	21.5	21.5	212.0	212.1	14.1	14.1	9.0	4.7	4.7	5.3	4.7	4.3	4.6		
						1.0	30.6		8.7		21.5		212.2		14.1			4.7			3.9				
					Middle	5.5	25.5	25.5	8.1	8.1	28.9	28.9	56.8	56.9	4.0	4.0		5.1	5.1		4.3	4.4			
						5.5	25.5		8.1		28.9		56.9		4.0			5.1			4.4				
					Bottom	10.0	24.3	24.3	8.1	8.1	32.6	32.6	37.7	37.9	2.6	2.6		2.6	2.6		6.1	6.1		5.5	5.0
						10.0	24.3		8.1		32.6		38.0		2.6			6.1			4.5				
3-Aug-19	Cloudy	Rough	13:54	11.6	Surface	1.0	26.8	26.8	7.9	7.9	25.0	25.0	84.6	84.6	5.9	5.9	5.6	3.3	3.3	4.7	5.9	6.1	6.1		
						1.0	26.8		7.9		25.0		84.6		5.9			3.3			6.3				
					Middle	5.8	26.4	26.4	7.9	7.9	26.0	26.0	77.7	77.7	5.4	5.4		4.7	4.7		6.0	6.1			
						5.8	26.4		7.9		26.0		77.7		5.4			4.7			6.2				
					Bottom	10.6	26.4	26.4	7.9	7.9	26.7	26.7	77.0	77.1	5.3	5.3		5.3	5.3		6.2	6.2		5.9	6.1
						10.6	26.4		7.9		26.7		77.1		5.3			6.2			5.9				
6-Aug-19	Fine	Moderate	15:11	11.1	Surface	1.0	27.6	27.6	8.0	8.0	25.8	25.8	73.5	73.5	5.0	5.0	4.9	2.0	2.0	3.3	4.3	4.1	4.2		
						1.0	27.6		8.0		25.8		73.5		5.0			2.0			3.9				
					Middle	5.6	27.1	27.1	8.1	8.1	28.5	28.5	70.1	70.1	4.8	4.8		2.5	2.5		4.8	4.8			
						5.6	27.1		8.1		28.5		70.1		4.8			2.5			4.8				
					Bottom	10.1	27.0	27.0	8.2	8.2	30.2	30.2	70.3	70.3	4.7	4.7		4.7	4.7		3.3	3.6			
						10.1	27.0		8.2		30.2		70.3		4.7			5.5			3.8				
8-Aug-19	Fine	Moderate	06:05	10.6	Surface	1.0	28.0	28.0	8.1	8.1	26.6	26.6	106.1	106.1	7.2	7.2	6.1	4.9	4.9	4.7	8.5	8.4	6.1		
						1.0	28.0		8.1		26.6		106.1		7.2			4.9			8.3				
					Middle	5.3	27.6	27.6	7.9	7.9	27.5	27.5	74.5	74.5	5.0	5.0		5.1	5.1		6.8	6.3			
						5.3	27.6		7.9		27.5		74.5		5.0			5.1			5.8				
					Bottom	9.6	27.4	27.4	8.0	8.0	28.9	28.9	76.0	75.9	5.1	5.1		5.1	5.1		3.5	3.6			
						9.6	27.4		8.0		29.0		75.8		5.1			4.0			3.6				
10-Aug-19	Fine	Moderate	08:56	11.2	Surface	1.0	29.5	29.5	8.2	8.2	27.7	27.7	118.8	118.8	7.8	7.8	7.5	3.9	3.9	4.1	2.8	3.3	4.6		
						1.0	29.5		8.2		27.7		118.8		7.8			3.9			3.8				
					Middle	5.6	29.4	29.4	8.1	8.1	27.8	27.8	110.7	110.6	7.3	7.2		4.2	4.2		4.7	5.2			
						5.6	29.4		8.1		27.8		110.4		7.2			4.2			5.6				
					Bottom	10.2	29.5	29.5	8.1	8.1	27.8	27.8	112.2	112.1	7.3	7.3		7.3	7.3		5.1	5.3			
						10.2	29.5		8.1		27.8		111.9		7.3			4.3			5.4				
13-Aug-19	Fine	Moderate	09:58	10.6	Surface	1.0	30.1	30.1	8.0	8.0	24.5	24.5	125.1	124.7	8.3	8.2	5.8	1.8	1.9	6.8	4.0	3.9	3.3		
						1.0	30.1		8.0		24.5		124.3		8.2			1.9			3.8				
					Middle	5.3	28.0	28.0	7.6	7.6	29.4	29.4	49.3	49.5	3.3	3.3		2.9	3.0		3.1	3.2			
						5.3	28.0		7.6		29.4		49.6		3.3			3.0			3.2				
					Bottom	9.6	27.0	27.0	7.5	7.5	33.2	33.2	38.5	38.7	2.6	2.6		2.6	2.6		2.5	2.7			
						9.6	27.0		7.5		33.2		38.8		2.6			15.5			2.9				
15-Aug-19	Fine	Rough	11:15	10.8	Surface	1.0	30.0	30.0	8.1	8.1	26.0	26.0	148.7	148.6	9.8	9.7	6.7	2.1	2.1	6.5	3.6	3.4	3.5		
						1.0	30.0		8.1		26.0		148.5		9.7			2.1			3.1				
					Middle	5.4	28.0	28.0	7.6	7.6	28.9	28.9	55.0	55.0	3.7	3.7		3.6	3.6		3.7	4.5			
						5.4	28.0		7.6		28.9		55.0		3.7			3.6			5.2				
					Bottom	9.8	26.7	26.7	7.5	7.5	33.9	33.9	33.2	33.2	2.2	2.2		2.2	2.2		3.2	2.7			
						9.8	26.7		7.5		33.9		33.2		2.2			13.8			2.2				
17-Aug-19	Rainy	Moderate	12:12	10.8	Surface	1.0	27.7	27.7	7.9	7.9	27.8	27.9	91.2	90.8	6.2	6.1	4.6	2.1	2.1	5.9	6.8	6.4	7.1		
						1.0	27.6		7.9		27.9		90.3		6.1			2.2			5.9				
					Middle	5.4	26.9	26.9	7.8	7.8	33.0	33.0	45.3	45.3	3.0	3.0		4.8	4.8		8.0	7.7			
						5.4	26.9		7.8		33.0		45.3		3.0			4.8			7.3				
					Bottom	9.8	25.4	25.4	7.8	7.8	34.3	34.3	44.0	44.2	3.0	3.0		3.0	3.0		7.0	7.4			
						9.8	25.4		7.8		34.3		44.4		3.0			10.4			7.8				

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at C2 during Mid-flood Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)				
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA		
16-Jul-19	Fine	Moderate	04:45	10.4	Surface	1.0	27.4	27.4	8.4	8.4	21.6	21.6	84.8	84.8	5.9	5.9	4.6	1.9	1.9	1.7	5.0	5.0	5.6		
						1.0	27.4		8.4		21.7		84.8		5.9			1.9			4.9				
					Middle	5.2	25.8	25.8	7.9	7.9	26.9	26.8	49.0	48.9	3.4	3.4		1.2	1.2		5.3	5.2			
						5.2	25.8		7.9		26.8		48.7		3.4			1.2			5.0				
					Bottom	9.4	24.1	24.1	7.9	7.9	33.7	33.7	40.5	40.6	2.8	2.8		2.8	2.8		2.0	2.0		6.9	6.8
						9.4	24.1		7.9		33.7		40.7		2.8			2.0			6.6				
18-Jul-19	Sunny	Moderate	06:26	10.7	Surface	1.0	26.6	26.6	8.0	8.0	25.9	26.0	115.3	115.1	8.0	8.0	5.8	2.1	2.1	2.3	5.4	5.3	6.1		
						1.0	26.6		8.0		26.0		114.8		8.0			2.1			5.1				
					Middle	5.4	25.1	25.1	7.8	7.8	31.8	31.8	51.8	51.7	3.6	3.6		1.4	1.4		5.5	5.3			
						5.4	25.1		7.8		31.9		51.6		3.6			1.4			5.5				
					Bottom	9.7	23.7	23.7	7.7	7.7	34.7	34.7	39.7	39.8	2.8	2.8		2.8	2.8		3.3	3.3		8.0	7.9
						9.7	23.7		7.7		34.7		39.8		2.8			3.4			7.7				
20-Jul-19	Cloudy	Moderate	07:31	10.8	Surface	1.0	27.2	27.2	8.1	8.1	25.8	25.8	98.7	98.7	6.8	6.8	4.8	4.0	4.0	5.1	4.2	4.0	4.4		
						1.0	27.2		8.1		25.8		98.7		6.8			4.0			3.8				
					Middle	5.4	25.2	25.2	7.8	7.8	30.7	30.7	41.6	41.7	2.9	2.9		4.7	4.7		4.5	4.7			
						5.4	25.2		7.8		30.7		41.8		2.9			4.7			4.8				
					Bottom	9.8	24.2	24.2	7.8	7.8	33.7	33.7	35.9	36.0	2.5	2.5		2.5	2.5		6.5	6.5		4.6	4.7
						9.8	24.2		7.8		33.7		36.0		2.5			6.6			4.7				
23-Jul-19	Cloudy	Moderate	09:17	10.6	Surface	1.0	26.6	26.6	8.1	8.1	27.2	27.2	113.1	112.9	7.8	7.8	5.2	0.6	0.6	1.3	3.2	3.3	3.7		
						1.0	26.6		8.1		27.2		112.7		7.8			0.7			3.4				
					Middle	5.3	24.3	24.3	7.8	7.8	33.2	33.2	36.7	36.8	2.5	2.5		0.8	0.7		3.8	3.7			
						5.3	24.3		7.8		33.2		36.8		2.6			0.8			3.5				
					Bottom	9.6	24.0	24.0	7.8	7.8	33.7	33.7	42.2	42.4	2.9	2.9		2.9	2.9		2.5	2.5		4.1	4.0
						9.6	24.0		7.8		33.7		42.6		3.0			2.4			3.9				
25-Jul-19	Sunny	Moderate	11:33	11.1	Surface	1.0	30.0	30.0	8.6	8.6	21.5	21.5	189.6	189.5	12.7	12.7	8.9	4.6	4.6	7.4	4.2	4.7	3.9		
						1.0	30.0		8.6		21.5		189.4		12.7			4.5			5.2				
					Middle	5.6	26.2	26.2	8.0	8.0	27.1	27.1	72.9	72.7	5.1	5.0		5.0	5.0		3.2	3.6			
						5.6	26.2		8.0		27.2		72.4		5.0			5.0			3.9				
					Bottom	10.1	24.3	24.3	7.9	7.9	32.6	32.6	30.4	30.5	2.1	2.1		2.1	2.1		3.3	3.6			
						10.1	24.3		7.9		32.6		30.6		2.1			12.4			3.8				
3-Aug-19	Rainy	Rough	19:40	11.2	Surface	1.0	26.6	26.6	7.9	7.9	26.0	26.0	80.0	80.0	5.6	5.6	5.5	4.5	4.5	8.1	4.8	5.2	4.1		
						1.0	26.6		7.9		26.0		80.0		5.6			5.5			5.5				
					Middle	5.6	26.8	26.8	8.0	8.0	29.5	29.5	80.2	80.2	5.4	5.4		9.1	9.1		4.2	4.0			
						5.6	26.8		8.0		29.5		80.2		5.4			9.2			3.7				
					Bottom	10.2	26.9	26.9	8.0	8.0	29.8	29.8	81.3	81.3	5.5	5.5		5.5	5.5		10.4	10.6		3.8	3.3
						10.2	26.9		8.0		29.8		81.3		5.5			10.7			2.7				
6-Aug-19	Fine	Moderate	09:59	10.6	Surface	1.0	27.5	27.5	8.0	8.0	25.2	25.2	72.5	72.5	5.0	5.0	4.9	2.1	2.1	4.8	4.1	3.7	3.4		
						1.0	27.5		8.0		25.2		72.5		5.0			2.1			3.2				
					Middle	5.3	27.3	27.3	8.0	8.0	26.6	26.6	71.5	71.5	4.9	4.9		4.6	4.6		2.9	3.1			
						5.3	27.3		8.0		26.6		71.5		4.9			4.6			3.3				
					Bottom	9.6	27.0	27.0	8.1	8.1	30.1	30.1	71.3	71.3	4.8	4.8		4.8	4.8		3.7	3.6			
						9.6	27.0		8.1		30.1		71.3		4.8			7.8			3.4				
8-Aug-19	Sunny	Moderate	11:39	11.1	Surface	1.0	28.3	28.3	8.1	8.1	26.9	26.9	116.6	116.7	7.8	7.8	6.2	4.1	4.1	4.3	7.0	6.6	6.6		
						1.0	28.3		8.1		26.9		116.7		7.8			4.1			6.1				
					Middle	5.6	27.0	27.0	8.0	8.0	30.2	30.2	68.1	68.1	4.6	4.6		3.7	3.7		4.1	6.6			
						5.6	27.0		8.0		30.2		68.1		4.6			3.7			9.1				
					Bottom	10.1	27.0	27.0	8.0	8.0	30.7	30.7	67.8	68.0	4.6	4.6		4.6	4.6		5.1	5.0		6.8	6.7
						10.1	27.0		8.0		30.7		68.1		4.6			5.0			6.6				
10-Aug-19	Fine	Moderate	15:01	11.3	Surface	1.0	29.5	29.5	8.0	8.0	28.2	28.2	118.1	118.1	7.7	7.7	7.5	0.8	0.8	1.8	2.5	2.8	3.3		
						1.0	29.5		8.0		28.2		118.0		7.7			0.8			3.1				
					Middle	5.7	29.4	29.4	8.0	8.0	28.3	28.3	110.3	110.3	7.2	7.2		1.7	1.7		3.6	3.1			
						5.7	29.4		8.0		28.3		110.2		7.2			1.8			2.6				
					Bottom	10.3	29.5	29.5	8.0	8.0	28.3	28.4	111.5	111.3	7.3	7.3		7.3	7.3		4.5	4.0			
						10.3	29.5		8.0		28.4		111.1		7.2			3.0			3.5				
13-Aug-19	Cloudy	Moderate	03:58	10.7	Surface	1.0	29.8	29.8	7.9	7.9	25.8	25.8	115.8	115.0	7.6	7.6	6.0	1.2	1.3	2.2	2.7	2.9	3.1		
						1.0	29.8		7.9		25.8		114.1		7.5			1.3			3.1				
					Middle	5.4	28.0	28.0	7.6	7.6	29.4	29.4	66.8	67.0	4.4	4.5		2.0	2.0		3.3	3.3			
						5.4	28.0		7.6		29.4		67.1		4.5			2.0			3.3				
					Bottom	9.7	27.6	27.6	7.6	7.6	33.2	33.2	74.1	74.5	4.9	4.9		4.9	4.9		2.9	3.0			
						9.7	27.6		7.6		33.2		74.9		4.9			3.2			3.1				
15-Aug-19	Fine	Rough	05:09	10.3	Surface	1.0	29.5	29.5	8.0	8.0	27.1	27.1	134.4	134.4	8.8	8.8	6.2	1.6	1.6	4.0	2.6	2.9	2.8		
						1.0	29.5		8.0		27.1		134.4		8.8			1.6			3.1				
					Middle	5.2	28.2	28.2	7.7	7.7	30.5	30.5	52.8	52.7	3.5	3.5		2.4	2.4		2.7	2.1			
						5.2	28.2		7.7		30.5		52.6		3.5			2.4			1.5				
					Bottom	9.3	26.5	26.5	7.6	7.6	34.0	34.0	37.2	37.3	2.5	2.5		2.5	2.5		3.1	3.4			
						9.3	26.5		7.6		34.0		37.3		2.5			7.9			3.7				
17-Aug-19	Rainy	Moderate	06:47	10.4	Surface	1.0	28.3	28.3	8.0	8.0	28.1	28.1	103.6	103.3	6.9	6.9	5.2	1.9	1.9	5.5	6.2	6.7	5.3		
						1.0	28.3		8.0		28.1		102.9		6.9			1.9			7.2				
					Middle	5.2	27.5	27.5	7.8	7.8	31.9	31.9	52.2	52.1	3.5	3.4		3.4	2.0		5.1	4.9			
						5.2	27.5		7.8		31.9		51.9		3.4			1.9			5.1				
					Bottom	9.4	25.7	25.7	7.7	7.7	34.2	34.2	34.1	34.2	2.3	2.3		2.3	2.3		4.2	4.2			
						9.4	25.7		7.7		34.2		34.2		2.3			12.6			4.2				

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Water Quality Monitoring Results at C3 during Mid-ebb Tide																												
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)							
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA					
16-Jul-19	Fine	Moderate	11:02	20.8	Surface	1.0	28.3	28.3	8.6	8.5	22.2	22.2	186.7	186.5	12.7	12.7	7.8	1.2	1.2	3.3	3.0	2.8	3.7					
						1.0	28.2		8.5		22.3		186.3		12.7			1.2			2.6							
					Middle	10.4	24.4	24.4	7.9	7.9	33.8	33.8	41.2	41.3	2.8	2.8	2.9	2.9	2.9		2.9	4.1		4.1	4.1	4.1		
						10.4	24.4	24.4	7.9	7.9	33.8	33.8	41.3	41.3	2.8	2.8	2.9	2.9	2.9		2.9	4.1		4.1	4.1	4.1		
					Bottom	19.8	24.4	24.4	8.0	8.0	33.8	33.8	44.2	44.3	3.1	3.1	3.1	3.1	3.1		3.1	5.7		5.7	5.7	5.7	4.4	4.3
						19.8	24.4	24.4	8.0	8.0	33.8	33.8	44.4	44.3	3.1	3.1	3.1	3.1	3.1		3.1	5.7		5.7	5.7	5.7	4.2	4.3
18-Jul-19	Sunny	Moderate	12:20	22.3	Surface	1.0	27.0	27.0	8.1	8.1	28.6	28.6	133.7	133.6	9.1	9.1	6.2	1.9	1.9	2.2	5.8	5.8	6.7					
						1.0	27.0		8.1		28.6		133.4		9.1			1.9			5.8							
					Middle	11.2	24.1	24.1	7.7	7.7	34.2	34.2	48.3	48.3	3.3	3.3	3.3	3.3	3.3		3.3	1.0		1.0	1.0	1.0	6.2	6.3
						11.2	24.1	24.1	7.7	7.7	34.2	34.2	48.3	48.3	3.3	3.3	3.3	3.3	3.3		3.3	1.0		1.0	1.0	1.0	6.4	6.3
					Bottom	21.3	23.6	23.6	7.7	7.7	34.8	34.8	42.9	43.0	3.0	3.0	3.0	3.0	3.0		3.0	3.7		3.8	3.7	3.7	8.2	8.1
						21.3	23.6	23.6	7.7	7.7	34.8	34.8	43.0	43.0	3.0	3.0	3.0	3.0	3.0		3.0	3.9		3.8	3.9	3.9	8.0	8.1
20-Jul-19	Rainy	Moderate	13:15	22.3	Surface	1.0	27.6	27.6	8.1	8.1	24.5	24.5	115.1	114.9	7.9	7.9	5.3	4.6	4.6	6.5	6.8	6.7	7.0					
						1.0	27.6		8.1		24.5		114.7		7.9			4.6			6.6							
					Middle	11.2	24.1	24.1	7.8	7.8	33.7	33.7	38.8	38.8	2.7	2.7	2.7	2.7	2.7		2.7	5.5		5.5	5.5	5.5	7.1	7.1
						11.2	24.1	24.1	7.8	7.8	33.7	33.7	38.8	38.8	2.7	2.7	2.7	2.7	2.7		2.7	5.6		5.5	5.6	5.5	7.0	7.1
					Bottom	21.3	23.8	23.8	7.8	7.8	33.8	33.8	39.2	39.3	2.7	2.7	2.7	2.7	2.7		2.7	9.2		9.2	9.2	9.2	7.1	7.2
						21.3	23.8	23.8	7.8	7.8	33.8	33.8	39.3	39.3	2.7	2.7	2.7	2.7	2.7		2.7	9.3		9.2	9.3	9.2	7.2	7.2
23-Jul-19	Cloudy	Moderate	15:02	22.5	Surface	1.0	27.8	27.8	8.3	8.3	26.5	26.5	157.7	155.3	10.7	10.5	6.8	0.4	0.3	2.3	3.3	3.2	4.0					
						1.0	27.8		8.3		26.5		152.8		10.4			0.3			3.0							
					Middle	11.3	24.0	24.0	7.8	7.8	33.7	33.7	43.9	43.9	3.1	3.1	3.1	3.1	3.1		3.1	1.1		1.0	1.1	1.0	4.1	4.0
						11.3	24.0	24.0	7.8	7.8	33.7	33.7	43.9	43.9	3.1	3.1	3.1	3.1	3.1		3.1	1.1		1.0	1.1	1.0	3.8	4.0
					Bottom	21.5	23.9	23.9	7.8	7.8	33.8	33.8	50.4	50.5	3.5	3.5	3.5	3.5	3.5		3.5	5.3		5.6	5.3	5.6	5.0	4.9
						21.5	23.9	23.9	7.8	7.8	33.8	33.8	50.6	50.5	3.5	3.5	3.5	3.5	3.5		3.5	5.9		5.6	5.9	5.6	4.7	4.9
25-Jul-19	Sunny	Moderate	16:35	22.6	Surface	1.0	29.7	29.7	8.5	8.5	18.5	18.5	209.8	210.1	14.4	14.4	8.9	4.8	4.8	5.0	4.1	4.2	4.2					
						1.0	29.7		8.5		18.5		210.4		14.4			4.8			4.2							
					Middle	11.3	24.1	24.1	7.9	7.9	32.7	32.7	47.2	47.3	3.3	3.3	3.3	3.3	3.3		3.3	4.4		4.4	4.4	4.4	4.0	4.4
						11.3	24.1	24.1	7.9	7.9	32.7	32.7	47.3	47.3	3.3	3.3	3.3	3.3	3.3		3.3	4.4		4.4	4.4	4.4	4.8	4.4
					Bottom	21.6	24.1	24.1	8.0	8.0	32.9	32.9	53.5	53.6	3.7	3.7	3.7	3.7	3.7		3.7	5.7		5.7	5.7	5.7	4.1	4.0
						21.6	24.1	24.1	8.0	8.0	32.9	32.9	53.6	53.6	3.7	3.7	3.7	3.7	3.7		3.7	5.7		5.7	5.7	5.7	3.8	4.0
3-Aug-19	Rainy	Rough	13:25	22.0	Surface	1.0	26.7	26.7	8.0	8.0	27.5	27.5	84.5	84.5	5.8	5.8	5.7	4.4	4.4	6.8	5.3	5.9	6.7					
						1.0	26.7		8.0		27.5		84.4		5.8			4.4			6.4							
					Middle	11.0	26.8	26.8	8.0	8.0	29.6	29.6	81.2	81.2	5.5	5.5	5.5	5.5	5.5		5.5	6.0		5.9	6.0	5.9	7.6	6.9
						11.0	26.8	26.8	8.0	8.0	29.6	29.6	81.2	81.2	5.5	5.5	5.5	5.5	5.5		5.5	6.0		5.9	6.0	5.9	7.8	6.9
					Bottom	21.0	26.8	26.8	8.0	8.0	29.6	29.6	80.7	80.7	5.5	5.5	5.5	5.5	5.5		5.5	10.3		10.2	10.3	10.2	6.9	7.4
						21.0	26.8	26.8	8.0	8.0	29.6	29.6	80.7	80.7	5.5	5.5	5.5	5.5	5.5		5.5	10.2		10.2	10.2	10.2	6.9	7.4
6-Aug-19	Fine	Moderate	15:24	20.3	Surface	1.0	27.6	27.6	8.1	8.1	28.0	28.0	83.2	83.2	5.6	5.6	5.4	1.2	1.2	1.5	3.0	3.1	3.4					
						1.0	27.6		8.1		28.0		83.2		5.6			1.2			3.1							
					Middle	10.2	27.1	27.1	8.2	8.2	30.0	30.0	77.5	77.5	5.2	5.2	5.2	5.2	5.2		5.2	1.6		1.6	1.6	1.6	2.7	3.0
						10.2	27.1	27.1	8.2	8.2	30.0	30.0	77.5	77.5	5.2	5.2	5.2	5.2	5.2		5.2	1.6		1.6	1.6	1.6	3.3	3.0
					Bottom	19.3	27.1	27.1	8.2	8.2	30.5	30.5	78.9	78.9	5.3	5.3	5.3	5.3	5.3		5.3	1.7		1.7	1.7	1.7	3.6	4.0
						19.3	27.1	27.1	8.2	8.2	30.5	30.5	78.9	78.9	5.3	5.3	5.3	5.3	5.3		5.3	1.7		1.7	1.7	1.7	4.4	4.0
8-Aug-19	Fine	Moderate	06:09	21.7	Surface	1.0	28.3	28.3	8.1	8.1	26.6	26.6	109.6	109.6	7.4	7.4	6.1	4.4	4.4	4.7	4.2	4.7	5.4					
						1.0	28.3		8.1		26.7		109.5		7.4			4.4			5.2							
					Middle	10.9	27.1	27.1	8.0	8.0	31.0	31.0	73.7	73.7	4.9	4.9	4.9	4.9	4.9		4.9	3.8		3.8	3.8	3.8	5.2	5.0
						10.9	27.1	27.1	8.0	8.0	31.0	31.0	73.6	73.7	4.9	4.9	4.9	4.9	4.9		4.9	3.8		3.8	3.8	3.8	5.2	5.0
					Bottom	20.7	26.9	26.9	8.0	8.0	31.6	31.6	66.0	66.0	4.4	4.4	4.4	4.4	4.4		4.4	5.9		5.9	5.9	5.9	6.6	6.5
						20.7	26.9	26.9	8.0	8.0	31.6	31.6	66.0	66.0	4.4	4.4	4.4	4.4	4.4		4.4	5.9		5.9	5.9	5.9	6.3	6.5
10-Aug-19	Fine	Moderate	08:33	21.6	Surface	1.0	28.9	28.9	8.2	8.2	27.5	27.5	118.1	118.1	7.8	7.8	7.6	4.5	4.6	7.0	2.8	3.3	3.9					
						1.0	28.9		8.2		27.5		118.0		7.8			4.6			3.7							
					Middle	10.8	29.2	29.2	8.1	8.1	27.8	27.8	111.0	111.0	7.3	7.3	7.3	7.3	7.3		7.3	3.9		3.9	3.9	3.9	4.5	4.0
						10.8	29.2	29.2	8.1	8.1	27.8	27.8	111.0	111.0	7.3	7.3	7.3	7.3	7.3		7.3	3.9		3.9	3.9	3.9	3.5	4.0
					Bottom	20.6	27.3	27.3	7.9	7.9	30.7	30.6	61.0	61.2	4.1	4.1	4.1	4.1	4.1		4.1	12.8		12.7	12.8	12.7	4.4	4.3
						20.6	27.3	27.3	7.9	7.9	30.6	30.6	61.4	61.2	4.1	4.1	4.1	4.1	4.1		4.1	12.6		12.7	12.6	12.7	4.2	4.3
13-Aug-19	Fine	Moderate	10:16	21.7	Surface	1.0	30.0	30.0	8.0	8.0	25.4	25.4	131.6	131.2	8.7	8.6	6.7	1.1	1.1	5.4	4.1	4.5	2.7					
						1.0	30.0		8.0		25.4		130.7		8.6			1.1			4.9							
					Middle	10.9	28.2	28.2	7.7	7.7	33.1	33.1	72.8	72.7	4.7	4.7	4.7	4.7	4.7		4.7	1.1		1.1	1.1	1.1	2.6	2.4
						10.9	28.2	28.2	7.7	7.7	33.1	33.1	72.6	72.7	4.7	4.7	4.7	4.7	4.7		4.7	1.1		1.1	1.1	1.1	2.1	2.4
					Bottom	20.7	25.9	25.9	7.4	7.4	33.9	33.9	39.8	39.9	2.7	2.7	2.7	2.7	2.7		2.7	13.9		13.9	13.9	13.9	1.3	1.2
						20.7	25.9	25.9	7.4	7.4	33.9	33.9	40.0	39.9	2.7	2.7	2.7	2.7	2.7		2.7	13.9		13.9	13.9	13.9	1.1	

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at C3 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
16-Jul-19	Fine	Moderate	04:44	20.9	Surface	1.0	28.6	28.6	8.6	8.6	19.5	19.4	84.6	84.6	5.8	5.8	4.6	1.0	1.0	2.4	7.1	7.0	7.0	
						1.0	28.6		8.6		19.4		84.6		5.8			1.0			6.8			
					Middle	10.5	23.6	23.6	8.0	8.0	33.8	33.8	48.6	48.6	3.4	3.4	3.4	2.0	2.0		2.0			6.8
						10.5	23.6		8.0		33.8		48.5		3.4			2.0			6.5			
					Bottom	19.9	23.4	23.4	8.0	8.0	33.8	33.8	49.0	49.1	3.4	3.4	3.4	4.2	4.2		4.2			7.2
						19.9	23.4		8.0		33.8		49.2		3.4			4.2			7.4			
						19.9	23.4		8.0		33.8		49.2		3.4			4.2			7.4			
18-Jul-19	Sunny	Moderate	05:51	22.1	Surface	1.0	27.7	27.7	8.2	8.2	25.9	25.9	80.2	80.2	5.4	5.4	4.4	1.3	1.3	1.5	7.8	8.0	8.1	
						1.0	27.7		8.2		25.9		80.2		5.4			1.3			8.2			
					Middle	11.1	24.0	24.0	7.8	7.8	34.3	34.3	49.3	49.3	3.4	3.4	3.7	1.5	1.5		1.5			7.6
						11.1	24.0		7.8		34.3		49.2		3.4			1.5			7.5			
					Bottom	21.1	23.7	23.7	7.8	7.8	34.7	34.7	52.7	52.7	3.7	3.7	3.7	1.6	1.6		1.6			8.7
						21.1	23.7		7.8		34.8		52.7		3.7			1.6			8.6			
						21.1	23.7		7.8		34.8		52.7		3.7			1.6			8.6			
20-Jul-19	Cloudy	Moderate	06:53	22.1	Surface	1.0	26.9	26.9	7.9	7.9	25.8	25.8	79.9	79.9	5.5	5.5	4.2	4.0	4.0	5.1	5.7	6.3	6.5	
						1.0	26.9		7.9		25.8		79.7		5.5			4.0			6.1			
					Middle	11.1	24.1	24.1	7.8	7.8	33.7	33.7	41.3	41.3	2.9	2.9	3.0	4.4	4.4		4.4			6.3
						11.1	24.1		7.8		33.7		41.3		2.9			4.4			6.3			
					Bottom	21.1	23.8	23.8	7.8	7.8	33.8	33.8	42.6	42.7	3.0	3.0	3.0	6.8	6.8		6.8			7.0
						21.1	23.8		7.8		33.8		42.8		3.0			6.8			7.3			
						21.1	23.8		7.8		33.8		42.8		3.0			6.8			7.3			
23-Jul-19	Cloudy	Moderate	09:03	22.1	Surface	1.0	26.6	26.6	8.1	8.1	27.5	27.5	99.6	96.4	6.9	6.6	4.6	0.7	0.7	1.3	3.0	3.2	3.4	
						1.0	26.6		8.1		27.5		93.2		6.4			0.7			3.4			
					Middle	11.1	24.4	24.4	7.8	7.8	32.8	32.9	36.6	36.8	2.5	2.6	3.0	1.2	1.3		1.3			3.4
						11.1	24.4		7.8		32.9		37.0		2.6			1.4			3.0			
					Bottom	21.1	24.0	24.0	7.8	7.8	33.7	33.7	43.2	43.5	3.0	3.0	3.0	1.9	1.8		1.8			3.6
						21.1	24.0		7.8		33.7		43.7		3.0			1.8			3.9			
						21.1	24.0		7.8		33.7		43.7		3.0			1.8			3.9			
25-Jul-19	Sunny	Moderate	11:26	22.4	Surface	1.0	28.8	28.8	8.5	8.5	21.5	21.5	175.5	175.3	12.0	12.0	7.5	5.0	5.0	5.0	3.0	2.8	3.1	
						1.0	28.8		8.5		21.5		175.1		12.0			5.0			2.5			
					Middle	11.2	25.3	25.3	7.9	7.9	29.9	29.9	43.6	43.6	3.0	3.0	3.8	4.6	4.6		4.6			2.6
						11.2	25.3		7.9		29.9		43.6		3.0			4.6			2.7			
					Bottom	21.4	24.1	24.1	8.1	8.1	32.9	32.9	54.2	54.2	3.8	3.8	3.8	5.3	5.3		5.3			4.0
						21.4	24.1		8.1		32.9		54.2		3.8			5.3			4.0			
						21.4	24.1		8.1		32.9		54.2		3.8			5.3			4.0			
3-Aug-19	Rainy	Rough	20:05	22.2	Surface	1.0	26.9	26.9	8.0	8.0	29.6	29.6	84.0	84.0	5.7	5.7	5.7	3.4	3.4	4.7	4.8	5.3	5.6	
						1.0	26.9		8.0		29.6		84.0		5.7			3.4			5.8			
					Middle	11.1	27.0	27.0	8.1	8.1	30.2	30.2	84.1	84.1	5.7	5.7	5.6	3.1	3.0		3.0			4.8
						11.1	27.0		8.1		30.2		84.1		5.7			3.0			5.0			
					Bottom	21.2	27.0	27.0	8.0	8.0	30.6	30.6	82.8	82.8	5.6	5.6	5.6	7.5	7.8		7.8			6.5
						21.2	27.0		8.0		30.6		82.8		5.6			8.0			6.5			
						21.2	27.0		8.0		30.6		82.8		5.6			8.0			6.5			
6-Aug-19	Fine	Moderate	09:16	21.7	Surface	1.0	27.3	27.3	8.0	8.0	27.2	27.2	76.7	76.7	5.2	5.2	5.1	1.6	1.6	3.0	3.4	3.8	3.3	
						1.0	27.3		8.0		27.2		76.7		5.2			1.6			4.2			
					Middle	10.9	27.1	27.1	8.0	8.0	29.6	29.6	73.5	73.5	5.0	5.0	4.8	2.5	2.5		2.5			3.5
						10.9	27.1		8.0		29.6		73.5		5.0			2.5			3.1			
					Bottom	20.7	27.0	27.0	8.0	8.0	30.8	30.8	72.1	72.1	4.8	4.8	4.8	4.8	4.8		4.8			2.5
						20.7	27.0		8.0		30.8		72.1		4.8			4.8			2.7			
						20.7	27.0		8.0		30.8		72.1		4.8			4.8			2.7			
8-Aug-19	Sunny	Moderate	11:42	20.3	Surface	1.0	28.4	28.4	8.2	8.2	28.2	28.2	149.0	149.0	9.9	9.9	7.5	3.7	3.7	3.5	6.2	6.7	4.9	
						1.0	28.4		8.2		28.2		149.0		9.9			3.7			7.2			
					Middle	10.2	27.2	27.2	8.0	8.0	30.6	30.6	75.0	75.0	5.0	5.0	4.5	2.8	2.8		2.8			5.2
						10.2	27.2		8.0		30.6		75.0		5.0			2.8			4.3			
					Bottom	19.3	26.9	26.9	8.0	8.0	31.7	31.7	67.2	67.2	4.5	4.5	4.5	4.1	4.2		4.2			3.7
						19.3	26.9		8.0		31.7		67.1		4.5			4.1			3.4			
						19.3	26.9		8.0		31.7		67.1		4.5			4.2			3.0			
10-Aug-19	Fine	Moderate	15:08	20.5	Surface	1.0	28.9	28.9	8.0	8.0	28.0	28.0	117.3	117.3	7.7	7.7	7.5	1.2	1.2	3.8	2.9	3.2	3.8	
						1.0	28.9		8.0		28.0		117.2		7.7			1.2			3.6			
					Middle	10.3	29.2	29.2	8.0	8.0	28.3	28.3	110.3	110.3	7.2	7.2	4.0	0.6	0.6		0.6			3.7
						10.3	29.2		8.0		28.3		110.3		7.2			0.6			2.7			
					Bottom	19.5	27.3	27.4	7.8	7.8	31.2	31.2	60.3	60.5	4.0	4.0	4.0	9.6	9.6		9.6			5.1
						19.5	27.4		7.8		31.1		60.7		4.0			9.6			4.8			
						19.5	27.4		7.8		31.1		60.7		4.0			9.6			4.8			
13-Aug-19	Cloudy	Moderate	03:38	21.4	Surface	1.0	29.9	29.9	8.0	8.0	25.2	25.2	117.2	117.2	7.7	7.7	6.3	0.9	0.9	4.3	3.2	4.2	4.6	
						1.0	29.9		8.0		25.2		117.2		7.7			0.9			3.7			
					Middle	10.7	28.0	28.0	7.7	7.7	33.2	33.2	74.3	74.2	4.8	4.8	3.3	0.9	1.0		1.0			4.2
						10.7	28.0		7.7		33.2		74.0		4.8			1.0			4.2			
					Bottom	20.4	25.5	25.5	7.5	7.5	34.1	34.1	49.0	49.1	3.3	3.3	3.3	11.0	11.1		11.1			5.6
						20.4	25.5		7.5		34.1		49.2		3.3			11.1			6.4			
						20.4	25.5		7.5		34.1		49.2		3.3			11.1			6.4			
15-Aug-19	Fine	Rough	05:03	21.4	Surface	1.0	29.4	29.4	8.0	8.0	26.1	26.1	127.0	127.1	8.4	8.4	6.2	1.4	1.4	3.4	2.1	2.3	2.1	
						1.0	29.4		8.0		26.1		127.1		8.4			1.3			2.3			
					Middle	10.7	26.9	26.8	7.7	7.7	34.1	34.1	59.6	59.6	3.9	3.9	3.6	1.7	1.7		1.7			2.8
						10.7	26.8		7.7		34.1		59.6		3.9			1.7			1.8			
					Bottom	20.4	24.6	24.6	7.6	7.6	34.4	34.4	51.8	51.8	3.6	3.6	3.6	7.0	7.0		7.0			1.5
						20.4	24.6		7.6		34.4		51.8		3.6			7.0			2.1			
						20.4	24.6		7.6		34.4		51.8		3.6			7.0			2.1			
17-Aug-19	Rainy	Moderate	06:36	20.5	Surface	1.0	28.2	28.2	8.0	8.0	28.5	28.5	115.2	115.1	7.7	7.7	5.7	2.1	2.1	1.9	5.4	5.8	5.9	
						1.0	28.2		8.0		28.5		115.0		7.7			2.1			6.1			
					Middle	10.3	26.9	26.9	7.8	7.8	33.5	33.5	56.6	56.6	3.8	3.8	3.4	0.9	0.9		0.9			5.8
						10.3	26.8		7.8		33.5		56.6		3.8			1.0			5.4			
					Bottom	19.5	26.3	26.4	7.8	7.8	34.0	34.0	50.9	51.1	3.4	3.4	3.4	2.6	2.5		2.6			5.7
						19.5	26.4		7.8		34.0		51.2		3.4			2.4			6.8			
						19.5	26.4		7.8		34.0		51.2		3.4			2.4			6.8			

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR1 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)							
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA					
16-Jul-19	Fine	Moderate	12:18	7.4	Surface	1.0	29.0	29.1	8.5	8.5	23.0	22.9	163.8	162.2	11.0	10.9	8.1	1.7	1.7	2.7	4.8	5.0	5.4				
						1.0	29.1		8.5		22.9		160.6		10.7			1.7			5.1						
					Middle	3.7	26.8	26.8	8.1	8.1	28.3	28.3	80.5	78.8	5.5	5.4		1.2			1.2			5.0	5.2		
						3.7	26.8		8.1		28.3		77.1		5.3			1.2						5.3			
					Bottom	6.4	24.8	24.8	7.9	7.9	33.3	33.3	41.0	41.4	2.8	2.8		2.8			2.8			5.1	5.1	6.0	6.2
						6.4	24.8		7.9		33.3		41.7		2.9			5.1						6.3			
18-Jul-19	Sunny	Moderate	13:33	7.0	Surface	1.0	28.1	28.1	8.3	8.3	28.6	28.6	189.3	188.9	12.6	12.6	9.3	1.6	1.6	2.4	8.1	8.2	7.5				
						1.0	28.1		8.3		28.6		188.5		12.6			1.6			8.2						
					Middle	3.5	26.5	26.5	7.9	7.9	30.7	30.7	87.8	87.6	5.9	5.9		2.1			2.1			7.4	7.2		
						3.5	26.5		7.9		30.7		87.3		5.9			2.1						7.0			
					Bottom	6.0	23.8	23.8	7.7	7.7	34.5	34.5	37.1	37.3	2.6	2.6		2.6			2.6			3.5	3.5	7.2	7.0
						6.0	23.8		7.7		34.5		37.4		2.6			3.5						6.8			
20-Jul-19	Cloudy	Moderate	14:25	7.0	Surface	1.0	27.5	27.5	8.0	8.0	26.8	26.8	104.4	104.3	7.1	7.1	6.7	3.9	3.9	4.0	5.7	5.6	5.5				
						1.0	27.5		8.0		26.8		104.2		7.1			3.9			5.5						
					Middle	3.5	27.3	27.3	8.0	8.0	27.8	27.8	94.1	94.0	6.4	6.4		6.4			6.4			4.1	4.1	4.9	5.1
						3.5	27.3		8.0		27.8		93.9		6.4			4.1						5.2			
					Bottom	6.0	27.3	27.3	7.9	7.9	28.3	28.3	86.8	86.9	5.9	5.9		5.9			5.9			4.1	4.1	5.8	5.9
						6.0	27.3		7.9		28.3		86.9		5.9			4.1						5.9			
23-Jul-19	Cloudy	Moderate	16:13	7.9	Surface	1.0	27.2	27.2	8.0	8.0	29.2	29.1	164.6	164.6	11.0	11.0	7.8	2.2	2.3	2.8	3.7	3.8	4.5				
						1.0	27.2		8.0		29.1		164.6		11.0			2.3			3.9						
					Middle	4.0	25.5	25.5	8.0	8.0	31.3	31.3	68.1	68.1	4.6	4.6		4.6			4.6			2.2	2.2	4.6	4.7
						4.0	25.5		8.0		31.3		68.1		4.6			2.2						4.8			
					Bottom	6.9	24.3	24.3	8.0	8.0	33.3	33.3	40.4	40.5	2.8	2.8		2.8			2.8			3.9	3.9	5.2	5.1
						6.9	24.3		8.0		33.3		40.6		2.8			4.0						4.9			
25-Jul-19	Sunny	Moderate	17:41	8.9	Surface	1.0	30.9	30.9	8.8	8.8	16.5	16.5	195.1	195.1	13.3	13.3	10.3	5.1	5.1	5.7	4.3	4.0	4.0				
						1.0	30.9		8.8		16.5		195.1		13.3			5.1			3.7						
					Middle	4.5	27.5	27.5	8.4	8.4	24.9	24.9	107.3	107.1	7.4	7.4		7.4			7.4			5.1	5.1	4.4	4.4
						4.5	27.4		8.4		24.9		106.8		7.4			5.1						4.4			
					Bottom	7.9	24.7	24.7	8.1	8.1	31.7	31.7	48.0	48.2	3.3	3.3		3.3			3.3			6.7	6.8	3.4	3.5
						7.9	24.7		8.1		31.7		48.3		3.4			6.8						3.5			
3-Aug-19	Rainy	Calm	12:19	8.5	Surface	1.0	27.0	27.0	8.0	8.0	29.4	29.4	82.8	82.8	5.6	5.6	5.5	7.4	7.3	8.8	10.3	10.0	9.1				
						1.0	27.0		8.0		29.4		82.8		5.6			7.3			9.6						
					Middle	4.3	26.9	26.9	8.0	8.0	29.5	29.5	80.4	80.4	5.4	5.4		5.4			5.4			8.5	8.5	10.0	10.1
						4.3	26.9		8.0		29.5		80.4		5.4			8.5						10.2			
					Bottom	7.5	26.9	26.9	8.0	8.0	29.6	29.6	78.6	78.7	5.3	5.3		5.3			5.3			10.7	10.7	7.1	7.3
						7.5	26.9		8.0		29.6		78.7		5.3			10.8						7.4			
6-Aug-19	Fine	Moderate	16:38	7.5	Surface	1.0	27.8	27.8	8.1	8.1	28.2	28.2	87.1	87.1	5.8	5.8	5.7	1.2	1.2	1.8	3.6	3.2	3.7				
						1.0	27.8		8.1		28.2		87.1		5.8			1.2			2.8						
					Middle	3.8	27.5	27.5	8.1	8.1	28.6	28.6	82.7	82.7	5.6	5.6		5.6			5.6			2.0	2.0	3.6	3.9
						3.8	27.5		8.1		28.6		82.7		5.6			2.0						4.2			
					Bottom	6.5	27.4	27.4	8.1	8.1	29.2	29.2	86.1	86.1	5.8	5.8		5.8			5.8			2.3	2.3	3.5	4.0
						6.5	27.4		8.1		29.2		86.1		5.8			2.3						4.5			
8-Aug-19	Fine	Moderate	05:02	8.6	Surface	1.0	28.5	28.5	8.1	8.1	28.6	28.6	118.7	118.7	7.9	7.9	7.3	4.6	4.6	7.1	5.2	5.1	4.8				
						1.0	28.5		8.1		28.6		118.6		7.9			4.6			5.0						
					Middle	4.3	27.7	27.7	8.1	8.1	29.6	29.6	101.9	101.8	6.8	6.8		6.8			6.8			6.4	6.4	4.9	4.8
						4.3	27.7		8.1		29.6		101.7		6.8			6.4						4.7			
					Bottom	7.6	27.1	27.1	8.0	8.0	30.9	30.9	70.0	70.1	4.7	4.7		4.7			4.7			10.3	10.3	4.0	4.4
						7.6	27.1		8.0		30.9		70.1		4.7			10.3						4.8			
10-Aug-19	Fine	Moderate	07:20	8.5	Surface	1.0	29.4	29.4	8.1	8.1	27.6	27.6	115.9	115.9	7.6	7.6	7.5	3.8	3.8	5.1	3.3	3.6	4.2				
						1.0	29.4		8.1		27.6		115.9		7.6			3.8			3.8						
					Middle	4.3	29.4	29.4	8.1	8.1	27.6	27.6	112.9	112.9	7.4	7.4		7.4			7.4			4.1	4.1	3.6	3.2
						4.3	29.4		8.1		27.6		112.8		7.4			4.2						2.8			
					Bottom	7.5	28.9	28.9	8.1	8.1	28.8	28.8	95.7	95.8	6.3	6.3		6.3			6.3			7.3	7.3	5.2	5.7
						7.5	28.9		8.1		28.8		95.9		6.3			7.3						6.2			
13-Aug-19	Fine	Moderate	11:30	7.3	Surface	1.0	31.0	31.0	8.1	8.1	24.3	24.3	144.1	144.1	9.4	9.4	8.5	1.2	1.2	2.7	2.8	2.7	4.1				
						1.0	31.0		8.1		24.3		144.0		9.4			1.2			2.5						
					Middle	3.7	30.9	30.9	8.0	8.0	24.6	24.6	118.8	118.3	7.7	7.7		7.7			7.7			2.0	2.0	3.7	3.7
						3.7	30.9		8.0		24.6		117.7		7.7			2.0						3.6			
					Bottom	6.3	27.3	27.3	7.7	7.7	32.3	32.3	88.8	89.6	5.9	5.9		5.9			5.9			4.8	4.8	6.1	6.1
						6.3	27.3		7.7		32.3		90.3		6.0			4.7						6.1			
15-Aug-19	Rainy	Rough	12:37	7.3	Surface	1.0	30.1	30.1	8.2	8.2	26.5	26.5	182.9	183.0	11.8	11.8	11.6	4.5	4.6	3.3	3.5	3.8	3.0				
						1.0	30.1		8.2		26.5		183.0		11.8			4.6			4.0						
					Middle	3.7	30.0	30.0	8.1	8.1	26.6	26.6	177.1	177.0	11.5	11.5		11.5			11.5			2.0	2.0	2.3	2.0
						3.7	30.0		8.1		26.6		176.8		11.4			2.0						1.6			
					Bottom	6.3	30.9	30.9	7.9	7.9	29.1	29.1	118.4	118.5	7.5	7.5		7.5			7.5			3.4	3.4	3.0	3.2
						6.3	30.8		7.9		29.0		118.5		7.5			3.4						3.3			
17-Aug-19	Fine	Moderate	13:48	8.3	Surface	1.0	28.1	28.1	8.0	8.0	28.1	28.1	103.9	102.0	7.0	6.8	5.6	2.9	3.0	3.2	5.1	4.9	8.0				
						1.0	28.0		8.0		28.1		100.1		6.7			3.0			4.7						
					Middle	4.2	27.3	27.3	7.8	7.8	31.7	31.8	64.6	64.3	4.3	4.3		4.3			4.3			3.3	3.3	6.8	6.0
						4.2	27.3		7.8		31.9		64.0		4.3			3.3						5.2			
					Bottom	7.3	26.9	26.9	7.8	7.8	32.7	32.7	53.6	53.6	3.6	3.6		3.6			3.6			3.5	3.5	12.4	13.0
						7.3	26.9		7.8		32.7		53.6		3.6			3.5						13.6			

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR1 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	03:34	8.9	Surface	1.0	27.6	27.6	8.3	8.2	24.0	23.9	80.8	80.8	5.5	5.5	4.1	1.7	1.7	2.6	5.8	6.0	6.7
						1.0	27.6		8.2		23.9		80.8		5.5			1.7					
					Middle	4.5	24.9	24.9	7.9	7.9	31.8	31.8	40.0	39.9	2.7	2.7	2.7	1.5	1.5	6.2			
						4.5	24.9		7.9		31.9		39.7		2.7			1.5					
					Bottom	7.9	24.1	24.1	7.9	7.9	33.5	33.5	38.8	38.9	2.7	2.7	2.7	4.6	4.6	7.9			
						7.9	24.1		7.9		33.5		39.0		2.7			4.6					
18-Jul-19	Fine	Moderate	04:44	8.2	Surface	1.0	26.5	26.5	8.0	8.0	29.3	29.3	88.7	88.6	6.0	5.9	5.5	1.6	1.6	1.9	5.9	6.1	6.4
						1.0	26.5		8.0		29.3		88.4		5.9			1.6					
					Middle	4.1	25.7	25.8	7.9	7.9	30.8	30.8	75.0	74.9	5.1	5.1	2.9	1.8	1.8	6.0			
						4.1	25.8		7.9		30.7		74.8		5.1			1.8					
					Bottom	7.2	24.2	24.2	7.7	7.7	34.0	34.0	41.6	41.6	2.9	2.9	2.9	2.2	2.3	7.2			
						7.2	24.1		7.7		34.0		41.6		2.9			2.3					
20-Jul-19	Cloudy	Moderate	05:50	8.3	Surface	1.0	26.5	26.5	7.9	7.9	28.6	28.6	74.3	74.3	5.1	5.1	4.4	3.9	4.0	5.3	3.3	3.2	3.6
						1.0	26.5		7.9		28.6		74.2		5.1			4.0					
					Middle	4.2	25.4	25.4	7.9	7.9	31.1	31.1	55.2	55.2	3.8	3.8	2.5	4.2	4.2	3.7			
						4.2	25.4		7.9		31.1		55.1		3.8			4.2					
					Bottom	7.3	24.2	24.2	7.8	7.8	33.6	33.6	36.4	36.4	2.5	2.5	2.5	7.7	7.7	4.1			
						7.3	24.2		7.8		33.6		36.4		2.5			7.7					
23-Jul-19	Cloudy	Moderate	07:49	8.4	Surface	1.0	26.2	26.2	8.0	8.0	28.5	28.5	91.0	90.9	6.3	6.3	5.9	0.4	0.4	0.6	3.2	3.3	2.9
						1.0	26.2		8.0		28.6		90.7		6.2			0.4					
					Middle	4.2	26.1	26.1	7.9	7.9	28.9	28.9	81.3	81.2	5.6	5.6	3.4	0.3	0.3	2.8			
						4.2	26.1		7.9		28.9		81.0		5.6			0.3					
					Bottom	7.4	24.8	24.8	7.8	7.8	32.4	32.4	48.6	49.2	3.4	3.4	3.4	1.2	1.2	2.2			
						7.4	24.8		7.8		32.4		49.8		3.4			1.3					
25-Jul-19	Fine	Moderate	10:22	8.3	Surface	1.0	29.5	29.5	8.6	8.6	20.4	20.4	176.9	176.8	12.1	12.0	10.0	4.6	4.6	5.7	3.8	3.3	3.2
						1.0	29.5		8.6		20.4		176.6		12.0			4.6					
					Middle	4.2	29.0	29.0	8.4	8.4	22.9	23.1	116.8	116.6	7.9	7.9	3.5	5.2	5.2	3.3			
						4.2	29.0		8.4		23.4		116.4		7.9			5.2					
					Bottom	7.3	25.3	25.3	8.0	8.0	30.7	30.7	50.1	50.1	3.5	3.5	3.5	7.1	7.2	3.0			
						7.3	25.3		8.0		30.7		50.0		3.5			7.2					
3-Aug-19	Cloudy	Calm	21:20	8.8	Surface	1.0	28.6	28.6	8.0	8.0	29.0	29.0	85.9	85.9	5.7	5.7	5.6	6.9	6.9	6.8	8.6	8.6	9.1
						1.0	28.6		8.0		29.0		85.9		5.7			6.9					
					Middle	4.4	27.0	27.0	8.0	8.0	29.5	29.5	82.7	82.7	5.6	5.6	5.3	6.3	6.1	8.5			
						4.4	27.0		8.0		29.5		82.7		5.6			6.3					
					Bottom	7.8	26.9	26.9	8.0	8.0	29.6	29.6	78.9	79.0	5.3	5.3	5.3	7.2	7.4	8.9			
						7.8	26.9		8.0		29.6		79.0		5.3			7.7					
6-Aug-19	Fine	Moderate	08:13	8.6	Surface	1.0	27.6	27.6	8.0	8.0	27.8	27.8	81.5	81.5	5.5	5.5	5.3	1.7	1.7	3.8	4.8	4.5	3.5
						1.0	27.6		8.0		27.8		81.5		5.5			1.7					
					Middle	4.3	27.6	27.6	8.0	8.0	28.0	28.0	76.6	76.6	5.2	5.2	5.0	3.2	3.2	2.9			
						4.3	27.6		8.0		28.0		76.6		5.2			3.2					
					Bottom	7.6	27.3	27.3	8.0	8.0	29.2	29.2	74.7	74.7	5.0	5.0	5.0	6.4	6.4	2.2			
						7.6	27.3		8.0		29.2		74.7		5.0			6.4					
8-Aug-19	Sunny	Moderate	12:54	7.5	Surface	1.0	29.6	29.6	8.4	8.4	28.5	28.5	196.4	196.5	12.8	12.8	11.5	3.4	3.5	3.1	5.3	5.8	4.6
						1.0	29.6		8.4		28.5		196.6		12.8			3.5					
					Middle	3.8	28.2	28.2	8.3	8.3	29.4	29.4	154.1	154.1	10.2	10.2	6.7	3.1	3.1	4.5			
						3.8	28.2		8.3		29.4		154.1		10.2			3.0					
					Bottom	6.5	27.6	27.6	8.1	8.1	29.9	29.9	99.7	99.8	6.7	6.7	6.7	2.9	2.9	4.1			
						6.5	27.6		8.1		29.9		99.8		6.7			2.9					
10-Aug-19	Fine	Moderate	16:26	7.2	Surface	1.0	29.4	29.4	8.0	8.0	28.1	28.1	115.3	115.3	7.5	7.5	7.4	2.9	3.0	2.5	9.7	9.2	7.3
						1.0	29.4		8.0		28.1		115.2		7.5			3.0					
					Middle	3.6	29.4	29.4	8.0	8.0	28.1	28.1	112.3	112.3	7.4	7.3	6.2	1.6	1.6	7.1			
						3.6	29.4		8.0		28.1		112.2		7.3			1.7					
					Bottom	6.2	28.9	28.9	8.0	8.0	29.3	29.3	94.7	94.8	6.2	6.2	6.2	2.8	2.8	5.5			
						6.2	28.9		8.0		29.3		94.9		6.2			2.8					
13-Aug-19	Cloudy	Rough	02:36	8.4	Surface	1.0	30.0	30.0	7.9	7.9	25.4	25.4	102.4	101.8	6.7	6.7	5.3	1.5	1.5	4.6	3.6	3.5	6.8
						1.0	30.0		7.9		25.4		101.1		6.6			1.5					
					Middle	4.2	27.9	27.9	7.6	7.6	30.7	30.8	59.0	58.9	3.9	3.9	3.3	2.3	2.4	5.2			
						4.2	27.9		7.6		30.8		58.7		3.9			4.9					
					Bottom	7.4	27.3	27.3	7.6	7.6	32.2	32.2	49.3	49.8	3.3	3.3	3.3	10.1	10.0	12.4			
						7.4	27.3		7.6		32.2		50.3		3.3			9.9					
15-Aug-19	Cloudy	Moderate	03:59	8.5	Surface	1.0	29.2	29.2	7.9	7.9	26.4	26.4	105.6	105.6	7.0	7.0	5.4	2.0	2.0	6.4	3.3	2.8	2.7
						1.0	29.2		7.9		26.4		105.6		7.0			2.0					
					Middle	4.3	27.9	27.9	7.7	7.7	31.8	31.8	57.0	57.0	3.7	3.7	3.7	6.7	6.7	2.2			
						4.3	27.9		7.7		31.8		56.9		3.7			6.7					
					Bottom	7.5	27.3	27.3	7.7	7.7	33.4	33.4	55.6	55.6	3.7	3.7	3.7	10.6	10.6	2.2			
						7.5	27.3		7.7		33.4		55.6		3.7			10.6					
17-Aug-19	Cloudy	Moderate	05:17	7.3	Surface	1.0	29.0	29.0	8.0	8.0	28.7	28.7	106.7	106.0	7.0	7.0	5.3	3.2	3.2	5.6	5.4	5.0	5.6
						1.0	29.0		8.0		28.7		105.3		6.9			3.2					
					Middle	3.7	27.3	27.3	7.8	7.8	32.1	32.1	58.9	56.0	3.9	3.7	3.1	4.2	4.2	6.1			
						3.7	27.3		7.8		32.1		53.0		3.5			4.3					
					Bottom	6.3	25.9	25.9	7.8	7.8	34.0	34.0	45.4	45.5	3.0	3.1	3.1	9.4	9.5	6.7			
						6.3	25.9		7.8		34.0		45.6		3.1			9.5					

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Water Quality Monitoring Results at SR2 during Mid-ebb Tide																									
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)				
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA		
16-Jul-19	Fine	Moderate	12:11	6.5	Surface	1.0	29.1	29.1	8.6	8.6	23.3	23.2	181.9	181.7	12.1	12.1	8.6	1.9	1.9	2.1	4.4	4.5	4.6		
						1.0	29.1		8.6		23.2		181.4		12.1			1.9							
					Middle	3.3	26.6	26.6	8.1	8.1	29.1	29.1	74.1	73.8	5.1	5.0	2.6	1.4	1.4	2.6	3.1	3.1		4.6	4.7
						3.3	26.6		8.1		29.2		73.4		5.0			1.4							
					Bottom	5.5	25.4	25.4	7.9	7.9	32.3	32.3	37.7	37.9	2.6	2.6	2.6	3.1	3.1	2.6	4.9	4.9		4.8	4.8
						5.5	25.4		7.9		32.3		38.1		2.6			3.1							
18-Jul-19	Sunny	Moderate	13:21	6.5	Surface	1.0	28.9	28.9	8.3	8.3	28.4	28.4	203.4	203.6	13.4	13.4	12.1	1.6	1.6	2.4	6.8	6.7	7.2		
						1.0	28.9		8.3		28.4		203.7		13.4			1.7							
					Middle	3.3	26.6	26.6	8.2	8.2	29.5	29.5	154.2	158.1	10.5	10.8	3.0	1.9	1.9	3.0	3.6	3.7		4.4	4.3
						3.3	26.6		8.2		29.4		162.0		11.0			1.8							
					Bottom	5.5	25.3	25.3	7.7	7.7	31.9	31.9	44.5	44.4	3.1	3.0	3.0	3.0	3.0	3.0	3.8	3.8		4.4	4.4
						5.5	25.3		7.7		31.9		44.2		3.0			3.0							
20-Jul-19	Cloudy	Moderate	14:18	6.5	Surface	1.0	27.6	27.6	8.1	8.1	26.9	26.9	111.4	111.4	7.6	7.6	7.3	3.9	3.9	5.6	4.2	4.3	4.3		
						1.0	27.6		8.1		26.9		111.3		7.6			4.0							
					Middle	3.3	27.8	27.8	8.0	8.0	27.8	27.8	106.0	105.9	7.1	7.1	5.2	4.4	4.3	5.2	8.7	8.5		4.4	4.4
						3.3	27.8		8.0		27.8		105.8		7.1			4.3							
					Bottom	5.5	26.9	26.9	7.9	7.9	29.3	29.2	77.0	77.2	5.2	5.2	5.2	8.4	8.4	5.2	4.3	4.3		4.4	4.4
						5.5	26.9		7.9		29.2		77.3		5.2			8.4							
23-Jul-19	Cloudy	Moderate	16:05	6.9	Surface	1.0	27.7	27.7	8.1	8.1	32.6	32.6	176.6	176.6	11.5	11.5	9.6	5.8	5.8	4.2	5.1	5.0	4.7		
						1.0	27.7		8.1		32.6		176.6		11.5			5.8							
					Middle	3.5	27.1	27.1	8.1	8.1	32.6	30.8	116.3	116.3	7.6	7.7	2.9	1.4	1.4	2.9	5.5	5.3		4.1	4.3
						3.5	27.1		8.1		29.0		116.3		7.9			1.4							
					Bottom	5.9	24.8	24.8	7.8	7.8	32.7	32.7	42.4	42.6	2.9	2.9	2.9	5.2	5.2	2.9	4.4	4.4		4.1	4.3
						5.9	24.8		7.8		32.7		42.7		2.9			5.2							
25-Jul-19	Sunny	Moderate	17:29	7.5	Surface	1.0	31.0	31.0	8.8	8.8	16.1	16.1	200.1	200.0	13.6	13.6	13.1	6.2	6.2	8.8	3.8	3.6	3.5		
						1.0	31.0		8.8		16.1		199.8		13.6			6.2							
					Middle	3.8	31.0	31.0	8.8	8.8	16.2	16.2	186.8	185.9	12.7	12.7	2.9	5.5	5.5	2.9	14.7	14.8		3.0	3.3
						3.8	31.0		8.8		16.2		184.9		12.6			5.5							
					Bottom	6.5	25.2	25.2	8.1	8.1	31.1	31.1	42.2	42.4	2.9	2.9	2.9	14.9	14.9	2.9	3.6	3.6		3.0	3.3
						6.5	25.2		8.1		31.1		42.5		2.9			14.9							
3-Aug-19	Rainy	Calm	12:27	6.6	Surface	1.0	26.9	26.9	8.0	8.0	29.5	29.5	80.3	80.3	5.4	5.4	5.4	8.8	8.8	8.5	8.7	8.4	7.2		
						1.0	26.9		8.0		29.5		80.3		5.4			8.8							
					Middle	3.3	26.9	26.9	8.0	8.0	29.6	29.6	78.2	78.2	5.3	5.3	5.3	8.4	8.4	5.3	6.2	6.2		5.5	6.1
						3.3	26.9		8.0		29.7		78.2		5.3			8.4							
					Bottom	5.6	26.9	26.9	8.0	8.0	29.7	29.7	78.1	78.2	5.3	5.3	5.3	8.3	8.3	5.3	6.7	6.7		5.5	6.1
						5.6	26.9		8.0		29.7		78.2		5.3			8.3							
6-Aug-19	Fine	Moderate	16:29	6.5	Surface	1.0	28.0	28.0	8.1	8.1	28.0	28.0	87.1	87.1	5.8	5.8	5.6	2.1	2.1	2.8	3.6	3.5	4.0		
						1.0	28.0		8.1		28.0		87.1		5.8			2.1							
					Middle	3.3	27.6	27.6	8.1	8.1	28.4	28.4	78.9	78.9	5.3	5.3	5.5	2.9	2.9	5.5	4.4	4.4		3.4	3.9
						3.3	27.6		8.1		28.4		78.9		5.3			2.9							
					Bottom	5.5	27.4	27.4	8.1	8.1	28.8	28.8	81.7	81.7	5.5	5.5	5.5	3.3	3.3	5.5	4.8	4.8		4.2	4.5
						5.5	27.4		8.1		28.8		81.7		5.5			3.3							
8-Aug-19	Fine	Moderate	05:11	6.8	Surface	1.0	28.0	28.0	8.2	8.2	29.1	29.1	134.1	134.1	8.9	8.9	8.2	4.4	4.3	7.1	6.8	6.4	5.6		
						1.0	28.0		8.2		29.1		134.0		8.9			4.3							
					Middle	3.4	27.8	27.8	8.1	8.1	29.6	29.6	111.8	111.7	7.4	7.4	6.2	4.6	4.5	6.2	5.0	5.0		4.0	4.5
						3.4	27.8		8.1		29.6		111.5		7.4			4.5							
					Bottom	5.8	27.5	27.5	8.1	8.1	30.0	30.0	93.1	93.0	6.2	6.2	6.2	12.4	12.4	6.2	5.0	5.0		4.0	4.5
						5.8	27.5		8.1		30.0		92.9		6.2			12.5							
10-Aug-19	Fine	Moderate	07:30	9.2	Surface	1.0	29.1	29.1	8.1	8.1	27.2	27.2	111.9	111.9	7.4	7.4	7.4	4.2	4.2	4.1	2.4	2.8	3.3		
						1.0	29.1		8.1		27.2		111.8		7.4			4.2							
					Middle	4.6	29.1	29.1	8.1	8.1	27.3	27.3	110.9	110.9	7.3	7.3	7.2	4.1	4.1	7.2	4.1	4.1		2.6	2.9
						4.6	29.1		8.1		27.3		110.9		7.3			4.1							
					Bottom	8.2	29.2	29.2	8.1	8.1	27.4	27.4	109.6	109.6	7.2	7.2	7.2	4.1	4.1	7.2	4.1	4.1		4.7	4.4
						8.2	29.2		8.1		27.4		109.6		7.2			4.1							
13-Aug-19	Fine	Moderate	11:18	6.3	Surface	1.0	31.0	31.0	8.1	8.1	24.3	24.3	147.5	147.5	9.6	9.6	9.4	0.8	0.9	1.4	1.8	1.9	1.9		
						1.0	31.0		8.1		24.3		147.4		9.6			0.9							
					Middle	3.2	30.9	30.9	8.0	8.0	24.3	24.3	141.3	141.2	9.2	9.2	8.6	1.2	1.2	8.6	1.2	1.2		1.2	1.7
						3.2	30.9		8.0		24.3		141.1		9.2			1.2							
					Bottom	5.3	30.7	30.7	8.0	8.0	24.8	24.8	132.3	132.4	8.6	8.6	8.6	2.1	2.0	8.6	2.0	2.0		2.2	2.1
						5.3	30.7		8.0		24.7		132.4		8.6			1.9							
15-Aug-19	Fine	Moderate	12:28	6.6	Surface	1.0	30.2	30.2	8.1	8.1	26.4	26.4	180.2	180.2	11.6	11.6	11.5	1.7	1.7	2.1	3.8	4.0	3.4		
						1.0	30.2		8.1		26.4		180.1		11.6			1.7							
					Middle	3.3	30.1	30.1	8.1	8.1	26.4	26.4	174.6	174.6	11.4	11.3	10.0	1.8	1.8	10.0	2.7	2.7		3.5	3.1
						3.3	30.1		8.1		26.4		174.5		11.3			1.8							
					Bottom	5.6	29.8	29.8	8.1	8.1	26.6	26.6	152.0	152.1	10.0	10.0	10.0	2.7	2.7	10.0	2.6	2.6		3.5	3.1
						5.6	29.8		8.1		26.6		152.2		10.0			2.7							
17-Aug-19	Fine	Moderate	13:38	7.4	Surface	1.0	29.0	29.0	8.1	8.1	27.4	27.4	108.9	106.9	7.2	7.1	5.2	4.9	4.9	4.1	5.5	5.8	9.9		
						1.0	29.0		8.1		27.4		104.8		6.9			4.9							
					Middle	3.7	27.1	27.1	7.8	7.8	32.7	32.7	49.0	49.0	3.3	3.3	3.2	3.7	3.7	3.2	3.6	3.6		17.9	17.3
						3.7	27.1		7.8		32.7		49.0		3.3			3.7							
					Bottom	6.4	26.9	26.9	7.8	7.8	33.0	33.0	48.6	48.7	3.2	3.2	3.2	3.6	3.6	3.2	16.7	16.7		17.9	17.3
						6.4	26.9		7.8		33.0		48.7		3.2			3.6							

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

**Water Quality Monitoring Results at SR2 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)				
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA		
16-Jul-19	Fine	Moderate	03:40	6.9	Surface	1.0	28.6	28.6	8.6	8.6	19.7	19.7	66.6	66.6	4.6	4.6	3.7	1.2	1.2	2.1	6.8	7.0	7.9		
						1.0	28.6		8.6		19.6		66.6		4.6			1.2			7.1				
					Middle	3.5	25.5	25.5	7.9	7.9	30.5	30.5	40.9	40.9	2.8	2.8		2.4	2.4		2.4	2.4		8.0	7.9
						3.5	25.5		7.9		30.5		40.9		2.8			2.4			7.7				
					Bottom	5.9	24.4	24.4	7.9	7.9	33.1	33.1	35.1	35.2	2.4	2.4		2.4	2.4		2.5	2.6		9.0	8.9
						5.9	24.4		7.9		33.1		35.2		2.4			2.7			8.8				
18-Jul-19	Fine	Moderate	04:52	6.8	Surface	1.0	26.9	26.9	8.0	8.0	28.9	28.9	79.9	79.8	5.3	5.3	4.9	1.4	1.4	1.7	8.1	8.1	8.8		
						1.0	26.9		8.0		28.9		79.7		5.3			1.4			8.0				
					Middle	3.4	25.7	25.7	7.8	7.8	30.3	30.4	66.2	65.5	4.6	4.5		1.5	1.5		1.5	1.5		8.8	8.7
						3.4	25.7		7.8		30.4		64.8		4.5			1.5			8.5				
					Bottom	5.8	24.5	24.5	7.7	7.7	33.6	33.6	35.4	35.3	2.4	2.4		2.4	2.4		2.1	2.1		9.8	9.7
						5.8	24.5		7.7		33.6		35.2		2.4			2.1			9.6				
20-Jul-19	Cloudy	Moderate	05:56	6.9	Surface	1.0	26.3	26.3	7.9	7.9	29.0	29.0	74.1	74.0	5.1	5.1	4.6	4.2	4.2	4.2	3.6	3.7	4.8		
						1.0	26.2		7.9		29.0		73.8		5.1			4.2			3.7				
					Middle	3.5	25.6	25.6	7.9	7.9	30.6	30.6	60.9	60.8	4.2	4.2		3.8	3.8		3.8	3.8		5.1	5.0
						3.5	25.6		7.9		30.7		60.7		4.2			3.8			4.8				
					Bottom	5.9	25.5	25.5	7.8	7.8	31.4	31.4	55.7	55.8	3.8	3.8		3.8	3.8		4.5	4.5		5.6	5.7
						5.9	25.5		7.8		31.4		55.9		3.8			4.5			5.8				
23-Jul-19	Cloudy	Moderate	07:58	6.9	Surface	1.0	26.5	26.5	8.0	8.0	28.6	28.6	101.7	101.7	7.0	7.0	6.5	0.1	0.1	0.5	2.7	2.7	2.6		
						1.0	26.5		8.0		28.6		101.6		7.0			0.1			2.6				
					Middle	3.5	26.8	26.8	7.9	7.9	29.5	29.5	91.9	90.3	6.2	6.1		0.5	0.5		0.5	0.5		3.0	2.9
						3.5	26.8		7.9		29.5		88.6		6.0			0.5			2.7				
					Bottom	5.9	26.1	26.1	7.9	7.9	30.8	30.8	68.3	68.4	4.7	4.7		4.7	4.7		0.8	0.8		2.3	2.3
						5.9	26.0		7.9		30.9		68.4		4.7			0.9			2.2				
25-Jul-19	Fine	Moderate	10:29	7.0	Surface	1.0	29.5	29.5	8.6	8.6	19.6	19.6	175.1	175.1	12.0	12.0	10.1	4.3	4.3	5.4	2.5	2.8	3.6		
						1.0	29.5		8.6		19.6		175.0		12.0			4.3			3.1				
					Middle	3.5	27.7	27.8	8.3	8.3	26.7	26.7	122.1	122.6	8.3	8.3		5.5	5.5		5.5	5.5		4.3	3.9
						3.5	27.8		8.3		26.7		123.0		8.3			5.5			3.5				
					Bottom	6.0	26.7	26.7	8.2	8.2	28.6	28.6	90.5	90.5	6.2	6.2		6.2	6.2		6.3	6.3		3.7	4.2
						6.0	26.7		8.2		28.6		90.4		6.2			6.2			4.6				
3-Aug-19	Cloudy	Calm	21:10	7.5	Surface	1.0	27.0	27.0	8.0	8.0	29.5	29.5	81.4	81.3	5.5	5.5	5.4	6.5	6.5	7.2	6.7	7.2	8.2		
						1.0	27.0		8.0		29.5		81.2		5.5			6.5			7.7				
					Middle	3.8	26.9	26.9	8.0	8.0	29.6	29.6	78.8	78.8	5.3	5.3		6.3	6.3		6.3	6.3		8.9	9.4
						3.8	26.9		8.0		29.6		78.8		5.3			6.3			8.7				
					Bottom	6.5	26.9	26.9	8.0	8.0	29.6	29.6	72.7	72.8	4.9	4.9		4.9	4.9		8.4	8.7		9.9	9.4
						6.5	26.9		8.0		29.6		72.8		4.9			8.4			9.9				
6-Aug-19	Fine	Moderate	08:19	6.8	Surface	1.0	27.7	27.7	8.0	8.0	28.0	28.0	78.8	78.8	5.3	5.3	5.0	2.1	2.1	4.7	3.1	3.5	4.6		
						1.0	27.7		8.0		28.0		78.8		5.3			2.1			3.8				
					Middle	3.4	27.7	27.7	8.0	8.0	28.1	28.1	71.1	71.1	4.8	4.8		4.2	4.2		4.4	4.9			
						3.4	27.7		8.0		28.1		71.1		4.8			4.2			5.4				
					Bottom	5.8	27.3	27.3	7.9	7.9	28.7	28.7	60.5	60.5	4.1	4.1		4.1	4.1		7.9	7.9		5.9	5.4
						5.8	27.3		7.9		28.7		60.5		4.1			4.1			4.8				
8-Aug-19	Sunny	Moderate	12:45	6.5	Surface	1.0	30.3	30.3	8.4	8.4	28.1	28.1	223.5	223.5	14.4	14.4	12.3	3.5	3.5	4.2	4.3	4.8	3.7		
						1.0	30.3		8.4		28.1		223.4		14.4			3.5			5.2				
					Middle	3.3	28.1	28.1	8.2	8.2	29.3	29.3	154.9	155.0	10.3	10.3		3.2	3.2		3.2	3.2		3.3	3.5
						3.3	28.1		8.2		29.3		155.1		10.3			3.2			3.6				
					Bottom	5.5	27.7	27.8	8.1	8.1	29.8	29.7	106.9	107.0	7.1	7.1		7.1	7.1		5.7	5.7		2.6	3.0
						5.5	27.8		8.1		29.7		107.1		7.1			5.8			3.4				
10-Aug-19	Fine	Moderate	16:14	6.4	Surface	1.0	29.1	29.1	8.0	8.0	27.7	27.7	111.2	111.2	7.3	7.3	7.3	1.9	1.9	2.8	3.1	3.5	5.2		
						1.0	29.1		8.0		27.7		111.2		7.3			1.9			3.9				
					Middle	3.2	29.1	29.1	8.0	8.0	27.8	27.8	110.3	110.3	7.3	7.3		4.0	4.0		4.0	4.0		5.2	5.7
						3.2	29.1		8.0		27.8		110.3		7.3			4.0			6.2				
					Bottom	5.4	29.2	29.2	8.0	8.0	27.9	27.9	108.9	108.9	7.2	7.2		7.2	7.2		2.4	2.4		6.4	6.4
						5.4	29.2		8.0		27.9		108.9		7.2			2.5			6.4				
13-Aug-19	Cloudy	Rough	02:42	6.6	Surface	1.0	30.3	30.3	8.0	8.0	24.3	24.3	116.2	116.1	7.7	7.6	6.1	1.5	1.5	4.1	2.6	2.7	4.5		
						1.0	30.3		8.0		24.3		115.9		7.6			1.5			2.8				
					Middle	3.3	28.5	28.5	7.7	7.7	29.3	29.2	68.6	69.3	4.5	4.6		6.4	6.2		6.4	6.2		4.5	4.4
						3.3	28.6		7.7		29.2		69.9		4.6			6.0			4.3				
					Bottom	5.6	27.5	27.5	7.6	7.6	31.6	31.7	59.9	60.4	4.0	4.0		4.0	4.0		4.5	4.7		6.1	6.4
						5.6	27.5		7.6		31.7		60.8		4.0			4.8			6.7				
15-Aug-19	Fine	Moderate	04:07	6.9	Surface	1.0	29.6	29.6	8.0	8.0	26.4	26.4	114.8	114.8	7.6	7.6	5.6	2.2	2.2	9.0	2.7	2.7	3.2		
						1.0	29.6		8.0		26.4		114.7		7.6			2.2			2.7				
					Middle	3.5	28.3	28.3	7.7	7.7	30.8	30.8	56.9	56.9	3.7	3.7		9.0	9.1		9.1	9.1		3.7	3.5
						3.5	28.3		7.7		30.8		56.8		3.7			9.1			3.3				
					Bottom	5.9	27.3	27.3	7.6	7.6	33.1	33.1	50.4	50.4	3.3	3.3		3.3	3.3		15.8	15.8		3.6	3.3
						5.9	27.3		7.6		33.1		50.4		3.3			15.8			2.9				
17-Aug-19	Cloudy	Moderate	05:26	6.6	Surface	1.0	29.2	29.2	8.1	8.1	27.6	27.6	130.8	127.8	8.6	8.4	6.0	2.4	2.4	7.4	6.7	6.2	7.1		
						1.0	29.2		8.1		27.6		124.7		8.2			2.4			5.7				
					Middle	3.3	27.1	27.1	7.8	7.8	32.5	32.5	55.5	55.2	3.7	3.7		6.3	6.4		6.6	6.4		7.1	7.1
						3.3	27.1		7.8		32.5		54.8		3.6			6.6			7.0				
					Bottom	5.6	26.9	26.9	7.8	7.8	33.1	33.1	44.3	43.9	2.9	2.9		2.9	2.9		13.4	13.4		7.6	8.2
						5.6	26.9		7.8		33.1		43.5		2.9			13.3			8.7				

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.



Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at SR3 during Mid-ebb Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)					
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA			
16-Jul-19	Fine	Moderate	11:55	7.5	Surface	1.0	29.3	29.3	8.6	8.6	22.0	22.0	180.3	180.3	12.1	12.1	7.7	1.8	1.8	2.1	5.8	5.8	5.0			
						1.0	29.3		8.6		22.0		180.3		12.1			1.8			5.7					
					Middle	3.8	26.2	26.2	8.0	8.0	30.0	30.0	50.1	49.9	3.4	3.4	2.2	1.2	1.2	2.2	4.8	4.8		4.7	4.6	
						3.8	26.2		8.0		30.0		49.6		3.4			1.2			4.7					
					Bottom	6.5	24.9	24.9	7.9	7.9	33.1	33.1	32.5	32.6	2.2	2.2	2.2	3.2	3.2	2.2	4.5	4.5		4.7	4.6	
						6.5	24.9		7.9		33.1		32.7		2.2			3.2			4.7					
18-Jul-19	Sunny	Moderate	13:10	8.2	Surface	1.0	26.8	26.8	8.3	8.3	28.8	28.8	178.4	178.2	12.2	12.1	8.8	1.9	1.9	2.2	4.2	4.4	5.3			
						1.0	26.8		8.3		28.8		178.0		12.1			1.9			4.5					
					Middle	4.1	25.8	25.8	7.9	7.9	30.5	30.5	80.1	79.9	5.5	5.5	2.8	2.1	2.0	2.8	2.0	2.0		2.8	5.6	5.5
						4.1	25.8		7.9		30.5		79.7		5.5			2.0			5.4					
					Bottom	7.2	23.9	23.9	7.7	7.7	34.4	34.4	40.2	40.2	2.8	2.8	2.8	2.7	2.8	2.8	2.8	2.8		2.8	5.9	6.1
						7.2	23.9		7.7		34.4		40.2		2.8			2.8			6.2					
20-Jul-19	Cloudy	Moderate	14:01	8.2	Surface	1.0	27.6	27.7	8.1	8.1	25.9	25.9	117.8	117.8	8.0	8.0	7.4	4.2	4.1	5.9	2.6	2.6	3.2			
						1.0	27.7		8.1		25.9		117.8		8.0			4.1			2.5					
					Middle	4.1	27.3	27.3	8.0	8.0	26.7	26.7	98.0	98.1	6.7	6.7	3.1	4.3	4.3	3.1	3.0	3.2		3.4	3.9	
						4.1	27.3		8.0		26.7		98.1		6.7			4.3			3.4					
					Bottom	7.2	24.5	24.5	7.8	7.8	33.0	33.0	44.1	44.3	3.1	3.1	3.1	9.2	9.2	3.1	3.5	3.7		3.5	3.7	
						7.2	24.5		7.8		33.0		44.4		3.1			9.1			3.5					
23-Jul-19	Cloudy	Moderate	15:55	8.9	Surface	1.0	27.5	27.5	8.4	8.4	27.0	27.0	186.3	184.4	12.6	12.4	8.5	4.4	4.4	3.2	3.0	3.2	3.7			
						1.0	27.4		8.4		27.1		182.4		12.3			4.4			3.4					
					Middle	4.5	25.8	25.8	7.9	7.9	31.0	31.0	67.6	67.9	4.6	4.6	2.9	1.5	1.6	2.9	4.1	4.1		3.6	3.9	
						4.5	25.8		7.9		31.0		68.1		4.7			1.7			4.1					
					Bottom	7.9	24.6	24.6	7.8	7.8	32.9	32.9	42.3	42.6	2.9	2.9	2.9	3.7	3.6	2.9	3.6	3.6		3.6	3.9	
						7.9	24.6		7.8		32.9		42.8		3.0			3.6			3.9					
25-Jul-19	Sunny	Moderate	17:19	8.4	Surface	1.0	30.9	30.9	8.8	8.8	15.3	15.3	201.4	201.4	13.8	13.8	9.7	5.2	5.2	6.0	4.4	4.1	4.1			
						1.0	30.9		8.8		15.3		201.4		13.8			5.2			3.7					
					Middle	4.2	26.8	26.8	8.3	8.3	28.5	28.4	82.6	82.5	5.6	5.6	3.3	5.5	5.5	3.3	5.5	5.5		7.4	7.4	
						4.2	26.8		8.3		28.4		82.3		5.6			5.5			4.4					
					Bottom	7.4	24.9	24.9	8.1	8.1	31.5	31.5	47.8	48.0	3.3	3.3	3.3	7.4	7.4	3.3	4.4	4.3		4.4	4.2	
						7.4	24.9		8.1		31.5		48.1		3.3			7.4			4.2					
3-Aug-19	Rainy	Calm	12:37	7.4	Surface	1.0	27.0	27.0	8.0	8.0	29.4	29.4	83.6	83.6	5.7	5.7	5.5	5.9	5.9	6.7	9.2	8.7	7.0			
						1.0	27.0		8.0		29.4		83.6		5.7			5.9			8.1					
					Middle	3.7	26.9	26.9	8.0	8.0	29.6	29.6	79.7	79.7	5.4	5.4	5.4	7.0	7.0	5.4	6.9	6.4		5.4	5.9	
						3.7	26.9		8.0		29.6		79.7		5.4			7.0			5.8					
					Bottom	6.4	26.9	26.9	8.0	8.0	29.7	29.7	79.2	79.2	5.4	5.4	5.4	7.3	7.3	5.4	6.4	6.4		7.3	7.3	
						6.4	26.9		8.0		29.7		79.2		5.4			7.3			6.4					
6-Aug-19	Fine	Moderate	16:15	8.1	Surface	1.0	27.7	27.7	8.2	8.2	28.2	28.2	81.3	81.2	5.5	5.5	5.3	2.5	2.5	3.5	2.7	2.7	3.0			
						1.0	27.7		8.2		28.2		81.1		5.5			2.5			2.7					
					Middle	4.1	27.3	27.3	8.1	8.1	29.5	29.5	77.8	77.8	5.2	5.2	5.4	3.7	3.7	5.4	3.1	3.3		3.4	3.6	
						4.1	27.3		8.1		29.5		77.8		5.2			3.7			3.4					
					Bottom	7.1	27.2	27.2	8.1	8.1	29.5	29.5	80.0	80.0	5.4	5.4	5.4	4.3	4.3	5.4	3.6	3.1		2.6	3.1	
						7.1	27.2		8.1		29.5		80.0		5.4			4.3			2.6					
8-Aug-19	Fine	Moderate	05:23	7.8	Surface	1.0	28.1	28.1	8.2	8.2	29.0	28.9	138.9	138.9	9.2	9.2	8.7	3.7	3.7	4.0	2.6	2.8	3.1			
						1.0	28.1		8.2		28.9		138.8		9.2			3.7			3.0					
					Middle	3.9	28.0	28.0	8.2	8.2	29.5	29.5	121.9	121.8	8.1	8.1	6.8	3.9	3.9	6.8	3.2	3.4		2.9	3.2	
						3.9	28.0		8.2		29.5		121.7		8.1			3.9			3.2					
					Bottom	6.8	27.6	27.6	8.1	8.1	29.9	29.9	101.8	101.8	6.8	6.8	6.8	4.4	4.4	6.8	2.9	3.2		3.4	3.4	
						6.8	27.6		8.1		29.9		101.8		6.8			4.4			3.4					
10-Aug-19	Fine	Moderate	07:45	8.6	Surface	1.0	29.1	29.1	8.1	8.1	27.4	27.4	113.5	113.5	7.5	7.5	7.3	3.7	3.7	5.3	4.3	4.9	4.6			
						1.0	29.1		8.1		27.4		113.4		7.5			3.7			5.4					
					Middle	4.3	29.2	29.2	8.1	8.1	27.5	27.5	108.9	108.8	7.2	7.2	5.7	3.9	3.8	5.7	5.0	5.2		5.3	5.3	
						4.3	29.2		8.1		27.5		108.6		7.2			3.8			5.3					
					Bottom	7.6	28.4	28.4	8.0	8.0	28.9	28.9	86.0	85.4	5.7	5.7	5.7	8.4	8.4	5.7	4.1	3.8		3.5	3.8	
						7.6	28.4		8.0		28.9		84.8		5.6			8.4			3.5					
13-Aug-19	Fine	Moderate	11:04	7.9	Surface	1.0	30.9	30.9	8.0	8.0	25.5	25.5	124.5	124.2	8.1	8.0	6.5	1.3	1.3	4.7	2.6	2.6	3.9			
						1.0	30.9		8.0		25.5		123.8		8.0			1.3			2.6					
					Middle	4.0	28.7	28.7	7.7	7.7	29.5	29.5	75.5	75.5	5.0	5.0	3.7	2.6	2.6	3.7	4.0	3.7		4.0	5.5	
						4.0	28.8		7.7		29.5		75.4		5.0			2.6			4.0					
					Bottom	6.9	27.3	27.3	7.5	7.5	32.2	32.2	55.5	55.8	3.7	3.7	3.7	10.1	10.1	3.7	5.7	5.5		5.3	5.5	
						6.9	27.3		7.5		32.2		56.0		3.7			10.1			5.3					
15-Aug-19	Fine	Moderate	12:18	8.4	Surface	1.0	30.1	30.1	8.1	8.1	27.4	27.4	160.3	160.3	10.4	10.4	8.2	2.5	2.5	8.7	3.8	3.9	3.5			
						1.0	30.1		8.1		27.4		160.3		10.4			2.5			4.0					
					Middle	4.2	28.5	28.5	7.8	7.8	29.9	29.9	91.0	91.0	6.0	6.0	3.1	2.9	2.9	3.1	2.8	3.3		3.7	3.4	
						4.2	28.5		7.8		29.9		91.0		6.0			2.9			3.7					
					Bottom	7.4	27.1	27.1	7.6	7.6	33.5	33.5	46.9	46.9	3.1	3.1	2.7	20.7	20.7	2.7	3.1	3.3		3.1	3.1	
						7.4	27.1		7.6		33.5		46.9		3.1			20.7			3.1					
17-Aug-19	Fine	Moderate	13:28	8.4	Surface	1.0	28.3	28.3	8.0	8.0	27.6	27.7	106.2	103.7	7.1	6.9	5.4	2.2	2.3	4.2	9.1	10.0	9.5			
						1.0	28.3		8.0		27.7		101.1		6.8			2.3			10.8					
					Middle	4.2	27.9	27.9	7.9	7.9	30.4	30.4	59.4	59.5	3.9	3.9	2.7	3.6	3.6	2.7	9.2	10.0		8.4	8.7	
						4.2	27.9		7.9		30.4		59.5		3.9			3.6			10.7					
					Bottom	7.4	26.2	26.2	7.8	7.8	33.7	33.7	39.7	39.8	2.7	2.7	2.7	6.8	6.8	2.7	8.4	8.7		9.0	8.7	
						7.4	26.2		7.8		33.7		39.9		2.7			6.8			9.0					

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher</

Water Quality Monitoring Results at SR3 during Mid-flood Tide																												
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)							
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA					
16-Jul-19	Fine	Moderate	03:52	7.9	Surface	1.0	28.6	28.6	8.6	8.6	18.4	18.4	73.2	73.2	5.1	5.1	3.7	1.0	1.0	3.6	5.9	5.9	6.1					
						1.0	28.6		8.6		18.4		73.2		5.1			1.0			5.9							
						Middle	4.0	25.1	25.1	7.9	7.9	31.6	31.5	35.0	35.0	2.4		2.4	3.9		3.9	3.9		3.9	5.9	6.2	6.4	
							4.0	25.1		7.9		31.5		35.0		2.4			3.9			6.4						
							Bottom	6.9	24.0	24.0	7.9	7.9	33.6	33.6	34.8	34.9		2.4	2.4		6.0	6.0		6.0	6.0	6.3	6.3	6.3
								6.9	24.0		7.9		33.6		34.9			2.4			6.0			6.3				
18-Jul-19	Fine	Moderate	05:01	8.1	Surface	1.0	26.9	26.9	8.1	8.1	28.3	28.3	73.5	73.4	4.9	4.9	4.8	1.7	1.7	1.6	5.3	5.2	7.0					
						1.0	26.9		8.1		28.3		73.2		4.9			1.7			5.0							
						Middle	4.1	25.8	25.8	7.8	7.8	30.4	30.4	69.6	69.7	4.8		4.8	1.3		1.3	1.3		1.3	6.9	6.8	6.6	
							4.1	25.8		7.8		30.4		69.8		4.8			1.3			6.6						
							Bottom	7.1	24.9	24.9	7.7	7.7	32.9	32.9	46.4	46.5		3.2	3.2		1.8	1.7		1.8	1.7	9.0	9.2	9.4
								7.1	24.9		7.7		32.9		46.6			3.2			1.7			9.4				
20-Jul-19	Cloudy	Moderate	06:10	8.2	Surface	1.0	26.2	26.2	7.9	7.9	28.5	28.5	72.5	72.4	5.0	5.0	4.2	4.3	4.2	5.7	3.0	3.2	3.7					
						1.0	26.2		7.9		28.5		72.3		5.0			4.2			3.4							
						Middle	4.1	25.0	25.0	7.8	7.8	32.1	32.1	49.8	49.8	3.4		3.4	4.5		4.5	4.5		4.5	3.6	3.7	3.7	
							4.1	25.0		7.8		32.1		49.8		3.4			4.5			3.7						
							Bottom	7.2	24.7	24.7	7.8	7.8	33.0	33.0	40.0	40.1		2.8	2.8		8.3	8.3		8.3	8.3	4.2	4.3	4.4
								7.2	24.7		7.8		33.0		40.1			2.8			8.3			4.4				
23-Jul-19	Cloudy	Moderate	08:11	8.3	Surface	1.0	26.3	26.3	8.0	8.0	28.1	28.1	90.1	90.1	6.2	6.2	5.4	4.2	3.2	3.5	1.4	1.4	2.4					
						1.0	26.3		8.0		28.1		90.0		6.2			2.3			1.3							
						Middle	4.2	25.7	25.7	7.9	7.9	30.2	30.4	70.1	66.6	4.8		4.6	1.0		0.8	0.6		0.8	2.5	2.6	2.7	
							4.2	25.6		7.9		30.5		63.0		4.3			1.0			2.7						
							Bottom	7.3	24.3	24.3	7.8	7.8	33.4	33.4	36.5	36.7		2.5	2.5		6.3	6.5		6.3	6.5	3.4	3.4	3.3
								7.3	24.3		7.8		33.4		36.9			2.5			6.7			3.3				
25-Jul-19	Sunny	Moderate	10:40	8.3	Surface	1.0	29.7	29.7	8.6	8.6	17.0	17.0	164.5	164.5	11.4	11.4	8.3	4.6	4.6	4.4	4.0	4.5	3.8					
						1.0	29.7		8.6		17.0		164.5		11.4			4.6			5.0							
						Middle	4.2	26.4	26.4	8.1	8.1	29.0	29.0	77.0	76.9	5.3		5.3	4.3		4.3	4.3		4.3	3.1	3.5	3.8	
							4.2	26.4		8.1		29.0		76.7		5.3			4.3			3.8						
							Bottom	7.3	25.6	25.6	8.1	8.1	30.1	30.1	63.6	63.6		4.4	4.4		4.3	4.4		4.3	4.4	3.4	3.3	3.2
								7.3	25.7		8.1		30.1		63.6			4.4			4.4			3.2				
3-Aug-19	Rainy	Calm	20:54	8.9	Surface	1.0	27.5	27.5	8.0	8.0	29.4	29.4	84.5	84.5	5.7	5.7	5.7	5.2	5.2	7.4	6.6	6.3	6.7					
						1.0	27.5		8.0		29.4		84.5		5.7			5.2			5.9							
						Middle	4.5	27.0	27.0	8.0	8.0	29.5	29.5	84.4	84.4	5.7		5.7	6.2		6.2	6.2		6.2	7.0	7.1	7.9	
							4.5	27.0		8.0		29.5		84.3		5.7			6.2			7.0						
							Bottom	7.9	26.9	26.9	8.0	8.0	29.6	29.6	79.4	79.4		5.4	5.4		11.0	10.9		10.8	10.9	7.9	7.1	7.9
								7.9	26.9		8.0		29.6		79.4			5.4			10.8			7.9				
6-Aug-19	Fine	Moderate	08:29	7.8	Surface	1.0	27.6	27.6	8.0	8.0	27.4	27.4	82.0	82.0	5.6	5.6	5.5	1.1	1.1	1.0	3.3	3.6	3.9					
						1.0	27.6		8.0		27.4		82.0		5.6			1.1			3.8							
						Middle	3.9	27.7	27.7	8.0	8.0	28.5	28.5	81.1	81.1	5.5		5.5	1.1		1.1	1.1		1.1	4.0	3.5	3.0	
							3.9	27.7		8.0		28.5		81.1		5.5			1.1			4.2						
							Bottom	6.8	27.5	27.5	8.1	8.1	28.6	28.6	81.1	81.1		5.5	5.5		0.9	0.9		0.9	0.9	5.2	4.7	5.2
								6.8	27.5		8.1		28.6		81.1			5.5			0.9			5.2				
8-Aug-19	Sunny	Moderate	12:28	8.1	Surface	1.0	30.3	30.3	8.3	8.3	28.4	28.4	195.2	195.1	12.6	12.6	10.7	3.5	3.5	3.2	2.6	3.0	3.3					
						1.0	30.3		8.3		28.4		195.0		12.6			3.4			3.3							
						Middle	4.1	27.9	27.9	8.2	8.2	29.6	29.6	131.5	131.7	8.7		8.7	3.2		3.3	3.2		3.3	3.6	3.7	3.8	
							4.1	27.9		8.2		29.6		131.8		8.8			3.3			3.8						
							Bottom	7.1	27.5	27.5	8.1	8.1	30.0	30.0	96.0	96.1		6.4	6.4		2.9	2.9		2.9	2.9	2.7	3.1	3.5
								7.1	27.5		8.1		30.0		96.2			6.4			2.9			3.5				
10-Aug-19	Fine	Moderate	16:01	8.2	Surface	1.0	29.1	29.1	8.0	8.0	27.9	27.9	112.8	112.8	7.4	7.4	7.3	3.8	3.8	3.7	4.0	4.2	5.0					
						1.0	29.1		8.0		27.9		112.7		7.4			3.8			4.4							
						Middle	4.1	29.2	29.2	8.0	8.0	28.0	28.0	109.6	109.6	7.2		7.2	2.6		2.7	2.6		2.7	4.9	5.4	5.8	
							4.1	29.2		8.0		28.0		109.5		7.2			2.7			5.8						
							Bottom	7.2	28.4	28.4	7.9	7.9	29.4	29.4	83.2	84.8		5.5	5.6		4.6	4.7		4.6	4.7	5.8	5.4	5.0
								7.2	28.4		7.9		29.4		86.4			5.7			4.7			5.0				
13-Aug-19	Cloudy	Moderate	02:52	8.9	Surface	1.0	30.1	30.1	8.0	8.0	24.0	24.0	114.1	114.0	7.6	7.5	5.5	1.2	1.3	3.1	2.8	2.9	4.5					
						1.0	30.1		8.0		24.0		113.9		7.5			1.3			2.9							
						Middle	4.5	28.1	28.0	7.6	7.6	30.2	30.2	52.4	51.6	3.5		3.4	2.7		2.8	2.7		2.8	4.6	4.6	4.5	
							4.5	28.0		7.6		30.2		50.7		3.4			2.9			4.5						
							Bottom	7.9	27.2	27.2	7.5	7.5	32.2	32.2	44.7	44.9		3.0	3.0		5.0	5.1		5.0	5.1	6.3	6.1	6.3
								7.9	27.2		7.5		32.2		45.0			3.0			5.2			6.3				
15-Aug-19	Fine	Moderate	04:16	7.6	Surface	1.0	29.7	29.7	8.0	8.0	26.2	26.2	118.6	118.6	7.8	7.8	5.5	1.7	1.7	5.1	2.5	3.1	3.3					
						1.0	29.7		8.0		26.2		118.5		7.8			1.7			3.7							
						Middle	3.8	27.4	27.4	7.6	7.6	32.7	32.7	49.3	49.3	3.3		3.3	9.5		9.5	9.5		9.5	2.7	3.5	4.2	
							3.8	27.4		7.6		32.7		49.3		3.3			9.5			4.2						
							Bottom	6.6	26.9	26.9	7.6	7.6	33.5	33.5	51.7	51.8		3.4	3.4		4.0	4.1		4.0	4.1	3.6	3.4	3.2
								6.6	26.9		7.6		33.5		51.8			3.4			4.1			3.2				
17-Aug-19	Cloudy	Moderate	05:41	8.1	Surface	1.0	28.6	28.7	8.1	8.1	28.0	28.0	132.4	130.2	8.8	8.6	6.2	2.2	2.2	2.8	7.8	7.6	10.5					
						1.0	28.7		8.1		28.0		128.0		8.5			2.2			7.3							
						Middle	4.1	26.6	26.6	7.8	7.8	33.2	33.3	59.0	56.8	3.9		3.8	3.0		3.1	3.0		3.1	8.9	8.5	8.1	
							4.1	26.5		7.8		33.4		54.5		3.6			3.2			8.1						
							Bottom	7.1	26.3	26.3	7.8	7.8	33.8	33.8	50.2	50.3		3.4	3.4		3.1	3.1		3.1	3.1	15.6	15.3	15.0
								7.1	26.3		7.8		33.8		50.4			3.4			3.2			15.0				

Remarks: DA: Depth-averaged  
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher  
 The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at SR4 during Mid-ebb Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
16-Jul-19	Fine	Moderate	11:31	11.8	Surface	1.0	27.6	27.6	8.2	8.2	22.8	22.8	104.5	104.5	7.3	7.2	5.6	1.4	1.4	3.7	5.0	5.1	4.6	
						1.0	27.6		8.2		22.9		104.4		7.2			1.5			5.1			
					Middle	5.9	25.7	25.7	8.0	8.0	28.2	28.2	56.5	56.7	3.9	3.9	2.7	1.8	1.7	3.7	4.0	4.2		4.6
						5.9	25.7		8.0		28.2		56.8		4.0			1.7			4.3			
					Bottom	10.8	24.3	24.3	7.9	7.9	33.4	33.4	38.9	39.0	2.7	2.7	2.7	7.8	7.8	2.7	4.5	4.6		4.6
						10.8	24.3		7.9		33.4		39.0		2.7			7.8			4.7			
18-Jul-19	Sunny	Moderate	12:51	14.4	Surface	1.0	26.1	26.1	7.9	7.9	26.5	26.5	86.7	86.7	6.1	6.1	6.1	2.8	2.7	2.8	8.1	8.3	8.5	
						1.0	26.1		7.9		26.5		86.7		6.1			2.7			8.4			
					Middle	7.2	25.9	25.9	7.9	7.9	27.6	27.6	87.1	87.3	6.1	6.1	5.4	2.6	2.6	2.8	8.4	8.6		8.6
						7.2	25.9		7.9		27.6		87.4		6.1			2.6			8.8			
					Bottom	13.4	25.6	25.6	7.8	7.8	28.5	28.6	77.6	77.6	5.4	5.4	5.4	3.1	3.1	5.4	8.5	8.6		8.6
						13.4	25.6		7.8		28.6		77.5		5.4			3.2			8.6			
20-Jul-19	Cloudy	Moderate	13:42	14.4	Surface	1.0	26.7	26.7	7.9	7.9	26.7	26.7	84.0	84.0	5.8	5.8	5.4	4.3	4.4	4.2	3.1	3.0	3.9	
						1.0	26.7		7.9		26.7		84.0		5.8			4.4			2.9			
					Middle	7.2	26.1	26.1	7.9	7.9	27.9	27.9	71.5	71.5	5.0	5.0	5.0	4.2	4.2	4.2	4.0	3.9		3.9
						7.2	26.1		7.9		27.9		71.4		5.0			4.2			3.8			
					Bottom	13.4	25.9	25.9	7.9	7.9	28.1	28.1	71.6	71.8	5.0	5.0	5.0	4.1	4.1	5.0	4.6	4.7		4.7
						13.4	25.9		7.9		28.1		72.0		5.0			4.1			4.8			
23-Jul-19	Cloudy	Moderate	15:12	14.8	Surface	1.0	27.5	27.5	8.1	8.1	27.0	27.0	144.6	144.6	9.7	9.7	7.8	1.8	1.8	2.0	3.3	3.2	4.1	
						1.0	27.5		8.1		27.0		144.6		9.7			1.8			3.1			
					Middle	7.4	27.1	27.1	8.0	8.0	31.2	31.2	88.8	88.8	5.9	5.9	3.6	1.9	1.9	2.0	3.6	3.7		3.7
						7.4	27.1		8.0		31.2		88.8		5.9			1.9			3.8			
					Bottom	13.8	24.9	24.9	8.0	8.0	33.3	33.3	53.3	53.3	3.6	3.6	3.6	2.4	2.4	2.0	5.4	5.3		5.3
						13.8	24.9		8.0		33.3		53.3		3.6			2.4			5.1			
25-Jul-19	Sunny	Moderate	16:52	14.8	Surface	1.0	29.2	29.2	8.6	8.6	22.8	22.8	202.8	202.9	13.7	13.7	9.6	4.8	4.8	6.6	4.7	4.8	4.6	
						1.0	29.2		8.6		22.9		203.0		13.7			4.8			4.9			
					Middle	7.4	25.7	25.7	8.0	8.0	30.0	30.0	80.0	80.1	5.5	5.5	2.9	5.2	5.3	6.6	4.6	4.6		4.6
						7.4	25.7		8.0		30.0		80.2		5.5			5.3			4.5			
					Bottom	13.8	24.3	24.3	8.0	8.0	32.4	32.4	41.1	41.2	2.9	2.9	2.9	9.8	9.8	6.6	4.9	4.5		4.5
						13.8	24.3		8.0		32.4		41.3		2.9			9.8			4.1			
3-Aug-19	Cloudy	Moderate	13:18	11.8	Surface	1.0	26.4	26.4	7.9	7.9	27.2	27.2	76.1	76.1	5.3	5.3	5.1	4.2	4.2	6.7	8.8	8.4	7.5	
						1.0	26.4		7.9		27.2		76.0		5.3			4.2			8.0			
					Middle	5.9	26.6	26.6	8.0	8.0	29.0	29.0	73.3	73.3	5.0	5.0	4.9	6.3	6.3	6.7	6.1	6.7		6.7
						5.9	26.6		8.0		29.0		73.3		5.0			6.3			7.3			
					Bottom	10.8	26.7	26.7	8.0	8.0	29.6	29.6	72.7	72.7	4.9	4.9	4.9	9.5	9.5	6.7	7.5	7.3		7.3
						10.8	26.7		8.0		29.6		72.7		4.9			9.5			7.1			
6-Aug-19	Fine	Moderate	15:50	11.8	Surface	1.0	27.8	27.8	8.0	8.0	26.7	26.7	81.7	81.7	5.5	5.5	5.5	1.5	1.5	2.4	3.6	4.1	3.9	
						1.0	27.8		8.0		26.7		81.7		5.5			1.5			4.6			
					Middle	5.9	27.7	27.7	8.0	8.0	27.1	27.1	79.6	79.6	5.4	5.4	5.2	2.1	2.1	2.4	4.2	4.1		4.1
						5.9	27.7		8.0		27.1		79.6		5.4			2.1			4.0			
					Bottom	10.8	27.2	27.2	8.1	8.1	29.4	29.4	76.6	76.6	5.2	5.2	5.2	3.6	3.6	2.4	3.4	3.6		3.6
						10.8	27.2		8.1		29.4		76.6		5.2			3.6			3.7			
8-Aug-19	Fine	Moderate	05:32	13.7	Surface	1.0	27.7	27.7	7.9	7.9	27.1	27.1	77.8	77.8	5.3	5.3	5.3	4.3	4.3	4.2	2.2	2.7	3.5	
						1.0	27.7		7.9		27.1		77.8		5.3			4.3			3.1			
					Middle	6.9	27.8	27.8	7.9	7.9	27.6	27.6	79.1	79.1	5.3	5.3	5.6	4.2	4.2	4.2	4.7	4.2		4.2
						6.9	27.8		7.9		27.6		79.1		5.3			4.2			3.6			
					Bottom	12.7	27.8	27.8	8.0	8.0	27.8	27.8	82.7	82.9	5.6	5.6	5.6	4.1	4.1	4.2	4.2	3.8		3.8
						12.7	27.8		8.0		27.8		83.0		5.6			4.1			3.4			
10-Aug-19	Fine	Moderate	08:18	14.3	Surface	1.0	28.4	28.4	8.1	8.1	26.9	26.9	98.9	98.9	6.6	6.6	6.7	4.7	4.7	4.7	4.2	4.7	3.1	
						1.0	28.4		8.1		26.9		98.9		6.6			4.7			5.2			
					Middle	7.2	28.4	28.4	8.1	8.1	27.4	27.4	100.6	100.6	6.7	6.7	6.3	4.4	4.4	4.7	3.5	3.0		3.0
						7.2	28.4		8.1		27.4		100.5		6.7			4.4			2.5			
					Bottom	13.3	28.4	28.4	8.1	8.1	28.2	28.2	95.1	95.1	6.3	6.3	6.3	4.8	4.9	4.7	1.9	1.6		1.6
						13.3	28.4		8.1		28.2		95.0		6.3			4.9			1.3			
13-Aug-19	Fine	Moderate	10:33	11.4	Surface	1.0	29.2	29.2	7.7	7.7	24.6	24.6	88.0	88.0	5.9	5.9	5.6	2.1	2.1	2.8	2.3	2.5	3.3	
						1.0	29.2		7.7		24.6		87.9		5.9			2.1			2.6			
					Middle	5.7	28.9	28.9	7.7	7.7	25.4	25.4	80.8	80.7	5.4	5.4	3.1	2.5	2.5	2.8	3.1	3.4		3.4
						5.7	28.9		7.7		25.4		80.5		5.4			2.5			3.7			
					Bottom	10.4	26.2	26.2	7.4	7.4	33.2	33.2	46.6	46.8	3.1	3.1	3.1	3.8	3.8	2.8	4.1	4.1		4.1
						10.4	26.3		7.4		33.2		47.0		3.2			3.8			4.0			
15-Aug-19	Fine	Rough	11:50	11.7	Surface	1.0	28.4	28.4	7.7	7.7	26.8	26.8	81.4	81.4	5.5	5.5	5.6	2.5	2.6	3.7	4.3	4.0	3.1	
						1.0	28.4		7.7		26.8		81.4		5.5			2.6			3.6			
					Middle	5.9	28.4	28.4	7.7	7.7	27.3	27.3	85.1	85.1	5.7	5.7	4.7	2.5	2.5	3.7	2.7	2.7		2.7
						5.9	28.4		7.7		27.3		85.1		5.7			2.5			2.7			
					Bottom	10.7	27.7	27.7	7.7	7.7	29.4	29.4	70.7	70.7	4.7	4.7	4.7	6.0	6.1	3.7	3.2	2.7		2.7
						10.7	27.7		7.7		29.4		70.7		4.7			6.1			2.1			
17-Aug-19	Fine	Moderate	12:42	12.0	Surface	1.0	27.4	27.4	7.8	7.8	29.1	29.1	70.6	70.6	4.8	4.7	4.4	1.9	1.9	4.2	6.6	6.3	7.5	
						1.0	27.3		7.8		29.1		70.5		4.7			2.0			5.9			
					Middle	6.0	27.0	27.0	7.8	7.8	31.9	32.0	61.1	60.9	4.1	4.1	3.7	5.1	5.1	4.2	6.6	7.3		7.3
						6.0	27.0		7.8		32.1		60.6		4.0			5.1			7.9			
					Bottom	11.0	24.7	24.7	7.8	7.8	34.3	34.3	54.1	54.3	3.7	3.7	3.7	5.5	5.5	4.2	8.5	9.0		9.0
						11.0	24.7		7.8		34.3		54.5		3.7			5.5			9.4			

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at SR4 during Mid-flood Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)				
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA		
16-Jul-19	Fine	Moderate	04:12	11.3	Surface	1.0	27.6	27.6	8.4	8.4	22.2	22.2	86.0	86.0	5.9	5.9	4.6	1.9	1.9	3.7	4.1	4.3	6.4		
						1.0	27.6		8.4		22.2		86.0		5.9			1.9			4.4				
					Middle	5.7	26.0	26.1	7.9	7.9	30.0	30.0	47.7	47.7	3.2	3.2	2.7	2.5	2.7		2.3	2.5		7.0	6.9
						5.7	26.1		7.9		29.9		47.7		3.2						2.7			6.8	
					Bottom	10.3	24.1	24.1	7.9	7.9	33.6	33.6	38.7	38.9	2.7	2.7	2.7	6.7	6.7		6.7	6.7		7.9	8.1
						10.3	24.1		7.9		33.6		39.0		2.7						6.7			8.2	
18-Jul-19	Fine	Moderate	05:50	14.0	Surface	1.0	25.9	25.9	7.9	7.9	28.2	28.2	87.8	87.8	6.1	6.1	4.3	1.7	1.7	4.2	6.8	6.9	7.0		
						1.0	25.9		7.9		28.2		87.7		6.1			1.7			6.9				
					Middle	7.0	23.7	23.7	7.7	7.7	34.6	34.6	37.3	37.4	2.6	2.6	3.1	3.2	3.2		3.2	3.2		7.0	7.1
						7.0	23.7		7.7		34.6		37.4		2.6						3.2			7.2	
					Bottom	13.0	23.2	23.2	7.7	7.7	34.8	34.8	44.3	44.4	3.1	3.1	3.1	7.6	7.6		7.5	7.6		6.9	7.1
						13.0	23.2		7.7		34.8		44.5		3.1						7.6			7.2	
20-Jul-19	Cloudy	Moderate	06:56	14.1	Surface	1.0	25.9	25.9	7.9	7.9	27.9	27.9	64.8	64.8	4.5	4.5	4.0	4.4	4.4	7.9	2.6	2.7	4.0		
						1.0	25.9		7.9		27.9		64.8		4.5			4.4			2.7				
					Middle	7.1	24.6	24.6	7.9	7.9	32.5	32.4	50.9	50.9	3.5	3.5	3.0	4.7	4.7		4.7	4.7		4.0	4.0
						7.1	24.6		7.9		32.4		50.9		3.5						4.7			3.9	
					Bottom	13.1	23.7	23.7	7.8	7.8	33.7	33.7	43.6	43.6	3.0	3.0	3.0	14.5	14.7		14.5	14.7		5.4	5.3
						13.1	23.7		7.8		33.7		43.6		3.0						14.9			5.2	
23-Jul-19	Cloudy	Moderate	08:41	12.5	Surface	1.0	25.6	25.6	7.8	7.8	27.7	27.8	58.8	58.7	4.1	4.1	3.4	0.5	0.5	2.9	1.6	1.8	2.4		
						1.0	25.6		7.8		27.8		58.5		4.1			0.5			1.9				
					Middle	6.3	24.6	24.6	7.8	7.8	32.6	32.6	38.4	38.3	2.7	2.7	2.7	6.1	6.1		2.2	2.0		2.7	2.8
						6.3	24.5		7.8		32.6		38.2		2.6						2.7			2.8	
					Bottom	11.5	24.0	24.0	7.8	7.8	33.6	33.6	39.0	39.1	2.7	2.7	2.7	6.1	6.1		2.7	2.7		2.5	2.6
						11.5	24.0		7.8		33.6		39.2		2.7						2.7			2.7	
25-Jul-19	Fine	Moderate	10:59	14.3	Surface	1.0	28.8	28.8	8.4	8.4	23.3	23.3	153.5	153.2	10.4	10.4	8.0	20.6	20.7	15.7	6.1	6.2	5.9		
						1.0	28.8		8.4		23.3		152.9		10.4			20.7			6.3				
					Middle	7.2	26.2	26.2	8.1	8.1	28.8	28.8	81.7	81.7	5.6	5.6	2.5	14.9	14.9		11.4	11.5		6.7	6.3
						7.2	26.2		8.1		28.8		81.7		5.6						11.5			5.8	
					Bottom	13.3	24.4	24.4	7.9	7.9	32.3	32.3	36.1	36.2	2.5	2.5	2.5	14.9	14.9		14.9	14.9		5.6	5.1
						13.3	24.4		7.9		32.3		36.2		2.5						14.9			4.6	
3-Aug-19	Cloudy	Moderate	20:11	13.8	Surface	1.0	26.5	26.5	7.9	7.9	25.9	25.9	77.5	77.5	5.4	5.4	5.3	3.3	3.3	5.3	5.1	5.7	6.2		
						1.0	26.5		7.9		25.9		77.4		5.4			3.3			6.2				
					Middle	6.9	26.5	26.5	7.9	7.9	26.8	26.8	74.0	74.0	5.1	5.1	5.1	8.1	8.1		4.6	4.6		6.5	6.0
						6.9	26.5		7.9		26.8		74.0		5.1						4.6			5.5	
					Bottom	12.8	26.6	26.6	7.9	7.9	27.1	27.1	73.8	73.8	5.1	5.1	5.1	8.1	8.1		8.1	8.1		7.4	7.1
						12.8	26.6		7.9		27.1		73.8		5.1						8.1			6.7	
6-Aug-19	Fine	Moderate	09:24	13.7	Surface	1.0	27.3	27.3	7.9	7.9	26.1	26.1	73.2	73.2	5.0	5.0	5.0	2.3	2.3	4.8	2.0	1.7	3.0		
						1.0	27.3		7.9		26.1		73.2		5.0			2.3			1.4				
					Middle	6.9	27.4	27.4	7.9	7.9	27.0	27.0	73.3	73.3	5.0	5.0	4.9	8.0	8.0		4.0	4.0		2.9	3.4
						6.9	27.4		7.9		27.0		73.3		5.0						4.0			3.9	
					Bottom	12.7	27.1	27.1	8.0	8.0	30.0	30.0	72.4	72.4	4.9	4.9	4.9	8.0	8.0		8.0	8.0		3.5	4.0
						12.7	27.1		8.0		30.0		72.4		4.9						8.0			4.5	
8-Aug-19	Sunny	Moderate	12:12	11.8	Surface	1.0	28.3	28.3	8.1	8.1	27.3	27.3	118.8	118.8	7.9	7.9	7.5	4.1	4.1	7.0	3.3	3.8	3.0		
						1.0	28.3		8.1		27.3		118.7		7.9			4.1			4.2				
					Middle	5.9	27.9	27.9	8.1	8.1	28.9	28.9	107.3	107.2	7.2	7.2	5.1	13.4	13.3		3.7	3.7		2.4	2.8
						5.9	27.9		8.1		28.9		107.1		7.1						3.7			2.4	
					Bottom	10.8	27.2	27.2	8.0	8.0	30.4	30.4	76.3	76.4	5.1	5.1	5.1	13.3	13.3		3.0	3.0		2.0	2.5
						10.8	27.2		8.0		30.4		76.5		5.1						3.0			2.0	
10-Aug-19	Fine	Moderate	15:32	11.8	Surface	1.0	28.2	28.2	7.9	7.9	29.4	29.4	94.9	94.9	6.3	6.3	5.6	0.5	0.5	2.0	3.5	3.1	3.7		
						1.0	28.2		7.9		29.4		94.8		6.3			0.5			2.7				
					Middle	5.9	27.5	27.5	7.9	7.9	31.0	31.0	74.1	74.1	4.9	4.9	5.2	3.9	3.9		1.5	1.5		3.9	3.7
						5.9	27.5		7.9		31.0		74.1		4.9						1.5			3.5	
					Bottom	10.8	27.4	27.4	7.9	7.9	31.5	31.5	78.2	78.2	5.2	5.2	5.2	4.0	4.0		3.9	3.9		3.7	4.2
						10.8	27.4		7.9		31.5		78.2		5.2						4.0			4.6	
13-Aug-19	Cloudy	Moderate	03:19	13.6	Surface	1.0	29.0	29.0	7.8	7.8	24.8	24.8	94.1	94.0	6.3	6.3	5.7	1.0	1.1	3.3	2.9	2.8	4.8		
						1.0	29.0		7.8		24.8		93.8		6.3			1.1			2.7				
					Middle	6.8	28.8	28.7	7.7	7.7	28.1	28.0	76.5	76.5	5.1	5.1	3.6	7.1	7.1		1.9	1.9		3.9	4.2
						6.8	28.7		7.7		27.9		76.4		5.1						1.8			4.4	
					Bottom	12.6	26.8	26.8	7.5	7.5	33.0	32.9	54.4	54.8	3.6	3.6	3.6	7.1	7.1		7.1	7.1		7.6	7.4
						12.6	26.8		7.5		32.9		55.2		3.7						7.1			7.1	
15-Aug-19	Fine	Rough	04:39	12.2	Surface	1.0	28.9	28.9	7.8	7.8	27.2	27.2	84.0	83.9	5.6	5.6	5.2	2.2	2.2	3.3	3.1	3.7	2.8		
						1.0	28.9		7.8		27.2		83.8		5.6			2.2			4.2				
					Middle	6.1	28.1	28.1	7.7	7.7	28.8	28.8	71.6	71.6	4.8	4.8	3.5	5.6	5.6		2.1	2.1		2.6	2.8
						6.1	28.1		7.7		28.8		71.5		4.8						2.1			3.0	
					Bottom	11.2	25.1	25.1	7.5	7.5	34.2	34.2	51.5	51.6	3.5	3.5	3.5	5.6	5.6		5.6	5.6		1.7	2.1
						11.2	25.1		7.5		34.2		51.7		3.5						5.6			2.4	
17-Aug-19	Cloudy	Moderate	06:11	11.2	Surface	1.0	28.2	28.2	7.9	7.9	27.6	27.6	109.8	109.7	7.4	7.3	5.7	2.4	2.4	5.1	6.0	6.7	5.8		
						1.0	28.2		7.9		27.7		109.6		7.3			2.4			7.4				
					Middle	5.6	27.3	27.3	7.8	7.8	29.8	29.8	61.1	61.1	4.1	4.1	4.1	5.8	5.8		5.8	5.8		6.2	6.0
						5.6	27.3		7.8		29.8		61.1		4.1						5.8			5.8	
					Bottom	10.2	27.2	27.2	7.8	7.8	30.6	30.6	61.2	61.1	4.1	4.1	4.1	7.2	7.1		7.2	7.1		4.7	4.8
						10.2	27.2		7.8		30.6		60.9		4.1						7.0			4.9	

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

**Water Quality Monitoring Results at SR5 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	11:22	12.7	Surface	1.0	27.8	27.8	8.1	8.1	20.4	20.4	86.2	86.1	6.0	6.0	5.0	1.8	1.8	2.9	5.3	5.3	5.4
						1.0	27.8		8.1		20.5		86.0		6.0			1.8			5.2		
					Middle	6.4	25.9	25.9	8.0	8.0	27.2	27.2	56.9	56.9	4.0	4.0	2.8	2.7	5.0		5.2		
						6.4	25.9		8.0		27.2		56.9		4.0		2.7		5.4				
					Bottom	11.7	25.8	25.8	8.0	8.0	27.8	27.7	58.4	58.5	4.1	4.1	4.1	4.1	5.6		5.8		
						11.7	25.8		8.0		27.7		58.6		4.1		4.1		5.9				
18-Jul-19	Sunny	Moderate	12:42	12.1	Surface	1.0	27.0	27.0	7.9	7.9	23.1	23.2	91.9	91.7	6.4	6.4	6.1	2.6	2.6	2.6	4.0	4.1	6.4
						1.0	27.0		7.9		23.2		91.4		6.4			2.6			4.2		
					Middle	6.1	26.0	26.0	7.9	7.9	26.9	26.9	83.3	83.3	5.8	5.8	2.7	2.7	6.9		7.1		
						6.1	26.0		7.9		26.9		83.3		5.8		2.7		7.2				
					Bottom	11.1	25.9	25.9	7.9	7.9	27.1	27.1	83.4	83.5	5.8	5.8	5.8	5.8	8.0		8.2		
						11.1	25.9		7.9		27.1		83.5		5.8		5.8		8.3				
20-Jul-19	Cloudy	Moderate	13:34	12.1	Surface	1.0	25.8	25.8	7.9	7.9	28.2	28.2	64.1	64.1	4.5	4.5	4.4	4.1	4.1	4.5	5.7	5.8	7.4
						1.0	25.8		7.9		28.2		64.1		4.5			4.1			5.9		
					Middle	6.1	25.6	25.6	7.9	7.9	29.0	28.9	62.3	62.2	4.3	4.3	4.3	4.3	7.5		7.6		
						6.1	25.6		7.9		28.9		62.1		4.3		4.3		7.6				
					Bottom	11.1	25.3	25.3	7.8	7.8	30.4	30.4	45.8	45.9	3.2	3.2	3.2	3.2	8.9		8.8		
						11.1	25.3		7.8		30.4		45.9		3.2		3.2		8.7				
23-Jul-19	Cloudy	Moderate	15:05	11.3	Surface	1.0	27.9	27.9	8.1	8.1	27.6	27.6	154.8	154.8	10.3	10.3	8.2	1.6	1.6	3.1	4.1	4.3	4.0
						1.0	27.9		8.1		27.6		154.8		10.3			1.6			4.4		
					Middle	5.7	27.1	27.1	8.1	8.1	32.4	32.4	93.7	93.1	6.2	6.1	2.2	2.3	3.6		3.8		
						5.7	27.1		8.1		32.5		92.5		6.1		2.4		4.0				
					Bottom	10.3	24.0	24.0	8.0	8.0	33.4	33.4	42.5	43.2	2.9	3.0	3.0	3.0	3.9		3.8		
						10.3	24.0		8.0		33.4		43.8		3.0		3.0		3.7				
25-Jul-19	Sunny	Moderate	16:44	12.2	Surface	1.0	30.5	30.5	8.8	8.8	18.7	18.7	203.5	203.3	13.8	13.8	10.6	4.7	4.7	5.1	2.9	3.2	3.5
						1.0	30.5		8.8		18.7		203.0		13.7			4.7			3.5		
					Middle	6.1	26.9	26.9	8.3	8.3	26.4	26.4	107.0	106.9	7.4	7.4	5.0	5.0	3.6		3.7		
						6.1	26.9		8.3		26.4		106.7		7.4		5.0		3.7				
					Bottom	11.2	24.4	24.4	8.1	8.1	32.2	32.2	40.2	40.4	2.8	2.8	2.8	2.8	4.2		3.7		
						11.2	24.4		8.1		32.3		40.5		2.8		2.8		3.2				
3-Aug-19	Cloudy	Moderate	13:25	12.6	Surface	1.0	26.9	26.9	8.0	8.0	28.1	28.1	79.7	79.7	5.4	5.4	5.5	6.5	6.5	7.5	9.6	10.4	11.2
						1.0	26.9		8.0		28.1		79.7		5.4			6.5			11.1		
					Middle	6.3	26.9	26.9	8.0	8.0	29.1	29.1	80.4	80.4	5.5	5.5	7.0	7.0	12.3		12.1		
						6.3	26.9		8.0		29.1		80.4		5.5		6.9		11.8				
					Bottom	11.6	26.9	26.9	8.0	8.0	29.7	29.7	77.9	77.9	5.3	5.3	5.3	5.3	11.4		11.1		
						11.6	26.9		8.0		29.7		77.9		5.3		5.3		10.7				
6-Aug-19	Fine	Moderate	15:39	12.2	Surface	1.0	27.9	27.9	8.0	8.0	25.9	25.9	81.5	81.5	5.5	5.5	5.4	1.9	1.9	3.3	3.6	4.1	4.1
						1.0	27.9		8.0		25.9		81.5		5.5			1.9			4.6		
					Middle	6.1	27.9	27.9	8.1	8.1	27.3	27.3	77.2	77.2	5.2	5.2	3.6	3.6	4.4		4.0		
						6.1	27.9		8.1		27.3		77.2		5.2		3.6		3.6				
					Bottom	11.2	27.1	27.1	8.1	8.1	29.7	29.7	74.8	74.8	5.0	5.0	5.0	5.0	4.1		4.3		
						11.2	27.1		8.1		29.7		74.8		5.0		5.0		4.5				
8-Aug-19	Fine	Moderate	05:42	12.7	Surface	1.0	27.8	27.8	7.9	7.9	26.5	26.5	76.9	76.9	5.2	5.2	5.2	4.3	4.3	6.1	1.9	2.1	2.5
						1.0	27.8		7.9		26.5		76.9		5.2			4.4			2.3		
					Middle	6.4	27.7	27.7	7.9	7.9	27.3	27.3	77.2	77.2	5.2	5.2	4.3	4.3	2.5		2.4		
						6.4	27.7		7.9		27.3		77.2		5.2		4.3		2.2				
					Bottom	11.7	27.5	27.5	8.0	8.0	29.5	29.5	84.8	84.8	5.7	5.7	5.7	5.7	3.2		3.1		
						11.7	27.5		8.0		29.5		84.7		5.7		5.7		3.0				
10-Aug-19	Fine	Moderate	08:28	13.1	Surface	1.0	28.4	28.4	8.1	8.1	27.2	27.2	99.8	99.8	6.7	6.7	6.6	4.5	4.6	6.2	1.8	1.8	2.4
						1.0	28.4		8.1		27.2		99.8		6.7			4.7			1.7		
					Middle	6.6	28.4	28.4	8.1	8.1	27.9	27.9	97.9	97.9	6.5	6.5	4.7	4.7	1.9		2.4		
						6.6	28.4		8.1		27.9		97.8		6.5		4.7		2.9				
					Bottom	12.1	27.0	27.0	7.9	7.9	31.1	31.1	53.1	53.2	3.6	3.6	3.6	3.6	3.6		3.2		
						12.1	27.0		7.9		31.1		53.3		3.6		3.6		2.7				
13-Aug-19	Fine	Moderate	10:26	10.8	Surface	1.0	29.3	29.3	7.7	7.7	23.8	23.8	91.6	91.5	6.2	6.1	5.9	3.0	3.0	4.7	2.4	2.6	4.1
						1.0	29.3		7.7		23.8		91.3		6.1			2.9			2.7		
					Middle	5.4	29.1	29.1	7.7	7.7	24.7	24.7	85.9	85.6	5.8	5.7	3.8	3.8	3.9		3.6		
						5.4	29.1		7.7		24.7		85.2		5.7		3.9		3.3				
					Bottom	9.8	28.6	28.6	7.6	7.6	28.2	28.1	81.5	81.7	5.4	5.4	5.4	5.4	6.1		6.2		
						9.8	28.6		7.6		27.9		81.8		5.4		5.4		7.4			6.3	
15-Aug-19	Fine	Rough	11:39	12.4	Surface	1.0	28.3	28.3	7.7	7.7	26.8	26.8	74.7	74.7	5.0	5.0	5.2	3.1	3.1	5.1	2.7	2.6	2.8
						1.0	28.3		7.7		26.8		74.7		5.0			3.1			2.5		
					Middle	6.2	28.3	28.3	7.7	7.7	27.3	27.2	80.7	80.7	5.4	5.4	4.3	4.3	1.4		2.2		
						6.2	28.3		7.7		27.2		80.7		5.4		4.3		3.0				
					Bottom	11.4	28.3	28.3	7.7	7.7	27.8	27.8	80.1	80.1	5.3	5.3	5.3	5.3	3.4		3.6		
						11.4	28.3		7.7		27.8		80.0		5.3		5.3		3.7				
17-Aug-19	Fine	Moderate	12:35	13.2	Surface	1.0	28.0	28.0	7.8	7.8	27.9	27.9	72.4	72.4	4.9	4.8	3.9	3.0	3.1	6.3	5.3	5.7	7.7
						1.0	28.0		7.8		27.9		72.3		4.8			3.1			6.1		
					Middle	6.6	25.8	25.7	7.8	7.8	33.8	33.9	43.0	43.3	2.9	2.9	8.7	8.7	5.8		5.6		
						6.6	25.6		7.8		34.0		43.6		2.9		8.7		5.4				
					Bottom	12.2	25.3	25.3	7.8	7.8	34.3	34.2	45.4	45.6	3.1	3.1	3.1	3.1	11.9		11.7		
						12.2	25.3		7.8		34.2		45.8		3.1		3.1		11.4				

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR5 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	04:21	12.5	Surface	1.0	28.2	28.2	8.4	8.4	20.9	20.9	76.5	76.5	5.3	5.3	4.5	1.0	1.0	1.6	4.9	4.9	5.8
						1.0	28.2		8.4		20.9		76.5		5.3			1.0			4.8		
					Middle	6.3	28.0	28.0	8.2	8.2	24.7	24.7	55.5	55.5	3.8	3.8	2.7	1.8	1.8	1.8	5.8		
						6.3	28.0		8.2		24.7		55.5		3.8			1.8		5.7			
					Bottom	11.5	24.1	24.1	7.9	7.9	33.5	33.5	39.5	39.6	2.7	2.7	2.7	2.0	2.0	2.0	6.8		
						11.5	24.1		7.9		33.5		39.7		2.7			2.0		6.9			
18-Jul-19	Fine	Moderate	05:58	10.7	Surface	1.0	25.9	25.9	7.9	7.9	28.1	28.1	83.3	83.2	5.8	5.8	4.1	1.9	1.9	3.5	6.7	6.8	7.0
						1.0	25.9		7.9		28.1		83.1		5.8			1.9			6.8		
					Middle	5.4	23.7	23.7	7.7	7.7	34.7	34.7	35.9	35.9	2.5	2.5	2.6	3.1	3.1	3.1	7.1		
						5.4	23.7		7.7		34.7		35.9		2.5			3.1		7.2			
					Bottom	9.7	23.7	23.7	7.7	7.7	34.7	34.7	36.9	37.0	2.6	2.6	2.6	5.3	5.3	5.4	7.3		
						9.7	23.7		7.7		34.7		37.0		2.6			5.4		7.4			
20-Jul-19	Cloudy	Moderate	07:02	10.8	Surface	1.0	25.8	25.8	7.8	7.8	27.9	27.9	58.2	58.2	4.1	4.1	3.4	4.6	4.6	6.4	6.2	6.1	6.7
						1.0	25.8		7.8		27.9		58.2		4.1			4.6			5.9		
					Middle	5.4	24.6	24.6	7.8	7.8	33.0	33.0	38.5	38.5	2.7	2.7	2.6	6.0	6.0	6.0	6.8		
						5.4	24.6		7.8		33.0		38.4		2.7			6.0		6.8			
					Bottom	9.8	24.1	24.1	7.8	7.8	33.7	33.7	37.2	37.3	2.6	2.6	2.6	8.4	8.5	8.6	7.3		
						9.8	24.1		7.8		33.7		37.3		2.6			8.6		7.1			
23-Jul-19	Cloudy	Moderate	08:49	11.0	Surface	1.0	25.8	25.8	7.8	7.8	27.2	27.2	60.1	60.0	4.2	4.2	3.6	0.3	0.3	1.3	1.8	1.8	1.9
						1.0	25.7		7.8		27.2		59.9		4.2			0.3			1.7		
					Middle	5.5	25.0	25.0	7.8	7.8	31.3	31.4	44.3	44.2	3.1	3.1	2.2	0.4	0.4	0.4	1.8		
						5.5	25.0		7.8		31.4		44.0		3.0			0.4		1.8			
					Bottom	10.0	24.2	24.2	7.8	7.8	33.5	33.5	31.7	31.8	2.2	2.2	2.2	3.3	3.3	3.3	2.3		
						10.0	24.2		7.8		33.5		31.8		2.2			3.3		2.3			
25-Jul-19	Fine	Moderate	11:06	11.0	Surface	1.0	29.1	29.1	8.5	8.5	21.5	21.6	160.5	160.5	10.9	10.9	8.3	10.8	10.8	11.1	4.0	3.8	3.8
						1.0	29.1		8.5		21.6		160.4		10.9			10.8			3.6		
					Middle	5.5	26.1	26.1	8.1	8.1	28.9	28.9	82.4	82.4	5.7	5.7	2.3	9.1	9.1	9.1	3.4		
						5.5	26.1		8.1		28.9		82.4		5.7			9.1		4.4			
					Bottom	10.0	24.5	24.5	7.9	7.9	32.0	32.0	32.8	32.9	2.3	2.3	2.3	13.2	13.3	13.2	3.7		
						10.0	24.5		7.9		32.0		32.9		2.3			13.4		3.8			
3-Aug-19	Cloudy	Moderate	20:05	12.1	Surface	1.0	26.5	26.5	7.9	7.9	26.1	26.1	77.8	77.7	5.4	5.4	5.3	3.9	3.9	8.1	8.2	8.5	9.0
						1.0	26.5		7.9		26.1		77.6		5.4			3.9			8.7		
					Middle	6.1	26.6	26.6	7.9	7.9	27.4	27.4	74.6	74.6	5.1	5.1	5.3	8.9	9.0	9.0	8.4		
						6.1	26.6		7.9		27.4		74.6		5.1			8.9		9.0			
					Bottom	11.1	26.7	26.7	8.0	8.0	28.5	28.5	77.3	77.3	5.3	5.3	5.3	11.3	11.5	11.3	10.0		
						11.1	26.7		8.0		28.5		77.3		5.3			11.6		9.4			
6-Aug-19	Fine	Moderate	09:32	12.7	Surface	1.0	27.3	27.3	7.9	7.9	25.9	25.9	74.4	74.4	5.1	5.1	5.1	2.1	2.1	2.5	5.8	5.5	5.4
						1.0	27.3		7.9		25.9		74.4		5.1			2.1			5.1		
					Middle	6.4	27.3	27.3	7.9	7.9	26.4	26.4	74.3	74.5	5.1	5.1	5.1	2.4	2.4	2.4	5.9		
						6.4	27.4		7.9		26.4		74.6		5.1			2.4		4.7			
					Bottom	11.7	27.3	27.3	7.9	7.9	29.4	29.4	76.4	76.4	5.1	5.1	5.1	2.9	2.9	2.9	5.3		
						11.7	27.3		7.9		29.4		76.4		5.1			2.9		5.4			
8-Aug-19	Sunny	Moderate	12:06	12.2	Surface	1.0	28.9	28.9	8.1	8.1	27.0	27.0	116.1	116.0	7.7	7.7	7.4	4.1	4.1	5.8	5.4	5.9	3.6
						1.0	28.9		8.1		27.0		115.9		7.7			4.1			6.4		
					Middle	6.1	27.7	27.7	8.1	8.1	29.5	29.5	106.0	106.0	7.1	7.1	4.6	2.8	2.8	2.8	3.1		
						6.1	27.7		8.1		29.5		105.9		7.1			2.9		2.6			
					Bottom	11.2	27.1	27.1	8.0	8.0	30.8	30.8	68.6	68.7	4.6	4.6	4.6	10.4	10.5	10.4	1.8		
						11.2	27.1		8.0		30.8		68.7		4.6			10.5		1.6			
10-Aug-19	Fine	Moderate	15:26	12.6	Surface	1.0	28.4	28.4	7.9	7.9	27.4	27.4	98.4	98.4	6.6	6.6	6.6	1.6	1.6	1.5	5.2	4.7	4.2
						1.0	28.4		7.9		27.4		98.4		6.6			1.6			4.2		
					Middle	6.3	28.4	28.4	8.0	8.0	27.9	27.9	100.1	100.1	6.7	6.7	6.3	1.3	1.2	1.2	3.3		
						6.3	28.4		8.0		27.9		100.1		6.7			1.2		4.3			
					Bottom	11.6	28.4	28.4	8.0	7.9	28.7	28.7	94.4	94.4	6.3	6.3	6.3	1.7	1.6	1.6	4.6		
						11.6	28.4		7.9		28.7		94.4		6.3			1.6		3.8			
13-Aug-19	Cloudy	Moderate	03:29	12.1	Surface	1.0	29.0	29.0	7.8	7.8	25.1	25.1	95.5	95.4	6.4	6.4	6.1	1.1	1.1	2.5	2.8	2.7	4.4
						1.0	29.0		7.8		25.1		95.2		6.4			1.1			2.5		
					Middle	6.1	29.0	29.0	7.8	7.8	26.1	26.1	87.1	86.7	5.8	5.8	3.0	1.6	1.6	1.6	4.9		
						6.1	29.0		7.8		26.1		86.3		5.8			1.6		4.1			
					Bottom	11.1	26.6	26.6	7.5	7.5	33.2	33.2	43.8	45.3	2.9	3.0	3.0	4.9	4.9	4.9	6.2		
						11.1	26.6		7.5		33.2		46.7		3.1			4.9		6.0			
15-Aug-19	Cloudy	Rough	04:45	13.0	Surface	1.0	29.3	29.3	7.9	7.9	26.7	26.7	90.7	90.7	6.0	6.0	4.9	2.2	2.2	5.5	2.9	3.2	2.8
						1.0	29.3		7.9		26.7		90.7		6.0			2.2			3.4		
					Middle	6.5	27.8	27.8	7.7	7.7	30.3	30.7	56.7	56.7	3.8	3.8	2.8	4.3	4.3	4.3	2.5		
						6.5	27.8		7.7		31.0		56.7		3.7			4.3		3.0			
					Bottom	12.0	26.4	26.4	7.5	7.5	33.8	33.8	41.3	41.4	2.8	2.8	2.8	10.0	10.0	10.0	2.7		
						12.0	26.4		7.5		33.8		41.4		2.8			10.0		1.8			
17-Aug-19	Cloudy	Moderate	06:19	12.1	Surface	1.0	27.9	27.9	7.9	7.9	27.8	27.9	101.6	99.4	6.8	6.7	5.2	2.7	2.8	5.4	7.6	8.0	9.5
						1.0	27.9		7.9		28.0		97.2		6.5			2.9			8.4		
					Middle	6.1	27.2	27.2	7.8	7.7	29.7	29.7	56.5	56.5	3.8	3.8	2.7	3.9	3.9	3.9	7.5		
						6.1	27.1		7.7		29.7		56.5		3.8			3.9		8.5			
					Bottom	11.1	26.7	26.7	7.7	7.7	33.0	33.0	40.9	41.1	2.7	2.7	2.7	9.5	9.5	9.5	12.8		
						11.1	26.7		7.7		33.0		41.2		2.7			9.5		12.2			

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR6 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	11:41	12.4	Surface	1.0	29.3	29.3	8.6	8.6	22.6	22.6	180.9	181.0	12.1	12.1	7.6	1.1	1.1	3.1	5.8	6.0	6.3
						1.0	29.3		8.6		22.6		181.0		12.1			1.1					
					Middle	6.2	25.9	25.9	7.9	7.9	31.9	31.9	45.1	45.1	3.1	3.1	1.7	1.7	1.7		5.9		
						6.2	25.9		7.9		31.9		45.0		3.1		1.7		5.5				
					Bottom	11.4	24.6	24.7	7.9	7.9	33.5	33.5	38.2	38.4	2.6	2.6	2.6	2.6	6.4		7.4		
						11.4	24.7		7.9		33.5		38.5		2.6		2.6		6.4		7.3		
18-Jul-19	Sunny	Moderate	12:59	14.4	Surface	1.0	27.1	27.1	8.1	8.1	29.0	29.0	139.2	139.2	9.4	9.4	6.4	2.1	2.1	2.2	6.2	6.1	6.7
						1.0	27.1		8.1		29.0		139.1		9.4			2.1			6.0		
					Middle	7.2	24.5	24.5	7.7	7.7	33.2	33.2	49.2	49.2	3.4	3.4	3.4	3.4	1.5		6.2		
						7.2	24.5		7.7		33.2		49.1		3.4		1.5		6.1				
					Bottom	13.4	24.0	24.0	7.7	7.7	34.1	34.1	42.6	42.8	3.0	3.0	3.0	3.0	2.9		7.8		
						13.4	24.0		7.7		34.1		42.9		3.0		3.0		2.9		7.6		
20-Jul-19	Rainy	Moderate	13:48	14.4	Surface	1.0	27.4	27.4	8.0	8.0	26.0	26.0	95.0	94.9	6.5	6.5	5.6	4.2	4.2	7.1	5.2	5.1	6.2
						1.0	27.4		8.0		26.0		94.7		6.5			4.2			4.9		
					Middle	7.2	25.7	25.7	7.9	7.9	30.4	30.4	68.7	68.6	4.7	4.7	4.7	4.7	4.0		6.4		
						7.2	25.7		7.9		30.4		68.5		4.7		4.0		6.1				
					Bottom	13.4	24.5	24.5	7.8	7.8	33.0	33.0	43.1	43.3	3.0	3.0	3.0	3.0	13.1		7.2		
						13.4	24.5		7.8		33.0		43.4		3.0		3.0		13.3		7.1		
23-Jul-19	Cloudy	Moderate	15:41	13.2	Surface	1.0	27.9	27.9	8.4	8.4	26.8	26.8	183.4	182.4	12.3	12.2	8.4	0.7	0.7	3.4	4.1	4.3	4.8
						1.0	27.9		8.4		26.8		181.4		12.1			0.7			4.4		
					Middle	6.6	25.4	25.4	7.9	7.9	31.3	31.3	68.0	68.2	4.7	4.7	4.7	4.7	0.4		4.8		
						6.6	25.4		7.9		31.3		68.3		4.7		0.4		5.1				
					Bottom	12.2	24.4	24.4	7.8	7.8	33.2	33.2	46.6	47.0	3.2	3.2	3.2	3.2	8.7		4.9		
						12.2	24.4		7.8		33.2		47.3		3.3		3.2		9.6		5.4		
25-Jul-19	Sunny	Moderate	17:08	15.1	Surface	1.0	30.8	30.8	8.8	8.8	15.5	15.5	201.1	200.5	13.8	13.7	8.5	5.2	5.2	4.8	4.5	4.4	4.2
						1.0	30.8		8.8		15.5		199.9		13.7			5.2			4.2		
					Middle	7.6	24.9	24.9	8.0	8.0	31.3	31.3	48.2	48.3	3.3	3.3	3.3	3.3	4.5		4.1		
						7.6	24.9		8.0		31.3		48.3		3.3		4.5		4.1				
					Bottom	14.1	24.4	24.4	8.1	8.1	32.3	32.3	46.6	46.7	3.2	3.2	3.2	3.2	4.6		4.4		
						14.1	24.4		8.1		32.3		46.7		3.3		3.2		4.6		3.7		
3-Aug-19	Rainy	Rough	12:50	14.8	Surface	1.0	26.9	26.9	8.0	8.0	29.5	29.5	83.7	83.7	5.7	5.7	5.5	5.4	5.4	7.4	13.9	12.7	12.9
						1.0	26.9		8.0		29.5		83.7		5.7			5.4			11.5		
					Middle	7.4	26.9	26.9	8.0	8.0	29.7	29.7	80.2	80.2	5.4	5.4	5.4	5.4	6.7		11.8		
						7.4	26.9		8.0		29.7		80.1		5.4		6.8		13.4				
					Bottom	13.8	26.9	26.9	8.0	8.0	30.2	30.2	76.2	76.2	5.1	5.1	5.1	5.1	10.2		13.4		
						13.8	26.9		8.0		30.2		76.2		5.1		5.1		10.2		13.3		
6-Aug-19	Fine	Moderate	16:04	14.8	Surface	1.0	28.0	28.0	8.1	8.1	27.6	27.6	90.0	90.0	6.0	6.0	5.6	1.7	1.7	3.6	4.5	4.7	4.0
						1.0	28.0		8.1		27.6		90.0		6.0			1.7			4.8		
					Middle	7.4	27.5	27.5	8.1	8.1	28.6	28.6	77.9	77.9	5.2	5.2	5.2	5.2	4.2		3.9		
						7.4	27.5		8.1		28.6		77.9		5.2		4.2		4.1				
					Bottom	13.8	27.2	27.2	8.1	8.1	29.9	29.9	81.3	81.3	5.5	5.5	5.5	5.5	4.8		2.8		
						13.8	27.2		8.1		29.9		81.3		5.5		5.5		4.8		3.8		
8-Aug-19	Fine	Moderate	05:34	13.6	Surface	1.0	28.2	28.2	8.2	8.2	28.8	28.8	141.2	141.1	9.4	9.4	7.7	3.9	3.9	6.7	4.7	4.6	4.1
						1.0	28.2		8.2		28.8		141.0		9.4			3.9			4.4		
					Middle	6.8	27.5	27.5	8.0	8.0	29.9	29.9	91.5	91.5	6.1	6.1	6.1	6.1	3.6		4.7		
						6.8	27.5		8.1		29.9		91.5		6.1		3.6		4.2				
					Bottom	12.6	27.2	27.2	8.0	8.0	30.8	30.8	75.6	75.8	5.1	5.1	5.1	5.1	12.6		3.3		
						12.6	27.2		8.0		30.8		75.9		5.1		5.1		12.5		3.0		
10-Aug-19	Fine	Moderate	07:58	12.3	Surface	1.0	28.7	28.7	8.2	8.2	27.4	27.4	119.8	119.8	8.0	8.0	7.7	3.4	3.4	4.1	1.3	1.5	1.6
						1.0	28.7		8.2		27.4		119.7		8.0			3.5			1.6		
					Middle	6.2	28.7	28.7	8.2	8.2	27.4	27.4	113.5	113.5	7.5	7.5	7.5	7.5	4.5		1.0		
						6.2	28.7		8.2		27.4		113.5		7.5		4.5		1.1				
					Bottom	11.3	28.8	28.8	8.2	8.2	27.5	27.5	109.6	109.6	7.3	7.3	7.3	7.3	4.2		2.0		
						11.3	28.8		8.2		27.5		109.5		7.3		7.3		4.3		2.6		
13-Aug-19	Fine	Moderate	10:52	13.1	Surface	1.0	30.5	30.5	8.0	8.0	24.5	24.5	129.8	129.3	8.5	8.5	6.1	1.7	1.7	3.6	4.7	4.5	4.0
						1.0	30.5		8.0		24.5		128.7		8.4			1.7			4.3		
					Middle	6.6	27.7	27.7	7.6	7.6	32.0	31.9	58.0	58.0	3.8	3.8	3.8	3.8	1.8		4.6		
						6.6	27.7		7.6		31.9		57.9		3.8		1.8		4.6				
					Bottom	12.1	27.5	27.5	7.6	7.6	32.9	32.9	56.0	56.2	3.7	3.7	3.7	3.7	7.4		2.7		
						12.1	27.5		7.6		32.9		56.3		3.7		3.7		7.4		3.1		
15-Aug-19	Fine	Rough	12:08	13.9	Surface	1.0	30.1	30.1	8.1	8.1	26.7	26.7	175.7	175.7	11.5	11.4	7.7	2.2	2.2	5.7	2.8	3.3	2.9
						1.0	30.1		8.1		26.7		175.6		11.4			2.2			3.7		
					Middle	7.0	28.1	28.1	7.7	7.7	31.7	31.7	58.9	58.9	3.9	3.9	3.9	3.9	2.1		3.0		
						7.0	28.1		7.7		31.7		58.9		3.9		2.1		2.8				
					Bottom	12.9	27.2	27.2	7.6	7.6	33.7	33.7	49.8	49.9	3.3	3.3	3.3	3.3	12.7		2.7		
						12.9	27.2		7.6		33.7		49.9		3.3		3.3		12.6		2.2		
17-Aug-19	Fine	Moderate	13:13	14.8	Surface	1.0	28.3	28.3	8.0	8.0	28.3	28.3	106.3	106.3	7.1	7.1	4.8	2.1	2.1	5.5	8.9	8.5	8.1
						1.0	28.3		8.0		28.3		106.3		7.1			2.1			8.1		
					Middle	7.4	25.6	25.6	7.8	7.8	34.1	34.1	38.4	38.5	2.6	2.6	2.6	2.6	8.3		7.4		
						7.4	25.6		7.8		34.1		38.5		2.6		8.3		7.9				
					Bottom	13.8	24.5	24.5	7.8	7.8	34.4	34.4	48.5	48.6	3.3	3.3	3.3	3.3	6.4		7.3		
						13.8	24.5		7.8		34.4		48.6		3.3		3.3		6.4		8.4		

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Water Quality Monitoring Results at SR6 during Mid-flood Tide																								
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
16-Jul-19	Fine	Moderate	04:05	14.1	Surface	1.0	28.5	28.5	8.6	8.6	20.1	20.0	68.8	68.8	4.7	4.7	3.6	1.6	1.6	3.8	6.2	6.3	6.3	
						1.0	28.5		8.6		20.0		68.8		4.7			1.6			6.3			
					Middle	7.1	24.5	24.5	7.9	7.9	32.5	32.6	35.6	35.6	2.4	2.4	2.4	2.4	1.2		1.2	6.4		6.3
						7.1	24.5	24.5	7.9	7.9	32.6	32.6	35.5	35.6	2.4	2.4	2.4	2.4	1.2		1.2	6.3		6.4
					Bottom	13.1	23.7	23.8	7.9	7.9	33.8	33.8	38.4	38.5	2.7	2.7	2.7	2.7	8.5		8.5	6.0		6.2
						13.1	23.8	23.8	7.9	7.9	33.8	33.8	38.5	38.5	2.7	2.7	2.7	2.7	8.5		8.5	6.3		6.2
18-Jul-19	Sunny	Moderate	05:10	13.5	Surface	1.0	26.6	26.6	8.1	8.1	27.9	27.8	117.9	118.1	8.1	8.1	5.3	1.6	1.6	3.1	6.0	6.2	6.3	
						1.0	26.6		8.1		27.8		118.3		8.1			1.7			6.3			
					Middle	6.8	23.8	23.8	7.7	7.7	34.4	34.4	37.2	37.3	2.6	2.6	2.6	2.6	2.4		2.4	5.7		5.8
						6.8	23.8	23.8	7.7	7.7	34.4	34.4	37.3	37.3	2.6	2.6	2.6	2.6	2.4		2.4	5.9		5.8
					Bottom	12.5	23.5	23.5	7.7	7.7	34.8	34.8	38.3	38.4	2.7	2.7	2.7	2.7	5.4		5.4	6.9		6.8
						12.5	23.5	23.5	7.7	7.7	34.8	34.8	38.5	38.4	2.7	2.7	2.7	2.7	5.3		5.4	6.7		6.8
20-Jul-19	Cloudy	Moderate	06:21	13.5	Surface	1.0	26.5	26.5	7.9	7.9	27.8	27.8	76.8	76.8	5.3	5.3	4.0	4.1	4.1	7.4	5.0	4.9	5.8	
						1.0	26.5		7.9		27.8		76.7		5.3			4.1			4.7			
					Middle	6.8	23.9	23.9	7.8	7.8	33.8	33.8	39.4	39.4	2.7	2.7	2.7	2.7	7.2		7.2	5.5		5.6
						6.8	23.9	23.9	7.8	7.8	33.8	33.8	39.4	39.4	2.7	2.7	2.7	2.7	7.2		7.2	5.7		5.6
					Bottom	12.5	23.9	23.9	7.8	7.8	33.8	33.8	40.0	40.1	2.8	2.8	2.8	2.8	10.7		11.0	7.1		6.9
						12.5	23.9	23.9	7.8	7.8	33.8	33.8	40.1	40.1	2.8	2.8	2.8	2.8	11.3		11.0	6.7		6.9
23-Jul-19	Cloudy	Moderate	08:22	14.6	Surface	1.0	27.0	27.0	8.1	8.1	26.0	26.0	106.0	105.8	7.3	7.3	5.1	0.3	0.3	1.0	1.7	1.8	2.9	
						1.0	27.0		8.1		26.0		105.6		7.3			0.3			1.9			
					Middle	7.3	24.3	24.3	7.8	7.8	33.2	33.2	42.5	40.8	3.0	2.8	2.8	2.8	1.1		1.1	2.8		2.7
						7.3	24.2	24.3	7.8	7.8	33.3	33.2	39.1	40.8	2.7	2.8	2.8	2.8	1.2		1.1	2.6		2.7
					Bottom	13.6	24.0	24.1	7.8	7.8	33.7	33.6	41.1	41.3	2.9	2.9	2.9	2.9	1.7		1.6	3.9		4.1
						13.6	24.1	24.1	7.8	7.8	33.6	33.6	41.4	41.3	2.9	2.9	2.9	2.9	1.6		1.6	4.3		4.1
25-Jul-19	Sunny	Moderate	10:51	13.9	Surface	1.0	29.8	29.8	8.6	8.6	15.3	15.2	165.1	164.9	11.5	11.5	7.2	5.2	5.2	5.8	3.1	3.1	3.0	
						1.0	29.8		8.6		15.2		164.6		11.5			5.2			3.0			
					Middle	7.0	24.8	24.8	8.0	8.0	31.6	31.6	42.5	42.5	3.0	2.9	2.9	2.9	6.1		6.1	2.9		3.0
						7.0	24.8	24.8	8.0	8.0	31.6	31.6	42.4	42.5	2.9	2.9	2.9	2.9	6.1		6.1	3.1		3.0
					Bottom	12.9	24.0	24.0	8.0	8.0	32.8	32.8	43.1	43.2	3.0	3.0	3.0	3.0	6.1		6.2	3.2		3.1
						12.9	24.0	24.0	8.0	8.0	32.8	32.8	43.2	43.2	3.0	3.0	3.0	3.0	6.2		6.2	2.9		3.1
3-Aug-19	Rainy	Rough	20:41	14.8	Surface	1.0	27.3	27.3	8.0	8.0	28.5	28.5	84.2	84.2	5.7	5.7	5.7	5.2	5.2	5.6	11.1	11.7	12.4	
						1.0	27.3		8.0		28.5		84.2		5.7			5.2			12.3			
					Middle	7.4	27.0	27.0	8.0	8.0	29.3	29.4	83.6	83.6	5.7	5.7	5.7	5.7	4.4		4.4	11.4		12.5
						7.4	27.0	27.0	8.0	8.0	29.4	29.4	83.6	83.6	5.7	5.7	5.7	5.7	4.4		4.4	13.5		12.5
					Bottom	13.8	26.9	26.9	8.0	8.0	29.7	29.7	78.7	78.7	5.3	5.3	5.3	5.3	7.3		7.3	12.2		13.0
						13.8	26.9	26.9	8.0	8.0	29.7	29.7	78.7	78.7	5.3	5.3	5.3	5.3	7.3		7.3	13.8		13.0
6-Aug-19	Fine	Moderate	08:38	13.6	Surface	1.0	27.5	27.5	8.0	8.0	27.9	27.9	78.5	78.5	5.3	5.3	5.1	2.6	2.6	4.0	5.8	5.6	5.4	
						1.0	27.5		8.0		27.9		78.5		5.3			2.6			5.3			
					Middle	6.8	27.2	27.2	8.0	8.0	29.8	29.8	73.9	73.9	5.0	5.0	5.0	5.0	4.9		4.9	5.7		5.8
						6.8	27.2	27.2	8.0	8.0	29.8	29.8	73.9	73.9	5.0	5.0	5.0	5.0	4.9		4.9	5.9		5.8
					Bottom	12.6	27.1	27.1	8.0	8.0	30.1	30.1	77.5	77.5	5.2	5.2	5.2	5.2	4.5		4.5	4.8		4.7
						12.6	27.1	27.1	8.0	8.0	30.1	30.1	77.5	77.5	5.2	5.2	5.2	5.2	4.5		4.5	4.6		4.7
8-Aug-19	Sunny	Moderate	12:18	14.8	Surface	1.0	29.0	29.0	8.3	8.3	28.7	28.7	179.6	179.5	11.8	11.8	9.0	3.4	3.4	6.7	8.0	7.7	5.8	
						1.0	29.0		8.3		28.7		179.4		11.8			3.4			7.4			
					Middle	7.4	27.6	27.6	8.0	8.0	30.0	30.0	92.0	91.9	6.1	6.1	6.1	6.1	3.7		3.7	5.2		4.8
						7.4	27.6	27.6	8.0	8.0	30.0	30.0	91.8	91.9	6.1	6.1	6.1	6.1	3.7		3.7	4.4		4.8
					Bottom	13.8	26.9	26.9	8.0	8.0	31.6	31.6	63.8	63.9	4.3	4.3	4.3	4.3	12.8		13.0	4.6		4.9
						13.8	26.9	26.9	8.0	8.0	31.6	31.6	63.9	63.9	4.3	4.3	4.3	4.3	13.3		13.0	5.1		4.9
10-Aug-19	Fine	Moderate	15:48	15.2	Surface	1.0	28.7	28.7	8.0	8.0	27.9	27.9	119.2	119.2	7.9	7.9	7.7	1.1	1.1	1.2	2.5	3.0	2.9	
						1.0	28.7		8.0		27.9		119.1		7.9			1.1			3.5			
					Middle	7.6	28.7	28.7	8.0	8.0	27.9	27.9	113.0	113.0	7.5	7.5	7.5	7.5	1.3		1.3	2.1		2.7
						7.6	28.7	28.7	8.0	8.0	27.9	27.9	112.9	113.0	7.5	7.5	7.5	7.5	1.3		1.3	3.2		2.7
					Bottom	14.2	28.8	28.8	8.0	8.0	28.0	28.0	109.0	109.0	7.2	7.2	7.2	7.2	1.2		1.1	3.2		3.1
						14.2	28.8	28.8	8.0	8.0	28.0	28.0	108.9	109.0	7.2	7.2	7.2	7.2	1.1		1.1	3.0		3.1
13-Aug-19	Cloudy	Rough	03:04	12.9	Surface	1.0	30.0	30.0	7.9	7.9	24.5	24.5	108.5	108.4	7.2	7.2	5.3	1.2	1.2	2.7	3.6	3.3	10.0	
						1.0	30.0		7.9		24.5		108.2		7.2			1.2			3.0			
					Middle	6.5	27.5	27.5	7.6	7.6	31.6	31.6	52.3	52.3	3.5	3.5	3.5	3.5	1.7		1.7	5.2		5.5
						6.5	27.5	27.5	7.6	7.6	31.6	31.6	52.2	52.3	3.5	3.5	3.5	3.5	1.7		1.7	5.8		5.5
					Bottom	11.9	27.1	27.1	7.5	7.5	32.6	32.6	47.6	47.8	3.2	3.2	3.2	3.2	5.3		5.3	19.6		21.1
						11.9	27.1	27.1	7.5	7.5	32.6	32.6	47.9	47.8	3.2	3.2	3.2	3.2	5.3		5.3	22.5		21.1
15-Aug-19	Fine	Rough	04:28	13.5	Surface	1.0	29.2	29.2	8.0	8.0	26.3	26.3	112.2	112.0	7.4	7.4	5.2	1.7	1.7	6.1	1.8	1.4	1.7	
						1.0	29.2		8.0		26.3		111.8		7.4			1.7			1.0			
					Middle	6.8	26.6	26.6	7.6	7.6	33.7	33.7	46.1	46.1	3.1	3.1	3.1	3.1	5.3		5.3	1.3		1.8
						6.8	26.6	26.6	7.6	7.6	33.7	33.7	46.1	46.1	3.1	3.1	3.1	3.1	5.3		5.3	2.2		1.8
					Bottom	12.5	25.6	25.6	7.6	7.6	34.1	34.1	44.1	44.1	3.0	3.0	3.0	3.0	11.3		11.3	1.6		2.0
						12.5	25.6	25.6	7.6	7.6	34.1	34.1	44.1	44.1	3.0	3.0	3.0	3.0	11.3		11.3	2.3		2.0
17-Aug-19	Rainy	Moderate	05:56	13.4	Surface	1.0	28.3	28.3	8.0	8.0	27.8	27.8	116.0	116.0	7.8	7.7	7.5	2.2	2.2	5.6	9.0	9.0	11.8	
						1.0	28.3		8.0		27.8		116.0		7.7			2.2			8.9			
					Middle	6.7	28.4	28.4	8.0	8.0	28.3	28.3	108.6	108.6	7.2	7.2	7.2	7.2	6.5		6.5	12.6		13.4
						6.7	28.4	28.4	8.0	8.0	28.3	28.3	108.6	108.6	7.2	7.2	7.2	7.2	6.5		6.5	14.2		13.4
					Bottom	12.4	27.7	27.7	7.9	7.9	29.5	29.5	81.1	81.1	5.4	5.4	5.4	5.4	8.3		8.1	13.5		13.2
						12.4	27.7	27.7	7.9	7.9	29.5	29.5	81.0	81.1	5.4	5.4	5.4	5.4	8.0		8.1	12.8		13.2

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.



**Water Quality Monitoring Results at SR7 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	11:18	21.4	Surface	1.0	28.5	28.5	8.4	8.4	23.8	23.8	137.3	137.3	9.3	9.3	5.9	1.7	1.7	4.0	5.7	5.7	6.2
						1.0	28.5		8.4		23.8		137.3		9.3			1.7			5.6		
					Middle	10.7	24.6	24.6	7.9	7.9	33.6	33.6	36.2	36.3	2.5	2.5	2.8	3.1	3.1		6.2		
						10.7	24.6		7.9		33.6		36.4		2.5			3.1			6.3		
					Bottom	20.4	24.5	24.5	8.0	8.0	33.7	33.7	40.0	40.1	2.8	2.8	2.8	7.1	7.1		6.7		
						20.4	24.5		8.0		33.7		40.2		2.8			7.0			6.9		
18-Jul-19	Sunny	Moderate	12:38	21.8	Surface	1.0	26.4	26.4	8.0	8.0	29.7	29.7	110.1	110.7	7.5	7.5	5.5	2.0	2.0	2.4	5.8	5.9	5.8
						1.0	26.4		8.0		29.7		111.2		7.6			2.0			5.9		
					Middle	10.9	24.6	24.6	7.7	7.7	33.2	33.2	51.7	51.7	3.6	3.6	2.9	1.0	1.0		6.0		
						10.9	24.6		7.7		33.2		51.7		3.6			1.0			5.9		
					Bottom	20.8	23.9	23.9	7.7	7.7	34.4	34.4	42.0	42.2	2.9	2.9	2.9	4.1	4.1		5.5		
						20.8	23.9		7.7		34.4		42.3		2.9			4.1			5.8		
20-Jul-19	Rainy	Moderate	13:32	21.8	Surface	1.0	27.9	27.9	8.2	8.2	25.6	25.6	138.4	138.1	9.4	9.4	6.1	4.1	4.1	6.6	5.7	5.8	6.9
						1.0	27.9		8.2		25.6		137.8		9.4			4.1			5.8		
					Middle	10.9	24.2	24.2	7.8	7.8	33.5	33.5	40.1	40.1	2.8	2.8	2.7	4.8	4.8		6.8		
						10.9	24.2		7.8		33.5		40.1		2.8			4.7			6.7		
					Bottom	20.8	24.0	24.0	7.8	7.8	33.7	33.7	39.0	39.1	2.7	2.7	2.7	11.0	11.0		8.0		
						20.8	24.0		7.8		33.7		39.1		2.7			11.0			8.3		
23-Jul-19	Cloudy	Moderate	15:15	22.5	Surface	1.0	26.9	27.0	8.1	8.2	27.6	27.5	128.2	128.3	8.8	8.8	5.7	0.5	0.5	0.8	4.1	4.3	4.3
						1.0	27.0		8.2		27.5		128.3		8.8			0.5			4.4		
					Middle	11.3	24.1	24.1	7.8	7.8	33.6	33.6	37.6	37.7	2.6	2.6	3.3	0.8	0.8		4.0		
						11.3	24.1		7.8		33.6		37.7		2.6			0.8			4.2		
					Bottom	21.5	24.0	24.0	7.8	7.8	33.7	33.7	45.8	47.9	3.2	3.3	3.3	1.2	1.2		4.8		
						21.5	24.0		7.8		33.7		50.0		3.5			1.1			4.5		
25-Jul-19	Sunny	Moderate	16:49	22.5	Surface	1.0	30.4	30.4	8.6	8.6	16.9	16.9	200.0	199.6	13.7	13.7	8.3	4.9	4.9	6.3	5.4	4.9	4.4
						1.0	30.4		8.6		16.9		199.2		13.6			4.9			4.4		
					Middle	11.3	24.2	24.2	7.9	7.9	32.6	32.6	41.0	41.0	2.9	2.9	3.4	5.2	5.3		4.6		
						11.3	24.2		7.9		32.6		41.0		2.9			5.3			4.7		
					Bottom	21.5	24.1	24.1	8.0	8.0	32.9	32.9	48.2	48.3	3.4	3.4	3.4	8.8	8.9		3.3		
						21.5	24.1		8.0		32.9		48.4		3.4			8.9			4.2		
3-Aug-19	Rainy	Rough	13:09	21.7	Surface	1.0	26.8	26.8	8.0	8.0	29.3	29.3	84.5	84.5	5.7	5.7	5.7	2.9	2.9	4.1	15.2	14.8	14.5
						1.0	26.8		8.0		29.3		84.5		5.7			2.9			14.4		
					Middle	10.9	27.1	27.1	8.1	8.1	30.5	30.5	83.9	83.9	5.6	5.6	5.5	4.1	4.1		15.7		
						10.9	27.1		8.1		30.5		83.9		5.6			4.1			14.0		
					Bottom	20.7	27.0	27.0	8.1	8.1	30.7	30.7	82.4	82.4	5.5	5.5	5.5	5.3	5.5		13.9		
						20.7	27.0		8.1		30.7		82.4		5.5			5.6			13.8		
6-Aug-19	Fine	Moderate	15:38	21.7	Surface	1.0	27.8	27.8	8.1	8.1	28.2	28.2	83.9	83.9	5.6	5.6	5.3	1.2	1.2	3.0	4.1	4.6	4.9
						1.0	27.8		8.1		28.2		83.9		5.6			1.2			5.1		
					Middle	10.9	27.1	27.1	8.1	8.1	30.0	30.0	73.6	73.6	5.0	5.0	4.8	3.0	3.0		4.2		
						10.9	27.1		8.1		30.0		73.6		5.0			3.0			5.2		
					Bottom	20.7	27.0	27.0	8.1	8.1	30.7	30.7	71.9	71.9	4.8	4.8	4.8	4.8	4.8		4.7		
						20.7	27.0		8.1		30.7		71.9		4.8			4.8			5.8		
8-Aug-19	Fine	Moderate	05:51	22.4	Surface	1.0	28.5	28.5	8.2	8.2	28.7	28.7	139.7	139.8	9.2	9.3	7.2	3.8	3.8	5.8	4.2	4.7	4.8
						1.0	28.5		8.2		28.7		139.9		9.3			3.8			5.2		
					Middle	11.2	27.2	27.2	8.0	8.0	30.6	30.6	75.8	75.8	5.1	5.1	4.4	4.4	4.4		4.9		
						11.2	27.2		8.0		30.6		75.8		5.1			4.4			4.0		
					Bottom	21.4	26.9	26.9	8.0	8.0	31.5	31.5	65.9	66.0	4.4	4.4	4.4	9.3	9.3		4.9		
						21.4	26.9		8.0		31.6		66.0		4.4			9.4			5.3		
10-Aug-19	Fine	Moderate	08:17	21.8	Surface	1.0	28.8	28.8	8.2	8.2	27.5	27.5	120.0	120.0	8.0	8.0	7.8	4.3	4.3	4.3	<1.0	1.2	2.0
						1.0	28.8		8.2		27.5		119.9		8.0			4.3			1.3		
					Middle	10.9	28.8	28.8	8.2	8.2	27.5	27.5	113.8	113.8	7.6	7.6	7.3	4.3	4.3		2.0		
						10.9	28.8		8.2		27.5		113.8		7.6			4.3			2.3		
					Bottom	20.8	28.8	28.8	8.2	8.2	27.6	27.6	111.1	111.0	7.4	7.3	7.3	4.2	4.2		2.1		
						20.8	28.8		8.2		27.6		110.9		7.3			4.2			3.1		
13-Aug-19	Fine	Moderate	10:29	22.5	Surface	1.0	30.1	30.1	8.0	8.0	25.2	25.2	129.7	129.5	8.5	8.5	5.9	1.6	1.6	5.2	1.6	1.7	3.5
						1.0	30.1		8.0		25.2		129.2		8.5			1.6			1.7		
					Middle	11.3	27.6	27.6	7.6	7.6	33.0	33.0	50.7	50.5	3.3	3.3	2.6	3.3	3.4		3.5		
						11.3	27.6		7.6		33.0		50.2		3.3			3.4			3.1		
					Bottom	21.5	26.4	26.4	7.5	7.5	33.6	33.6	37.9	38.4	2.5	2.6	2.6	10.7	10.6		5.7		
						21.5	26.4		7.5		33.6		38.8		2.6			10.4			5.1		
15-Aug-19	Fine	Rough	11:42	21.8	Surface	1.0	30.0	30.0	8.2	8.2	26.8	26.8	174.9	174.9	11.4	11.4	7.3	2.3	2.3	5.8	3.0	3.3	3.2
						1.0	30.0		8.2		26.8		174.9		11.4			2.3			3.6		
					Middle	10.9	27.3	27.3	7.6	7.6	33.8	33.8	48.3	48.3	3.2	3.2	2.8	2.4	2.4		3.2		
						10.9	27.3		7.6		33.8		48.3		3.2			2.4			2.9		
					Bottom	20.8	25.7	25.7	7.5	7.5	34.1	34.1	42.2	42.2	2.8	2.8	2.8	12.7	12.7		2.8		
						20.8	25.7		7.5		34.1		42.2		2.8			12.7			3.4		
17-Aug-19	Rainy	Moderate	12:49	23.2	Surface	1.0	28.3	28.3	8.0	8.0	28.8	28.8	103.9	103.8	6.9	6.9	5.2	1.5	1.5	5.4	6.6	6.7	7.2
						1.0	28.3		8.0		28.8		103.6		6.9			1.5			6.8		
					Middle	11.6	26.0	26.0	7.8	7.8	34.1	34.0	53.9	53.8	3.6	3.6	3.7	2.3	2.3		7.3		
						11.6	26.0		7.8		34.0		53.6		3.6			2.3			8.1		
					Bottom	22.2	24.2	24.2	7.8	7.8	34.5	34.5	54.3	54.4	3.7	3.7	3.7	12.4	12.4		7.8		
						22.2	24.2		7.8		34.5		54.4		3.8			12.4			6.3		

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Water Quality Monitoring Results at SR7 during Mid-flood Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)				
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA		
16-Jul-19	Fine	Moderate	04:28	20.7	Surface	1.0	28.6	28.6	8.6	8.6	19.5	19.4	84.6	84.6	5.8	5.8	4.6	1.2	1.2	3.2	6.8	7.0	7.4		
						1.0	28.6		8.6		19.4		84.6		5.8			1.2			7.1				
					Middle	10.4	23.6	23.6	8.0	8.0	33.8	33.8	48.6	48.6	3.4	3.4	3.4	3.4	3.0		3.0	3.0		7.2	7.0
						10.4	23.6		8.0		33.8		48.5		3.4		3.0		6.8						
					Bottom	19.7	23.4	23.4	8.0	8.0	33.8	33.8	49.0	49.1	3.4	3.4	3.4	3.4	5.2		5.2	5.2		8.2	8.3
						19.7	23.4		8.0		33.8		49.2		3.4		5.2		8.4						
18-Jul-19	Sunny	Moderate	05:33	21.7	Surface	1.0	26.4	26.4	8.1	8.1	29.2	29.2	78.2	78.2	5.3	5.3	4.0	1.6	1.6	2.6	4.2	4.3	5.2		
						1.0	26.4		8.1		29.2		78.2		5.3			1.6			4.4				
					Middle	10.9	23.6	23.6	7.7	7.7	34.7	34.7	40.4	40.4	2.8	2.8	2.8	2.8	2.6		2.6	2.6		5.2	5.1
						10.9	23.6		7.7		34.7		40.4		2.8		2.6		4.9						
					Bottom	20.7	23.5	23.5	7.7	7.7	34.7	34.7	41.2	41.3	2.9	2.9	2.9	2.9	3.6		3.6	3.6		6.1	6.3
						20.7	23.5		7.7		34.7		41.3		2.9		3.6		6.4						
20-Jul-19	Cloudy	Moderate	06:39	21.7	Surface	1.0	26.8	26.8	8.0	8.0	28.8	28.8	90.0	90.0	6.1	6.1	4.6	3.9	3.9	5.5	6.6	6.8	6.6		
						1.0	26.8		8.0		28.8		89.9		6.1			4.0			7.0				
					Middle	10.9	24.4	24.4	7.8	7.8	33.3	33.3	44.9	45.0	3.1	3.1	3.1	3.1	4.7		4.7	4.7		6.8	6.7
						10.9	24.4		7.8		33.3		45.0		3.1		4.7		6.6						
					Bottom	20.7	23.9	23.9	7.8	7.8	33.8	33.8	41.8	42.0	2.9	2.9	2.9	2.9	7.7		7.8	7.8		6.3	6.3
						20.7	23.9		7.8		33.8		42.1		2.9		7.8		6.2						
23-Jul-19	Cloudy	Moderate	08:45	21.5	Surface	1.0	26.4	26.4	8.1	8.1	27.5	27.5	95.6	95.0	6.6	6.6	4.6	0.6	0.6	1.7	3.1	3.2	3.7		
						1.0	26.3		8.1		27.6		94.3		6.5			0.6			3.3				
					Middle	10.8	24.1	24.1	7.8	7.8	33.5	33.5	38.1	38.2	2.6	2.6	2.6	2.6	1.6		1.5	1.6		4.0	3.9
						10.8	24.1		7.8		33.6		38.2		2.7		1.6		4.0						
					Bottom	20.5	24.0	24.0	7.8	7.8	33.7	33.7	40.4	40.5	2.8	2.8	2.8	2.8	3.2		3.2	3.2		3.7	4.0
						20.5	24.0		7.8		33.7		40.6		2.8		3.2		4.2						
25-Jul-19	Sunny	Moderate	11:09	22.0	Surface	1.0	29.8	29.7	8.6	8.6	14.9	14.9	167.3	167.3	11.7	11.7	7.2	5.4	5.5	5.7	3.4	2.9	3.4		
						1.0	29.7		8.6		14.9		167.2		11.7			5.5			2.4				
					Middle	11.0	24.1	24.1	8.0	8.0	32.7	32.7	37.3	37.3	2.6	2.6	2.6	2.6	5.7		5.7	5.7		2.8	3.3
						11.0	24.1		8.0		32.7		37.3		2.6		5.7		3.7						
					Bottom	21.0	24.0	24.0	8.1	8.1	32.8	32.8	40.0	40.1	2.8	2.8	2.8	2.8	6.1		6.1	6.1		3.6	4.1
						21.0	24.0		8.1		32.8		40.1		2.8		6.0		4.5						
3-Aug-19	Rainy	Rough	20:22	22.7	Surface	1.0	26.9	26.9	8.0	8.0	29.4	29.4	82.4	82.4	5.6	5.6	5.4	4.4	4.5	6.9	6.8	6.6	6.0		
						1.0	26.9		8.0		29.4		82.3		5.6			4.5			6.3				
					Middle	11.4	26.9	26.9	8.0	8.0	29.9	29.9	78.0	78.0	5.3	5.3	5.3	5.3	8.3		8.3	8.3		5.7	5.9
						11.4	26.9		8.0		29.9		77.9		5.3		8.3		5.8						
					Bottom	21.7	26.9	26.9	8.0	8.0	30.2	30.2	77.3	77.3	5.2	5.2	5.2	5.2	8.1		8.0	8.1		5.4	5.6
						21.7	26.9		8.0		30.2		77.3		5.2		8.1		5.4						
6-Aug-19	Fine	Moderate	09:03	22.4	Surface	1.0	27.5	27.5	8.0	8.0	27.7	27.7	78.3	78.3	5.3	5.3	5.1	1.6	1.6	8.0	5.1	5.1	4.7		
						1.0	27.5		8.0		27.7		78.3		5.3			1.6			5.0				
					Middle	11.2	27.2	27.2	8.0	8.0	29.7	29.7	74.1	74.1	5.0	5.0	5.0	5.0	3.4		3.4	3.4		4.2	4.5
						11.2	27.2		8.0		29.7		74.1		5.0		3.4		4.7						
					Bottom	21.4	27.0	27.0	8.0	8.0	30.6	30.6	71.1	71.1	4.8	4.8	4.8	4.8	19.0		19.0	19.0		4.3	4.6
						21.4	27.0		8.0		30.6		71.1		4.8		19.0		4.9						
8-Aug-19	Sunny	Moderate	11:58	21.7	Surface	1.0	28.5	28.5	8.3	8.3	29.0	29.0	171.0	170.9	11.3	11.3	7.9	3.0	3.0	6.2	8.0	8.4	7.0		
						1.0	28.5		8.3		29.0		170.8		11.3			3.0			8.8				
					Middle	10.9	27.0	27.0	8.0	8.0	31.1	31.1	68.6	68.5	4.6	4.6	4.6	4.6	4.2		4.1	4.2		7.0	6.6
						10.9	27.0		8.0		31.1		68.4		4.6		4.2		6.1						
					Bottom	20.7	26.8	26.8	8.0	8.0	31.9	31.9	63.3	63.4	4.2	4.2	4.2	4.2	11.4		11.4	11.4		6.0	5.9
						20.7	26.8		8.0		31.9		63.5		4.3		11.5		5.8						
10-Aug-19	Fine	Moderate	15:21	22.4	Surface	1.0	28.8	28.8	8.0	8.0	28.0	28.0	119.3	119.3	7.9	7.9	7.7	1.1	1.1	1.4	3.2	2.8	3.3		
						1.0	28.8		8.0		28.0		119.2		7.9			1.1			2.3				
					Middle	11.2	28.8	28.8	8.0	8.0	28.0	28.0	113.2	113.2	7.5	7.5	7.5	7.5	2.0		2.0	2.0		3.0	3.5
						11.2	28.8		8.0		28.0		113.2		7.5		2.0		4.0						
					Bottom	21.4	28.8	28.8	8.0	8.0	28.1	28.1	110.4	110.4	7.3	7.3	7.3	7.3	1.1		1.1	1.1		4.1	3.7
						21.4	28.8		8.0		28.1		110.3		7.3		1.1		3.2						
13-Aug-19	Cloudy	Moderate	03:22	22.7	Surface	1.0	29.6	29.6	7.9	7.9	24.5	24.5	105.2	104.8	7.0	7.0	5.3	1.1	1.1	3.2	4.9	4.8	3.0		
						1.0	29.6		7.9		24.5		104.3		6.9			1.1			4.6				
					Middle	11.4	27.8	27.8	7.6	7.6	33.2	33.2	54.9	54.7	3.6	3.6	3.6	3.6	2.3		2.3	2.3		2.7	2.5
						11.4	27.8		7.6		33.2		54.5		3.6		2.3		2.2						
					Bottom	21.7	26.4	26.4	7.5	7.5	33.4	33.4	35.5	35.6	2.4	2.4	2.4	2.4	6.2		6.3	6.2		2.0	1.8
						21.7	26.4		7.5		33.4		35.6		2.4		6.3		1.6						
15-Aug-19	Fine	Rough	04:47	22.1	Surface	1.0	29.2	29.2	8.0	8.0	26.3	26.3	119.7	119.7	7.9	7.9	5.6	1.7	1.7	5.1	1.5	1.5	1.5		
						1.0	29.2		8.0		26.3		119.6		7.9			1.7			1.4				
					Middle	11.1	26.5	26.5	7.7	7.7	34.0	34.0	48.4	48.4	3.2	3.2	3.2	3.2	3.2		3.2	3.2		1.9	1.6
						11.1	26.5		7.7		34.0		48.3		3.2		3.2		1.3						
					Bottom	21.1	24.9	24.9	7.6	7.6	34.3	34.3	46.5	46.5	3.2	3.2	3.2	3.2	10.5		10.5	10.5		2.0	1.5
						21.1	24.9		7.6		34.3		46.5		3.2		10.5		<1.0						
17-Aug-19	Rainy	Moderate	06:18	21.4	Surface	1.0	28.3	28.3	8.0	8.0	28.5	28.5	116.6	116.3	7.8	7.7	5.7	2.1	2.1	4.1	4.0	4.8	7.8		
						1.0	28.3		8.0		28.5		116.0		7.7			2.1			5.5				
					Middle	10.7	27.0	27.0	7.8	7.8	33.4	33.4	56.0	55.9	3.7	3.7	3.7	3.7	0.7		0.7	0.7		4.2	4.6
						10.7	26.9		7.8		33.4		55.8		3.7		0.7		5.0						
					Bottom	20.4	25.7	25.7	7.8	7.8	34.2	34.2	48.8	49.4	3.3	3.3	3.3	3.3	9.6		9.6	9.6		14.6	14.1
						20.4	25.7		7.8		34.3		49.9		3.4		9.6		13.5						

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

**Water Quality Monitoring Results at SR8 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)					
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA			
16-Jul-19	Fine	Moderate	12:05	10.4	Surface	1.0	27.6	27.6	8.4	8.4	26.0	26.0	141.9	141.9	9.7	9.7	7.7	1.0	1.0	1.5	9.8	10.0	8.4			
						1.0	27.6		8.4		26.0		141.9		9.7			1.0			10.1					
						5.2	26.5		8.1		28.4		84.6		5.8			1.9			8.2					
					Middle	5.2	26.4	26.5	8.1	8.1	28.5	28.4	84.3	84.5	5.8	5.8	1.9	1.9	1.9	1.9	1.6	1.6	7.7	8.0	7.1	7.2
						9.4	25.3		8.0		31.7		55.0		3.8		1.6		7.1							
						9.4	25.3		8.0		31.8		55.3		3.8		1.6		7.3							
18-Jul-19	Sunny	Moderate	13:32	11.6	Surface	1.0	26.4	26.4	8.1	8.1	28.5	28.5	130.6	130.6	9.0	9.0	8.3	2.2	2.1	3.1	6.0	5.9	6.4			
						1.0	26.4		8.1		28.5		130.6		9.0			2.1			5.7					
						5.8	25.9		8.0		30.3		111.5		7.6			2.5			6.4					
					Middle	5.8	25.9	25.9	8.0	8.0	30.3	30.3	110.9	111.2	7.6	7.6	2.4	2.4	2.4	2.4	4.6	4.6	6.6	6.4	6.6	6.8
						10.6	24.4		7.8		32.7		57.3		4.0		4.6		7.0							
						10.6	24.4		7.8		32.8		57.3		4.0		4.6		7.0							
Bottom	10.6	24.4	24.4	7.8	7.8	32.7	32.7	57.3	57.3	4.0	4.0	4.0	4.0	4.6	4.6	4.6	4.6	6.6	6.4	7.0	6.8					
	10.6	24.4		7.8		32.8		57.3		4.0		4.6		7.0												
20-Jul-19	Cloudy	Moderate	14:18	11.6	Surface	1.0	26.9	26.9	7.8	7.8	22.2	22.2	66.1	66.1	4.7	4.7	4.2	5.4	5.4	9.8	5.3	5.1	6.5			
						1.0	26.9		7.8		22.1		66.1		4.7			5.4			4.9					
						5.8	25.4		7.8		28.4		52.2		3.7			10.2			7.3					
					Middle	5.8	25.4	25.4	7.8	7.8	28.3	28.3	52.3	52.3	3.7	3.7	3.7	3.7	10.1	10.2	13.9	13.8	7.4	7.4	7.4	7.1
						10.6	25.0		7.8		29.9		50.6		3.5		13.9		7.2							
						10.6	25.0		7.8		30.0		50.8		3.5		13.7		6.9							
Bottom	10.6	25.0	25.0	7.8	7.8	29.9	29.9	50.6	50.7	3.5	3.5	3.5	3.5	13.7	13.8	6.9	7.1	7.2	7.1	6.9	7.1					
	10.6	25.0		7.8		30.0		50.8		3.5		13.7		6.9												
23-Jul-19	Cloudy	Moderate	15:45	11.4	Surface	1.0	27.9	27.9	8.0	8.0	28.9	28.9	155.2	155.2	10.3	10.3	8.2	1.3	1.3	2.0	3.3	3.4	3.3			
						1.0	27.9		8.0		28.9		155.2		10.3			1.3			3.4					
						5.7	27.6		7.9		30.9		94.2		6.2			1.5			4.0					
					Middle	5.7	27.6	27.6	7.9	7.9	30.9	30.9	94.1	94.2	6.2	6.2	6.2	6.2	1.5	1.5	3.7	3.9	3.7	3.9	3.7	3.9
						10.4	24.5		7.9		32.9		61.8		4.2		2.9									
						10.4	24.5		7.9		32.9		61.8		4.2		2.9									
Bottom	10.4	24.5	24.5	7.9	7.9	32.9	32.9	61.8	61.8	4.2	4.2	4.2	4.2	3.2	3.2	2.9	2.8	2.7	2.8	2.7	2.8					
	10.4	24.5		7.9		32.9		61.8		4.2		2.7														
25-Jul-19	Sunny	Moderate	17:24	11.9	Surface	1.0	29.8	29.8	8.4	8.4	23.3	23.3	195.5	195.2	13.0	13.0	11.6	4.9	4.9	8.8	4.9	4.7	4.8			
						1.0	29.8		8.4		23.3		194.8		13.0			4.9			4.4					
						6.0	28.1		8.3		26.3		150.6		10.2			7.0			4.5					
					Middle	6.0	28.1	28.1	8.3	8.3	26.3	26.3	149.4	150.0	10.1	10.1	10.1	10.1	7.1	7.1	5.3	4.9	5.3	4.9	5.3	4.9
						10.9	24.9		7.9		31.1		48.6		3.4		4.2									
						10.9	24.8		7.9		31.1		48.4		3.4		4.2									
Bottom	10.9	24.9	24.8	7.9	7.9	31.1	31.1	48.6	48.5	3.4	3.4	3.4	3.4	14.2	14.5	4.2	4.7	4.2	4.7	4.2	4.7					
	10.9	24.8		7.9		31.1		48.4		3.4		14.8		5.2												
3-Aug-19	Fine	Moderate	12:46	10.5	Surface	1.0	26.5	26.5	8.0	8.0	28.1	28.1	78.0	78.0	5.4	5.4	5.3	4.0	4.0	5.6	8.7	8.5	9.1			
						1.0	26.5		8.0		28.1		78.0		5.4			4.1			8.3					
						5.3	26.6		8.0		28.6		76.5		5.2			5.6			9.1					
					Middle	5.3	26.6	26.6	8.0	8.0	28.6	28.6	76.5	76.5	5.2	5.2	5.2	5.2	5.6	5.6	7.1	7.2	10.1	9.6	10.1	9.6
						9.5	26.7		8.0		29.1		75.8		5.2		7.1		10.0							
						9.5	26.7		8.0		29.1		75.9		5.2		7.3		8.4							
Bottom	9.5	26.7	26.7	8.0	8.0	29.1	29.1	75.9	75.9	5.2	5.2	5.2	5.2	7.3	7.2	7.3	7.2	8.4	9.2	8.4	9.2					
	9.5	26.7		8.0		29.1		75.9		5.2		7.3		8.4												
6-Aug-19	Fine	Moderate	16:28	11.5	Surface	1.0	27.5	27.5	8.0	8.0	28.4	28.4	78.3	78.3	5.3	5.3	5.2	2.5	2.5	3.8	5.1	5.3	6.3			
						1.0	27.5		8.0		28.4		78.3		5.3			2.5			5.4					
						5.8	27.3		8.1		29.2		76.0		5.1			4.2			6.6					
					Middle	5.8	27.3	27.3	8.1	8.1	29.2	29.2	76.0	76.0	5.1	5.1	5.1	5.1	4.2	4.2	4.2	4.2	6.7	6.7	6.7	6.7
						10.5	27.2		8.1		29.6		77.5		5.2		4.8		7.1							
						10.5	27.2		8.1		29.6		77.5		5.2		4.8		6.6							
Bottom	10.5	27.2	27.2	8.1	8.1	29.6	29.6	77.5	77.5	5.2	5.2	5.2	5.2	4.8	4.8	4.8	4.8	6.6	6.9	6.6	6.9					
	10.5	27.2		8.1		29.6		77.5		5.2		4.8		6.6												
8-Aug-19	Fine	Moderate	05:00	12.4	Surface	1.0	27.7	27.7	8.0	8.0	28.3	28.2	87.1	87.1	5.9	5.9	5.9	4.1	4.1	4.2	3.1	3.6	3.4			
						1.0	27.7		8.0		28.2		87.1		5.9			4.1			4.0					
						6.2	27.8		8.0		28.9		88.8		5.9			4.2			3.0					
					Middle	6.2	27.8	27.8	8.0	8.0	28.9	28.9	88.8	88.8	5.9	5.9	5.9	5.9	4.2	4.2	4.2	4.2	3.8	3.4	3.8	3.4
						11.4	27.7		8.0		29.0		85.5		5.7		4.2		2.9							
						11.4	27.7		8.0		29.0		85.7		5.7		4.3		3.7							
Bottom	11.4	27.7	27.7	8.0	8.0	29.0	29.0	85.7	85.6	5.7	5.7	5.7	5.7	4.3	4.2	4.3	4.2	3.7	3.3	3.7	3.3					
	11.4	27.7		8.0		29.0		85.7		5.7		4.3		3.7												
10-Aug-19	Fine	Moderate	07:47	12.3	Surface	1.0	28.1	28.1	8.0	8.0	28.4	28.4	90.9	90.9	6.1	6.1	5.8	3.6	3.6	4.3	5.3	4.8	4.2			
						1.0	28.1		8.0		28.4		90.9		6.1			3.6			4.3					
						6.2	27.8		8.0		29.5		84.0		5.6			4.7			3.4					
					Middle	6.2	27.8	27.8	8.0	8.0	29.5	29.5	84.0	84.0	5.6	5.6	5.6	5.6	4.7	4.7	4.7	4.7	4.3	3.9	4.3	3.9
						11.3	27.6		8.0		30.2		82.4		5.5		4.7		3.5							
						11.3	27.6		8.0		30.2		82.5		5.5		4.6		4.2							
Bottom	11.3	27.6	27.6	8.0	8.0	30.2	30.2	82.4	82.5	5.5	5.5	5.5	5.5	4.7	4.7	4.7	4.7	4.2	3.9	4.2	3.9					
	11.3	27.6		8.0		30.2		82.5		5.5		4.6		4.2												
13-Aug-19	Fine	Moderate	11:11	10.8	Surface	1.0	29.8	29.8	7.9	7.9	25.1	25.1	121.4	121.3	8.0	8.0	5.9	1.7	1.7	2.5	4.2	4.2	3.3			
						1.0	29.8		7.9		25.1		121.2		8.0			1.								

**Water Quality Monitoring Results at SR8 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)				
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA		
16-Jul-19	Cloudy	Calm	03:42	11.2	Surface	1.0	27.2	27.2	8.3	8.3	23.9	23.9	76.8	76.8	5.3	5.3	4.3	2.8	2.8	3.2	7.4	7.3	6.2		
						1.0	27.2		8.3		23.9		76.8		5.3			2.8			7.2				
					Middle	5.6	24.5	24.5	8.0	8.0	31.7	31.7	48.0	48.0	3.3	3.3		1.5			1.5			1.5	5.9
						5.6	24.5		8.0		31.7		48.0		3.3			1.5						5.6	
					Bottom	10.2	23.9	23.9	8.0	8.0	33.3	33.3	43.4	43.5	3.0	3.0		3.0			5.3			5.3	5.7
						10.2	23.9		8.0		33.3		43.6		3.0			5.3			5.5				
18-Jul-19	Fine	Moderate	05:18	11.1	Surface	1.0	26.0	26.0	7.9	7.9	28.5	28.5	89.3	89.2	6.2	4.9	1.6	1.6	2.2	5.0	5.2	6.4			
						1.0	26.0		7.9		28.5		89.0		6.2		1.6			5.3					
					Middle	5.6	24.3	24.3	7.8	7.8	33.0	33.0	53.1	53.0	3.7		3.7			3.7			2.3		
						5.6	24.3		7.8		33.0		52.9		3.7					2.3			6.2		
					Bottom	10.1	23.8	23.8	7.7	7.7	33.9	33.9	48.4	48.5	3.4		3.4			3.4			2.8	2.8	8.0
						10.1	23.8		7.7		33.9		48.6		3.4					2.8			7.7		
20-Jul-19	Cloudy	Moderate	06:23	11.4	Surface	1.0	25.6	25.6	7.9	7.9	29.2	29.2	60.2	60.2	4.2	4.0	4.4	4.4	6.4	7.2	7.3	8.7			
						1.0	25.6		7.9		29.2		60.2		4.2		4.4			7.3					
					Middle	5.7	25.1	25.1	7.9	7.9	31.3	31.3	54.7	54.7	3.8		3.8			3.8			5.0		
						5.7	25.1		7.9		31.3		54.7		3.8					5.0			9.0		
					Bottom	10.4	23.7	23.7	7.8	7.8	33.7	33.7	43.0	43.1	3.0		3.0			3.0			9.7	9.7	10.1
						10.4	23.7		7.8		33.7		43.1		3.0					9.7			9.7		
23-Jul-19	Cloudy	Moderate	08:09	10.5	Surface	1.0	25.5	25.5	7.8	7.8	28.6	28.6	63.9	63.9	4.5	4.4	0.2	0.2	1.7	1.7	1.7	2.2			
						1.0	25.5		7.9		28.7		63.9		4.5		0.2			1.6					
					Middle	5.3	25.5	25.5	7.8	7.8	29.8	29.8	62.2	62.2	4.3		4.3			4.3			0.6		
						5.3	25.5		7.8		29.8		62.1		4.3					0.6			2.3		
					Bottom	9.5	24.4	24.4	7.8	7.8	32.7	32.7	49.4	49.6	3.4		3.4			3.4			4.2	4.3	2.9
						9.5	24.4		7.8		32.7		49.8		3.5					4.4			2.6		
25-Jul-19	Fine	Moderate	10:23	11.3	Surface	1.0	28.9	28.9	8.2	8.2	23.8	23.8	157.9	157.8	10.7	8.8	4.8	4.8	5.6	4.1	3.9	4.7			
						1.0	28.9		8.2		23.8		157.7		10.7		4.8			3.6					
					Middle	5.7	27.1	27.1	8.0	8.0	27.2	27.2	101.9	102.0	7.0		7.0			7.0			6.2		
						5.7	27.1		8.0		27.2		102.1		7.0					6.2			5.2		
					Bottom	10.3	24.5	24.5	7.7	7.7	31.9	31.9	51.4	51.4	3.6		3.6			3.6			5.7	5.7	5.5
						10.3	24.5		7.7		31.9		51.4		3.6					5.7			5.1		
3-Aug-19	Cloudy	Moderate	20:45	12.2	Surface	1.0	26.7	26.7	7.9	7.9	26.7	26.7	74.7	74.8	5.2	5.1	2.9	2.9	6.1	4.1	4.8	5.1			
						1.0	26.7		7.9		26.7		74.8		5.2		3.0			5.5					
					Middle	6.1	26.7	26.7	8.0	8.0	29.0	29.0	73.5	73.5	5.0		5.0			5.0			4.7		
						6.1	26.7		8.0		29.0		73.5		5.0					4.7			5.4		
					Bottom	11.2	26.7	26.7	8.0	8.0	29.4	29.4	71.3	71.3	4.8		4.8			4.8			10.3	10.5	6.0
						11.2	26.7		8.0		29.4		71.3		4.9					10.8			5.6		
6-Aug-19	Fine	Moderate	08:54	12.4	Surface	1.0	27.4	27.4	7.9	7.9	27.0	27.0	76.1	76.1	5.2	5.1	2.4	2.4	4.6	7.5	7.5	7.1			
						1.0	27.4		7.9		27.0		76.1		5.2		2.4			7.5					
					Middle	6.2	27.4	27.4	7.9	7.9	27.4	27.4	75.0	75.0	5.1		5.1			5.1			8.1		
						6.2	27.4		7.9		27.4		75.0		5.1					8.1			6.0		
					Bottom	11.4	27.3	27.3	8.0	8.0	28.8	28.7	74.9	76.0	5.1		5.1			5.1			3.3	3.3	8.0
						11.4	27.3		8.0		28.6		77.0		5.2					3.3			7.0		
8-Aug-19	Sunny	Moderate	12:44	11.5	Surface	1.0	29.1	29.1	8.2	8.2	28.6	28.6	151.5	151.4	9.9	7.9	3.6	3.6	6.7	4.0	4.5	4.3			
						1.0	29.0		8.2		28.6		151.2		9.9		3.6			4.9					
					Middle	5.8	27.6	27.6	8.0	8.0	29.8	29.8	88.8	88.8	5.9		5.9			5.9			3.1		
						5.8	27.6		8.0		29.8		88.8		5.9					3.1			4.1		
					Bottom	10.5	27.4	27.4	8.0	8.0	30.3	30.3	77.6	77.6	5.2		5.2			5.2			13.4	13.4	3.4
						10.5	27.4		8.0		30.3		77.5		5.2					13.4			4.4		
10-Aug-19	Fine	Moderate	16:10	12.4	Surface	1.0	28.1	28.1	7.9	7.9	28.9	28.9	90.4	90.4	6.0	5.8	1.5	1.5	2.2	3.6	3.1	3.1			
						1.0	28.1		7.9		28.9		90.4		6.0		1.5			2.6					
					Middle	6.2	27.8	27.8	7.9	7.9	30.1	30.1	83.4	83.4	5.5		5.5			5.5			1.7		
						6.2	27.8		7.9		30.1		83.4		5.5					1.7			3.5		
					Bottom	11.4	27.6	27.6	7.9	7.9	30.8	30.8	81.6	81.7	5.4		5.4			5.4			3.4	3.4	2.7
						11.4	27.6		7.9		30.8		81.7		5.4					3.4			3.7		
13-Aug-19	Cloudy	Moderate	02:46	12.3	Surface	1.0	29.0	29.1	7.8	7.8	26.3	26.2	93.2	92.6	6.2	5.5	1.3	1.3	3.1	1.8	1.7	1.6			
						1.0	29.1		7.8		26.2		91.9		6.1		1.3			1.6					
					Middle	6.2	28.3	28.3	7.7	7.7	28.6	28.6	73.2	73.1	4.9		4.9			4.9			2.0		
						6.2	28.3		7.7		28.6		72.9		4.8					2.0			1.6		
					Bottom	11.3	25.7	25.7	7.5	7.5	33.6	33.6	61.1	61.8	4.1		4.2			4.2			5.7	5.9	1.4
						11.3	25.7		7.5		33.6		62.4		4.2					6.1			1.1		
15-Aug-19	Cloudy	Moderate	04:05	11.8	Surface	1.0	28.6	28.6	7.8	7.8	27.2	27.2	84.8	84.8	5.7	4.9	2.0	2.0	3.4	2.8	3.0	2.9			
						1.0	28.6		7.8		27.2		84.8		5.7		2.0			3.2					
					Middle	5.9	27.8	27.8	7.6	7.6	30.6	30.6	64.0	64.0	4.2		4.2			4.2			2.0		
						5.9	27.8		7.6		30.6		64.0		4.2					2.0			3.4		
					Bottom	10.8	25.3	25.3	7.5	7.5	34.0	34.0	56.5	56.7	3.8		3.8			3.8			6.2	6.2	3.2
						10.8	25.3		7.5		34.0		56.9		3.9					6.1			2.4		
17-Aug-19	Cloudy	Moderate	05:42	11.2	Surface	1.0	27.8	27.8	7.9	7.9	29.3	29.3	98.6	98.6	6.6	6.1	2.0	2.0	4.1	3.2	3.2	5.7			
						1.0	27.8		7.9		29.3		98.6		6.6		1.9			3.2					
					Middle	5.6	27.7	27.7	7.8	7.8	29.9	29.9	84.7	84.7	5.6		5.6			5.6			1.8		
						5.6	27.7		7.8		29.9		84.6		5.6					1.8			4.4		
					Bottom	10.2	27.1	27.1	7.8	7.8	32.3	32.3	58.5	58.7	3.9		3.9			3.9			8.5	8.4	9.3
						10.2	27.1		7.8		32.3		58.8		3.9					8.4			9.9		

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Water Quality Monitoring Results at SR9 during Mid-ebb Tide																							
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	11:50	10.8	Surface	1.0	27.8	27.8	8.3	8.3	24.6	24.6	133.6	133.6	9.1	9.1	6.6	1.3	1.3	1.8	4.9	4.9	5.6
						1.0	27.8		8.3		24.6		133.6		9.1			1.3			4.9		
					Middle	5.4	26.0	26.0	8.0	8.0	29.3	29.2	58.8	60.8	4.1	4.2	6.6	1.9	1.9	1.8	5.8	6.0	
						5.4	26.0		8.0		29.1		62.7		4.3			1.9			6.1		
					Bottom	9.8	25.3	25.3	7.9	7.9	31.3	31.2	42.0	42.1	2.9	2.9	2.9	2.2	2.2	1.8	5.7	5.9	
						9.8	25.3		7.9		31.2		42.2		2.9			2.2			6.0		
18-Jul-19	Sunny	Moderate	13:15	11.0	Surface	1.0	26.9	26.9	8.1	8.1	29.8	29.8	140.5	140.5	9.5	9.5	7.9	1.9	1.9	2.5	7.3	7.4	8.3
						1.0	26.9		8.1		29.8		140.4		9.5			1.9			7.4		
					Middle	5.5	25.6	25.6	7.9	7.9	30.9	30.9	92.2	92.0	6.3	6.3	7.9	2.0	2.0	2.5	8.2	8.2	
						5.5	25.6		7.9		30.9		91.8		6.3			2.0			8.1		
					Bottom	10.0	24.4	24.4	7.8	7.8	33.1	33.1	51.2	51.3	3.5	3.5	3.5	3.8	3.8	2.5	9.3	9.4	
						10.0	24.4		7.8		33.1		51.3		3.6			3.8			9.5		
20-Jul-19	Cloudy	Moderate	14:01	11.0	Surface	1.0	26.0	26.0	7.9	7.9	28.9	28.9	71.7	71.7	5.0	4.9	4.8	4.5	4.5	4.6	6.3	6.2	6.3
						1.0	26.0		7.9		28.9		71.6		4.9			4.5			6.1		
					Middle	5.5	25.6	25.6	7.9	7.9	29.8	29.8	66.0	66.0	4.6	4.6	4.8	4.6	4.6	4.6	6.4	6.4	
						5.5	25.6		7.9		29.8		66.0		4.6			4.7			6.3		
					Bottom	10.0	25.4	25.4	7.9	7.9	30.3	30.3	63.1	63.2	4.4	4.4	4.4	4.7	4.7	4.6	6.0	6.2	
						10.0	25.4		7.9		30.3		63.2		4.4			4.7			6.4		
23-Jul-19	Cloudy	Moderate	15:32	10.8	Surface	1.0	27.9	27.9	8.0	8.0	27.4	27.4	159.2	159.2	10.6	10.6	7.7	1.7	1.7	1.8	4.2	4.0	4.5
						1.0	27.9		8.0		27.3		159.2		10.6			1.7			3.8		
					Middle	5.4	27.3	27.3	8.0	8.0	30.1	30.1	72.9	73.4	4.8	4.9	7.7	1.7	1.7	1.8	4.8	5.0	
						5.4	27.3		8.0		30.1		73.9		4.9			1.7			5.2		
					Bottom	9.8	24.3	24.3	7.9	7.9	33.4	33.4	53.0	53.0	3.6	3.6	3.6	2.1	2.1	1.8	4.3	4.4	
						9.8	24.3		7.9		33.4		53.0		3.6			2.1			4.4		
25-Jul-19	Sunny	Moderate	17:11	11.3	Surface	1.0	29.2	29.2	8.4	8.4	25.7	25.7	183.0	182.6	12.2	12.1	9.2	4.4	4.4	7.4	5.0	5.5	5.4
						1.0	29.2		8.4		25.7		182.1		12.1			4.4			6.0		
					Middle	5.7	26.4	26.4	8.0	8.0	28.8	28.7	92.2	92.1	6.3	6.3	9.2	5.9	5.9	7.4	4.8	5.3	
						5.7	26.4		8.0		28.7		92.0		6.3			5.9			5.7		
					Bottom	10.3	25.0	25.0	7.9	7.9	31.1	31.1	59.4	59.5	4.1	4.1	4.1	11.7	11.8	7.4	5.8	5.4	
						10.3	25.0		7.9		31.1		59.6		4.1			11.8			5.0		
3-Aug-19	Fine	Moderate	13:00	10.1	Surface	1.0	26.6	26.6	7.9	7.9	25.3	25.3	79.8	79.8	5.6	5.6	5.3	2.2	2.2	3.6	6.9	6.2	5.8
						1.0	26.6		7.9		25.3		79.8		5.6			2.2			5.5		
					Middle	5.1	26.6	26.6	8.0	8.0	28.5	28.5	74.8	74.8	5.1	5.1	5.3	4.0	4.0	3.6	6.5	5.8	
						5.1	26.6		8.0		28.5		74.8		5.1			4.0			5.0		
					Bottom	9.1	26.6	26.6	8.0	8.0	28.9	28.9	74.0	74.0	5.1	5.1	5.1	4.6	4.6	3.6	5.9	5.4	
						9.1	26.6		8.0		28.9		74.0		5.1			4.6			4.8		
6-Aug-19	Fine	Moderate	16:12	10.8	Surface	1.0	27.6	27.6	8.1	8.1	28.0	28.0	78.3	78.3	5.3	5.3	5.3	1.8	1.8	2.3	5.6	5.2	5.0
						1.0	27.6		8.1		28.0		78.3		5.3			1.8			4.8		
					Middle	5.4	27.4	27.4	8.1	8.1	28.8	28.8	77.7	77.7	5.2	5.2	5.3	2.7	2.7	2.3	5.7	5.4	
						5.4	27.4		8.1		28.8		77.7		5.2			2.7			5.0		
					Bottom	9.8	27.3	27.3	8.1	8.1	29.0	29.0	82.3	82.3	5.5	5.5	5.5	2.5	2.5	2.3	4.8	4.6	
						9.8	27.3		8.1		29.0		82.3		5.5			2.5			4.3		
8-Aug-19	Fine	Moderate	05:14	10.8	Surface	1.0	27.6	27.6	8.0	8.0	29.6	29.6	86.5	86.5	5.8	5.8	5.6	4.3	4.3	5.3	4.4	4.3	3.7
						1.0	27.6		8.0		29.6		86.5		5.8			4.3			4.2		
					Middle	5.4	27.5	27.5	8.0	8.0	30.2	30.2	81.9	81.9	5.5	5.5	5.6	4.6	4.6	5.3	3.7	3.6	
						5.4	27.5		8.0		30.2		81.8		5.5			4.6			3.4		
					Bottom	9.8	27.3	27.3	8.0	8.0	30.5	30.5	78.5	78.6	5.2	5.2	5.2	7.0	6.9	5.3	3.2	3.3	
						9.8	27.3		8.0		30.5		78.6		5.3			6.9			3.4		
10-Aug-19	Fine	Moderate	08:00	11.2	Surface	1.0	28.2	28.2	8.0	8.0	28.9	28.9	95.5	95.5	6.3	6.3	5.7	3.7	3.7	4.2	5.0	4.5	4.1
						1.0	28.2		8.0		28.9		95.4		6.3			3.7			4.0		
					Middle	5.6	27.5	27.5	8.0	8.0	30.5	30.5	74.9	74.9	5.0	5.0	5.7	4.9	4.9	4.2	4.7	4.3	
						5.6	27.5		8.0		30.5		74.9		5.0			4.9			3.8		
					Bottom	10.2	27.4	27.4	8.0	8.0	30.9	30.9	78.9	79.0	5.3	5.3	5.3	4.1	4.1	4.2	3.9	3.5	
						10.2	27.4		8.0		30.9		79.0		5.3			4.1			3.0		
13-Aug-19	Fine	Moderate	10:54	10.5	Surface	1.0	29.7	29.7	8.0	8.0	27.0	27.0	130.1	130.0	8.5	8.5	6.1	0.9	0.9	2.2	2.4	2.3	3.0
						1.0	29.7		8.0		27.0		129.9		8.5			0.9			2.1		
					Middle	5.3	27.7	27.7	7.6	7.6	30.7	30.7	56.5	56.3	3.8	3.7	6.1	2.1	2.1	2.2	2.7	2.9	
						5.3	27.7		7.6		30.8		56.0		3.7			2.1			3.0		
					Bottom	9.5	26.6	26.6	7.4	7.4	32.8	32.8	42.4	42.5	2.8	2.8	2.8	3.5	3.5	2.2	3.2	3.8	
						9.5	26.6		7.4		32.8		42.6		2.8			3.5			4.4		
15-Aug-19	Fine	Moderate	12:10	11.0	Surface	1.0	29.3	29.3	7.9	7.9	28.3	28.3	129.6	129.5	8.5	8.5	6.6	1.2	1.3	3.3	3.7	3.4	3.6
						1.0	29.3		7.9		28.3		129.3		8.5			1.3			3.1		
					Middle	5.5	27.9	27.9	7.7	7.7	30.6	30.6	71.2	71.1	4.7	4.7	6.6	2.0	2.0	3.3	3.5	3.7	
						5.5	27.9		7.7		30.6		71.0		4.7			2.0			3.8		
					Bottom	10.0	26.0	26.0	7.5	7.5	33.6	33.6	51.1	51.1	3.4	3.4	3.4	6.5	6.5	3.3	3.9	3.7	
						10.0	26.0		7.5		33.6		51.1		3.4			6.5			3.4		
17-Aug-19	Fine	Moderate	13:04	11.3	Surface	1.0	27.6	27.6	7.8	7.8	29.2	29.2	70.4	70.3	4.7	4.7	4.5	1.6	1.6	3.3	6.0	6.0	6.5
						1.0	27.6		7.8		29.2		70.1		4.7			1.6			6.0		
					Middle	5.7	27.5	27.5	7.8	7.8	29.5	29.5	65.2	64.8	4.4	4.3	4.5	3.6	3.7	3.3	6.0	6.5	
						5.7	27.5		7.8		29.6		64.4		4.3			3.7			7.0		
					Bottom	10.3	25.6	25.6	7.8	7.8	33.5	33.5	54.8	55.0	3.7	3.7	3.7	4.6	4.5	3.3	6.3	7.0	
						10.3	25.6		7.8		33.5		55.2		3.7			4.4			7.6		

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at SR9 during Mid-flood Tide

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA	
16-Jul-19	Cloudy	Calm	03:54	11.0	Surface	1.0	26.6	26.6	8.2	8.2	26.3	26.2	82.3	82.3	5.7	5.7	4.5	1.2	1.2	1.4	5.9	6.0	7.3	
						1.0	26.6		8.2		26.2		82.3		5.7			1.2						
					Middle	5.5	24.9	24.9	8.0	8.0	31.7	31.7	48.7	48.6	3.3	3.3	3.0	1.2	1.2	3.0	1.8	1.8		8.2
						5.5	24.9		8.0		31.7		48.5		3.3			1.2						
					Bottom	10.0	24.0	24.1	8.0	8.0	33.1	33.1	43.1	43.3	3.0	3.0	3.0	1.8	1.8	3.0	8.0			
						10.0	24.1		8.0		33.1		43.5		3.0			1.8						
18-Jul-19	Fine	Moderate	05:28	11.2	Surface	1.0	26.5	26.5	8.1	8.1	28.4	28.4	113.9	113.8	7.8	7.8	5.4	1.1	1.1	1.9	6.6	6.8	8.7	
						1.0	26.5		8.1		28.4		113.6		7.8			1.1						
					Middle	5.6	24.4	24.4	7.7	7.7	32.9	33.0	43.6	43.6	3.0	3.0	3.2	2.6	2.6	3.2	2.2	2.2		10.9
						5.6	24.4		7.7		33.0		43.6		3.0			2.6						
					Bottom	10.2	23.8	23.8	7.7	7.7	34.1	34.1	46.6	46.7	3.2	3.2	3.2	2.2	2.2	3.2	11.2			
						10.2	23.8		7.7		34.1		46.8		3.3			2.2						
20-Jul-19	Cloudy	Moderate	06:35	11.5	Surface	1.0	25.7	25.7	7.9	7.9	29.8	29.8	70.5	70.5	4.9	4.9	4.7	4.2	4.2	7.4	5.2	5.3	5.6	
						1.0	25.7		7.9		29.8		70.5		4.9			4.2						
					Middle	5.8	25.7	25.7	7.9	7.9	30.2	30.2	66.5	66.4	4.6	4.6	3.0	4.3	4.2	3.0	5.6			
						5.8	25.7		7.9		30.2		66.2		4.6			4.2						
					Bottom	10.5	24.7	24.7	7.8	7.8	32.5	32.5	43.4	43.5	3.0	3.0	3.0	13.7	13.7	3.0	5.7			
						10.5	24.7		7.8		32.5		43.5		3.0			13.8						
23-Jul-19	Cloudy	Moderate	08:23	10.0	Surface	1.0	26.1	26.1	8.0	8.0	30.2	30.3	93.4	93.3	6.4	6.4	5.5	0.3	0.3	0.4	2.1	2.3	2.7	
						1.0	26.0		8.0		30.3		93.1		6.4			0.3						
					Middle	5.0	25.3	25.3	7.9	7.9	31.6	31.5	68.3	68.1	4.7	4.7	3.8	0.5	0.5	3.8	2.8			
						5.0	25.2		7.9		31.6		67.9		4.7			0.5						
					Bottom	9.0	24.6	24.6	7.9	7.9	32.7	32.7	55.5	55.5	3.8	3.8	3.8	0.5	0.5	3.8	2.8			
						9.0	24.5		7.9		32.7		55.5		3.8			0.4						
25-Jul-19	Fine	Moderate	10:37	11.5	Surface	1.0	28.3	28.3	8.4	8.4	25.8	25.8	158.4	158.3	10.7	10.7	10.4	4.1	4.1	4.3	4.2	4.4	5.0	
						1.0	28.3		8.4		25.8		158.2		10.7			4.1						
					Middle	5.8	27.8	27.8	8.3	8.3	26.8	26.8	150.8	150.5	10.2	10.2	5.6	4.3	4.3	5.6	5.2			
						5.8	27.8		8.3		26.8		150.2		10.2			4.3						
					Bottom	10.5	25.7	25.7	8.0	8.0	29.8	29.8	81.5	81.5	5.6	5.6	5.6	4.4	4.4	5.6	5.1			
						10.5	25.7		8.0		29.8		81.5		5.6			4.4						
3-Aug-19	Cloudy	Moderate	20:32	11.3	Surface	1.0	26.6	26.6	7.9	7.9	27.4	27.4	72.0	72.0	5.0	5.0	5.0	5.8	5.8	8.4	10.1	10.9	12.2	
						1.0	26.6		7.9		27.4		72.0		5.0			5.8						
					Middle	5.7	26.7	26.7	7.9	7.9	28.1	28.1	74.9	74.9	5.1	5.1	5.0	8.4	8.4	5.0	11.4			
						5.7	26.7		7.9		28.1		74.9		5.1			8.4						
					Bottom	10.3	26.7	26.7	8.0	8.0	28.6	28.6	73.8	73.8	5.0	5.0	5.0	11.1	10.9	5.0	12.7			
						10.3	26.7		8.0		28.6		73.8		5.0			10.8						
6-Aug-19	Fine	Moderate	09:05	10.8	Surface	1.0	27.5	27.5	7.8	7.8	27.9	27.9	71.7	71.7	4.9	4.9	5.0	1.2	1.2	2.9	4.9	4.8	4.3	
						1.0	27.5		7.8		27.9		71.7		4.9			1.2						
					Middle	5.4	27.3	27.3	7.9	7.9	29.0	29.0	75.4	75.4	5.1	5.1	5.2	1.8	1.8	5.2	4.3			
						5.4	27.3		7.9		29.0		75.4		5.1			1.8						
					Bottom	9.8	27.3	27.3	7.9	7.9	29.2	29.2	76.4	76.4	5.2	5.2	5.2	5.8	5.8	5.2	3.7			
						9.8	27.3		7.9		29.2		76.4		5.2			5.8						
8-Aug-19	Sunny	Moderate	12:34	10.8	Surface	1.0	28.0	28.0	8.1	8.1	28.4	28.4	111.6	111.5	7.5	7.5	6.5	4.2	4.2	5.7	5.4	5.8	4.9	
						1.0	28.0		8.1		28.4		111.3		7.4			4.2						
					Middle	5.4	27.6	27.6	8.0	8.0	29.4	29.5	81.9	81.7	5.5	5.5	5.2	5.8	5.7	5.2	6.2			
						5.4	27.6		8.0		29.5		81.5		5.5			5.8						
					Bottom	9.8	27.4	27.4	8.0	8.0	30.2	30.2	78.1	78.1	5.2	5.2	5.2	7.1	7.1	5.2	3.6			
						9.8	27.4		8.0		30.2		78.1		5.2			7.1						
10-Aug-19	Fine	Moderate	15:57	11.1	Surface	1.0	28.4	28.4	7.9	7.9	27.7	27.7	99.2	99.2	6.6	6.6	6.5	1.3	1.3	3.2	3.5	3.3	3.4	
						1.0	28.4		7.9		27.7		99.2		6.6			1.3						
					Middle	5.6	28.4	28.4	8.0	8.0	28.5	28.5	96.9	96.8	6.4	6.4	3.5	1.5	1.5	3.5	3.4			
						5.6	28.4		8.0		28.5		96.7		6.4			1.5						
					Bottom	10.1	27.0	27.0	7.8	7.8	31.7	31.7	52.0	52.1	3.5	3.5	3.5	6.6	6.7	3.5	3.4			
						10.1	27.0		7.8		31.7		52.1		3.5			6.7						
13-Aug-19	Cloudy	Moderate	03:00	9.8	Surface	1.0	29.0	29.0	7.8	7.8	27.4	27.4	89.8	89.7	5.9	5.9	4.9	0.6	0.6	1.1	1.4	1.4	1.8	
						1.0	29.0		7.8		27.4		89.5		5.9			0.6						
					Middle	4.9	27.5	27.5	7.6	7.6	31.2	31.2	58.7	58.7	3.9	3.9	4.3	1.1	1.1	4.3	1.6			
						4.9	27.5		7.6		31.2		58.7		3.9			1.1						
					Bottom	8.8	26.9	26.9	7.6	7.6	32.3	32.3	63.9	64.2	4.3	4.3	4.3	1.7	1.7	4.3	2.3			
						8.8	26.9		7.6		32.3		64.5		4.3			1.7						
15-Aug-19	Fine	Moderate	04:17	11.1	Surface	1.0	28.7	28.7	7.8	7.8	27.9	27.9	94.6	94.5	6.3	6.3	4.9	1.2	1.2	3.4	3.4	3.1	3.0	
						1.0	28.7		7.8		27.9		94.4		6.3			1.2						
					Middle	5.6	27.6	27.6	7.6	7.6	31.0	31.0	52.9	52.9	3.5	3.5	3.2	3.5	3.5	3.2	2.4			
						5.6	27.6		7.6		31.0		52.8		3.5			3.5						
					Bottom	10.1	25.7	25.7	7.5	7.5	33.8	33.8	47.3	47.4	3.2	3.2	3.2	5.4	5.4	3.2	2.4			
						10.1	25.7		7.5		33.8		47.4		3.2			5.4						
17-Aug-19	Cloudy	Moderate	05:53	10.6	Surface	1.0	27.9	27.9	7.9	7.9	29.0	29.0	97.0	97.0	6.5	6.5	6.0	2.0	2.0	6.4	6.3	6.6	9.3	
						1.0	27.9		7.9		29.0		97.0		6.5			2.0						
					Middle	5.3	27.2	27.2	7.8	7.8	30.3	30.4	83.2	83.1	5.6	5.6	4.2	6.1	6.1	4.2	4.3			
						5.3	27.1		7.8		30.5		82.9		5.6			6.1						
					Bottom	9.6	26.6	26.7	7.8	7.8	31.8	31.7	62.3	62.7	4.2	4.2	4.2	11.0	11.2	4.2	16.1			
						9.6	26.7		7.8		31.7		63.1		4.2			11.3						

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

**Water Quality Monitoring Results at SR10 during Mid-ebb Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	10:24	6.1	Surface	1.0	29.1	29.1	8.6	8.6	21.5	21.5	179.8	179.6	12.1	12.1	8.8	1.2	1.2	1.1	5.4	5.3	5.5
						1.0	29.1		8.6		21.5		179.4		12.1			1.2			5.1		
					Middle	3.1	27.4	27.4	8.1	8.1	24.1	24.1	78.1	78.0	5.4	5.4	1.0	1.0	1.0	1.0	5.3	5.3	
						3.1	27.4		8.1		24.1		77.9		5.4		1.0		5.2				
					Bottom	5.1	26.3	26.3	7.8	7.8	28.6	28.6	30.6	28.7	2.1	2.0	2.0	2.0	1.2	1.2	5.8	6.0	
						5.1	26.3		7.8		28.7		1.8		1.2		6.1						
18-Jul-19	Sunny	Moderate	11:45	6.6	Surface	1.0	29.3	29.4	8.3	8.3	25.4	25.4	178.8	178.8	11.9	11.9	9.1	1.8	1.8	2.5	6.5	6.7	7.3
						1.0	29.4		8.3		25.4		178.7		11.9			1.8			6.8		
					Middle	3.3	26.6	26.6	7.9	7.9	27.6	27.6	93.0	92.6	6.4	6.4	2.2	2.2	2.2	2.2	7.3	7.3	
						3.3	26.6		7.9		27.6		92.2		6.3		2.2		7.2				
					Bottom	5.6	25.2	25.2	7.6	7.6	31.6	31.6	27.1	27.1	1.9	1.9	1.9	1.9	3.6	3.4	8.1	8.0	
						5.6	25.2		7.6		31.6		27.1		1.9		3.3		8.1				
20-Jul-19	Rainy	Moderate	12:48	6.6	Surface	1.0	27.7	27.7	8.1	8.1	27.1	27.1	106.7	106.6	7.2	7.2	6.5	4.1	4.1	4.7	6.2	6.3	8.6
						1.0	27.7		8.1		27.1		106.4		7.2			4.1			6.4		
					Middle	3.3	26.9	26.9	8.0	8.0	27.9	27.9	85.3	85.1	5.8	5.8	4.7	4.7	4.7	4.7	8.0	8.2	
						3.3	26.9		8.0		27.9		84.8		5.8		4.7		8.4				
					Bottom	5.6	25.6	25.6	7.7	7.7	30.9	30.9	27.5	27.6	1.9	1.9	1.9	1.9	5.4	5.3	11.1	11.3	
						5.6	25.6		7.7		30.9		27.7		1.9		5.3		11.4				
23-Jul-19	Cloudy	Moderate	14:20	7.0	Surface	1.0	27.9	28.0	8.4	8.4	26.8	26.8	172.4	170.6	11.6	11.5	8.9	0.9	0.9	2.1	3.1	3.3	3.9
						1.0	28.0		8.4		26.8		168.8		11.4			0.9			3.4		
					Middle	3.5	26.5	26.6	8.0	8.0	28.1	28.0	91.3	91.2	6.3	6.3	6.3	6.3	1.6	1.6	3.8	3.7	
						3.5	26.6		8.0		28.0		91.0		6.2		3.5						
					Bottom	6.0	25.5	25.5	7.7	7.7	30.9	30.9	30.8	31.0	2.1	2.1	2.1	2.1	3.6	3.7	4.8	4.9	
						6.0	25.5		7.8		30.9		31.1		2.1		3.8		4.9				
25-Jul-19	Sunny	Moderate	15:46	6.8	Surface	1.0	29.8	29.8	8.4	8.4	24.7	24.7	190.4	190.2	12.6	12.6	11.4	4.3	4.3	6.2	3.9	4.4	5.4
						1.0	29.8		8.4		24.7		190.0		12.6			4.3			4.9		
					Middle	3.4	27.7	27.7	8.3	8.3	25.9	25.9	151.1	151.0	10.3	10.3	10.3	10.3	5.2	5.2	5.0	5.3	
						3.4	27.7		8.3		25.9		150.8		10.3		5.2		5.5				
					Bottom	5.8	26.9	26.9	8.1	8.1	27.4	27.4	92.3	92.2	6.3	6.3	6.3	6.3	8.9	9.0	6.6	6.5	
						5.8	26.9		8.1		27.4		92.0		6.3		9.0		6.4				
3-Aug-19	Cloudy	Rough	14:18	7.3	Surface	1.0	26.9	26.9	7.9	7.9	24.8	24.8	84.4	84.4	5.9	5.9	5.6	3.0	3.0	5.0	7.5	7.8	7.3
						1.0	26.8		7.9		24.8		84.4		5.9			3.1			8.1		
					Middle	3.7	26.4	26.4	7.9	7.9	25.9	26.0	77.3	77.3	5.4	5.4	5.4	5.4	4.7	4.7	6.2	7.1	
						3.7	26.4		7.9		26.0		77.2		5.4		4.8		7.9				
					Bottom	6.3	26.4	26.4	7.9	7.9	27.0	27.0	75.8	75.8	5.2	5.2	5.2	5.2	7.1	7.1	6.4	7.2	
						6.3	26.4		7.9		27.0		75.7		5.2		7.1		6.4				
6-Aug-19	Fine	Moderate	14:45	6.2	Surface	1.0	27.9	27.9	8.0	8.0	25.1	25.1	94.7	94.7	6.5	6.5	6.2	1.2	1.2	1.4	4.9	4.5	4.4
						1.0	27.9		8.0		25.1		94.7		6.5			1.2			4.0		
					Middle	3.1	27.8	27.8	8.0	8.0	25.3	25.3	88.2	88.2	6.0	6.0	6.0	6.0	1.5	1.5	4.8	4.4	
						3.1	27.8		8.0		25.3		88.2		6.0		1.5		3.9				
					Bottom	5.2	27.6	27.6	8.0	8.0	25.7	25.7	84.2	84.2	5.8	5.8	5.8	5.8	1.6	1.6	4.6	4.5	
						5.2	27.6		8.0		25.7		84.2		5.8		1.6		4.4				
8-Aug-19	Fine	Moderate	06:37	7.2	Surface	1.0	28.2	28.3	8.2	8.2	26.7	26.7	132.9	133.3	8.9	9.0	7.1	5.4	5.4	6.9	10.8	11.6	9.7
						1.0	28.3		8.2		26.7		133.7		9.0			5.4			12.4		
					Middle	3.6	27.6	27.6	8.0	8.0	27.3	27.2	77.2	77.3	5.2	5.2	5.2	5.2	6.1	6.1	12.6	11.7	
						3.6	27.6		8.0		27.2		77.4		5.2		6.1		10.8				
					Bottom	6.2	27.3	27.3	7.9	7.9	28.3	28.3	56.7	56.8	3.8	3.8	3.8	3.8	9.2	9.2	5.4	5.9	
						6.2	27.3		7.9		28.3		56.8		3.8		9.2		6.4				
10-Aug-19	Fine	Moderate	09:26	7.5	Surface	1.0	32.5	32.5	8.1	8.1	27.7	27.7	116.0	116.0	7.2	7.2	7.3	1.9	1.9	2.7	2.6	3.1	4.1
						1.0	32.5		8.1		27.7		115.9		7.2			1.9			3.6		
					Middle	3.8	29.6	29.6	8.1	8.1	27.6	27.6	113.3	113.0	7.4	7.4	7.4	7.4	2.6	2.6	4.8	4.9	
						3.8	29.6		8.1		27.6		112.7		7.4		2.6		4.9				
					Bottom	6.5	28.0	28.0	8.1	8.1	28.3	28.3	94.6	94.1	6.3	6.3	6.3	6.3	3.6	3.6	4.7	4.5	
						6.5	28.0		8.1		28.4		93.5		6.2		3.6		4.2				
13-Aug-19	Fine	Moderate	09:34	6.4	Surface	1.0	30.4	30.4	8.0	8.0	25.7	25.7	133.6	132.9	8.7	8.7	8.0	1.3	1.4	1.9	3.0	3.1	3.5
						1.0	30.4		8.0		25.7		132.1		8.6			1.4			3.2		
					Middle	3.2	29.5	29.5	7.8	7.8	26.7	26.7	111.3	111.2	7.3	7.3	7.3	7.3	2.4	2.3	3.4	3.3	
						3.2	29.5		7.8		26.7		111.0		7.3		2.2		3.1				
					Bottom	5.4	28.9	28.9	7.7	7.7	27.9	27.8	76.8	77.2	5.1	5.1	5.1	5.1	2.1	2.1	4.3	4.1	
						5.4	28.9		7.7		27.8		77.5		5.1		2.1		3.8				
15-Aug-19	Fine	Rough	10:48	7.3	Surface	1.0	30.0	30.0	8.0	8.0	26.4	26.4	139.6	139.6	9.1	9.1	7.4	2.4	2.4	3.9	3.6	3.4	4.4
						1.0	30.0		8.0		26.4		139.6		9.1			2.4			3.1		
					Middle	3.7	29.1	29.1	7.8	7.8	27.5	27.5	85.2	85.2	5.6	5.6	5.6	5.6	2.5	2.5	4.5	4.6	
						3.7	29.1		7.8		27.5		85.2		5.6		2.5		4.7				
					Bottom	6.3	27.9	27.9	7.6	7.6	30.8	30.8	40.3	40.5	2.7	2.7	2.7	2.7	6.9	6.9	4.6	5.1	
						6.3	27.9		7.6		30.8		40.6		2.7		6.8		5.6				
17-Aug-19	Rainy	Moderate	11:47	7.9	Surface	1.0	28.7	28.7	8.0	8.0	28.4	28.5	116.1	115.6	7.7	7.6	7.0	2.7	2.7	3.3	4.8	5.2	5.1
						1.0	28.7		8.0		28.5		115.1		7.6			2.7			5.6		
					Middle	4.0	28.1	28.1	8.0	8.0	28.9	28.9	97.5	96.2	6.5	6.4	6.4	6.4	3.2	3.3	5.3	5.3	
						4.0	28.1		8.0		29.0		94.8		6.3		3.3		5.3				
					Bottom	6.9	27.6	27.6	7.7	7.7	31.3	31.3	47.9	47.9	3.2	3.2	3.2	3.2	4.1	4.1	5.1	4.7	
						6.9	27.6		7.7		31.4		47.9		3.2		4.1		4.3				

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

**Water Quality Monitoring Results at SR10 during Mid-flood Tide**

Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	05:10	6.8	Surface	1.0	29.1	29.2	8.5	8.5	20.9	20.9	88.4	88.4	6.0	6.0	5.0	1.9	1.9	1.9	6.0	6.0	6.7
						1.0	29.2		8.5		20.9		88.4		6.0			1.9			5.9		
					Middle	3.4	27.1	27.1	8.0	8.0	24.4	24.4	57.3	57.4	3.9	3.9	1.3	1.3	6.3				
						3.4	27.1		8.0		24.4		57.4		4.0		5.9						
					Bottom	5.8	25.3	25.3	7.8	7.8	31.5	31.5	20.9	21.4	1.4	1.5	2.6	2.6	8.2				
						5.8	25.3		7.8		31.5		21.9		1.5		2.6		8.0				
18-Jul-19	Sunny	Moderate	06:55	6.8	Surface	1.0	28.7	28.7	8.3	8.3	25.1	25.1	88.3	88.3	5.8	5.8	4.5	1.8	1.8	3.0	7.6	7.8	7.4
						1.0	28.7		8.3		25.1		88.2		5.8			1.8			8.0		
					Middle	3.4	25.9	25.9	7.7	7.7	28.9	28.9	44.7	44.7	3.1	3.1	1.9	1.9	7.2				
						3.4	25.9		7.7		28.9		44.6		3.1		7.0						
					Bottom	5.8	24.5	24.5	7.6	7.6	34.0	34.0	21.7	21.9	1.5	1.5	5.1	5.2	7.1				
						5.8	24.5		7.6		34.0		22.0		1.5		5.2		7.4				
20-Jul-19	Cloudy	Moderate	07:55	6.8	Surface	1.0	27.9	27.9	8.2	8.2	26.8	26.8	122.4	122.3	8.3	8.3	7.4	4.2	4.2	4.6	7.8	8.0	7.1
						1.0	27.9		8.2		26.8		122.2		8.3			4.2			8.1		
					Middle	3.4	27.0	27.0	8.0	8.0	27.6	27.6	97.2	97.1	6.6	6.6	4.5	4.5	6.6				
						3.4	27.0		8.0		27.6		96.9		6.6		4.5		6.8				
					Bottom	5.8	25.8	25.8	7.8	7.8	30.1	30.1	45.7	45.7	3.1	3.1	5.3	5.3	6.5				
						5.8	25.8		7.8		30.1		45.7		3.1		5.3		6.9				
23-Jul-19	Cloudy	Rough	09:41	7.0	Surface	1.0	27.0	27.0	8.4	8.4	27.2	27.3	154.8	154.8	10.5	10.5	8.4	0.8	0.8	1.4	4.1	4.1	3.7
						1.0	26.9		8.4		27.3		154.8		10.5			0.8			4.0		
					Middle	3.5	26.6	26.6	8.0	8.0	28.1	28.1	93.7	93.1	6.4	6.4	0.9	0.9	3.9				
						3.5	26.6		8.0		28.1		92.5		6.3		0.9		4.1				
					Bottom	6.0	25.3	25.3	7.8	7.8	31.4	31.3	42.5	43.2	2.9	3.0	2.6	2.6	2.8				
						6.0	25.3		7.8		31.3		43.8		3.0		2.7		3.0				
25-Jul-19	Sunny	Moderate	11:57	6.9	Surface	1.0	29.9	29.9	8.4	8.4	24.1	24.1	170.4	170.4	11.3	11.3	10.5	4.5	4.5	6.1	7.3	7.2	6.9
						1.0	29.9		8.4		24.1		170.4		11.3			4.5			7.1		
					Middle	3.5	27.8	27.8	8.2	8.2	26.0	26.0	144.1	144.1	9.8	9.8	5.2	5.2	6.1				
						3.5	27.8		8.2		26.0		144.0		9.8		5.2		6.8				
					Bottom	5.9	26.0	26.0	7.8	7.8	28.7	28.7	44.0	44.1	3.0	3.0	8.5	8.5	7.1				
						5.9	26.0		7.8		28.7		44.1		3.0		8.5		6.7				
3-Aug-19	Rainy	Moderate	19:13	6.9	Surface	1.0	26.7	26.7	7.9	7.9	25.1	25.1	82.0	82.0	5.7	5.7	5.6	2.9	2.9	4.1	6.6	7.2	7.6
						1.0	26.7		7.9		25.1		82.0		5.7			2.9			7.7		
					Middle	3.5	26.4	26.4	7.9	7.9	25.9	25.9	77.7	77.7	5.4	5.4	4.3	4.3	7.6				
						3.5	26.4		7.9		25.9		77.6		5.4		4.3		7.3				
					Bottom	5.9	26.4	26.4	7.9	7.9	26.3	26.3	75.8	75.8	5.3	5.3	5.1	5.1	7.9				
						5.9	26.4		7.9		26.3		75.7		5.3		5.1		8.2				
6-Aug-19	Fine	Moderate	10:25	7.2	Surface	1.0	27.7	27.7	8.0	8.0	25.2	25.2	76.4	76.4	5.2	5.2	5.1	2.0	2.0	3.1	6.4	6.7	6.9
						1.0	27.7		8.0		25.2		76.4		5.2			2.0			6.9		
					Middle	3.6	27.6	27.6	8.0	8.0	25.4	25.4	72.7	72.7	5.0	5.0	2.7	2.7	6.1				
						3.6	27.6		8.0		25.4		72.7		5.0		2.7		6.4				
					Bottom	6.2	27.3	27.3	8.0	8.0	27.1	27.1	68.5	68.5	4.7	4.7	4.7	4.7	7.3				
						6.2	27.3		8.0		27.1		68.5		4.7		4.7		8.2				
8-Aug-19	Sunny	Moderate	11:16	6.2	Surface	1.0	29.6	29.6	8.3	8.3	26.5	26.5	189.0	188.9	12.4	12.4	10.4	4.5	4.5	7.0	6.5	7.0	8.0
						1.0	29.6		8.3		26.5		188.8		12.4			4.5			7.5		
					Middle	3.1	28.1	28.1	8.1	8.1	26.9	26.9	123.2	123.2	8.3	8.3	4.8	4.8	8.0				
						3.1	28.1		8.1		26.9		123.1		8.3		4.8		7.9				
					Bottom	5.2	27.1	27.1	7.9	7.9	29.5	29.5	56.6	56.6	3.8	3.8	11.7	11.6	9.4				
						5.2	27.1		7.9		29.5		56.6		3.8		11.4		8.6				
10-Aug-19	Fine	Moderate	14:37	6.8	Surface	1.0	32.5	32.5	8.0	8.0	28.2	28.2	115.1	115.1	7.2	7.2	7.3	1.8	1.8	3.4	3.4	3.2	4.3
						1.0	32.5		8.0		28.2		115.1		7.2			1.8			3.0		
					Middle	3.4	29.6	29.6	8.0	8.0	28.1	28.1	112.9	112.7	7.4	7.4	1.4	1.4	4.1				
						3.4	29.6		8.0		28.1		112.4		7.3		1.4		5.1				
					Bottom	5.8	28.0	28.0	8.0	8.0	28.7	28.8	94.4	94.5	6.3	6.3	7.0	7.0	5.4				
						5.8	28.0		8.0		28.8		94.6		6.3		7.0		4.5				
13-Aug-19	Cloudy	Moderate	04:21	7.4	Surface	1.0	30.1	30.1	8.0	8.0	25.9	25.9	132.3	132.0	8.7	8.6	8.0	1.3	1.3	3.5	1.8	1.9	2.3
						1.0	30.1		8.0		25.9		131.7		8.6			1.3			1.9		
					Middle	3.7	29.4	29.4	7.8	7.8	26.7	26.7	110.8	110.5	7.3	7.3	1.7	1.8	2.1				
						3.7	29.4		7.8		26.7		110.2		7.3		1.8		2.1				
					Bottom	6.4	28.5	28.5	7.6	7.6	28.9	28.9	62.5	62.7	4.1	4.2	7.4	7.4	3.0				
						6.4	28.5		7.6		28.9		62.9		4.2		7.4		3.0				
15-Aug-19	Fine	Rough	05:34	7.2	Surface	1.0	30.3	30.3	8.0	8.0	26.5	26.5	141.1	141.0	9.2	9.2	7.3	1.3	1.3	4.4	2.3	2.5	3.4
						1.0	30.3		8.0		26.5		140.9		9.2			1.3			2.6		
					Middle	3.6	28.9	28.9	7.8	7.8	27.7	27.7	82.0	81.9	5.4	5.4	3.0	3.0	3.9				
						3.6	28.9		7.8		27.7		81.7		5.4		3.0		2.5				
					Bottom	6.2	28.2	28.2	7.6	7.6	29.9	29.9	41.4	41.4	2.7	2.7	8.6	8.8	4.6				
						6.2	28.2		7.6		29.9		41.4		2.7		8.9		4.4				
17-Aug-19	Rainy	Moderate	07:15	7.4	Surface	1.0	28.8	28.8	8.1	8.1	28.6	28.6	109.2	108.9	7.2	7.2	6.3	2.8	2.8	3.9	6.1	6.1	6.3
						1.0	28.8		8.1		28.6		108.6		7.2			2.8			6.1		
					Middle	3.7	28.5	28.4	8.0	8.0	29.4	29.6	84.1	81.2	5.6	5.4	3.4	3.6	5.6				
						3.7	28.3		8.0		29.8		78.3		5.2		3.7		5.9				
					Bottom	6.4	27.8	27.8	7.7	7.7	31.2	31.2	29.2	29.3	1.9	1.9	5.4	5.3	7.0				
						6.4	27.8		7.7		31.1		29.4		1.9		5.3		6.7				

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.



Water Quality Monitoring Results at A1 during Mid-ebb Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	11:11	7.8	Surface	1.0	27.5	27.5	8.1	8.1	22.5	22.5	90.6	90.5	6.3	6.3	5.6	2.0	2.1	5.1
						1.0	27.5		8.1		22.5		90.4		6.3			2.2		
					Middle	3.9	26.5	26.6	8.1	8.1	25.7	25.6	70.6	70.7	4.9	4.9		6.6	6.6	
						3.9	26.6		8.1		25.6		70.7		4.9			6.6		
					Bottom	6.8	26.7	26.7	8.1	8.1	26.1	26.1	72.9	73.0	5.1	5.1		6.7	6.7	
						6.8	26.7		8.1		26.1		73.0		5.1			6.7		
18-Jul-19	Sunny	Moderate	12:33	9.4	Surface	1.0	26.6	26.6	8.0	8.0	26.1	26.1	109.9	109.7	7.6	7.6	7.0	3.7	3.7	4.5
						1.0	26.6		8.0		26.1		109.5		7.6			3.8		
					Middle	4.7	26.0	26.0	7.9	7.9	27.7	27.6	92.9	92.9	6.4	6.4		5.4	5.5	
						4.7	26.0		7.9		27.6		92.8		6.4			5.6		
					Bottom	8.4	25.8	25.8	7.9	7.9	29.0	29.0	87.3	87.3	6.0	6.0		4.2	4.2	
						8.4	25.8		7.9		29.0		87.2		6.0			4.3		
20-Jul-19	Cloudy	Moderate	13:27	9.4	Surface	1.0	26.4	26.4	7.9	7.9	27.9	27.9	70.8	70.8	4.9	4.9	4.4	4.5	4.5	6.0
						1.0	26.4		7.9		27.9		70.8		4.9			4.5		
					Middle	4.7	25.7	25.7	7.8	7.8	28.7	28.7	57.2	57.1	4.0	4.0		4.5	4.5	
						4.7	25.7		7.8		28.7		57.0		4.0			4.6		
					Bottom	8.4	24.8	24.8	7.8	7.8	32.2	32.2	45.2	45.3	3.1	3.1		8.8	8.8	
						8.4	24.8		7.8		32.2		45.3		3.1			8.9		
23-Jul-19	Cloudy	Moderate	14:58	8.7	Surface	1.0	27.3	27.3	8.0	8.0	30.1	30.1	152.0	152.0	10.1	10.1	7.3	2.5	2.5	2.6
						1.0	27.3		8.0		30.1		152.0		10.1			2.5		
					Middle	4.4	26.7	26.7	8.0	8.0	31.3	31.4	66.8	66.8	4.4	4.4		2.5	2.5	
						4.4	26.7		8.0		31.4		66.8		4.4			2.5		
					Bottom	7.7	24.7	24.7	8.0	8.0	32.5	32.5	42.2	42.4	2.9	2.9		2.9	2.9	
						7.7	24.7		8.0		32.5		42.6		2.9			2.9		
25-Jul-19	Sunny	Moderate	16:35	9.5	Surface	1.0	30.9	30.9	8.7	8.7	19.5	19.1	180.0	180.0	12.0	12.1	11.7	4.6	4.6	4.7
						1.0	30.9		8.7		18.8		180.0		12.1			4.6		
					Middle	4.8	28.9	28.9	8.6	8.6	24.2	24.2	169.3	169.1	11.4	11.4		4.9	4.9	
						4.8	28.9		8.6		24.3		168.8		11.4			4.9		
					Bottom	8.5	26.2	26.2	8.3	8.3	29.3	29.2	81.8	81.8	5.6	5.6		4.7	4.7	
						8.5	26.2		8.3		29.2		81.8		5.6			4.7		
3-Aug-19	Rainy	Moderate	13:36	8.7	Surface	1.0	26.8	26.8	8.0	8.0	27.4	27.3	79.4	79.5	5.4	5.4	5.5	5.6	5.6	6.1
						1.0	26.8		8.0		27.3		79.5		5.5			5.7		
					Middle	4.4	27.1	27.1	8.0	8.0	28.8	28.8	82.0	82.0	5.6	5.6		6.5	6.5	
						4.4	27.1		8.0		28.8		81.9		5.6			6.5		
					Bottom	7.7	26.9	26.9	8.0	8.0	29.5	29.4	80.7	80.7	5.5	5.5		6.4	6.3	
						7.7	26.9		8.0		29.4		80.7		5.5			6.2		
6-Aug-19	Fine	Moderate	15:28	8.2	Surface	1.0	28.5	28.5	8.0	8.0	26.4	26.4	86.9	86.9	5.8	5.8	5.6	2.0	2.0	4.0
						1.0	28.5		8.0		26.4		86.9		5.8			2.0		
					Middle	4.1	28.7	28.7	8.0	8.0	28.5	28.5	81.3	81.3	5.4	5.4		3.0	3.0	
						4.1	28.7		8.0		28.5		81.3		5.4			3.0		
					Bottom	7.2	27.2	27.2	8.1	8.1	29.6	29.6	75.3	75.3	5.1	5.1		7.0	7.0	
						7.2	27.2		8.1		29.6		75.3		5.1			7.0		
8-Aug-19	Fine	Moderate	05:49	8.8	Surface	1.0	27.8	27.8	7.9	7.9	26.7	26.7	81.5	81.6	5.5	5.5	6.5	4.3	4.3	6.4
						1.0	27.8		7.9		26.7		81.6		5.5			4.3		
					Middle	4.4	27.9	27.9	8.1	8.1	28.9	28.9	110.7	110.7	7.4	7.4		3.8	3.8	
						4.4	27.9		8.1		28.9		110.7		7.4			3.8		
					Bottom	7.8	27.3	27.3	8.0	8.0	30.0	29.9	83.3	83.4	5.6	5.6		11.3	11.1	
						7.8	27.3		8.0		29.9		83.4		5.6			10.8		
10-Aug-19	Fine	Moderate	08:39	9.5	Surface	1.0	28.6	28.6	8.2	8.2	27.6	27.6	108.8	108.8	7.2	7.2	7.2	4.5	4.6	4.6
						1.0	28.6		8.2		27.6		108.7		7.2			4.6		
					Middle	4.8	28.6	28.6	8.2	8.2	27.6	27.6	106.8	106.8	7.1	7.1		4.6	4.6	
						4.8	28.6		8.2		27.6		106.7		7.1			4.6		
					Bottom	8.5	28.6	28.6	8.2	8.2	27.6	27.6	106.4	106.4	7.1	7.1		4.6	4.5	
						8.5	28.6		8.2		27.6		106.3		7.1			4.5		
13-Aug-19	Fine	Moderate	10:18	7.8	Surface	1.0	29.7	29.7	7.8	7.8	23.5	23.5	109.9	109.9	7.3	7.3	7.1	3.9	3.9	7.9
						1.0	29.7		7.8		23.5		109.9		7.3			3.9		
					Middle	3.9	29.5	29.5	7.8	7.8	25.4	25.4	105.1	104.9	7.0	6.9		5.3	5.3	
						3.9	29.5		7.8		25.4		104.6		6.9			5.3		
					Bottom	6.8	28.4	28.4	7.6	7.6	29.0	29.0	71.1	71.1	4.7	4.7		14.5	14.6	
						6.8	28.3		7.6		29.0		71.0		4.7			14.7		
15-Aug-19	Fine	Rough	11:31	8.2	Surface	1.0	28.8	28.8	7.8	7.8	26.4	26.4	102.4	102.5	6.8	6.8	7.0	2.6	2.6	4.9
						1.0	28.8		7.8		26.4		102.5		6.8			2.6		
					Middle	4.1	29.0	29.0	7.8	7.8	26.7	26.7	108.7	108.8	7.2	7.2		2.7	2.7	
						4.1	29.0		7.8		26.7		108.8		7.2			2.7		
					Bottom	7.2	28.7	28.7	7.8	7.8	29.5	29.6	93.8	94.0	6.2	6.2		9.5	9.4	
						7.2	28.7		7.8		29.6		94.1		6.2			9.3		
17-Aug-19	Fine	Moderate	12:28	8.3	Surface	1.0	28.1	28.1	7.8	7.8	27.7	27.7	76.1	76.0	5.1	5.1	3.9	2.5	2.5	6.3
						1.0	28.1		7.8		27.7		75.8		5.1			2.5		
					Middle	4.2	25.6	25.6	7.8	7.8	34.0	34.1	39.9	40.2	2.7	2.7		9.4	9.4	
						4.2	25.5		7.8		34.1		40.5		2.7			9.4		
					Bottom	7.3	25.3	25.3	7.8	7.8	34.2	34.2	41.9	42.2	2.8	2.9		7.1	7.1	
						7.3	25.3		7.8		34.3		42.5		2.9			7.1		

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at A1 during Mid-flood Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	04:29	8.7	Surface	1.0	28.5	28.5	8.5	8.5	18.8	18.8	77.7	77.7	5.4	5.4	4.2	1.7	1.7	2.0
						1.0	28.5		8.5		18.8		77.7		5.4					
					Middle	4.4	25.8	25.8	7.9	7.9	30.5	30.6	45.6	45.6	3.1	3.1		1.9	1.9	
						4.4	25.8		7.9		30.6		45.5		3.1					
					Bottom	7.7	23.9	23.9	7.9	7.9	33.7	33.7	37.6	37.7	2.6	2.6		2.4	2.4	
						7.7	23.9		7.9		33.7		37.8		2.6			2.4		
18-Jul-19	Fine	Moderate	06:08	9.0	Surface	1.0	26.3	26.3	7.9	7.9	28.0	28.0	91.0	90.9	6.3	6.3	4.9	1.8	1.8	3.0
						1.0	26.3		7.9		28.0		90.8		6.3					
					Middle	4.5	26.7	26.7	7.7	7.7	33.7	33.8	52.0	51.9	3.5	3.4		3.0	2.9	
						4.5	26.7		7.7		33.8		51.8		3.4			2.9		
					Bottom	8.0	23.6	23.6	7.7	7.7	34.8	34.8	38.1	38.2	2.7	2.7		4.2	4.2	
						8.0	23.6		7.7		34.8		38.3		2.7			4.2		
20-Jul-19	Cloudy	Moderate	07:13	9.0	Surface	1.0	25.9	25.9	7.9	7.9	29.0	29.0	59.7	59.7	4.1	4.1	3.3	4.7	4.7	6.7
						1.0	25.9		7.9		29.0		59.7		4.1					
					Middle	4.5	24.2	24.2	7.8	7.8	33.7	33.7	36.4	36.4	2.5	2.5		6.1	6.1	
						4.5	24.2		7.8		33.7		36.4		2.5			6.1		
					Bottom	8.0	24.1	24.1	7.8	7.8	33.7	33.7	37.7	37.8	2.6	2.6		9.2	9.2	
						8.0	24.1		7.8		33.7		37.8		2.6			9.2		
23-Jul-19	Cloudy	Moderate	09:00	9.5	Surface	1.0	25.8	25.8	7.8	7.8	27.5	27.5	65.2	64.8	4.5	4.5	4.0	0.2	0.2	3.0
						1.0	25.8		7.8		27.5		64.4		4.5					
					Middle	4.8	25.6	25.6	7.8	7.8	30.3	30.3	52.2	52.0	3.6	3.6		0.8	0.8	
						4.8	25.6		7.8		30.3		51.7		3.6			0.8		
					Bottom	8.5	24.1	24.1	7.8	7.8	33.6	33.6	36.6	36.7	2.5	2.5		7.7	7.9	
						8.5	24.1		7.8		33.6		36.8		2.6			8.1		
25-Jul-19	Fine	Moderate	11:16	9.4	Surface	1.0	29.4	29.4	8.6	8.6	19.7	19.7	169.7	169.7	11.6	11.6	9.3	4.5	4.5	4.7
						1.0	29.4		8.6		19.7		169.7		11.6					
					Middle	4.7	27.6	27.6	8.2	8.2	26.0	26.4	103.2	103.3	7.0	7.0		4.7	4.7	
						4.7	27.6		8.2		26.9		103.3		7.0			4.7		
					Bottom	8.4	25.4	25.4	8.0	8.0	30.8	30.8	52.3	52.4	3.6	3.6		5.0	5.0	
						8.4	25.4		8.0		30.8		52.4		3.6			5.0		
3-Aug-19	Cloudy	Moderate	19:55	9.0	Surface	1.0	26.6	26.6	7.9	7.9	27.3	27.3	73.9	73.9	5.1	5.1	5.2	4.9	4.8	6.9
						1.0	26.6		7.9		27.3		73.9		5.1					
					Middle	4.5	26.7	26.7	8.0	8.0	28.5	28.5	78.3	78.3	5.4	5.4		6.3	6.3	
						4.5	26.7		8.0		28.5		78.3		5.4			6.3		
					Bottom	8.0	26.7	26.7	8.0	8.0	28.9	28.9	79.1	79.1	5.4	5.4		9.5	9.5	
						8.0	26.7		8.0		28.9		79.1		5.4			9.4		
6-Aug-19	Fine	Moderate	09:41	8.8	Surface	1.0	27.9	27.9	7.9	7.9	26.5	26.5	76.8	76.8	5.2	5.2	5.1	2.4	2.4	4.3
						1.0	27.9		7.9		26.5		76.8		5.2					
					Middle	4.4	27.4	27.4	7.9	7.9	27.4	27.4	74.0	74.0	5.0	5.0		4.2	4.2	
						4.4	27.4		7.9		27.4		74.0		5.0			4.2		
					Bottom	7.8	27.2	27.2	8.0	8.0	29.9	29.9	76.1	76.1	5.1	5.1		6.2	6.2	
						7.8	27.2		8.0		29.9		76.1		5.1			6.2		
8-Aug-19	Sunny	Moderate	11:55	8.2	Surface	1.0	31.5	31.5	8.1	8.1	28.7	28.7	128.8	128.9	8.1	8.1	7.9	4.7	4.7	4.5
						1.0	31.5		8.1		28.7		128.9		8.1					
					Middle	4.1	29.9	29.9	8.1	8.1	29.3	29.3	118.7	118.7	7.7	7.7		4.8	4.8	
						4.1	29.9		8.1		29.3		118.7		7.7			4.8		
					Bottom	7.2	27.2	27.2	8.0	8.0	30.5	30.5	78.0	78.0	5.2	5.2		4.1	4.1	
						7.2	27.2		8.0		30.5		78.0		5.2			4.1		
10-Aug-19	Fine	Moderate	15:17	8.2	Surface	1.0	28.6	28.6	8.0	8.0	28.1	28.1	108.2	108.2	7.2	7.2	7.1	1.4	1.5	1.8
						1.0	28.6		8.0		28.1		108.2		7.2					
					Middle	4.1	28.6	28.6	8.0	8.0	28.1	28.1	106.2	106.2	7.0	7.0		2.5	2.5	
						4.1	28.6		8.0		28.1		106.1		7.0			2.5		
					Bottom	7.2	28.6	28.6	8.0	8.0	28.1	28.1	105.9	105.9	7.0	7.0		1.4	1.4	
						7.2	28.6		8.0		28.1		105.8		7.0			1.5		
13-Aug-19	Cloudy	Moderate	03:40	8.5	Surface	1.0	29.5	29.4	7.9	7.9	24.6	24.6	100.3	100.1	6.7	6.7	5.3	1.5	1.5	2.4
						1.0	29.4		7.9		24.6		99.9		6.7					
					Middle	4.3	29.0	28.9	7.6	7.6	31.7	31.7	60.7	61.1	3.9	3.9		2.8	2.7	
						4.3	28.8		7.6		31.7		61.4		4.0			2.6		
					Bottom	7.5	27.1	27.1	7.5	7.5	32.6	32.6	51.1	51.3	3.4	3.4		3.0	3.0	
						7.5	27.1		7.5		32.7		51.4		3.4			3.0		
15-Aug-19	Cloudy	Rough	04:51	8.7	Surface	1.0	29.3	29.3	7.9	7.9	26.7	26.7	102.6	102.6	6.8	6.8	5.8	2.3	2.3	7.8
						1.0	29.3		7.9		26.7		102.6		6.8					
					Middle	4.4	30.8	30.8	7.7	7.7	29.3	29.3	76.8	76.8	4.9	4.9		9.5	9.5	
						4.4	30.8		7.7		29.3		76.7		4.9			9.5		
					Bottom	7.7	26.2	26.2	7.6	7.6	33.9	33.9	41.1	41.2	2.8	2.8		11.5	11.6	
						7.7	26.2		7.6		33.9		41.2		2.8			11.6		
17-Aug-19	Cloudy	Moderate	06:30	8.1	Surface	1.0	28.2	28.2	8.0	8.0	27.7	27.7	111.6	111.2	7.5	7.4	6.9	2.3	2.3	5.5
						1.0	28.2		8.0		27.8		110.7		7.4					
					Middle	4.1	28.1	28.2	7.9	7.9	27.9	27.8	96.4	95.9	6.5	6.4		5.3	5.5	
						4.1	28.2		7.9		27.8		95.3		6.4			5.6		
					Bottom	7.1	26.6	26.6	7.8	7.8	32.7	32.7	54.0	54.8	3.6	3.7		8.9	8.7	
						7.1	26.6		7.8		32.7		55.6		3.7			8.6		

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Water Quality Monitoring Results at A2 during Mid-ebb Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	10:31	8.4	Surface	1.0	29.1	29.1	8.5	8.5	23.4	23.4	161.0	160.6	10.7	10.7	8.0	1.8	1.8	2.1
						1.0	29.1		8.5		23.4		160.2		10.7			1.8		
						4.2	27.3		8.1		28.7		79.3		5.4			1.6		
					Middle	4.2	27.2	27.3	8.1	8.1	28.9	28.8	75.5	77.4	5.1	5.2	1.6			
						7.4	24.9		7.9		33.1		36.6		2.5		2.8			
						7.4	24.9		7.9		33.1		36.9		2.5		2.8			
18-Jul-19	Sunny	Moderate	11:49	9.3	Surface	1.0	28.1	28.1	8.3	8.3	28.4	28.4	189.0	188.5	12.6	12.6	7.9	1.7	1.7	4.0
						1.0	28.1		8.3		28.4		188.0		12.6			1.7		
						4.7	24.4		7.7		33.6		45.6		3.2			2.6		
					Middle	4.7	24.4	24.4	7.7	7.7	33.6	33.6	45.6	45.6	3.2	3.2	2.6			
						8.3	23.8		7.7		34.6		38.6		2.7		7.9			
						8.3	23.8		7.7		34.6		39.1		2.7		7.8			
20-Jul-19	Cloudy	Moderate	12:48	9.3	Surface	1.0	27.3	27.3	8.0	8.0	27.0	27.0	102.1	102.0	7.0	7.0	6.6	4.1	4.1	4.7
						1.0	27.3		8.0		27.0		101.8		6.9			4.1		
						4.7	27.1		8.0		27.9		91.7		6.2			4.2		
					Middle	4.7	27.1	27.1	8.0	8.0	27.9	27.9	91.4	91.6	6.2	6.2	4.2			
						8.3	25.0		7.8		32.4		48.2		3.3		5.7			
						8.3	25.0		7.8		32.4		48.4		3.3		5.7			
23-Jul-19	Cloudy	Moderate	14:33	10.4	Surface	1.0	27.6	27.6	8.0	8.0	28.4	28.4	166.0	166.0	11.1	11.0	7.7	4.0	4.1	4.3
						1.0	27.6		8.0		28.5		166.0		11.0			4.2		
						5.2	27.1		8.0		29.6		67.7		4.4			4.0		
					Middle	5.2	27.1	27.1	8.0	8.0	29.6	29.6	67.7	67.7	4.4	4.4	3.8			
						9.4	24.3		8.0		32.5		43.2		3.0		5.0			
						9.4	24.3		8.0		32.5		43.7		3.0		5.1			
25-Jul-19	Sunny	Moderate	16:05	10.7	Surface	1.0	30.7	30.7	8.8	8.8	16.8	16.8	192.1	191.7	13.1	13.1	10.2	5.0	5.0	5.9
						1.0	30.7		8.8		16.8		191.2		13.0			5.0		
						5.4	26.8		8.4		28.0		107.3		7.3			4.7		
					Middle	5.4	26.8	26.8	8.4	8.4	28.0	28.0	106.8	107.1	7.3	7.3	4.8			
						9.7	24.4		8.1		32.3		47.5		3.3		7.8			
						9.7	24.4		8.1		32.3		47.7		3.3		7.8			
3-Aug-19	Rainy	Moderate	13:55	9.2	Surface	1.0	26.9	26.9	8.0	8.0	29.4	29.4	84.3	84.3	5.7	5.7	5.7	3.6	3.6	3.9
						1.0	26.9		8.0		29.4		84.3		5.7			3.6		
						4.6	26.9		8.0		29.5		83.4		5.6			3.6		
					Middle	4.6	26.9	26.9	8.0	8.0	29.5	29.5	83.4	83.4	5.6	5.6	3.5			
						8.2	26.9		8.0		29.6		81.9		5.5		4.6			
						8.2	26.9		8.0		29.6		81.9		5.5		4.6			
6-Aug-19	Fine	Moderate	14:52	9.3	Surface	1.0	27.9	27.9	8.1	8.1	28.4	28.4	83.7	83.7	5.6	5.6	5.5	1.8	1.8	2.1
						1.0	27.9		8.1		28.4		83.7		5.6			1.8		
						4.7	27.4		8.1		28.9		81.2		5.5			1.9		
					Middle	4.7	27.4	27.4	8.1	8.1	28.9	28.9	81.2	81.2	5.5	5.5	1.9			
						8.3	27.3		8.1		29.4		84.6		5.7		2.5			
						8.3	27.3		8.1		29.4		84.6		5.7		2.5			
8-Aug-19	Fine	Moderate	06:37	9.9	Surface	1.0	28.2	28.2	8.2	8.2	28.6	28.6	135.7	135.6	9.0	9.0	8.5	4.0	4.0	5.7
						1.0	28.2		8.2		28.6		135.5		9.0			4.0		
						5.0	28.1		8.2		29.1		121.6		8.1			3.8		
					Middle	5.0	28.1	28.1	8.2	8.2	29.1	29.1	121.3	121.5	8.1	8.1	3.8			
						8.9	27.1		8.0		30.9		70.7		4.7		9.4			
						8.9	27.1		8.0		30.9		70.7		4.7		9.4			
10-Aug-19	Fine	Moderate	09:07	9.2	Surface	1.0	29.4	29.4	8.1	8.1	27.6	27.6	114.6	114.6	7.5	7.5	7.5	4.0	4.0	3.9
						1.0	29.4		8.1		27.6		114.6		7.5			4.0		
						4.6	29.4		8.1		27.7		114.1		7.5			3.9		
					Middle	4.6	29.4	29.4	8.1	8.1	27.7	27.7	114.1	114.1	7.5	7.5	4.0			
						8.2	29.4		8.1		27.7		113.5		7.4		3.9			
						8.2	29.4		8.1		27.7		113.3		7.4		3.9			
13-Aug-19	Fine	Moderate	09:49	8.7	Surface	1.0	30.9	30.9	8.0	8.0	24.5	24.5	135.9	135.7	8.9	8.8	6.3	1.2	1.3	6.0
						1.0	30.9		8.0		24.5		135.4		8.8			1.3		
						4.4	28.1		7.6		30.7		56.3		3.7			6.5		
					Middle	4.4	28.1	28.1	7.6	7.6	30.7	30.7	55.8	56.1	3.7	3.7	6.9			
						7.7	27.3		7.5		32.3		63.1		4.2		10.0			
						7.7	27.2		7.5		32.3		63.9		4.2		10.1			
15-Aug-19	Fine	Rough	10:54	9.1	Surface	1.0	30.0	30.0	8.2	8.2	26.7	26.7	177.5	177.5	11.5	11.5	9.6	2.4	2.4	7.8
						1.0	30.0		8.2		26.7		177.4		11.5			2.4		
						4.6	29.4		8.0		30.4		120.9		7.8			3.2		
					Middle	4.6	29.4	29.4	8.0	8.0	30.4	30.4	120.9	120.9	7.8	7.8	3.2			
						8.1	27.0		7.6		33.8		48.1		3.2		17.7			
						8.1	27.0		7.6		33.8		48.1		3.2		17.8			
17-Aug-19	Fine	Moderate	12:03	10.5	Surface	1.0	28.9	28.9	8.0	8.0	27.6	27.6	110.9	110.0	7.3	7.3	5.5	2.1	2.1	4.8
						1.0	28.9		8.0		27.6		109.1		7.2			2.1		
						5.3	27.0		7.8		32.2		55.7		3.7			4.1		
					Middle	5.3	27.0	27.0	7.8	7.8	32.4	32.3	55.6	55.7	3.7	3.7	4.3			
						9.5	26.1		7.8		33.7		50.8		3.4		8.2			
						9.5	26.1		7.8		33.6		55.7		3.7		8.2			

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Water Quality Monitoring Results at A2 during Mid-flood Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	05:13	9.7	Surface	1.0	26.8	26.8	8.1	8.1	26.7	26.7	77.1	77.1	5.3	5.3	4.0	1.3	1.3	2.0
						1.0	26.8		8.1		26.7		77.1		5.3			1.3		
						4.9	24.9		7.9		32.1		41.6		2.8			1.2		
					Middle	4.9	24.8	7.9	32.3	41.2	2.8	1.2								
						Bottom	8.7	24.0	7.9	33.6	40.7	2.8	3.3							
							8.7	24.0	7.9	33.6	40.9	2.8	3.5							
18-Jul-19	Fine	Moderate	06:22	10.0	Surface	1.0	26.2	26.2	8.0	8.0	29.1	29.1	100.8	100.7	6.9	6.9	5.6	1.5	1.5	2.1
						1.0	26.2		8.0		29.1		100.6		6.9			1.5		
						5.0	25.0		7.8		31.9		64.1		4.4			1.8		
					Middle	5.0	25.0	7.8	31.9	60.5	4.2	1.8								
						Bottom	9.0	23.7	7.7	34.6	37.6	2.6	3.0							
							9.0	23.7	7.7	34.6	37.6	2.6	3.0							
20-Jul-19	Cloudy	Moderate	07:26	10.0	Surface	1.0	26.2	26.2	7.9	7.9	29.1	29.1	67.2	67.2	4.6	4.6	4.1	4.2	4.3	4.7
						1.0	26.2		7.9		29.0		67.1		4.6			4.3		
						5.0	25.0		7.9		32.0		52.3		3.6			4.7		
					Middle	5.0	25.0	7.9	32.0	52.2	3.6	4.7								
						Bottom	9.0	24.8	7.8	32.5	47.6	3.3	5.3							
							9.0	24.8	7.8	32.5	47.6	3.3	5.3							
23-Jul-19	Cloudy	Moderate	09:36	10.0	Surface	1.0	26.0	26.0	8.0	7.9	28.8	28.8	85.9	85.9	5.9	5.9	5.3	0.3	0.3	1.0
						1.0	26.0		7.9		28.8		85.9		5.9			0.3		
						5.0	25.6		7.9		30.6		69.5		4.8			0.3		
					Middle	5.0	25.6	7.9	30.6	69.1	4.8	0.4								
						Bottom	9.0	24.5	7.8	32.9	43.8	3.0	2.2							
							9.0	24.4	7.8	33.3	38.2	2.6	2.5							
25-Jul-19	Fine	Moderate	11:55	10.2	Surface	1.0	29.6	29.6	8.6	8.6	17.7	17.8	169.8	169.7	11.7	11.7	8.2	4.8	4.8	7.5
						1.0	29.6		8.6		17.8		169.6		11.7			4.8		
						5.1	26.5		8.0		29.0		69.3		4.7			5.4		
					Middle	5.1	26.5	8.0	29.0	69.3	4.7	5.4								
						Bottom	9.2	24.1	7.9	32.8	37.7	2.6	12.2							
							9.2	24.1	7.9	32.8	37.8	2.6	12.2							
3-Aug-19	Cloudy	Moderate	19:37	11.6	Surface	1.0	27.6	27.6	8.0	8.0	28.7	28.7	81.0	81.0	5.4	5.4	5.5	7.7	7.7	6.4
						1.0	27.6		8.0		28.7		81.0		5.4			7.7		
						5.8	27.5		8.0		29.1		82.9		5.6			6.7		
					Middle	5.8	27.5	8.0	29.1	83.0	5.6	6.7								
						Bottom	10.6	27.0	8.0	29.5	83.9	5.7	4.8							
							10.6	27.0	8.0	29.5	83.9	5.7	4.8							
6-Aug-19	Fine	Moderate	09:46	9.9	Surface	1.0	27.6	27.6	8.0	8.0	27.6	27.6	79.9	80.0	5.4	5.4	5.4	1.2	1.2	1.6
						1.0	27.6		8.0		27.6		80.0		5.4			1.2		
						5.0	27.6		8.0		27.9		79.3		5.4			1.5		
					Middle	5.0	27.6	8.0	27.9	79.3	5.4	1.5								
						Bottom	8.9	27.5	8.0	28.2	78.4	5.3	2.2							
							8.9	27.5	8.0	28.2	78.4	5.3	2.2							
8-Aug-19	Sunny	Moderate	11:13	9.3	Surface	1.0	30.0	30.0	8.4	8.4	28.6	28.6	198.3	198.0	12.8	12.8	12.2	3.3	3.3	3.1
						1.0	30.0		8.4		28.6		197.6		12.8			3.3		
						4.7	28.5		8.3		29.2		174.9		11.5			2.6		
					Middle	4.7	28.5	8.3	29.2	174.8	11.5	2.6								
						Bottom	8.3	27.4	8.0	30.0	91.1	6.1	3.4							
							8.3	27.4	8.0	30.0	91.0	6.1	3.3							
10-Aug-19	Fine	Moderate	14:38	9.2	Surface	1.0	29.4	29.4	8.0	8.0	28.1	28.1	114.0	114.0	7.5	7.5	7.4	1.8	1.8	2.7
						1.0	29.4		8.0		28.2		114.0		7.5			1.8		
						4.6	29.4		8.0		28.2		113.5		7.4			2.7		
					Middle	4.6	29.4	8.0	28.2	113.5	7.4	2.7								
						Bottom	8.2	29.4	8.0	28.2	113.0	7.4	3.6							
							8.2	29.4	8.0	28.2	112.9	7.4	3.6							
13-Aug-19	Cloudy	Rough	04:09	9.3	Surface	1.0	29.9	29.9	7.8	7.8	26.4	26.4	86.9	86.6	5.7	5.7	5.1	1.4	1.4	1.4
						1.0	29.9		7.8		26.5		86.2		5.7			1.4		
						4.7	27.9		7.7		31.3		70.0		4.6			0.4		
					Middle	4.7	27.9	7.7	31.4	69.6	4.6	0.4								
						Bottom	8.3	27.2	7.6	32.4	59.4	3.9	2.4							
							8.3	27.2	7.6	32.4	60.0	4.0	2.3							
15-Aug-19	Rainy	Rough	05:36	10.3	Surface	1.0	29.4	29.4	7.9	7.9	26.3	26.3	107.7	107.7	7.1	7.1	5.4	1.5	1.5	3.8
						1.0	29.4		7.9		26.3		107.7		7.1			1.5		
						5.2	27.4		7.7		33.1		56.5		3.7			2.3		
					Middle	5.2	27.4	7.7	33.1	56.5	3.7	2.3								
						Bottom	9.3	27.3	7.7	33.6	56.5	3.7	7.4							
							9.3	27.3	7.7	33.6	56.6	3.7	7.5							
17-Aug-19	Cloudy	Moderate	07:12	8.0	Surface	1.0	29.1	29.1	8.1	8.1	27.8	27.7	147.8	147.8	9.7	9.7	6.9	2.1	2.1	5.9
						1.0	29.1		8.1		27.7		147.8		9.7			2.1		
						4.0	27.7		7.9		31.2		59.7		4.0			4.7		
					Middle	4.0	27.8	7.9	30.9	63.4	4.2	4.9								
						Bottom	7.0	25.7	7.8	34.1	44.2	3.0	11.0							
							7.0	25.7	7.8	34.1	44.5	3.0	10.9							

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Water Quality Monitoring Results at A3 during Mid-ebb Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	10:42	10.8	Surface	1.0	29.1	29.1	8.4	8.4	26.3	26.3	156.5	159.0	10.3	10.4	6.8	1.9	1.9	3.3
						1.0	29.1		8.4		26.2		161.4		10.6					
					Middle	5.4	25.8	25.8	7.9	7.9	31.8	31.9	46.1	46.1	3.1	3.1		1.1	1.1	
						5.4	25.8		7.9		31.9		46.1		3.1					
					Bottom	9.8	24.5	24.5	7.9	7.9	33.7	33.7	37.9	38.1	2.6	2.6		7.0	7.0	
						9.8	24.5		8.0		33.7		38.3		2.6			7.0		
18-Jul-19	Sunny	Moderate	12:00	10.7	Surface	1.0	27.2	27.2	8.3	8.3	28.3	28.3	177.2	176.5	12.0	12.0	8.7	1.9	1.9	3.3
						1.0	27.2		8.3		28.3		176.5		12.0					
					Middle	5.4	25.6	25.6	7.9	7.9	31.3	31.3	79.4	79.4	5.4	5.4		2.1	2.2	
						5.4	25.6		7.9		31.3		79.4		5.4					
					Bottom	9.7	23.9	23.9	7.7	7.7	34.4	34.4	40.3	40.5	2.8	2.8		5.7	5.7	
						9.7	23.9		7.7		34.4		40.6		2.8			5.7		
20-Jul-19	Rainy	Moderate	12:55	10.7	Surface	1.0	27.3	27.3	7.9	7.9	28.0	28.0	84.2	84.2	5.7	5.7	5.1	4.3	4.3	7.7
						1.0	27.3		7.9		28.0		84.1		5.7					
					Middle	5.4	25.6	25.6	7.9	7.9	31.0	31.0	64.2	64.1	4.4	4.4		3.9	3.9	
						5.4	25.6		7.9		31.0		64.0		4.4			3.9		
					Bottom	9.7	24.3	24.3	7.8	7.8	33.4	33.4	41.0	41.2	2.8	2.9		14.9	14.7	
						9.7	24.3		7.8		33.4		41.4		2.9			14.6		
23-Jul-19	Cloudy	Moderate	14:40	8.5	Surface	1.0	27.7	27.7	8.4	8.4	26.9	26.9	165.4	163.0	11.1	10.9	7.8	1.8	1.8	3.7
						1.0	27.7		8.4		26.9		160.5		10.8					
					Middle	4.3	25.8	25.8	7.9	7.9	31.1	31.2	67.9	67.6	4.6	4.6		3.1	3.1	
						4.3	25.8		7.9		31.2		67.3		4.6			3.2		
					Bottom	7.5	24.7	24.7	7.8	7.8	32.6	32.6	45.8	47.8	3.2	3.3		6.2	6.2	
						7.5	24.7		7.8		32.6		49.7		3.4			6.2		
25-Jul-19	Sunny	Moderate	16:12	10.8	Surface	1.0	30.4	30.4	8.8	8.8	17.5	17.5	200.7	200.6	13.7	13.7	10.4	5.0	5.0	4.6
						1.0	30.4		8.8		17.5		200.4		13.7					
					Middle	5.4	27.1	27.1	8.4	8.4	27.0	26.9	105.0	104.7	7.2	7.2		4.6	4.6	
						5.4	27.1		8.4		26.9		104.4		7.1			4.6		
					Bottom	9.8	24.9	24.9	8.1	8.1	31.4	31.4	50.2	50.4	3.5	3.5		4.1	4.1	
						9.8	24.9		8.1		31.4		50.5		3.5			4.1		
3-Aug-19	Rainy	Moderate	13:49	10.1	Surface	1.0	26.9	26.9	8.0	8.0	29.5	29.5	83.4	83.4	5.6	5.6	5.5	6.0	6.0	7.8
						1.0	26.9		8.0		29.5		83.4		5.6					
					Middle	5.1	26.9	26.9	8.0	8.0	29.7	29.7	79.3	79.3	5.4	5.4		6.9	6.9	
						5.1	26.9		8.0		29.7		79.3		5.4			6.9		
					Bottom	9.1	26.9	26.9	8.0	8.0	29.8	29.8	79.0	79.0	5.3	5.3		10.5	10.6	
						9.1	26.9		8.0		29.8		79.0		5.3			10.7		
6-Aug-19	Fine	Moderate	15:03	10.7	Surface	1.0	27.8	27.8	8.1	8.1	27.6	27.6	83.3	83.3	5.6	5.6	5.3	1.9	1.9	3.2
						1.0	27.8		8.1		27.6		83.3		5.6					
					Middle	5.4	27.2	27.2	8.1	8.1	29.5	29.5	75.0	75.0	5.1	5.1		3.6	3.6	
						5.4	27.2		8.1		29.5		75.0		5.1			3.6		
					Bottom	9.7	27.1	27.1	8.1	8.1	30.0	30.0	74.3	74.3	5.0	5.0		4.2	4.2	
						9.7	27.1		8.1		30.0		74.3		5.0			4.2		
8-Aug-19	Fine	Moderate	06:29	10.2	Surface	1.0	28.3	28.3	8.1	8.1	29.0	29.0	121.7	121.6	8.1	8.1	7.3	4.2	4.2	5.0
						1.0	28.3		8.1		29.0		121.5		8.1					
					Middle	5.1	27.7	27.7	8.1	8.1	29.7	29.8	99.5	99.3	6.6	6.6		4.3	4.3	
						5.1	27.7		8.1		29.8		99.0		6.6			4.4		
					Bottom	9.2	27.2	27.2	8.0	8.0	30.5	30.5	77.1	77.2	5.2	5.2		6.6	6.6	
						9.2	27.2		8.0		30.5		77.2		5.2			6.6		
10-Aug-19	Fine	Moderate	08:57	10.4	Surface	1.0	29.5	29.5	8.1	8.1	27.7	27.7	113.7	113.7	7.4	7.4	7.2	4.1	4.1	5.6
						1.0	29.5		8.1		27.7		113.7		7.4					
					Middle	5.2	29.3	29.3	8.1	8.1	27.9	27.9	107.1	107.0	7.0	7.0		4.5	4.5	
						5.2	29.3		8.1		27.9		106.9		7.0			4.6		
					Bottom	9.4	28.3	28.3	8.0	8.0	29.5	29.5	77.5	77.5	5.1	5.1		8.1	8.1	
						9.4	28.3		8.0		29.5		77.5		5.1			8.1		
13-Aug-19	Fine	Moderate	09:55	10.4	Surface	1.0	30.3	30.3	7.9	7.9	25.1	25.1	118.9	118.6	7.8	7.8	5.9	1.6	1.7	4.2
						1.0	30.3		7.9		25.1		118.2		7.7					
					Middle	5.2	27.9	27.9	7.6	7.6	31.3	31.4	61.2	60.5	4.0	4.0		5.1	5.2	
						5.2	27.9		7.6		31.4		59.8		3.9			5.2		
					Bottom	9.4	26.8	26.8	7.5	7.5	33.1	33.1	59.6	60.1	4.0	4.0		5.6	5.7	
						9.4	26.8		7.5		33.1		60.6		4.0			5.7		
15-Aug-19	Fine	Rough	11:05	10.5	Surface	1.0	30.1	30.1	8.1	8.1	27.2	27.2	161.9	162.0	10.5	10.5	7.1	2.3	2.3	6.9
						1.0	30.1		8.1		27.2		162.0		10.5					
					Middle	5.3	27.9	27.9	7.7	7.7	32.7	32.7	57.8	57.8	3.8	3.8		2.2	2.3	
						5.3	27.9		7.7		32.7		57.7		3.8			2.3		
					Bottom	9.5	26.4	26.4	7.6	7.6	33.9	33.9	42.4	42.4	2.8	2.8		16.3	16.2	
						9.5	26.4		7.6		33.9		42.4		2.8			16.1		
17-Aug-19	Fine	Moderate	12:12	10.6	Surface	1.0	28.2	28.2	8.0	8.0	27.9	27.9	90.9	89.6	6.1	6.0	4.8	2.1	2.2	3.7
						1.0	28.2		8.0		27.9		88.3		5.9					
					Middle	5.3	26.9	27.0	7.8	7.8	33.0	32.9	55.9	56.1	3.7	3.7		1.8	1.7	
						5.3	27.0		7.8		32.9		56.2		3.7			1.7		
					Bottom	9.6	25.7	25.7	7.8	7.8	34.1	34.0	45.0	45.1	3.0	3.0		7.4	7.3	
						9.6	25.7		7.8		34.0		45.1		3.0			7.2		

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Water Quality Monitoring Results at A3 during Mid-flood Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA	
16-Jul-19	Fine	Moderate	05:05	10.1	Surface	1.0	28.1	28.1	8.5	8.5	20.9	20.9	76.4	76.4	5.3	5.3	4.3	1.6	1.6	1.9
						1.0	28.1		8.5		31.2		49.5		5.3			1.6		
					Middle	5.1	25.7	25.7	8.0	8.0	31.1	31.1	50.4	50.0	3.4	3.4	1.2	1.2		
						5.1	25.7		8.0		31.1		50.4		3.4		1.2			
					Bottom	9.1	23.9	23.9	8.0	8.0	33.7	33.7	39.3	39.4	2.7	2.7	2.7	2.8		
						9.1	23.9		8.0		33.7		39.4		2.7		2.8			
18-Jul-19	Sunny	Moderate	06:16	10.5	Surface	1.0	26.4	26.4	8.1	8.1	28.1	28.1	67.8	67.9	4.6	4.6	3.7	1.4	1.4	2.2
						1.0	26.4		8.1		28.1		67.9		4.6			1.4		
					Middle	5.3	23.7	23.7	7.7	7.7	34.6	34.6	39.6	39.6	2.8	2.8	2.5	2.5		
						5.3	23.7		7.7		34.6		39.6		2.8		2.5			
					Bottom	9.5	23.6	23.6	7.7	7.7	34.6	34.6	42.4	42.7	3.0	3.0	3.0	2.7		
						9.5	23.6		7.7		34.6		42.9		3.0		2.7			
20-Jul-19	Cloudy	Moderate	07:15	10.5	Surface	1.0	26.1	26.1	7.9	7.9	28.9	28.9	66.7	66.7	4.6	4.6	4.0	4.4	4.4	4.7
						1.0	26.0		7.9		28.9		66.6		4.6			4.4		
					Middle	5.3	24.8	24.8	7.8	7.8	32.7	32.7	48.6	48.7	3.4	3.4	4.4	4.5		
						5.3	24.8		7.8		32.7		48.7		3.4		4.5			
					Bottom	9.5	24.4	24.4	7.8	7.8	33.2	33.2	46.4	46.5	3.2	3.2	3.2	5.2		
						9.5	24.4		7.8		33.2		46.6		3.2		5.3			
23-Jul-19	Cloudy	Moderate	09:29	14.2	Surface	1.0	26.7	26.7	8.2	8.2	27.0	27.0	121.7	121.6	8.4	8.4	5.5	0.5	0.5	3.6
						1.0	26.7		8.2		27.0		121.4		8.4			0.5		
					Middle	7.1	24.2	24.2	7.8	7.8	33.4	33.4	37.5	37.5	2.6	2.6	1.2	1.2		
						7.1	24.2		7.8		33.4		37.5		2.6		1.2			
					Bottom	13.2	24.0	24.0	7.8	7.8	33.7	33.7	38.3	38.4	2.7	2.7	2.7	9.1		
						13.2	24.0		7.8		33.7		38.5		2.7		9.3			
25-Jul-19	Sunny	Moderate	11:48	10.7	Surface	1.0	29.5	29.5	8.6	8.6	19.0	19.0	184.2	184.1	12.7	12.6	8.0	4.5	4.5	4.5
						1.0	29.5		8.6		19.0		184.0		12.6			4.4		
					Middle	5.4	25.1	25.1	8.0	8.0	31.0	31.0	47.6	47.6	3.3	3.3	4.1	4.1		
						5.4	25.1		8.0		31.0		47.6		3.3		4.1			
					Bottom	9.7	24.6	24.6	8.1	8.1	31.9	31.9	46.6	46.7	3.2	3.2	3.2	5.0		
						9.7	24.6		8.1		31.9		46.7		3.2		5.0			
3-Aug-19	Rainy	Moderate	19:44	10.6	Surface	1.0	27.3	27.3	8.0	8.0	28.2	28.2	81.3	81.3	5.5	5.5	5.5	6.4	6.4	8.4
						1.0	27.3		8.0		28.2		81.3		5.5			6.4		
					Middle	5.3	27.1	27.1	8.0	8.0	29.5	29.5	80.3	80.3	5.4	5.4	8.6	8.6		
						5.3	27.1		8.0		29.5		80.3		5.4		8.6			
					Bottom	9.6	26.9	26.9	8.0	8.0	29.6	29.6	78.0	78.1	5.3	5.3	5.3	10.3		
						9.6	26.9		8.0		29.6		78.1		5.3		10.5			
6-Aug-19	Fine	Moderate	09:40	10.2	Surface	1.0	27.4	27.4	8.0	8.0	27.3	27.3	79.2	79.2	5.4	5.4	5.3	1.5	1.5	2.3
						1.0	27.4		8.0		27.3		79.2		5.4			1.5		
					Middle	5.1	27.4	27.4	8.0	8.0	28.5	28.5	78.0	78.0	5.3	5.3	1.8	1.8		
						5.1	27.4		8.0		28.5		78.0		5.3		1.8			
					Bottom	9.2	27.1	27.1	8.0	8.0	29.5	29.5	75.2	75.5	5.1	5.1	5.1	3.7		
						9.2	27.1		8.0		29.5		75.7		5.1		3.7			
8-Aug-19	Sunny	Moderate	11:19	10.7	Surface	1.0	30.1	30.1	8.3	8.3	28.4	28.4	185.1	185.2	12.0	12.0	9.7	3.5	3.5	3.9
						1.0	30.1		8.3		28.4		185.2		12.0			3.5		
					Middle	5.4	27.6	27.6	8.1	8.1	29.7	29.7	109.9	109.8	7.3	7.3	3.0	3.0		
						5.4	27.6		8.1		29.7		109.7		7.3		3.0			
					Bottom	9.7	27.1	27.1	8.0	8.0	31.0	31.0	72.4	72.6	4.8	4.9	4.9	5.3		
						9.7	27.1		8.0		31.0		72.7		4.9		5.2			
10-Aug-19	Fine	Moderate	14:48	11.9	Surface	1.0	29.5	29.5	8.0	8.0	28.3	28.3	113.0	113.0	7.4	7.4	7.2	2.8	2.8	3.2
						1.0	29.5		8.0		28.3		112.9		7.4			2.9		
					Middle	6.0	29.3	29.3	8.0	8.0	28.5	28.5	106.4	106.3	7.0	7.0	1.3	1.3		
						6.0	29.3		8.0		28.5		106.2		7.0		1.3			
					Bottom	10.9	28.3	28.3	7.9	7.9	30.1	30.1	76.8	76.8	5.1	5.1	5.1	5.6		
						10.9	28.3		7.9		30.1		76.7		5.1		5.6			
13-Aug-19	Cloudy	Rough	04:00	10.1	Surface	1.0	30.1	30.1	8.0	8.0	24.4	24.4	118.8	118.8	7.8	7.8	5.9	1.1	1.1	2.3
						1.0	30.1		8.0		24.4		118.7		7.8			1.1		
					Middle	5.1	27.9	27.9	7.6	7.6	30.7	30.7	60.8	60.3	4.0	4.0	1.2	1.3		
						5.1	27.9		7.6		30.7		59.8		4.0		1.3			
					Bottom	9.1	27.1	27.1	7.5	7.5	32.5	32.5	50.6	50.8	3.4	3.4	3.4	4.6		
						9.1	27.1		7.5		32.5		51.0		3.4		4.6			
15-Aug-19	Cloudy	Rough	05:29	10.4	Surface	1.0	29.3	29.3	8.0	8.0	26.4	26.4	117.3	117.2	7.8	7.8	5.7	1.7	1.7	3.0
						1.0	29.3		8.0		26.4		117.1		7.8			1.7		
					Middle	5.2	27.3	27.3	7.7	7.7	33.4	33.4	54.1	54.1	3.6	3.6	2.1	2.1		
						5.2	27.3		7.7		33.4		54.1		3.6		2.1			
					Bottom	9.4	26.6	26.6	7.6	7.6	33.9	33.9	50.6	50.6	3.4	3.4	3.4	5.1		
						9.4	26.6		7.6		33.9		50.6		3.4		5.1			
17-Aug-19	Rainy	Moderate	07:03	10.7	Surface	1.0	28.8	28.8	8.0	8.0	28.5	28.5	109.1	108.1	7.2	7.1	5.2	2.6	2.6	5.9
						1.0	28.8		8.0		28.5		107.1		7.1			2.6		
					Middle	5.4	26.1	26.1	7.8	7.8	34.0	34.0	47.5	47.5	3.2	3.2	5.0	5.1		
						5.4	26.1		7.8		34.0		47.4		3.2		5.2			
					Bottom	9.7	25.7	25.7	7.8	7.8	34.1	34.1	47.0	47.5	3.2	3.2	3.2	10.1		
						9.7	25.7		7.8		34.1		48.0		3.2		10.2			

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at A4 during Mid-ebb Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	11:32	13.4	Surface	1.0	28.3	28.3	8.3	8.3	26.0	26.0	119.7	119.5	8.1	8.1	5.5	1.2	1.2	2.2
						1.0	28.3		8.3		26.0		119.3		8.0					
						6.7	25.8		7.9		31.7		44.7		3.0					
					Middle	6.7	25.8	7.9	31.7	44.7	3.0	3.0								
						12.4	24.6	7.9	33.6	39.1	2.7	2.7	4.0							
						12.4	24.6	7.9	33.6	39.4	2.7		4.0							
18-Jul-19	Sunny	Moderate	12:53	19.9	Surface	1.0	27.9	27.9	8.2	8.2	28.6	28.6	163.9	163.6	11.0	10.9	7.4	2.0	2.0	3.3
						1.0	27.9		8.2		28.6		163.2		10.9					
						10.0	24.8		7.8		32.7		54.8		3.8					
					Middle	10.0	24.8	7.8	32.7	54.6	3.8	3.8								
						18.9	24.0	7.7	34.3	42.4	2.9	3.0	6.4							
						18.9	24.0	7.7	34.3	42.7	3.0		6.4							
20-Jul-19	Rainy	Moderate	13:43	19.9	Surface	1.0	27.3	27.3	8.0	8.0	26.0	26.0	94.1	94.1	6.5	6.4	5.3	4.2	4.2	7.4
						1.0	27.3		8.0		26.0		94.0		6.4					
						10.0	25.5		7.9		30.8		61.0		4.2					
					Middle	10.0	25.5	7.9	30.8	60.8	4.2	4.2								
						18.9	24.4	7.8	33.2	42.4	2.9	2.9	13.7							
						18.9	24.4	7.8	33.2	42.6	2.9		13.7							
23-Jul-19	Cloudy	Moderate	15:32	14.7	Surface	1.0	28.7	28.8	8.4	8.4	26.4	26.4	185.1	183.0	12.2	12.1	7.6	0.7	0.7	1.2
						1.0	28.8		8.4		26.4		180.9		11.9					
						7.4	24.5		7.8		33.0		43.7		3.0					
					Middle	7.4	24.5	7.8	33.0	43.6	3.0	3.0								
						13.7	24.2	7.8	33.4	43.4	3.0	3.0	2.5							
						13.7	24.2	7.8	33.4	43.6	3.0		2.9							
25-Jul-19	Sunny	Moderate	17:04	15.8	Surface	1.0	30.5	30.5	8.7	8.7	16.8	16.8	204.0	204.2	13.9	14.0	8.9	5.0	5.0	4.5
						1.0	30.5		8.7		16.8		204.3		14.0					
						7.9	25.6		8.1		29.9		55.9		3.9					
					Middle	7.9	25.6	8.1	29.9	55.7	3.8	3.8								
						14.8	24.2	8.1	32.6	44.7	3.1	3.1	4.3							
						14.8	24.2	8.1	32.6	44.8	3.1		4.3							
3-Aug-19	Rainy	Rough	12:55	15.9	Surface	1.0	27.0	27.0	8.0	8.0	29.5	29.5	83.3	83.3	5.6	5.6	5.4	6.1	6.1	8.4
						1.0	27.0		8.0		29.5		83.3		5.6					
						8.0	26.9		8.0		29.9		77.9		5.3					
					Middle	8.0	26.9	8.0	29.9	77.9	5.3	5.3								
						14.9	26.9	8.0	30.3	76.5	5.2	5.2	10.9							
						14.9	26.9	8.0	30.3	76.5	5.2		10.9							
6-Aug-19	Fine	Moderate	15:56	14.0	Surface	1.0	27.8	27.8	8.1	8.1	27.5	27.5	84.5	84.5	5.7	5.7	5.4	1.8	1.8	3.4
						1.0	27.8		8.1		27.5		84.5		5.7					
						7.0	27.3		8.1		28.9		74.7		5.0					
					Middle	7.0	27.3	8.1	28.9	74.7	5.0	5.0								
						13.0	27.0	8.1	30.5	73.3	4.9	4.9	5.3							
						13.0	27.0	8.1	30.5	73.3	4.9		5.3							
8-Aug-19	Fine	Moderate	05:38	14.3	Surface	1.0	28.3	28.3	8.2	8.2	29.1	29.1	134.1	134.0	8.9	8.9	7.4	3.7	3.7	6.0
						1.0	28.3		8.2		29.1		133.9		8.9					
						7.2	27.4		8.0		29.9		87.4		5.9					
					Middle	7.2	27.4	8.0	29.9	87.3	5.8	5.8								
						13.3	27.0	8.0	31.2	67.6	4.5	4.5	10.6							
						13.3	27.0	8.0	31.2	67.7	4.5		10.6							
10-Aug-19	Fine	Moderate	08:06	11.6	Surface	1.0	28.7	28.7	8.2	8.2	27.4	27.4	115.1	115.1	7.7	7.7	7.6	4.5	4.5	4.5
						1.0	28.7		8.2		27.5		115.1		7.7					
						5.8	28.6		8.2		27.5		112.3		7.5					
					Middle	5.8	28.6	8.2	27.5	112.4	7.5	7.5								
						10.6	28.7	8.2	27.5	108.8	7.2	7.2	4.5							
						10.6	28.7	8.2	27.5	108.7	7.2		4.4							
13-Aug-19	Fine	Moderate	10:44	13.8	Surface	1.0	30.5	30.5	8.0	8.0	25.2	25.2	137.2	136.8	9.0	8.9	6.6	2.0	2.0	1.8
						1.0	30.5		8.0		25.2		136.4		8.9					
						6.9	27.8		7.6		31.8		65.9		4.3					
					Middle	6.9	27.8	7.6	31.8	66.1	4.4	4.3								
						12.8	27.7	7.6	32.7	70.4	4.6	4.6	2.2							
						12.8	27.7	7.6	32.7	70.7	4.6		2.2							
15-Aug-19	Fine	Rough	12:00	14.4	Surface	1.0	30.1	30.1	8.1	8.1	26.7	26.7	176.6	176.5	11.5	11.5	7.7	2.1	2.1	3.8
						1.0	30.1		8.1		26.7		176.4		11.5					
						7.2	28.1		7.7		31.9		58.5		3.8					
					Middle	7.2	28.1	7.7	31.9	58.6	3.8	3.8								
						13.4	27.0	7.6	33.7	45.7	3.0	3.0	7.6							
						13.4	27.0	7.6	33.7	45.8	3.0		7.6							
17-Aug-19	Fine	Moderate	13:06	14.9	Surface	1.0	28.1	28.1	7.9	7.9	28.1	28.1	92.5	92.4	6.2	6.2	4.7	2.0	2.0	5.4
						1.0	28.1		7.9		28.1		92.3		6.2					
						7.5	25.2		7.8		34.2		46.8		3.2					
					Middle	7.5	25.1	7.8	34.2	47.1	3.2	3.2								
						13.9	24.4	7.8	34.4	50.0	3.4	3.5	7.2							
						13.9	24.4	7.8	34.4	51.8	3.6		7.2							

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

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 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at A4 during Mid-flood Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	04:13	14.0	Surface	1.0	28.4	28.2	8.6	8.5	19.2	20.2	74.8	74.8	5.2	5.2	4.0	1.8	1.8	1.8
						1.0	28.0		8.5		21.1		74.8		5.2			1.8		
						7.0	24.4		7.9		32.8		40.4		2.8			1.2		
					Middle	7.0	24.3	7.9	32.9	40.5	2.8	1.2								
						Bottom	13.0	23.7	8.0	33.8	41.7	2.9	2.5							
							13.0	23.7	8.0	33.8	41.8	2.9	2.5							
18-Jul-19	Sunny	Moderate	05:17	15.8	Surface	1.0	26.7	26.7	8.1	8.1	27.8	27.8	77.3	77.3	5.2	5.2	4.0	1.5	1.5	2.9
						1.0	26.7		8.1		27.2		77.2		5.2			1.6		
						7.9	23.5		7.7		34.8		39.1		2.7			3.0		
					Middle	7.9	23.5	7.7	34.8	39.1	2.7	3.0								
						Bottom	14.8	23.5	7.7	34.8	39.4	2.7	4.2							
							14.8	23.5	7.7	34.8	39.6	2.8	4.3							
20-Jul-19	Cloudy	Moderate	06:25	15.8	Surface	1.0	26.6	26.6	7.9	7.9	28.1	28.1	81.6	81.6	5.6	5.6	4.4	4.1	4.1	6.0
						1.0	26.6		7.9		28.1		81.5		5.6			4.1		
						7.9	24.6		7.8		32.8		45.8		3.2			5.9		
					Middle	7.9	24.6	7.8	32.8	45.8	3.2	5.9								
						Bottom	14.8	23.9	7.8	33.8	40.9	2.8	7.9							
							14.8	23.9	7.8	33.8	41.1	2.9	8.2							
23-Jul-19	Cloudy	Moderate	08:30	15.8	Surface	1.0	26.7	26.7	8.1	8.1	26.2	26.2	107.8	107.7	7.5	7.5	4.9	0.4	0.4	4.3
						1.0	26.7		8.1		26.2		107.5		7.4			0.4		
						7.9	24.0		7.8		33.6		34.2		2.4			2.1		
					Middle	7.9	24.0	7.8	33.6	34.3	2.4	2.4								
						Bottom	14.8	24.0	7.8	33.7	38.1	2.6	10.2							
							14.8	24.0	7.8	33.7	38.3	2.7	10.6							
25-Jul-19	Sunny	Moderate	10:57	16.1	Surface	1.0	29.5	29.5	8.6	8.6	16.3	16.3	175.3	175.2	12.2	12.2	7.6	5.2	5.2	6.6
						1.0	29.5		8.6		16.3		175.1		12.2			5.2		
						8.1	24.5		8.0		32.0		43.1		3.0			5.3		
					Middle	8.1	24.5	8.0	32.0	43.1	3.0	5.3								
						Bottom	15.1	24.0	8.1	32.8	40.8	2.8	9.4							
							15.1	24.0	8.1	32.8	40.9	2.9	9.4							
3-Aug-19	Rainy	Rough	20:37	16.3	Surface	1.0	26.9	26.9	8.0	8.0	27.8	27.8	83.6	83.6	5.7	5.7	5.6	4.5	4.5	7.3
						1.0	26.9		8.0		27.8		83.6		5.7			4.5		
						8.2	26.9		8.0		29.4		81.4		5.5			7.1		
					Middle	8.2	26.9	8.0	29.4	81.4	5.5	7.2								
						Bottom	15.3	26.9	8.0	29.6	80.2	5.4	10.3							
							15.3	26.9	8.0	29.6	80.2	5.4	10.1							
6-Aug-19	Fine	Moderate	08:45	14.3	Surface	1.0	27.4	27.4	8.0	8.0	27.2	27.2	77.5	77.5	5.3	5.3	5.1	2.0	2.0	3.6
						1.0	27.4		8.0		27.2		77.5		5.3			2.0		
						7.2	27.2		8.0		29.7		71.8		4.8			5.1		
					Middle	7.2	27.2	8.0	29.7	71.8	4.8	5.2								
						Bottom	13.3	27.0	8.0	30.5	69.9	4.7	3.6							
							13.3	27.0	8.0	30.5	69.9	4.7	3.6							
8-Aug-19	Sunny	Moderate	12:10	14.0	Surface	1.0	28.8	28.8	8.3	8.3	28.7	28.7	175.0	175.0	11.5	11.5	8.5	3.4	3.4	6.2
						1.0	28.8		8.3		28.7		174.9		11.5			3.4		
						7.0	27.3		8.0		30.5		80.9		5.4			5.0		
					Middle	7.0	27.3	8.0	30.5	80.9	5.4	4.9								
						Bottom	13.0	26.9	8.0	31.6	64.0	4.3	10.3							
							13.0	26.9	8.0	31.7	64.0	4.3	10.3							
10-Aug-19	Fine	Moderate	15:39	14.5	Surface	1.0	28.7	28.7	8.0	8.0	28.0	28.0	114.5	114.5	7.6	7.6	7.5	1.2	1.2	1.3
						1.0	28.7		8.0		28.0		114.5		7.6			1.2		
						7.3	28.6		8.0		28.0		111.6		7.4			1.3		
					Middle	7.3	28.6	8.0	28.0	111.6	7.4	1.3								
						Bottom	13.5	28.7	8.0	28.0	108.1	7.2	1.3							
							13.5	28.7	8.0	28.0	108.0	7.2	1.2							
13-Aug-19	Cloudy	Rough	03:09	13.7	Surface	1.0	29.7	29.7	7.9	7.9	24.6	24.6	107.7	107.6	7.2	7.1	5.5	1.1	1.2	1.5
						1.0	29.7		7.9		24.6		107.4		7.1			1.2		
						6.9	27.7		7.6		32.3		58.3		3.8			1.1		
					Middle	6.9	27.7	7.6	32.3	57.6	3.8	1.1								
						Bottom	12.7	27.3	7.6	32.7	61.8	4.1	2.1							
							12.7	27.3	7.6	32.7	62.4	4.1	2.1							
15-Aug-19	Fine	Rough	04:34	14.8	Surface	1.0	29.2	29.2	8.0	8.0	26.3	26.3	122.9	122.9	8.1	8.1	5.7	1.7	1.7	3.1
						1.0	29.2		8.0		26.3		122.9		8.1			1.7		
						7.4	26.8		7.6		33.6		49.6		3.3			3.0		
					Middle	7.4	26.8	7.6	33.6	49.6	3.3	3.0								
						Bottom	13.8	26.4	7.6	33.8	46.8	3.1	4.5							
							13.8	26.4	7.6	33.8	46.8	3.1	4.5							
17-Aug-19	Rainy	Moderate	06:00	14.1	Surface	1.0	28.8	28.8	8.1	8.1	27.8	27.8	153.4	153.3	10.1	10.0	7.7	2.2	2.2	5.5
						1.0	28.8		8.1		27.8		153.1		10.0			2.2		
						7.1	28.6		7.9		29.4		81.6		5.4			2.7		
					Middle	7.1	28.6	7.9	29.4	81.7	5.4	2.7								
						Bottom	13.1	26.0	7.8	34.1	48.9	3.3	11.9							
							13.1	26.0	7.8	34.1	49.0	3.3	11.5							

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.



Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.1 – Baseline Water Quality Monitoring Results

Water Quality Monitoring Results at A5 during Mid-ebb Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	11:23	21.1	Surface	1.0	28.2	28.2	8.3	8.3	25.4	25.4	136.4	133.9	9.2	9.1	6.0	1.9	1.9	3.8
						1.0	28.2		8.3		25.5		131.4		8.9			1.9		
						10.6	25.7		7.9		31.9		42.3		2.9			1.1		
					Middle	10.6	25.7	7.9	32.0	31.9	42.3	2.9	2.9	1.1						
						20.1	24.6	7.9	33.6	33.6	37.0	2.5	2.6	8.5						
						20.1	24.6	7.9	33.6	33.6	37.3	2.6	2.6	8.5						
18-Jul-19	Sunny	Moderate	12:45	21.1	Surface	1.0	27.9	27.9	8.2	8.2	28.6	28.6	163.3	163.1	10.9	10.9	6.9	1.9	1.9	3.9
						1.0	27.9		8.2		28.6		162.9		10.9			1.9		
						10.6	24.0		7.7		34.1		41.3		2.9			3.1		
					Middle	10.6	24.0	7.7	34.1	34.1	41.2	2.9	2.9	3.1						
						20.1	23.8	7.7	34.5	34.5	41.1	2.9	2.9	6.8						
						20.1	23.8	7.7	34.5	34.5	41.3	2.9	2.9	6.8						
20-Jul-19	Rainy	Moderate	13:39	21.1	Surface	1.0	27.5	27.5	8.1	8.1	26.1	26.1	116.4	116.5	8.0	8.0	5.5	4.3	4.3	7.3
						1.0	27.5		8.1		26.0		116.6		8.0			4.2		
						10.6	24.5		7.8		33.1		33.1		45.0			3.1		
					Middle	10.6	24.5	7.8	33.1	33.1	45.0	3.1	3.1	4.3						
						20.1	24.1	7.8	33.7	33.7	39.7	2.8	2.8	13.4						
						20.1	24.1	7.8	33.7	33.7	40.1	2.8	2.8	13.5						
23-Jul-19	Cloudy	Moderate	15:26	21.0	Surface	1.0	28.6	28.7	8.5	8.5	26.3	26.3	196.5	195.1	13.0	12.9	7.8	0.6	0.6	2.5
						1.0	28.7		8.5		26.3		193.6		12.8			0.6		
						10.5	24.2		7.8		33.4		33.4		38.6			2.7		
					Middle	10.5	24.2	7.8	33.4	33.4	38.3	2.7	2.7	1.2						
						20.0	24.0	7.8	33.7	33.7	40.7	2.8	2.8	5.8						
						20.0	24.0	7.8	33.7	33.7	41.1	2.9	2.8	6.0						
25-Jul-19	Sunny	Moderate	16:57	21.0	Surface	1.0	30.4	30.4	8.7	8.7	17.0	17.0	199.7	199.5	13.7	13.6	8.2	5.1	5.1	5.9
						1.0	30.4		8.7		17.0		199.2		13.6			5.0		
						10.5	24.3		7.9		32.5		32.5		39.0			2.7		
					Middle	10.5	24.3	7.9	32.5	32.5	39.0	2.7	2.7	5.0						
						20.0	24.0	8.0	32.8	32.8	42.2	2.9	3.0	7.6						
						20.0	24.0	8.0	32.8	32.8	42.4	3.0	3.0	7.7						
3-Aug-19	Rainy	Rough	13:01	20.3	Surface	1.0	26.9	26.9	8.0	8.0	29.6	29.6	80.5	80.5	5.4	5.4	5.4	9.0	9.0	6.3
						1.0	26.9		8.0		29.6		80.5		5.4			9.1		
						10.2	26.9		8.0		29.9		29.9		79.0			5.3		
					Middle	10.2	26.9	8.0	29.9	29.9	79.0	5.3	5.3	5.4						
						19.3	27.0	8.0	30.5	30.5	80.1	5.4	5.4	4.7						
						19.3	27.0	8.0	30.5	30.5	80.1	5.4	5.4	4.6						
6-Aug-19	Fine	Moderate	15:49	20.7	Surface	1.0	27.7	27.7	8.1	8.1	27.7	27.7	83.5	83.5	5.6	5.6	5.3	1.6	1.6	3.5
						1.0	27.7		8.1		27.7		83.5		5.6			1.6		
						10.4	27.2		8.1		29.6		29.6		73.1			4.9		
					Middle	10.4	27.2	8.1	29.6	29.6	73.1	4.9	4.9	4.6						
						19.7	27.1	8.1	30.4	30.4	75.0	5.0	5.0	4.3						
						19.7	27.1	8.1	30.4	30.4	75.0	5.0	5.0	4.3						
8-Aug-19	Fine	Moderate	05:46	21.8	Surface	1.0	28.4	28.4	8.2	8.2	28.8	28.8	136.1	136.0	9.0	9.0	7.1	4.0	4.0	7.2
						1.0	28.4		8.2		28.9		135.9		9.0			4.0		
						10.9	27.2		8.0		30.6		30.6		76.4			5.1		
					Middle	10.9	27.2	8.0	30.6	30.6	76.3	5.1	5.9							
						20.8	26.9	8.0	31.5	31.5	64.4	4.3	4.3	11.6						
						20.8	26.9	8.0	31.5	31.5	64.4	4.3	4.3	11.6						
10-Aug-19	Fine	Moderate	08:12	22.1	Surface	1.0	28.7	28.7	8.2	8.2	27.5	27.5	115.0	115.0	7.6	7.6	7.4	4.4	4.4	4.4
						1.0	28.7		8.2		27.5		114.9		7.6			4.4		
						11.1	28.4		8.2		27.5		27.5		107.1			7.1		
					Middle	11.1	28.4	8.2	27.5	27.5	107.0	7.1	7.1	4.3						
						21.1	28.5	8.2	27.6	27.6	105.9	7.0	7.0	4.6						
						21.1	28.5	8.2	27.6	27.6	105.9	7.0	7.0	4.6						
13-Aug-19	Fine	Moderate	10:39	21.3	Surface	1.0	30.2	30.2	8.0	8.0	25.2	25.2	132.5	132.3	8.7	8.7	6.5	1.4	1.4	4.3
						1.0	30.2		8.0		25.2		132.1		8.7			1.4		
						10.7	28.0		7.7		32.9		32.9		65.1			4.3		
					Middle	10.7	28.0	7.7	32.9	32.9	64.9	4.2	4.2	1.4						
						20.3	26.3	7.5	33.5	33.5	38.7	2.6	2.6	10.0						
						20.3	26.3	7.5	33.5	33.5	39.0	2.6	2.6	10.1						
15-Aug-19	Fine	Rough	11:51	20.6	Surface	1.0	30.0	30.0	8.1	8.1	26.8	26.8	176.9	177.1	11.5	11.5	7.2	3.6	3.5	5.6
						1.0	30.0		8.1		26.8		177.2		11.6			3.3		
						10.3	27.1		7.6		33.7		33.7		42.2			2.8		
					Middle	10.3	27.1	7.6	33.7	33.7	42.2	2.8	2.8	4.1						
						19.6	26.3	7.5	34.0	34.0	43.9	2.9	2.9	9.2						
						19.6	26.3	7.5	34.0	34.0	44.0	2.9	2.9	9.2						
17-Aug-19	Fine	Moderate	12:58	21.7	Surface	1.0	28.1	28.1	7.9	7.9	28.6	28.6	96.9	96.3	6.5	6.4	4.9	1.9	1.8	7.5
						1.0	28.1		7.9		28.6		95.6		6.4			1.8		
						10.9	24.8		7.8		34.3		34.3		49.2			3.4		
					Middle	10.9	24.8	7.8	34.4	34.3	49.5	3.4	3.4	8.4						
						20.7	24.3	7.8	34.5	34.5	52.6	3.6	3.6	12.3						
						20.7	24.3	7.8	34.5	34.5	52.7	3.6	3.6	12.6						

Remarks: DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Water Quality Monitoring Results at A5 during Mid-flood Tide																				
Date	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA	Value	Average	DA
16-Jul-19	Fine	Moderate	04:19	22.1	Surface	1.0	28.7	28.7	8.6	8.6	19.0	19.0	76.5	76.5	5.3	5.3	4.1	1.1	1.1	4.2
						1.0	28.7		8.6		19.0		76.5		5.3					
					Middle	11.1	23.8	23.8	8.0	8.0	33.8	33.8	41.2	41.1	2.8	2.8		1.9	1.9	
						11.1	23.8		8.0		33.8		40.9		2.8					
					Bottom	21.1	23.6	23.6	8.0	8.0	33.8	33.8	41.5	41.6	2.9	2.9		9.5	9.5	
						21.1	23.6		8.0		33.8		41.7		2.9					
18-Jul-19	Sunny	Moderate	05:23	20.4	Surface	1.0	26.8	26.8	8.1	8.1	27.6	27.6	68.3	68.5	4.6	4.6	3.7	1.4	1.4	2.7
						1.0	26.8		8.1		27.7		68.7		4.6					
					Middle	10.2	24.0	24.0	7.7	7.7	34.1	34.1	39.9	40.0	2.8	2.8		2.4	2.4	
						10.2	24.0		7.7		34.1		40.0		2.8					
					Bottom	19.4	23.3	23.3	7.7	7.7	34.8	34.8	41.5	41.6	2.9	2.9		4.5	4.5	
						19.4	23.3		7.7		34.8		41.6		2.9					
20-Jul-19	Cloudy	Moderate	06:33	20.5	Surface	1.0	26.6	26.6	7.9	7.9	27.8	27.8	80.9	80.9	5.6	5.6	4.2	4.0	4.0	6.4
						1.0	26.6		7.9		27.8		80.8		5.6					
					Middle	10.3	24.2	24.2	7.8	7.8	33.5	33.5	42.2	42.1	2.9	2.9		6.6	6.6	
						10.3	24.2		7.8		33.5		42.0		2.9					
					Bottom	19.5	23.9	23.9	7.8	7.8	33.8	33.8	40.9	41.0	2.8	2.8		8.7	8.7	
						19.5	23.9		7.8		33.8		41.0		2.9					
23-Jul-19	Cloudy	Moderate	08:37	21.4	Surface	1.0	26.2	26.3	8.0	8.0	29.2	29.2	91.0	89.2	6.2	6.1	4.5	0.3	0.3	1.0
						1.0	26.3		8.0		29.1		87.3		6.0					
					Middle	10.7	23.9	23.9	7.8	7.8	33.7	33.7	42.4	42.4	2.9	2.9		0.4	0.4	
						10.7	23.9		7.8		33.7		42.4		2.9					
					Bottom	20.4	23.9	23.9	7.8	7.8	33.8	33.8	43.0	43.0	3.0	3.0		2.3	2.3	
						20.4	23.9		7.8		33.8		43.0		3.0					
25-Jul-19	Sunny	Moderate	11:01	20.6	Surface	1.0	29.7	29.7	8.6	8.6	15.2	15.2	165.1	165.1	11.5	11.5	7.2	5.2	5.3	5.6
						1.0	29.7		8.6		15.2		165.0		11.5					
					Middle	10.3	24.3	24.3	8.0	8.0	32.3	32.3	40.7	40.7	2.8	2.8		4.8	4.8	
						10.3	24.3		8.0		32.3		40.7		2.8					
					Bottom	19.6	24.1	24.1	8.1	8.1	32.8	32.8	41.8	41.9	2.9	2.9		6.6	6.6	
						19.6	24.1		8.1		32.8		41.9		2.9					
3-Aug-19	Rainy	Rough	20:30	21.4	Surface	1.0	27.7	27.7	8.0	8.0	28.6	28.6	84.3	84.3	5.7	5.7	5.5	5.3	5.3	9.1
						1.0	27.7		8.0		28.6		84.3		5.7					
					Middle	10.7	26.9	26.9	8.0	8.0	29.7	29.7	78.8	78.8	5.3	5.3		9.1	9.0	
						10.7	26.9		8.0		29.7		78.8		5.3					
					Bottom	20.4	26.9	26.9	8.0	8.0	30.1	30.1	76.1	76.1	5.1	5.1		12.9	12.8	
						20.4	26.9		8.0		30.1		76.1		5.1					
6-Aug-19	Fine	Moderate	08:53	21.8	Surface	1.0	27.4	27.4	8.0	8.0	27.4	27.4	78.3	78.3	5.3	5.3	5.1	1.9	1.9	4.3
						1.0	27.4		8.0		27.4		78.3		5.3					
					Middle	10.9	27.2	27.2	8.0	8.0	29.6	29.6	72.6	72.6	4.9	4.9		4.6	4.6	
						10.9	27.2		8.0		29.6		72.6		4.9					
					Bottom	20.8	27.0	27.0	8.0	8.0	30.5	30.5	73.5	73.5	4.9	4.9		6.3	6.3	
						20.8	27.0		8.0		30.5		73.5		4.9					
8-Aug-19	Sunny	Moderate	12:06	20.7	Surface	1.0	28.9	28.9	8.3	8.3	28.7	28.7	168.7	168.5	11.1	11.1	8.0	3.5	3.6	7.5
						1.0	28.9		8.3		28.7		168.2		11.1					
					Middle	10.4	27.1	27.1	8.0	8.0	31.0	31.0	72.5	72.6	4.8	4.9		7.3	7.3	
						10.4	27.1		8.0		31.0		72.7		4.9					
					Bottom	19.7	26.9	26.9	8.0	8.0	31.8	31.8	62.4	62.5	4.2	4.2		11.6	11.6	
						19.7	26.9		8.0		31.8		62.5		4.2					
10-Aug-19	Fine	Moderate	15:32	21.6	Surface	1.0	28.7	28.7	8.0	8.0	28.0	28.0	114.4	114.4	7.6	7.6	7.3	1.2	1.2	1.2
						1.0	28.7		8.0		28.0		114.3		7.6					
					Middle	10.8	28.4	28.4	8.0	8.0	28.0	28.0	106.4	106.4	7.1	7.1		1.0	1.0	
						10.8	28.4		8.0		28.0		106.4		7.1					
					Bottom	20.6	28.5	28.5	8.0	8.0	28.2	28.2	105.3	105.3	7.0	7.0		1.4	1.4	
						20.6	28.5		8.0		28.2		105.2		7.0					
13-Aug-19	Cloudy	Rough	03:16	21.5	Surface	1.0	29.6	29.6	7.9	7.9	24.5	24.5	103.5	103.0	6.9	6.9	5.3	1.1	1.1	5.0
						1.0	29.6		7.9		24.5		102.5		6.8					
					Middle	10.8	27.7	27.7	7.6	7.6	32.7	32.7	57.7	57.7	3.8	3.8		2.2	2.3	
						10.8	27.7		7.6		32.7		57.6		3.8					
					Bottom	20.5	26.0	26.0	7.5	7.5	33.7	33.7	35.1	35.2	2.4	2.4		11.7	11.8	
						20.5	26.0		7.5		33.7		35.2		2.4					
15-Aug-19	Fine	Rough	04:39	21.6	Surface	1.0	29.2	29.2	8.0	8.0	26.3	26.3	120.3	120.3	8.0	8.0	5.6	1.6	1.6	6.1
						1.0	29.2		8.0		26.3		120.2		8.0					
					Middle	10.8	26.7	26.7	7.7	7.7	33.8	33.8	48.1	48.1	3.2	3.2		3.6	3.6	
						10.8	26.7		7.7		33.8		48.1		3.2					
					Bottom	20.6	25.1	25.1	7.6	7.6	34.2	34.2	43.8	43.8	3.0	3.0		13.2	13.2	
						20.6	25.1		7.6		34.2		43.8		3.0					
17-Aug-19	Rainy	Moderate	06:08	20.8	Surface	1.0	28.6	28.6	8.1	8.1	27.9	27.9	133.2	133.0	8.8	8.8	6.1	2.2	2.2	4.7
						1.0	28.6		8.1		27.9		132.7		8.8					
					Middle	10.4	26.3	26.3	7.8	7.8	34.0	34.0	51.8	51.6	3.4	3.4		4.4	4.4	
						10.4	26.2		7.8		34.0		51.4		3.4					
					Bottom	19.8	25.9	25.9	7.8	7.8	34.1	34.1	50.6	50.8	3.4	3.4		7.4	7.4	
						19.8	25.9		7.8		34.1		51.0		3.4					

Remarks: DA: Depth-averaged

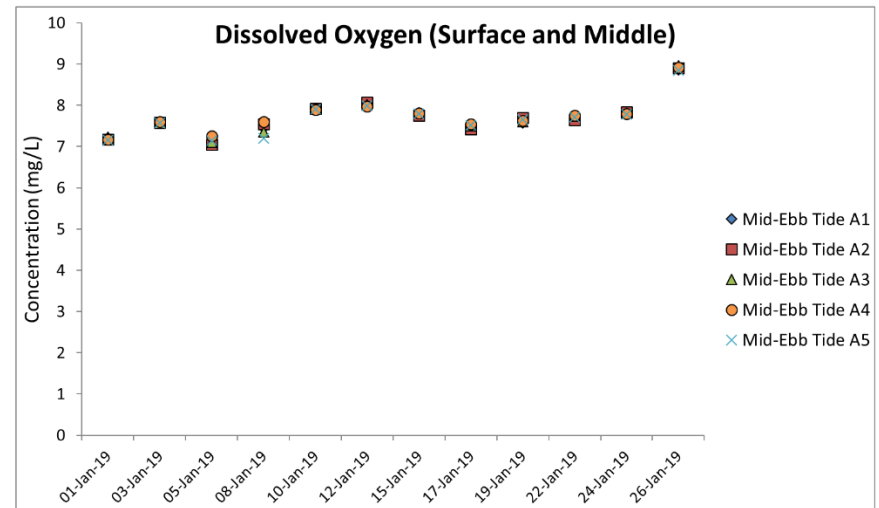
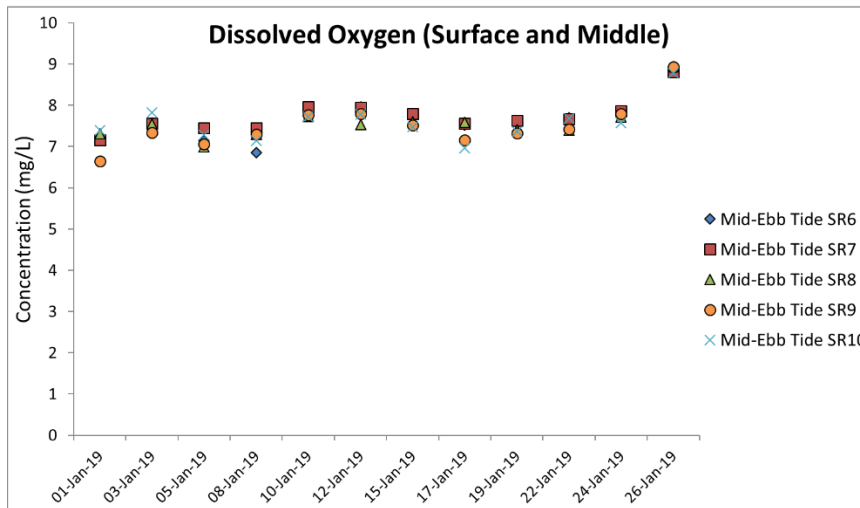
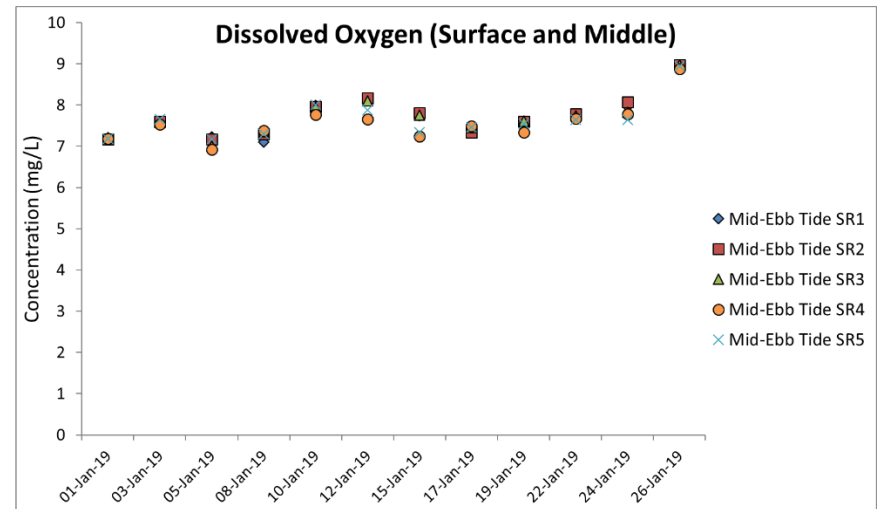
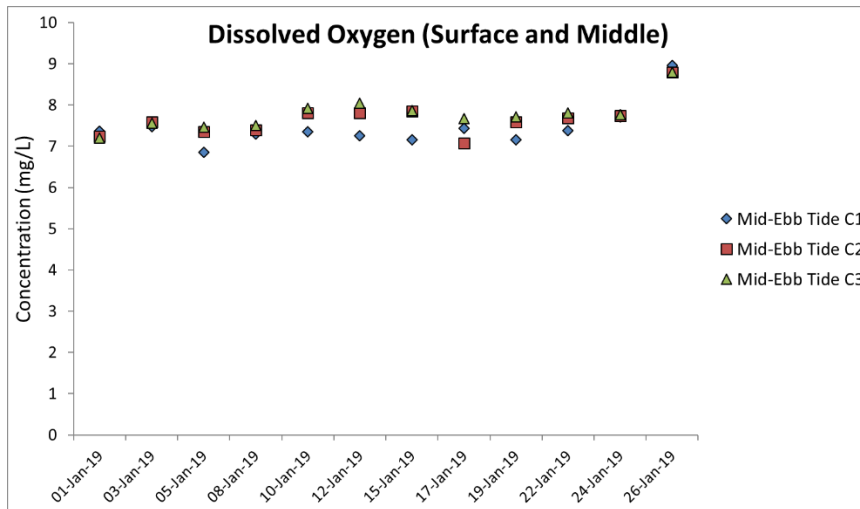
Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

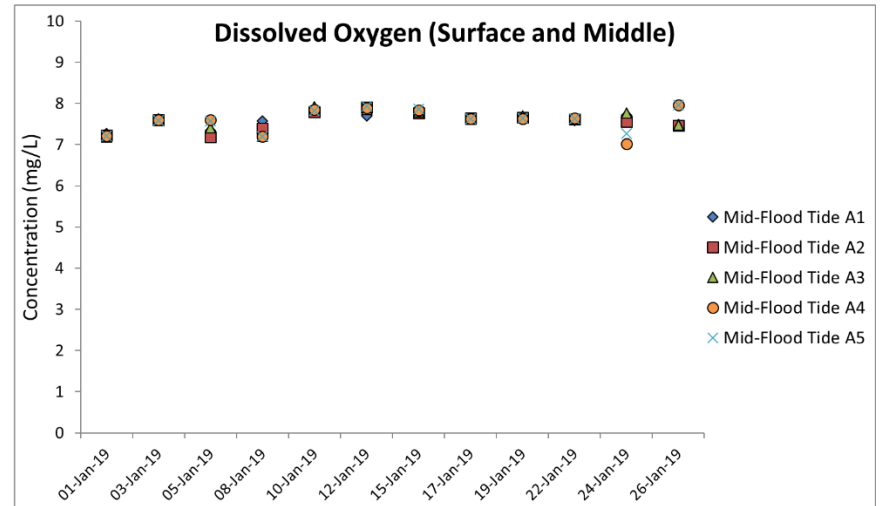
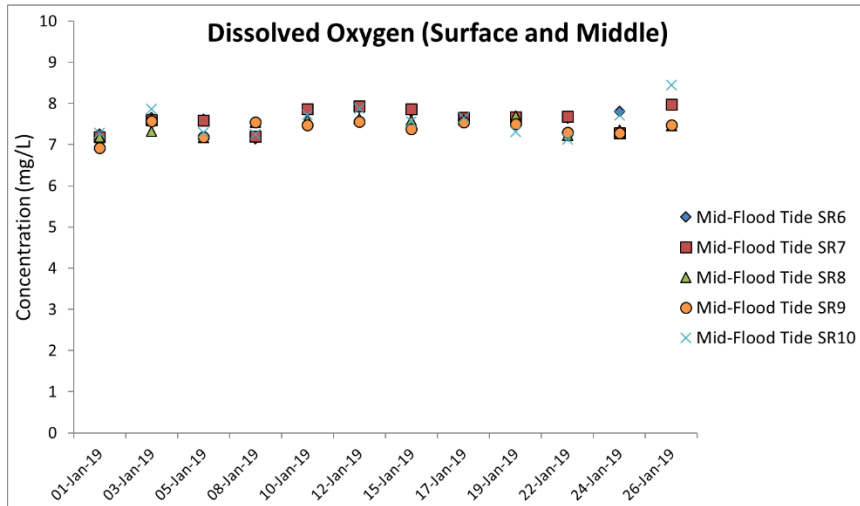
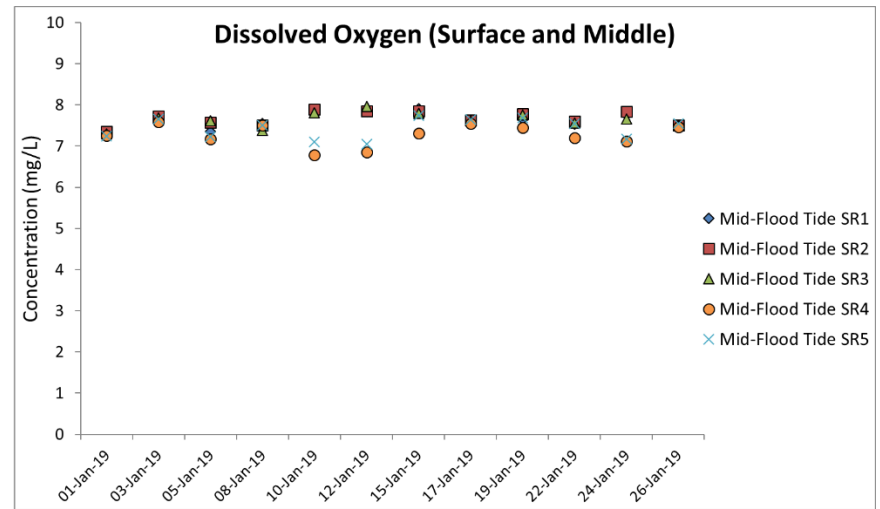
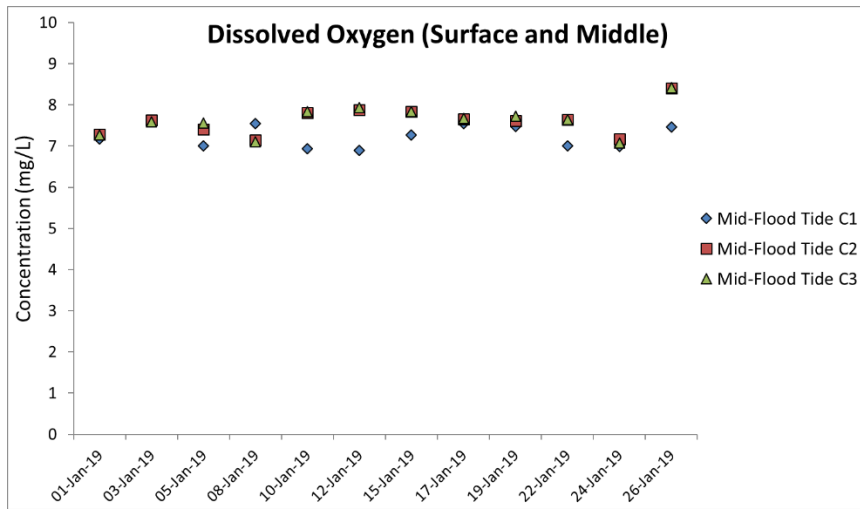
## **Appendix 3.2 Graphical Presentations of Baseline Water Quality Monitoring Results**

# **Annex I Graphical Presentations of Baseline Water Quality Monitoring Results (January 2019)**

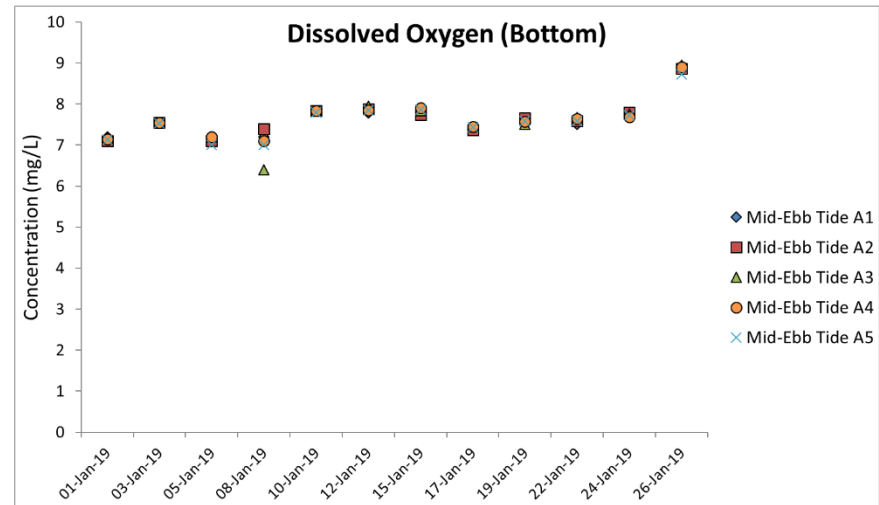
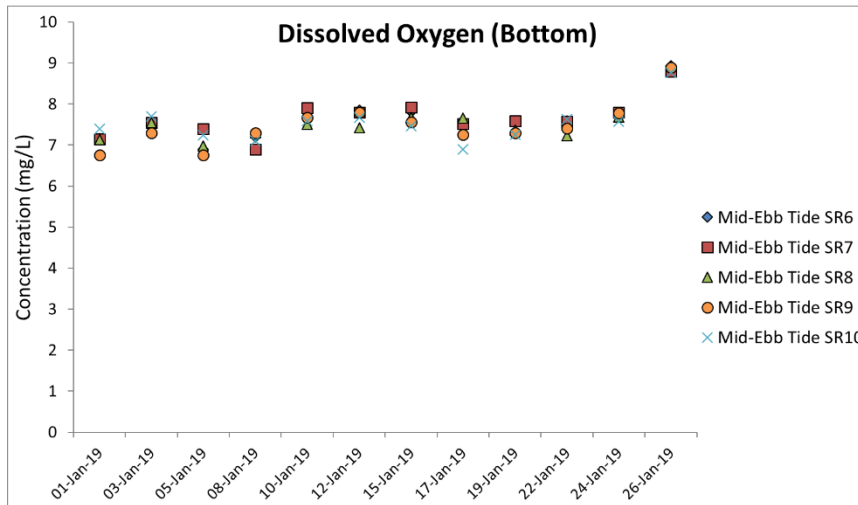
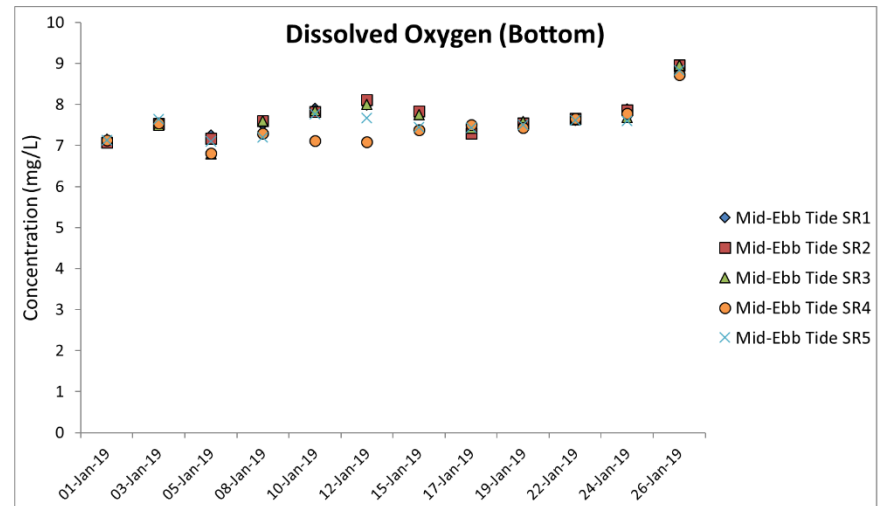
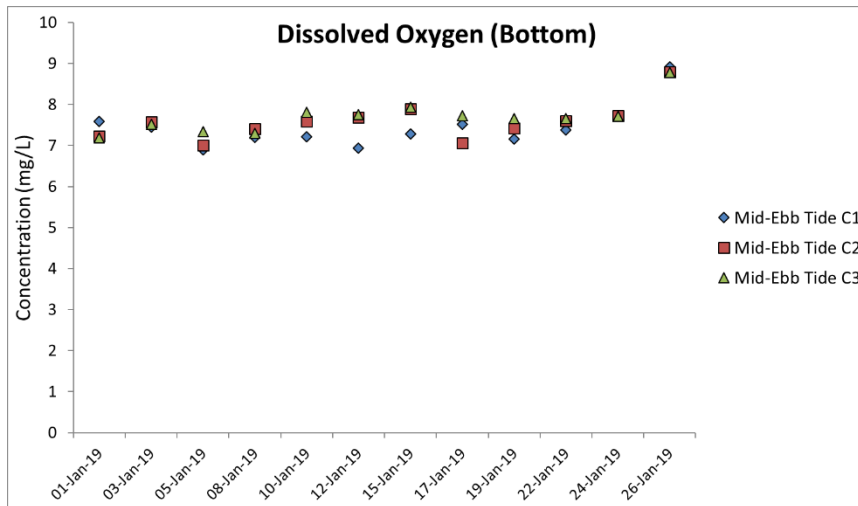
Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.2 – Graphical Presentations of Baseline Water Quality Monitoring Results



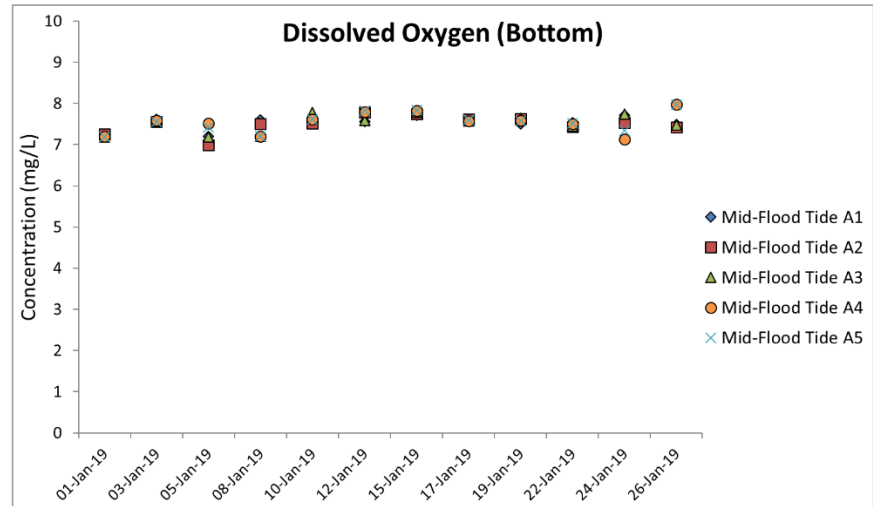
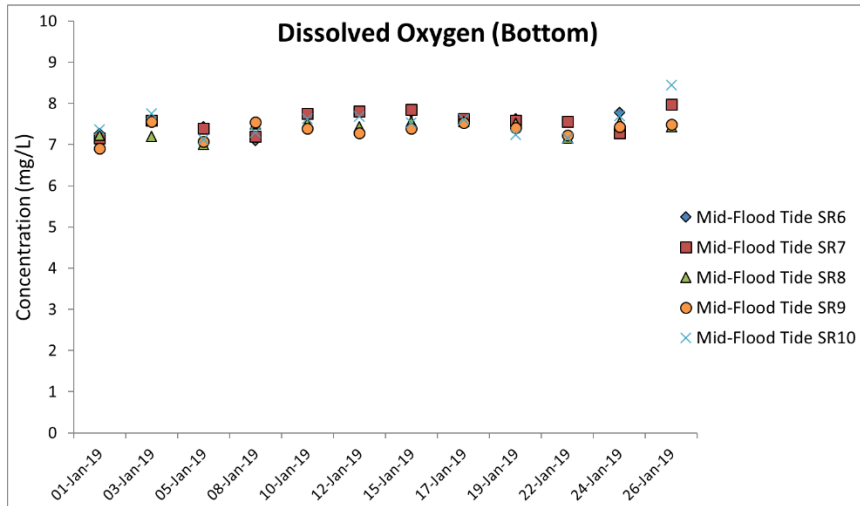
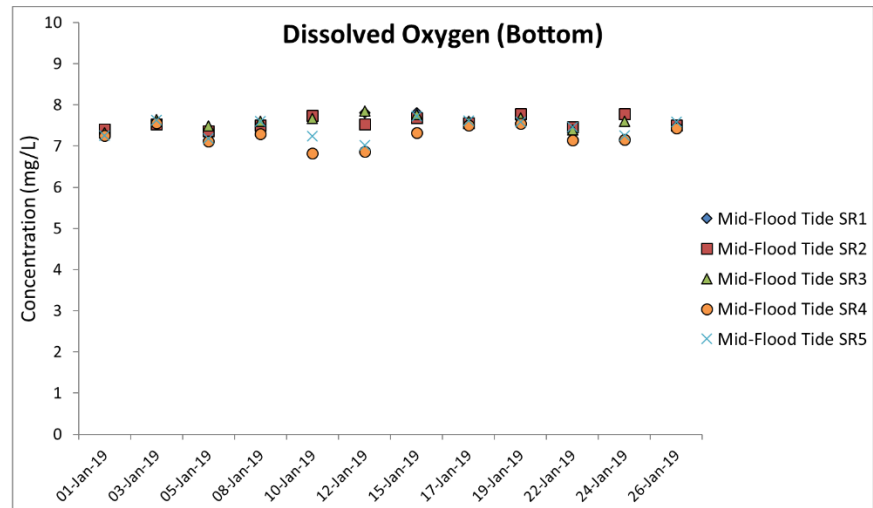
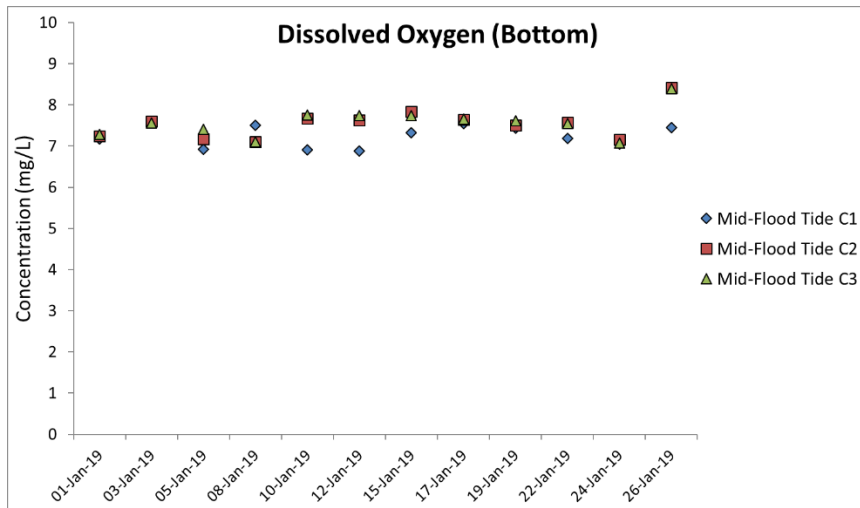
Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.2 – Graphical Presentations of Baseline Water Quality Monitoring Results



Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.2 – Graphical Presentations of Baseline Water Quality Monitoring Results

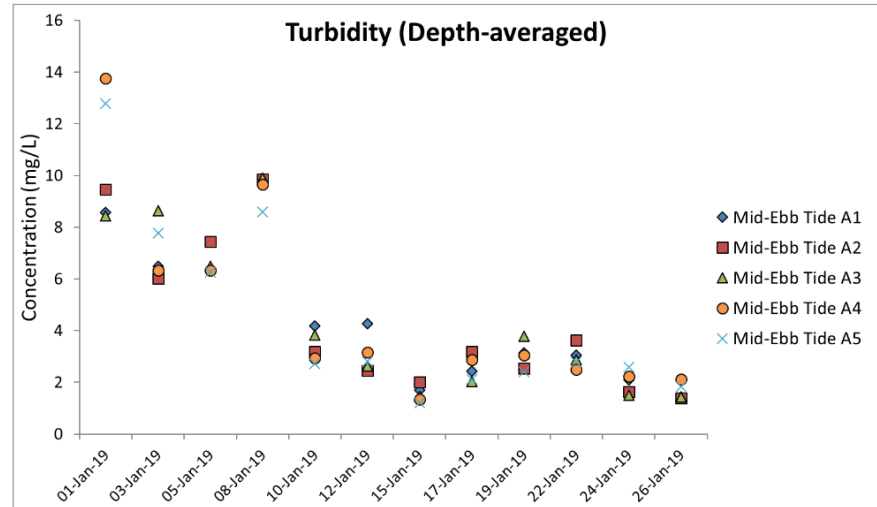
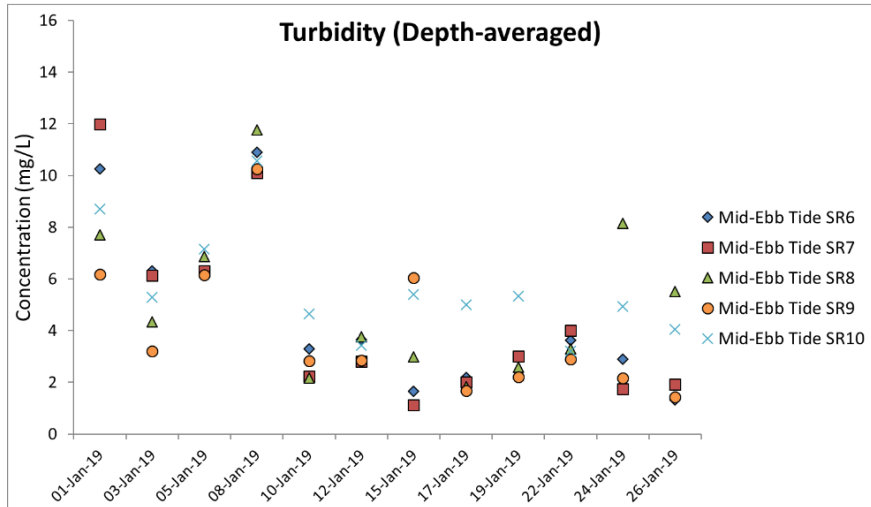
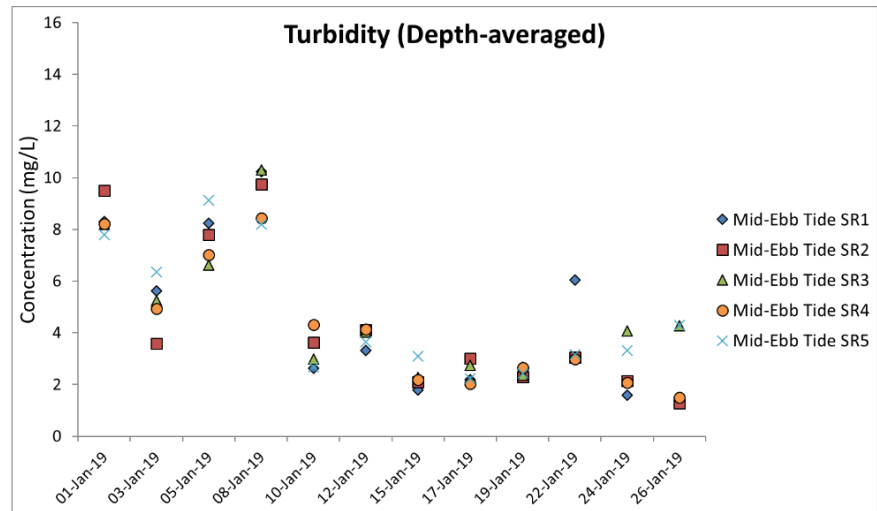
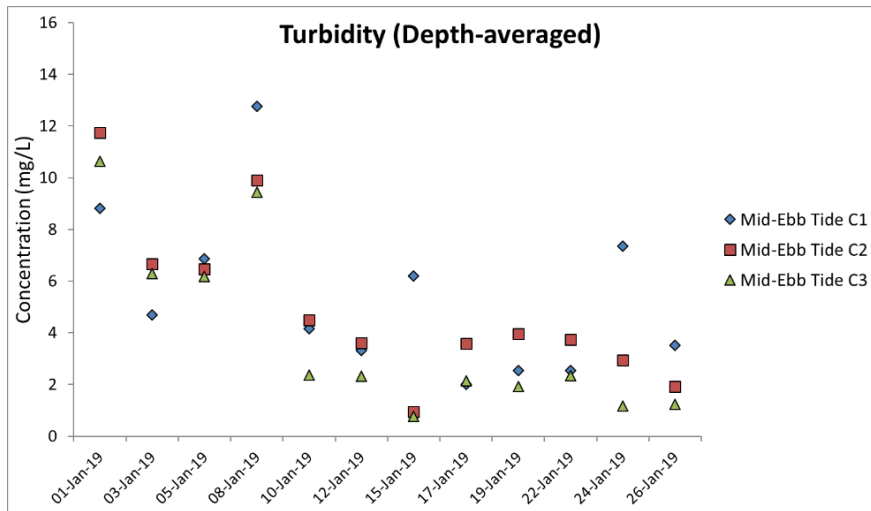


Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
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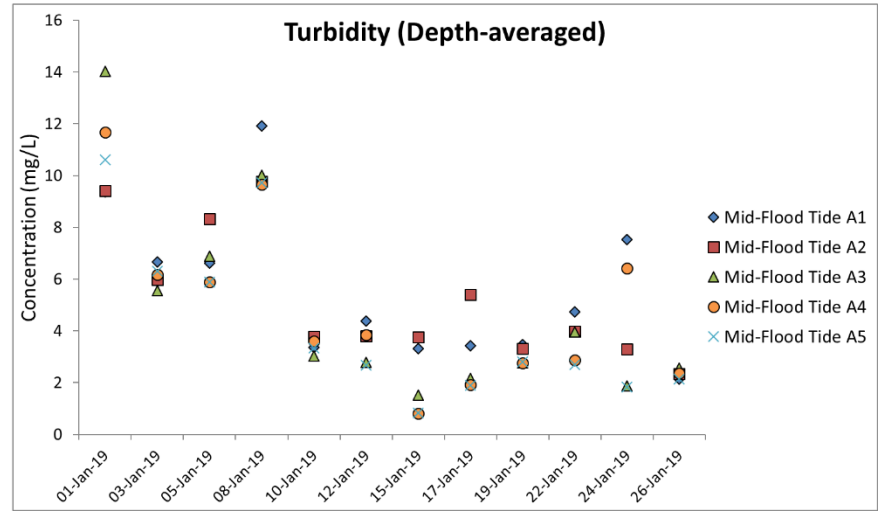
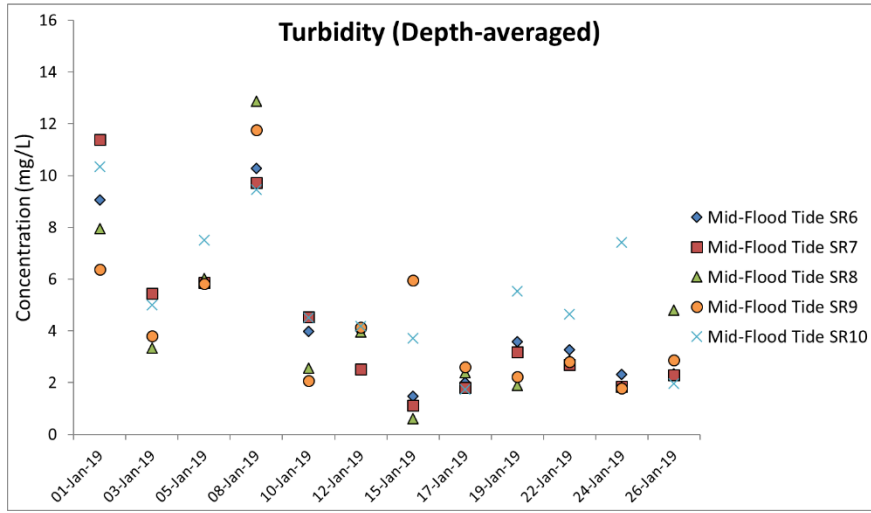
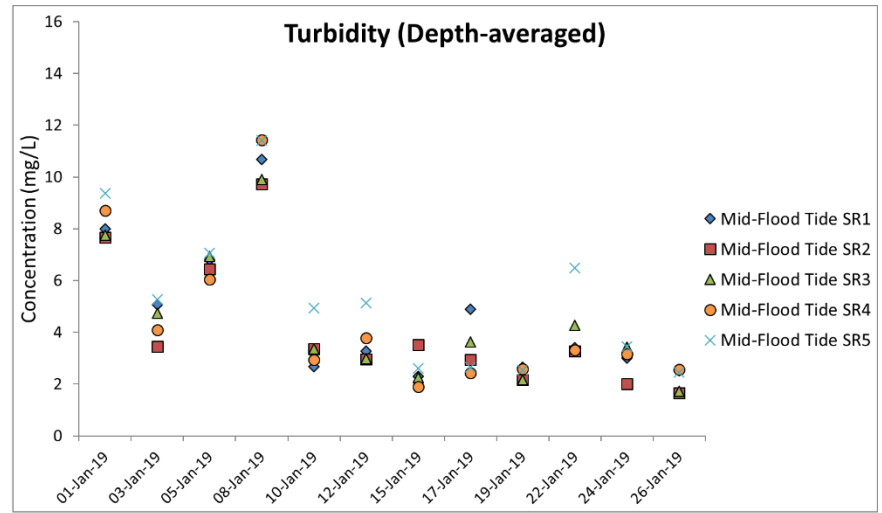
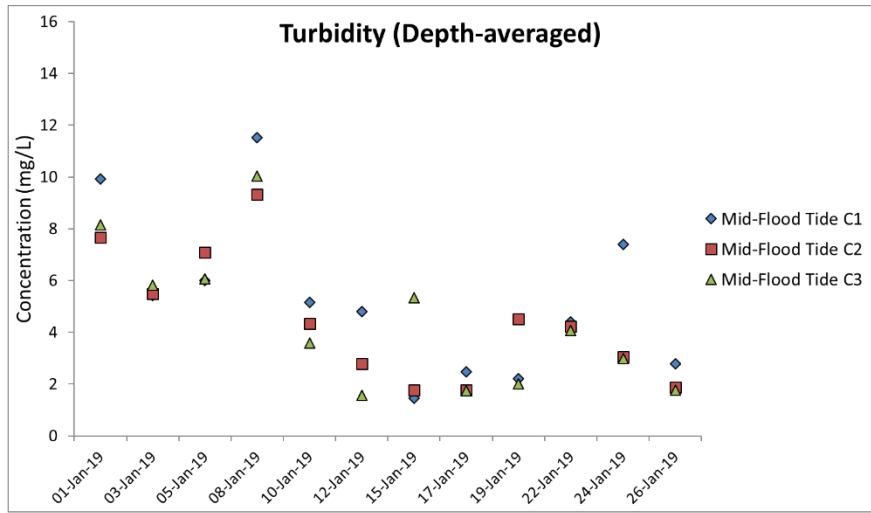




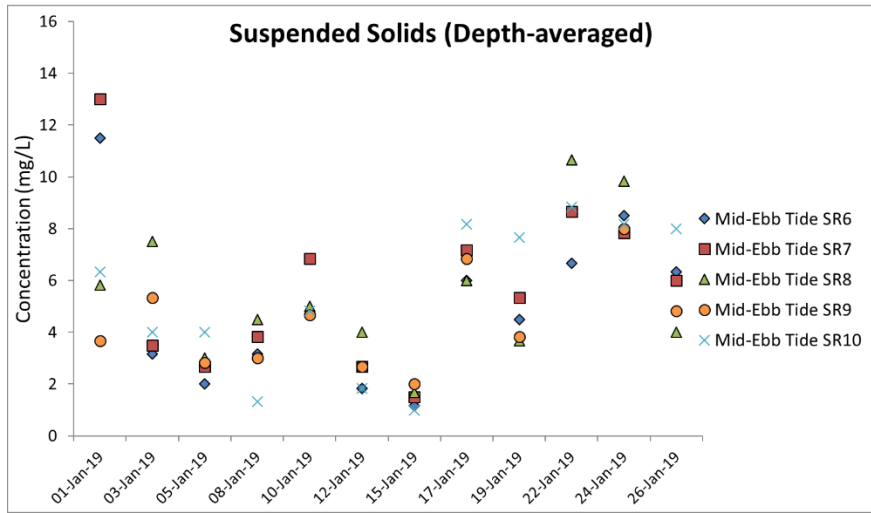
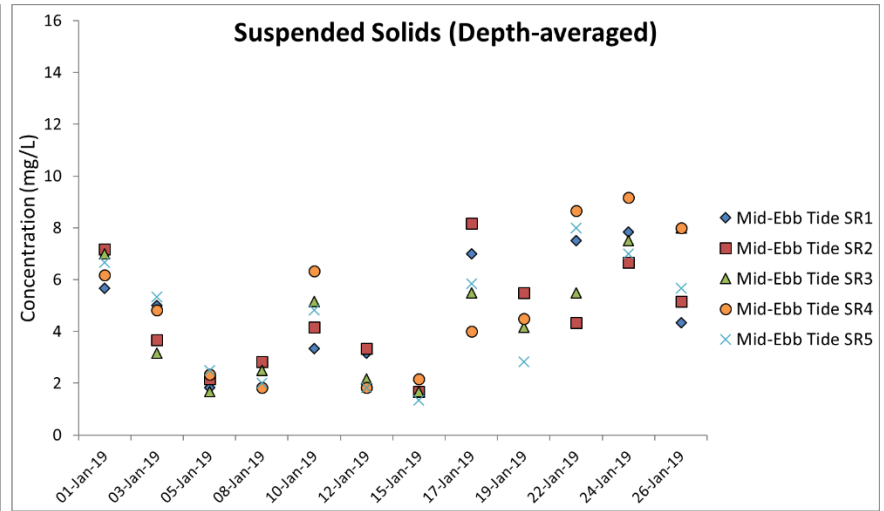
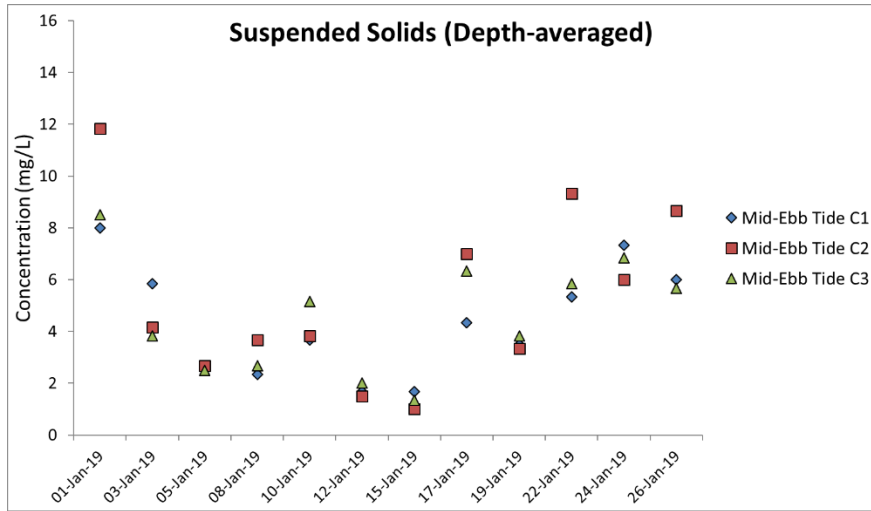
Improvement Dredging for Lamma Power Station Navigation Channel  
Baseline Water Quality Monitoring  
Appendix 3.2 – Graphical Presentations of Baseline Water Quality Monitoring Results



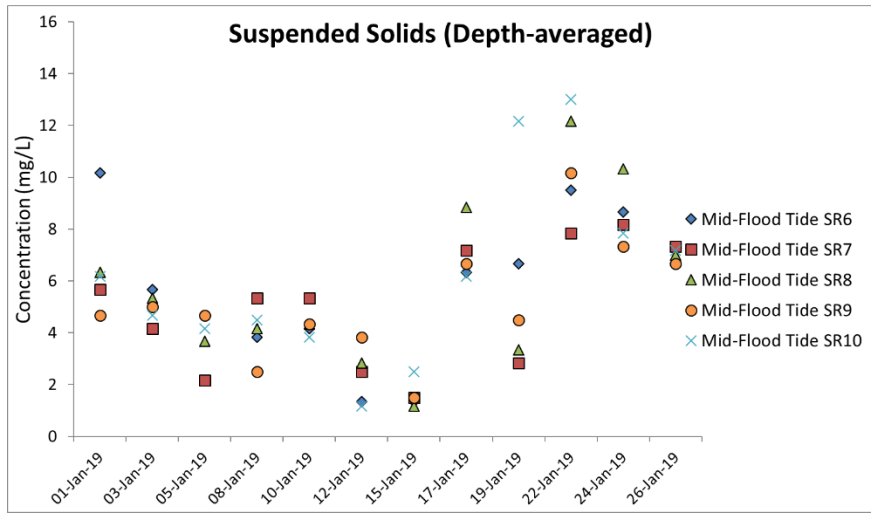
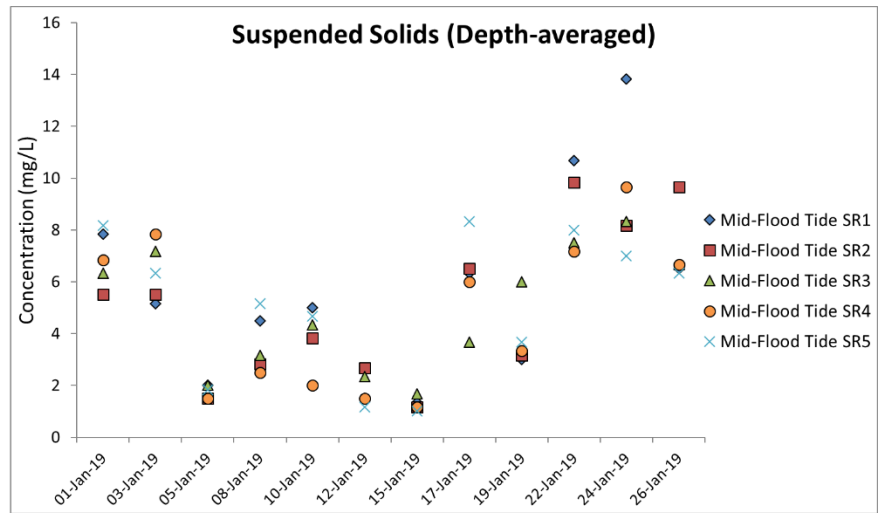
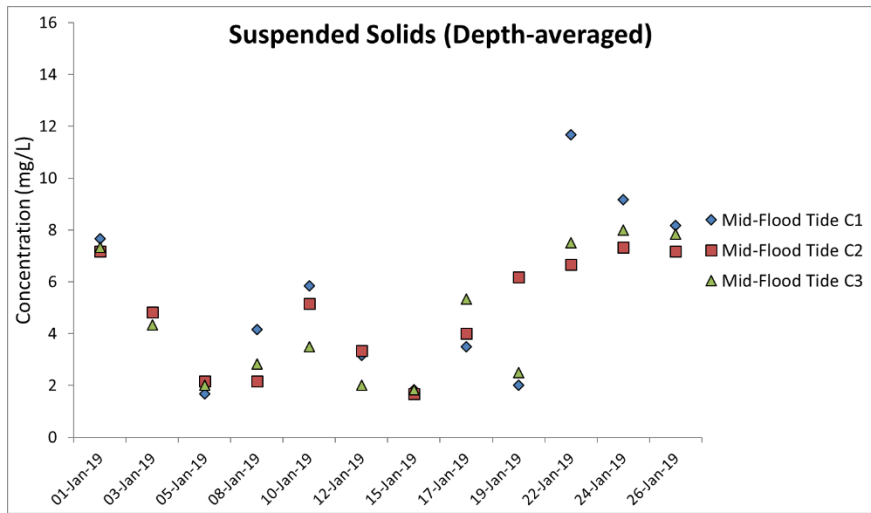
Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.2 – Graphical Presentations of Baseline Water Quality Monitoring Results



Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.2 – Graphical Presentations of Baseline Water Quality Monitoring Results

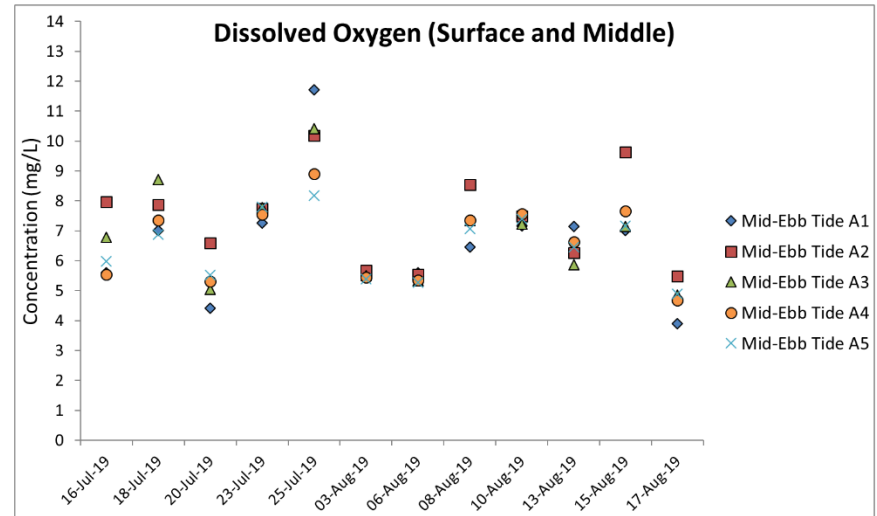
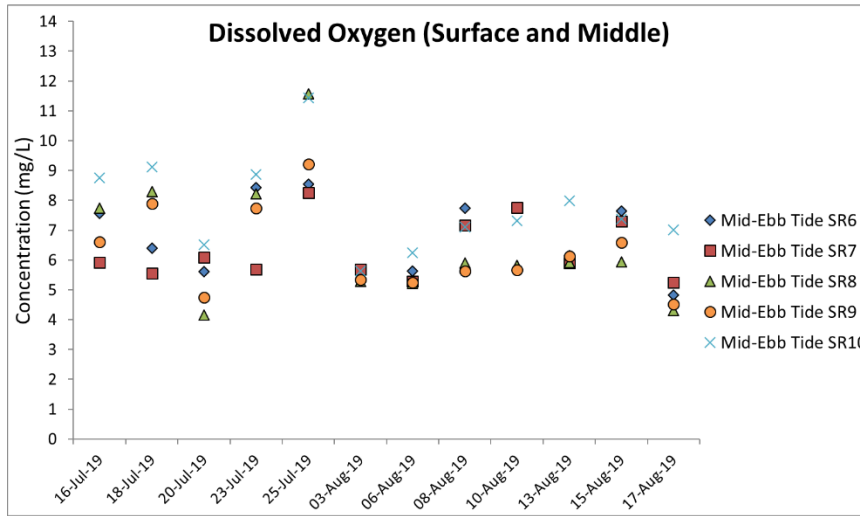
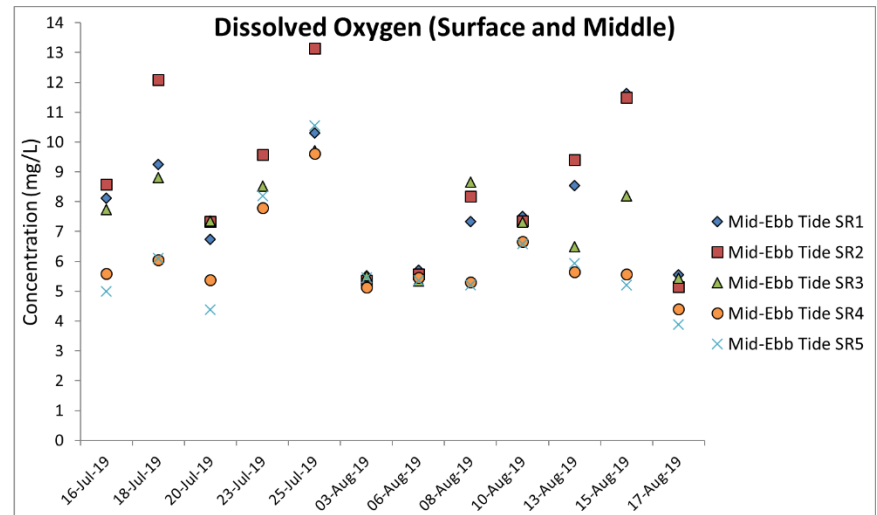
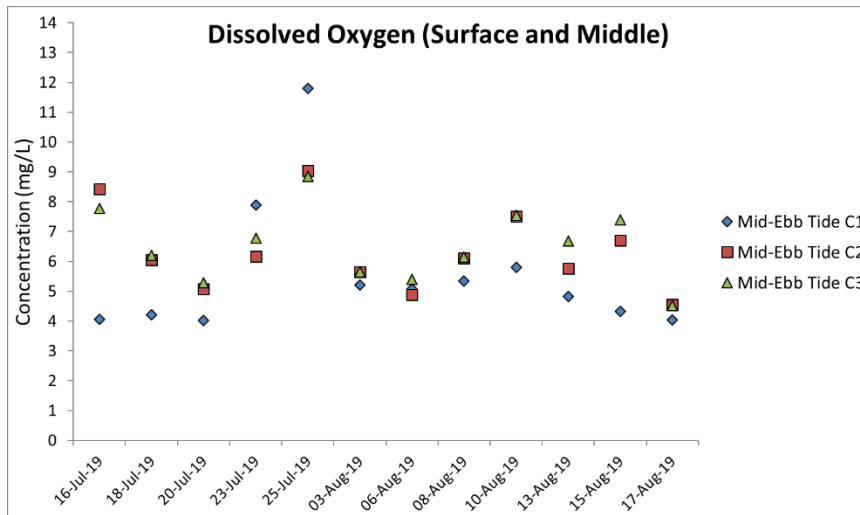


Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.2 – Graphical Presentations of Baseline Water Quality Monitoring Results



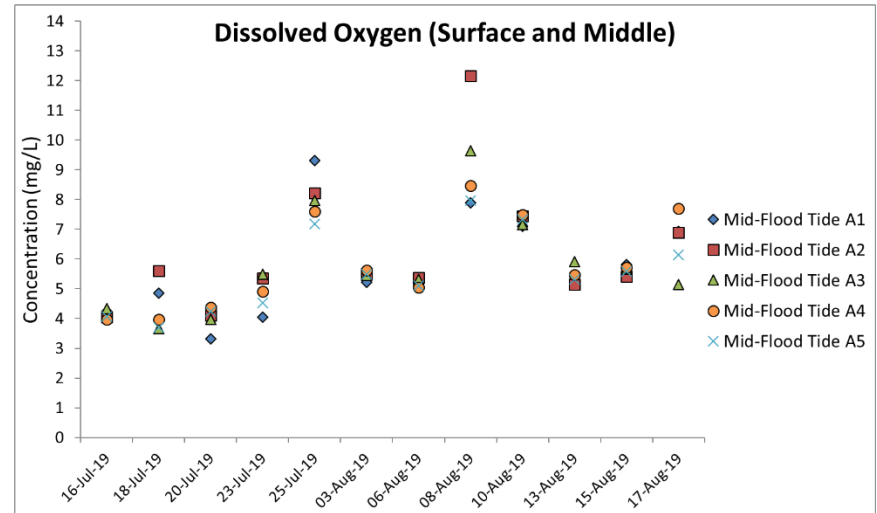
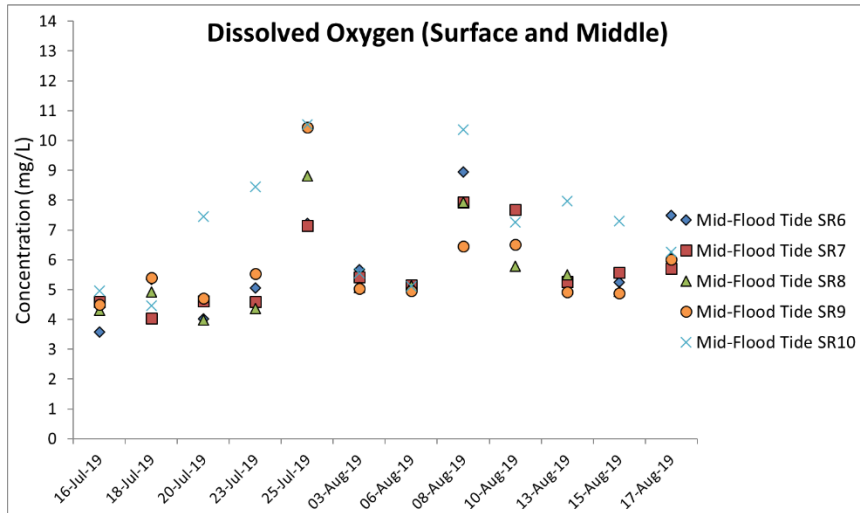
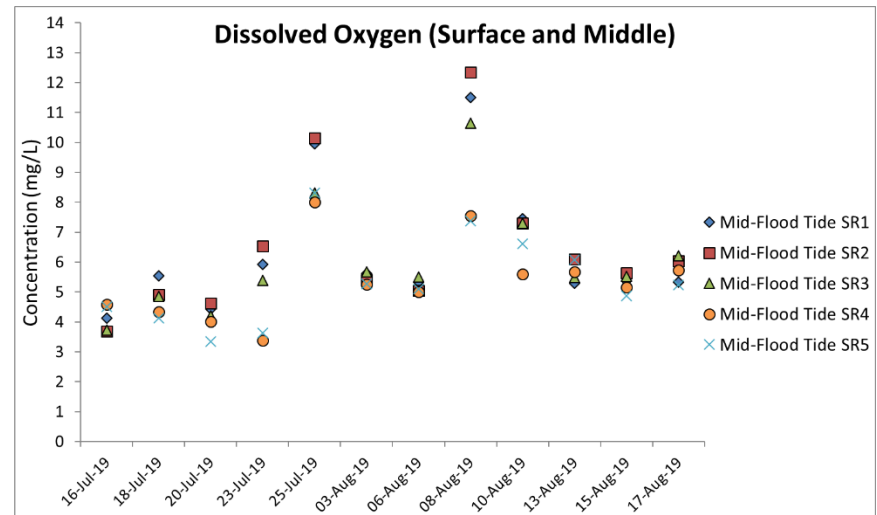
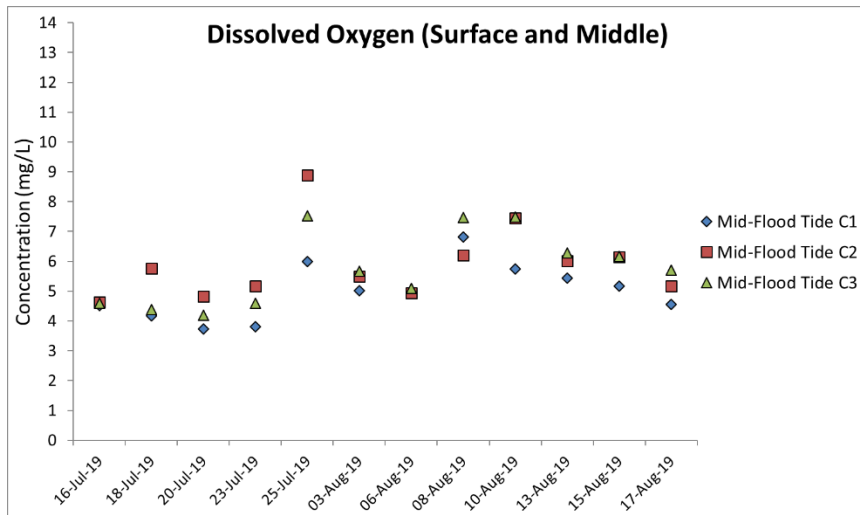
## **Annex II Graphical Presentations of Baseline Water Quality Monitoring Results (July and August 2019)**

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.2 – Graphical Presentations of Baseline Water Quality Monitoring Results



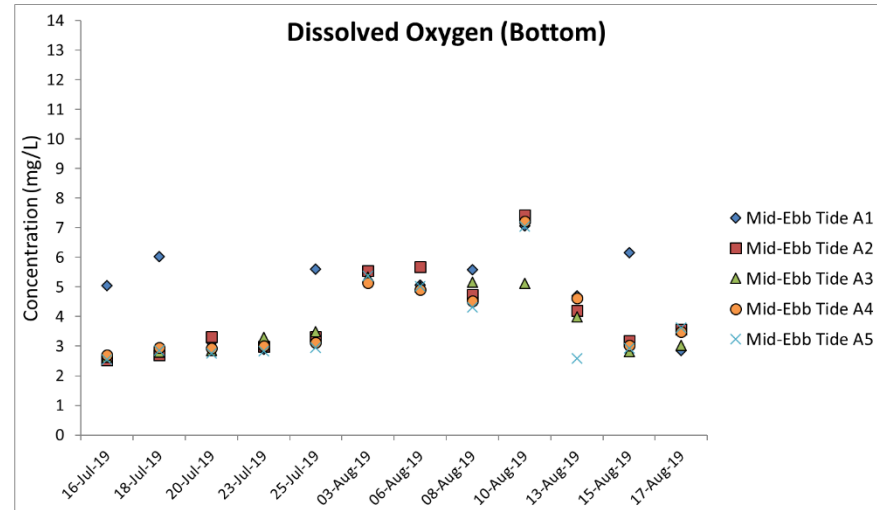
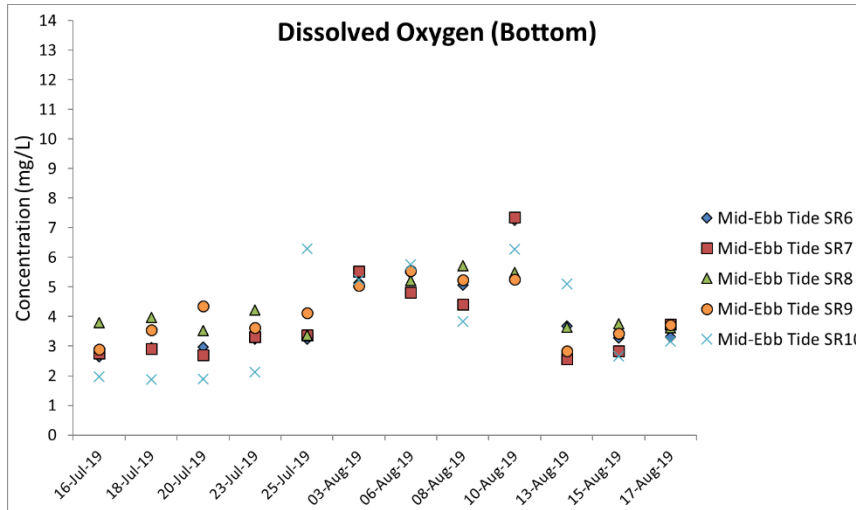
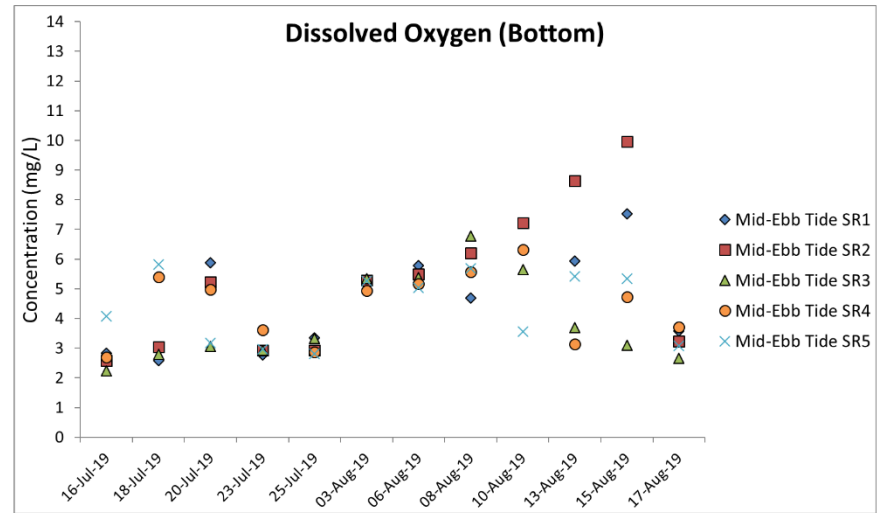
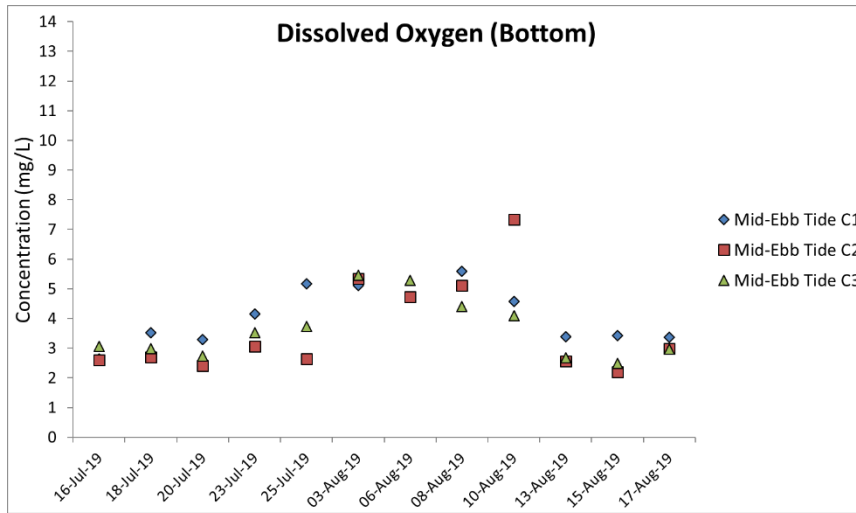
Remark: The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.2 – Graphical Presentations of Baseline Water Quality Monitoring Results



Remark: The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

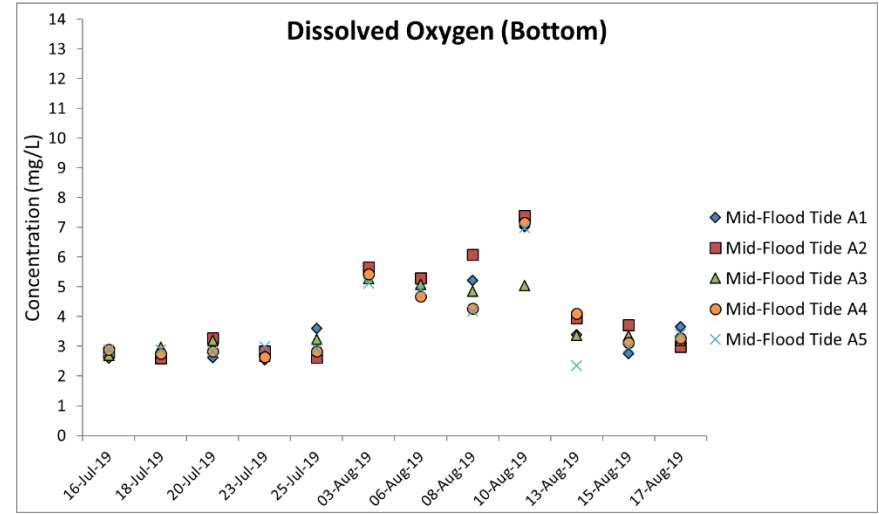
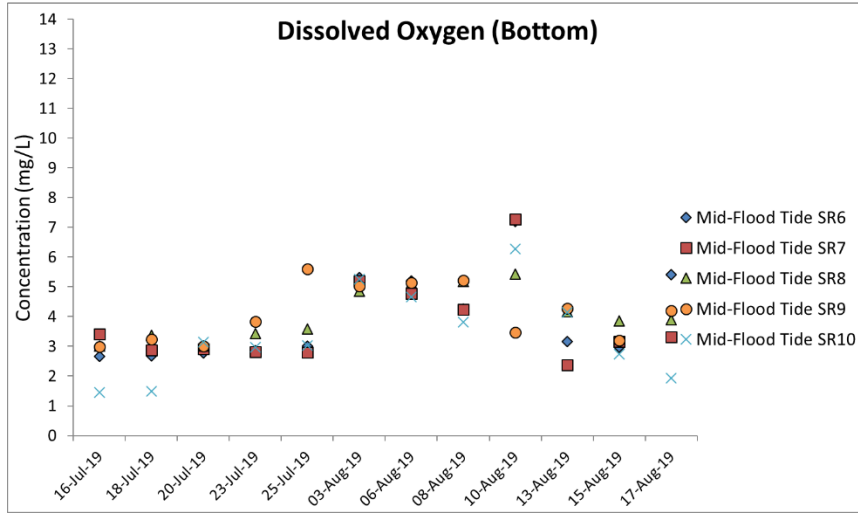
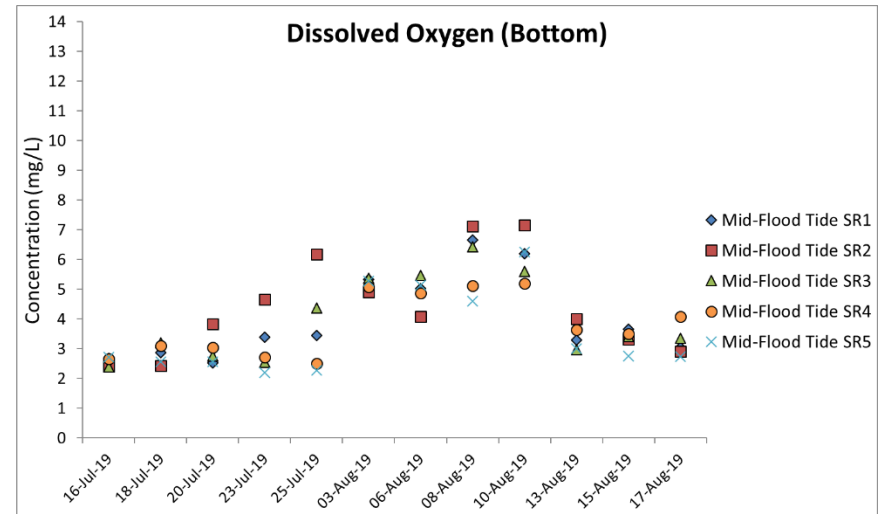
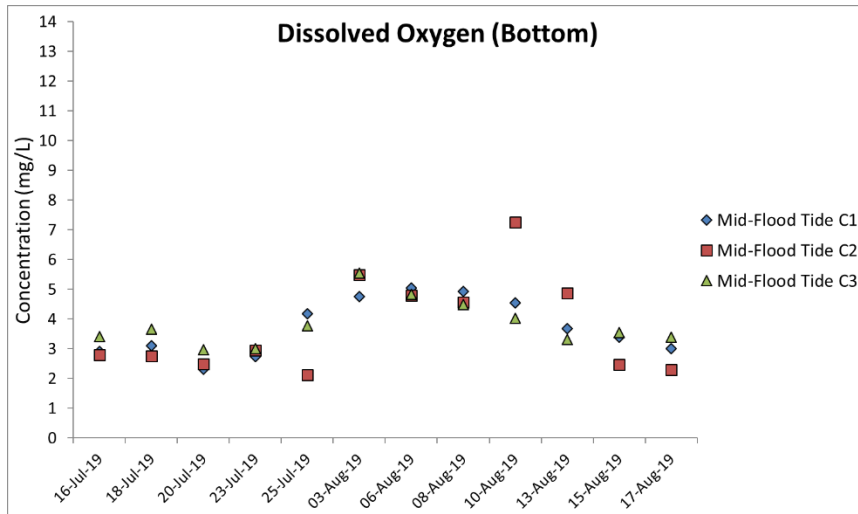
Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.2 – Graphical Presentations of Baseline Water Quality Monitoring Results



Remark: The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

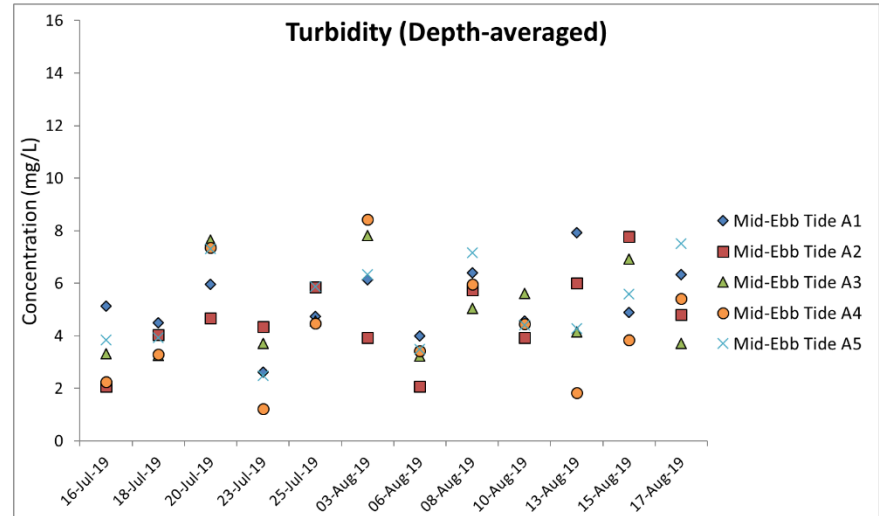
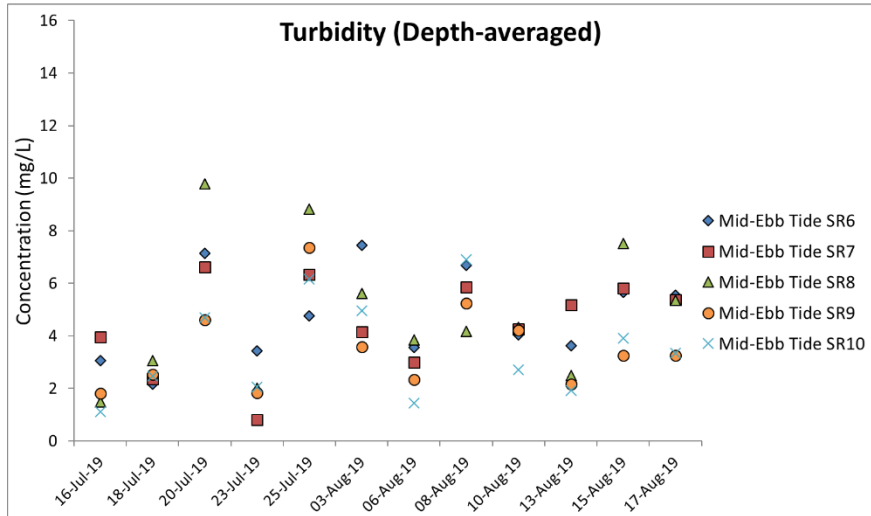
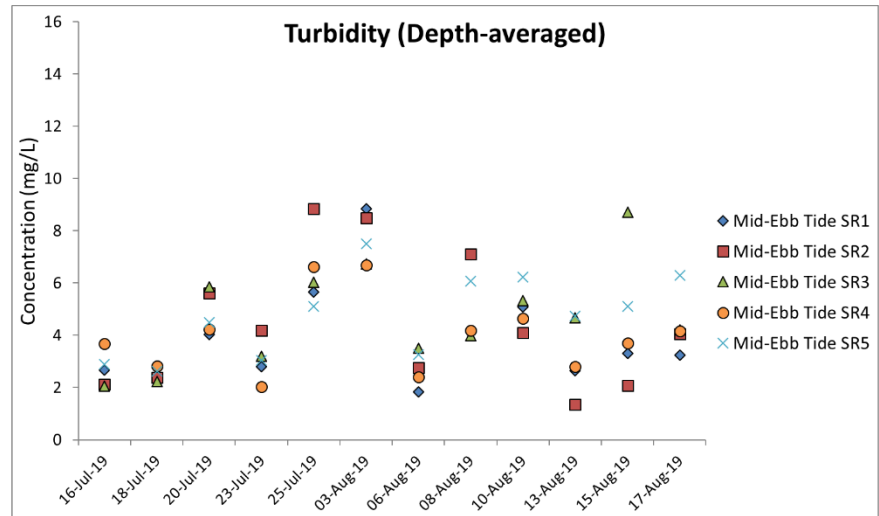
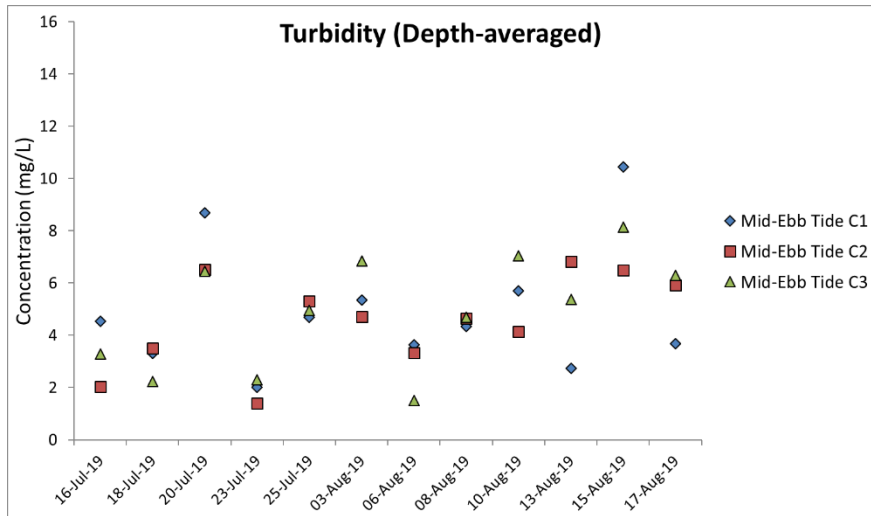


Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.2 – Graphical Presentations of Baseline Water Quality Monitoring Results



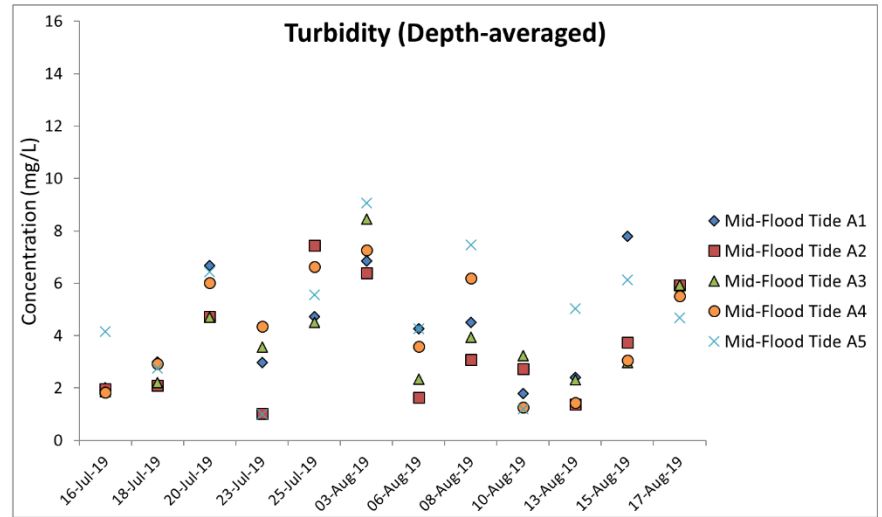
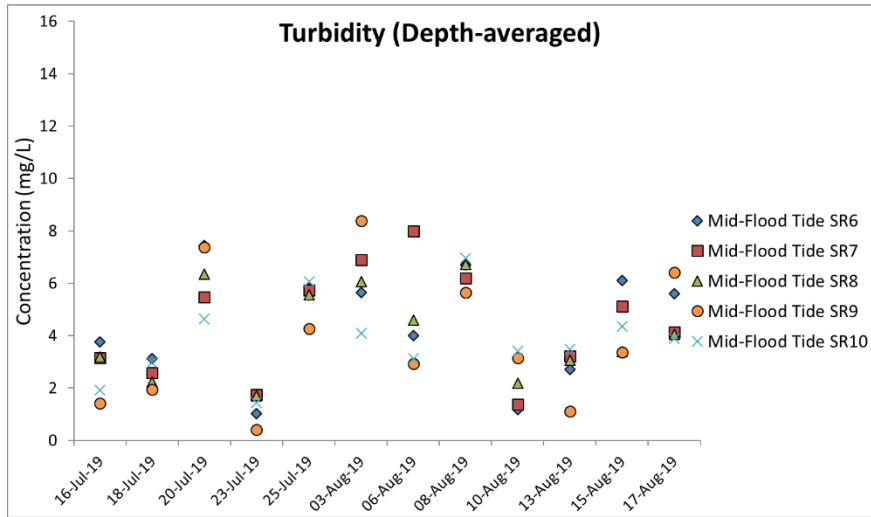
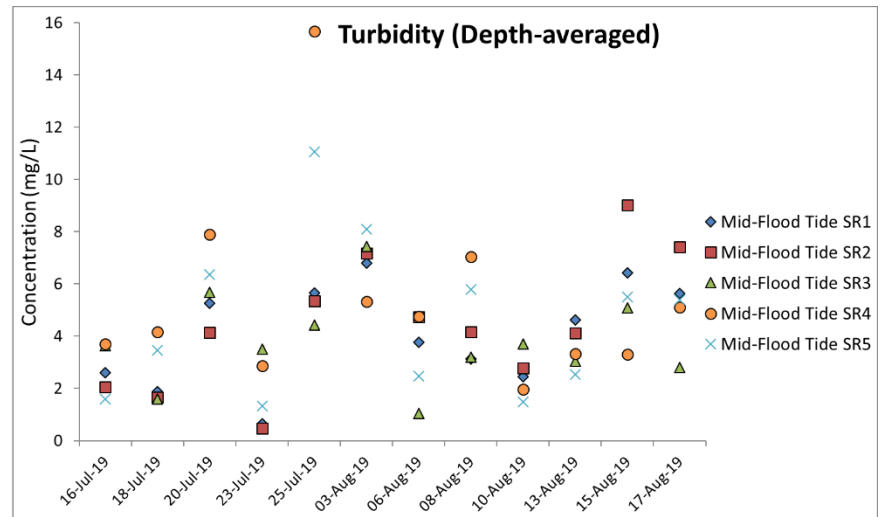
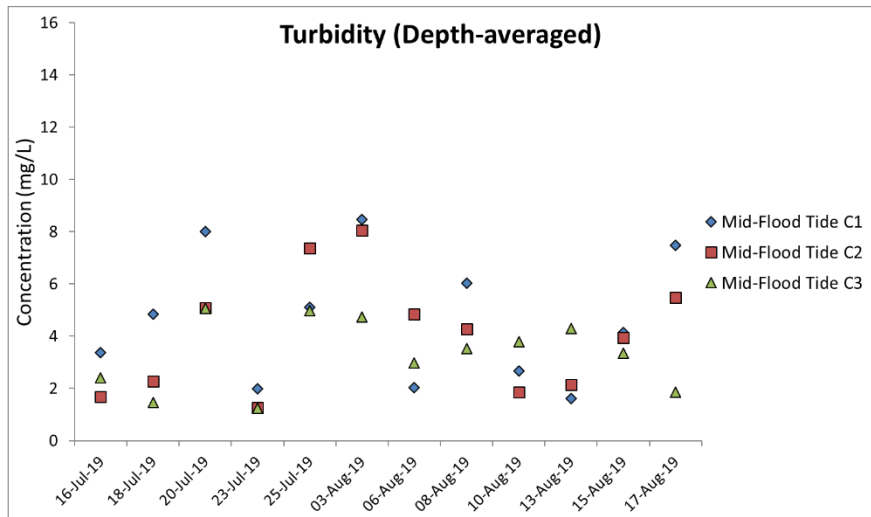
Remark: The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.2 – Graphical Presentations of Baseline Water Quality Monitoring Results



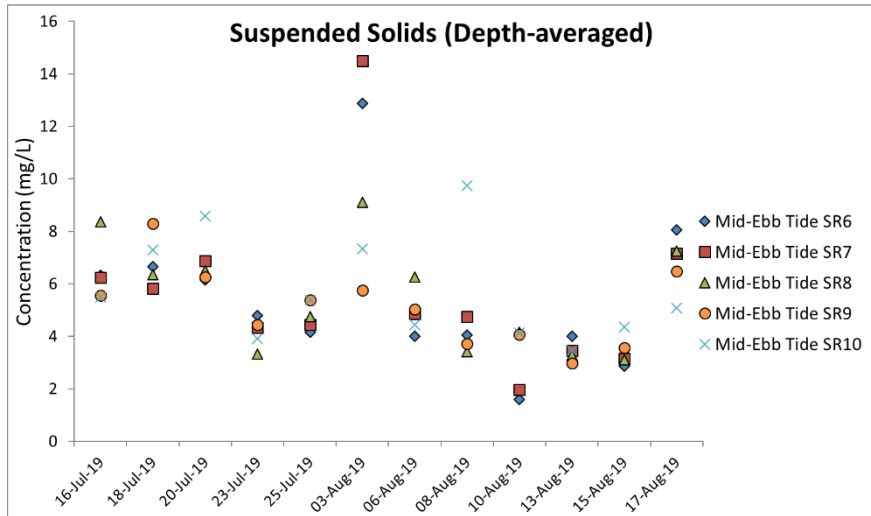
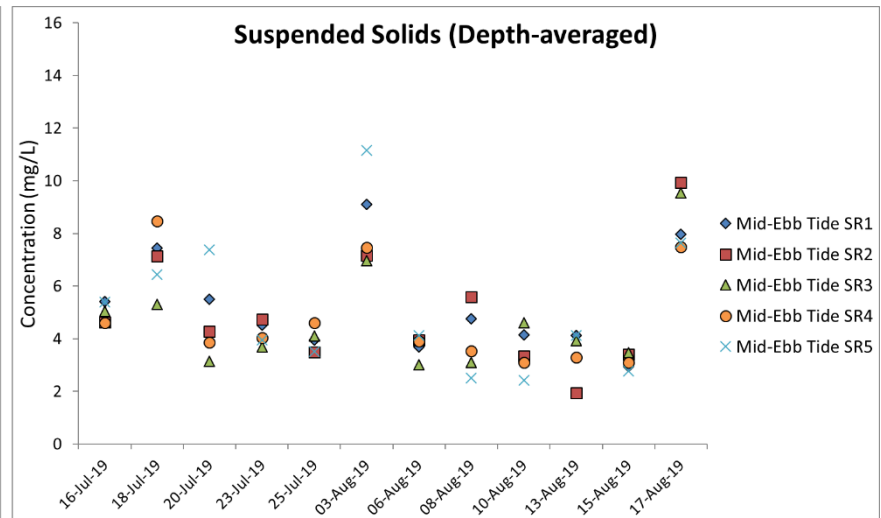
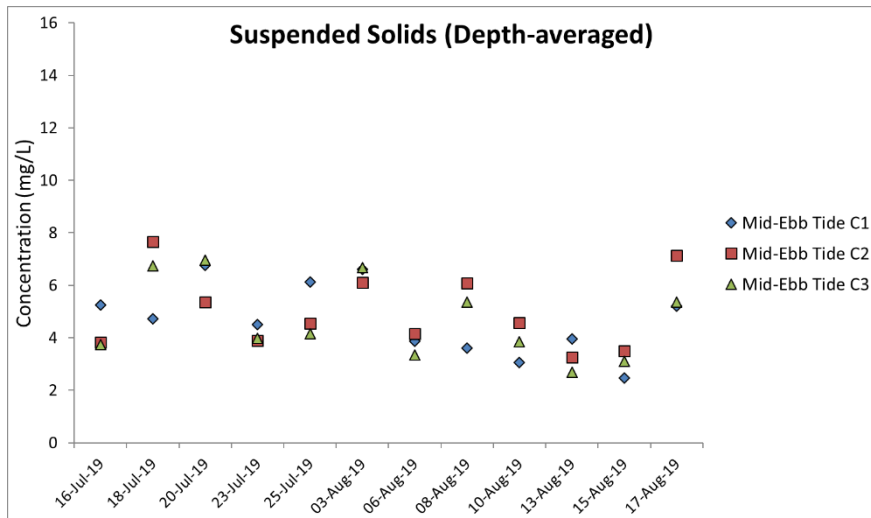
Remark: The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

Improvement Dredging for Lamma Power Station Navigation Channel  
 Baseline Water Quality Monitoring  
 Appendix 3.2 – Graphical Presentations of Baseline Water Quality Monitoring Results



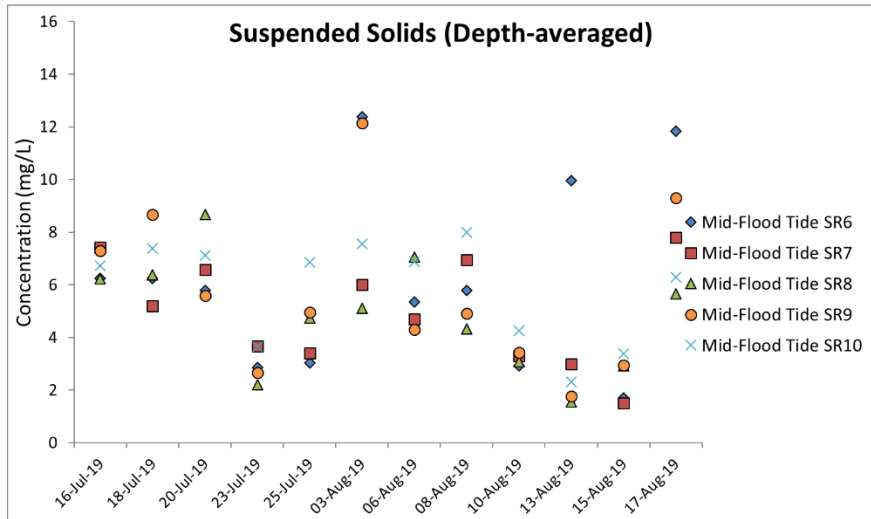
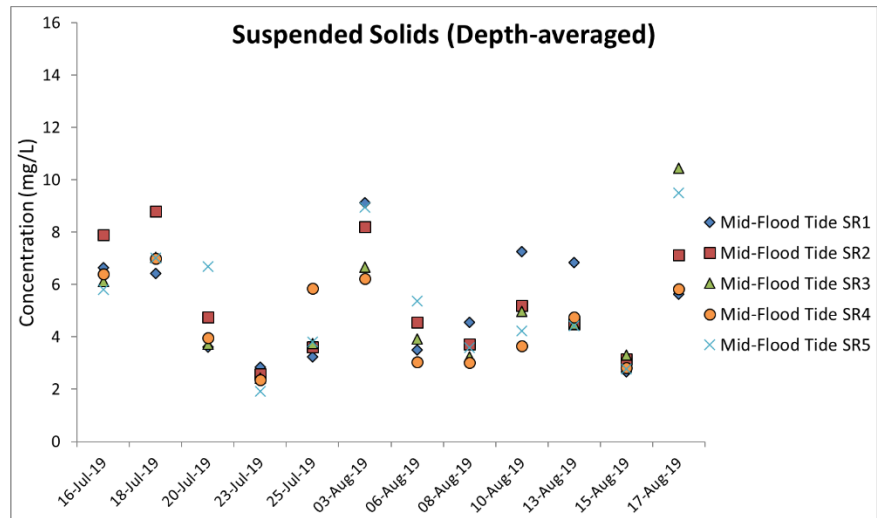
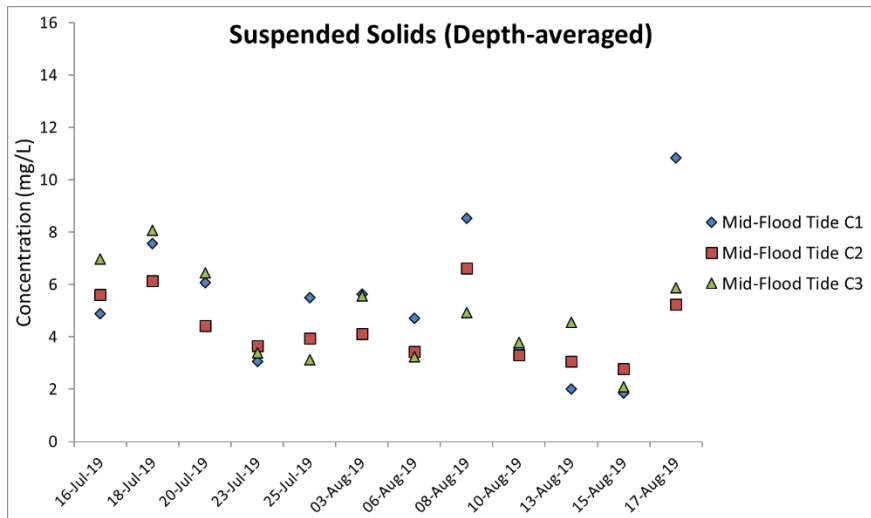
Remark: The baseline monitoring was suspended on July 27 and 30 and August 1 because of bad weather associated with typhoon, and also the sampling vessel was unexpectedly out of commission for repair.

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