PREPARED FOR

Hong Kong Offshore LNG Terminal Project

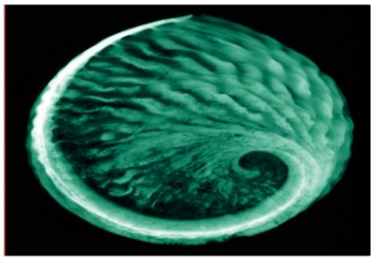
Water Quality Monitoring Report for First Year of Operation of the LNG Terminal – October to December 2023

DATE
17 January 2024

PROJECT NO.
0505354







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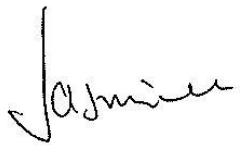
Hong Kong Offshore LNG Terminal Project

Water Quality Monitoring Report for First Year of Operation of the LNG Terminal – October to December 2023

0505354



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Hong Kong Offshore LNG Terminal
Environmental Certification Sheet
FEP-01/558/2018/A, FEP-02/558/2018/A and FEP-03/558/2018/B

Reference Document/Plan

Document/~~Plan~~ to be Certified/ Verified:	Water Quality Monitoring Report for First Year of Operation of the LNG Terminal – October to December 2023
Date of Report:	17 January 2024
Date prepared by ET:	17 January 2024
Date received by IEC:	17 January 2024

Reference EP Requirement

EP Condition:	Condition No. 5.1 of FEP-01/558/2018/A, FEP-02/558/2018/A & FEP-03/558/2018/B

The Permit Holder shall implement the EM&A programme in accordance with the procedures and requirements as set out in the Updated EM&A Manual.

ET Certification

I hereby certify that the above referenced document/~~plan~~ complies with the above referenced condition of FEP-01/558/2018/A, FEP-02/558/2018/A & FEP-03/558/2018/B.

Mr Raymond Chow,
Environmental Team Leader: 

Date: 17 January 2024

IEC Verification

I hereby verify that the above referenced document/~~plan~~ complies with the above referenced condition of FEP-01/558/2018/A, FEP-02/558/2018/A & FEP-03/558/2018/B.

Ms Lydia Chak,
Independent Environmental Checker: 

Date: 17 January 2024

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EXECUTIVE SUMMARY

To support the increased use of natural gas in Hong Kong from 2020 onwards, Castle Peak Power Company Limited (CAPCO) and The Hongkong Electric Co., Ltd. (HK Electric) have identified that the development of an offshore liquefied natural gas (LNG) receiving terminal in Hong Kong using Floating Storage and Regasification Unit (FSRU) technology ('the Project') presents a viable additional gas supply option that will provide energy security through access to competitive gas supplies from world markets. The Project involves the construction and operation of an offshore LNG import facility to be located in the southern waters of Hong Kong, a double berth jetty, and subsea pipelines that connect to the gas receiving stations (GRS) at the Black Point Power Station (BPPS) and the Lamma Power Station (LPS). The Project commenced operation on 3 July 2023. In accordance with the *Updated EM&A Manual* of the Project, operation phase water quality monitoring is undertaken during the first year of operation for the Project. This is the water quality monitoring report presenting the operation phase water quality monitoring carried out between October and December 2023.

During the reporting period, operation phase water quality monitoring was conducted at three monitoring locations once per week for 13 sessions between 3 October and 28 December 2023. There were no Project-related Action and Limit Level exceedances for the operation phase water quality monitoring in the reporting period. Overall, deterioration of water quality and indirect impacts at water and ecological sensitive receivers were not detected. The operation of the Project did not result in unacceptable water quality impacts to the nearby water and ecological sensitive receivers, which aligns with the EIA study predictions.

There were no environmental complaints, notification of summons and successful prosecutions recorded for the operation of the Project in the reporting period.

The monitoring activities conducted in the reporting period have been reviewed and are considered effective. As such, no change to the monitoring methodology is recommended. Based on the EM&A findings for the reporting period, the environmental performance for the operation of the Project is generally in line with the EIA predictions and considered acceptable.

1. INTRODUCTION

1.1 BACKGROUND

To support the increased use of natural gas in Hong Kong from 2020 onwards, Castle Peak Power Company Limited (CAPCO) and The Hongkong Electric Co., Ltd. (HK Electric) have identified that the development of an offshore liquefied natural gas (LNG) receiving terminal in Hong Kong using Floating Storage and Regasification Unit (FSRU) technology ('the Project') presents a viable additional gas supply option that will provide energy security through access to competitive gas supplies from world markets. The Project involves the construction and operation of an offshore LNG import facility to be located in the southern waters of Hong Kong, a double berth jetty, and subsea pipelines that connect to the gas receiving stations (GRS) at the Black Point Power Station (BPPS) and the Lamma Power Station (LPS).

The Environmental Impact Assessment (EIA) Report for the Project was submitted to the Environmental Protection Department (EPD) of the HKSAR Government in May 2018. The EIA Report (EIAO Register No. AEIAR-218/2018) was approved by EPD and the associated Environmental Permit (EP) (EP-558/2018) was issued in October 2018.

An application for Further Environmental Permits (FEPs) were made on 24 December 2019 to demarcate the works between the different parties. The following FEPs were issued on 17 January 2020 and the EP under EP-558/2018 was surrendered on 5 March 2020.

- the double berth jetty at LNG Terminal under the Hong Kong LNG Terminal Limited (HKLTL), joint venture between CAPCO and HK Electric (FEP-01/558/2018/A) [(1)] – construction commenced on 27 November 2020;
- the subsea gas pipeline for the BPPS and the associated GRS in the BPPS under CAPCO (FEP-03/558/2018/B) [(2)] – construction commenced on 23 September 2020; and
- the subsea gas pipeline for the LPS and the associated GRS in the LPS under HK Electric (FEP-02/558/2018/A) [(3)] – construction commenced on 13 December 2020.

The location of these components is shown in ***Figure 1.1***.

The Project commenced operation on 3 July 2023. This is the quarterly report for the operation phase water quality monitoring for the LNG Terminal which summarises the key monitoring results for the reporting period of October to December 2023 in accordance with the *Updated EM&A Manual* of the Project.

1.2 STRUCTURE OF THE REPORT

The remainder of the report is structured as follows:

(1) Application for variation of an environmental permit for FEP-01/558/2018 was undertaken and the latest FEP (FEP-01/558/2018/A) was issued on 6 November 2020.
(2) Application for variation of an environmental permit for FEP-03/558/2018/A was undertaken and the latest FEP (FEP-03/558/2018/B) was issued on 25 August 2021.
(3) Application for variation of an environmental permit for FEP-02/558/2018 was undertaken and the latest FEP (FEP-02/558/2018/A) was issued on 22 December 2020.

- ***Section 2*** details the monitoring locations, monitoring methodology, QA/QC requirements, and the monitoring results;
- ***Section 3*** provides the conclusion of this operation phase water quality monitoring.

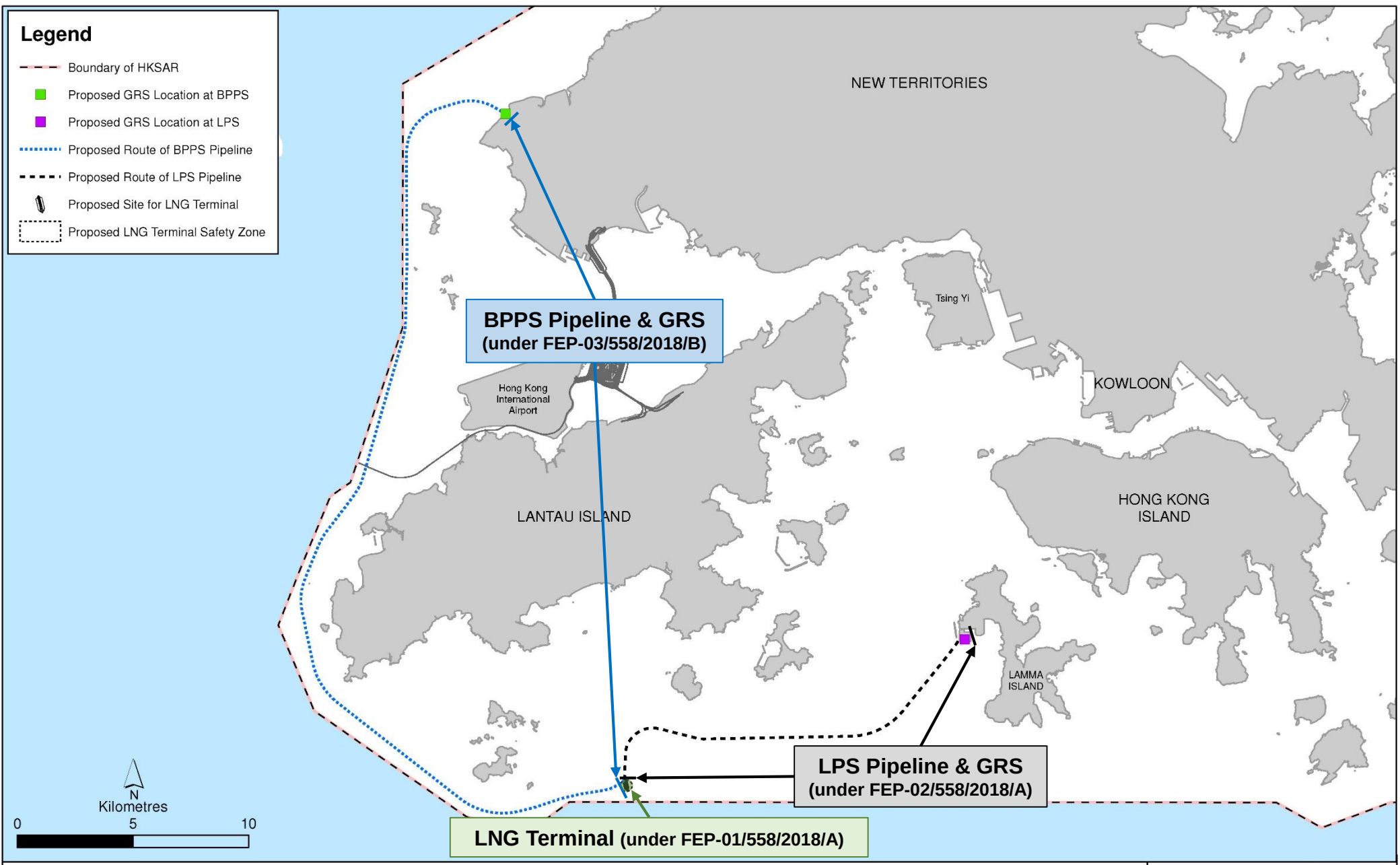

Figure 1.1

Indicative Location of Key Project Components

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Date: August 2021

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2. OPERATIONAL PHASE WATER QUALITY MONITORING

In accordance with the *Updated EM&A Manual* of the Project, operation phase water quality monitoring would be conducted once a week for one year after operation of the LNG Terminal. Details of the operation phase water quality monitoring under this Project are presented in the following sections.

2.1 MONITORING LOCATIONS

Operation phase water quality monitoring was conducted at 3 monitoring stations around the LNG Terminal, comprising 1 sensitive receiver station, 1 ebb-tide control station and 1 flood-tide control station. The locations of the monitoring stations are presented in ***Figure 2.1***. The coordinates and description of monitoring stations are summarised in ***Table 2.1***.

TABLE 2.1 LOCATION OF WATER QUALITY MONITORING STATIONS

Station	Easting	Northing	Description
IM6	814073	802029	Boundary of South Lantau Marine Park
E2	813367	808213	Control Station for Ebb Tide
F3	815032	801161	Control Station for Flood Tide

2.2 MONITORING METHODOLOGY

2.2.1 MONITORING PARAMETERS AND FREQUENCY

The parameters that have been selected for measurement *in situ* and in the laboratory are those that were either determined in the EIA to be those with the highest potential to be affected by the Project or are a standard check on water quality conditions. ***Table 2.2*** summarises the monitoring parameters, monitoring period and frequencies of the water quality monitoring. The measurement of monitoring parameters followed the standard methods and detection limit requirements as stated in *Table 5.2* of the *Updated EM&A Manual*.

TABLE 2.2 WATER QAULITY MONITORING PARAMETERS AND FREQUENCY

Monitoring Station	Parameters	Depth	Frequency and Replication
Sensitive Receiver Station IM6 Control Stations Ebb tide - E2 Flood tide - F3	• Dissolved Oxygen (DO) (mg/L) • Dissolved Oxygen Saturation (DOS) (%) • Temperature (°C) • pH • Turbidity (NTU) • Salinity (ppt) • Water depth (m) • Total Residual Chlorine (TRC) (mg/L) • Suspended Solid (SS) (mg/L) • Total Inorganic Nitrogen (TIN) (mg/L) • 5-day Biochemical Oxygen Demand (BOD_5) (mg/L)	• Three water depths: 1 m below sea surface, mid-depth and 1 m above seabed. • If the water depth is less than 3 m, mid-depth sampling only. • If water depth less than 6 m, mid-depth would be omitted.	• First year of operation water quality monitoring: one day per week, at mid-flood and mid-ebb tides, for one year upon the commencement of operation of the LNG Terminal. The interval between two sets of monitoring shall not be less than 36 hours. • Two replicates of *in-situ* measurements and water samples at each depth at each station.

In addition to the water quality parameters, other relevant data were also measured and recorded in Water Quality Monitoring Logs, including the location of the monitoring stations, water depth, time, weather conditions, sea conditions, tidal state, current direction and velocity, special phenomena and work activities undertaken around the monitoring and works area that may influence the monitoring results.

2.2.2 MONITORING EQUIPMENT

Table 2.3 summarises the equipment used in the monitoring works. All the monitoring equipment complied with the requirements as set out in the *Updated EM&A Manual*.

TABLE 2.3 WATER QAULITY MONITORING EQUIPMENT

Equipment	Brand and Model
Water Sampling Equipment	SBE 32 Carousel Water Sampler
Positioning Device	Hemisphere Vector V500
Water Depth Gauge	Knudsen 320M Single Beam Echo Sounder
Equipment for Dissolved Oxygen, Temperature, Turbidity, pH and Salinity measurements	YSI 6820, S/N: MPP16, MPP22 YSI 6920, S/N: MPP30 (Note 1)
Total Residual Chlorine	Hanna Instruments (Model HI761)
Equipment for Current Velocity and Direction measurements	Teledyne RDI Workhorse Sentinel ADCP

Note 1:
MPP22 was deployed for the monitoring conducted on 3 October 2023;
MPP30 was deployed for the monitoring conducted between 12 October and 23 November 2023;
MPP16 was deployed for the monitoring conducted between 29 November and 28 December 2023;

2.2.3 OPERATIONAL/ ANALYTICAL PROCEDURES

At each monitoring station, two consecutive measurements of DO level, DO Saturation, Temperature, Turbidity, Salinity and pH were taken at each sampling depth. Where the difference in the value between the first and second readings of each set was more than 25% of the value of the first reading, the reading was discarded, and further readings were taken. Two water samples were collected for laboratory analysis of SS, TIN and BOD_5. Following sample collection, water samples were stored in high density polythene bottles (1L) with no preservatives added, packed in ice (cooled to 4°C without being frozen) and kept in dark during both on-site temporary storage and transfer to the testing laboratory. The samples were delivered to the laboratory as soon as possible and the laboratory determination works started within 24 hours after collection of the water samples.

The testing of SS, TIN and BOD_5 for all monitoring stations was conducted by a Hong Kong Laboratory Accreditation Scheme (HOKLAS) accredited laboratory, ALS Technichem (HK) Pty Ltd. (HOKLAS Registration No. 066). Comprehensive quality assurance and control procedures were in place in order to ensure quality and consistency in results.

2.2.4 ACTION AND LIMIT LEVELS FOR MARINE WATER QUALITY MONITORING

The Action and Limit Levels for operation phase water quality monitoring have been established with reference to *Table 5.5 of the Updated EM&A Manual*. Action and Limit Levels of key assessment parameters for operation phase marine water quality monitoring are summarised in ***Table 2.4*** which have been agreed with EPD.

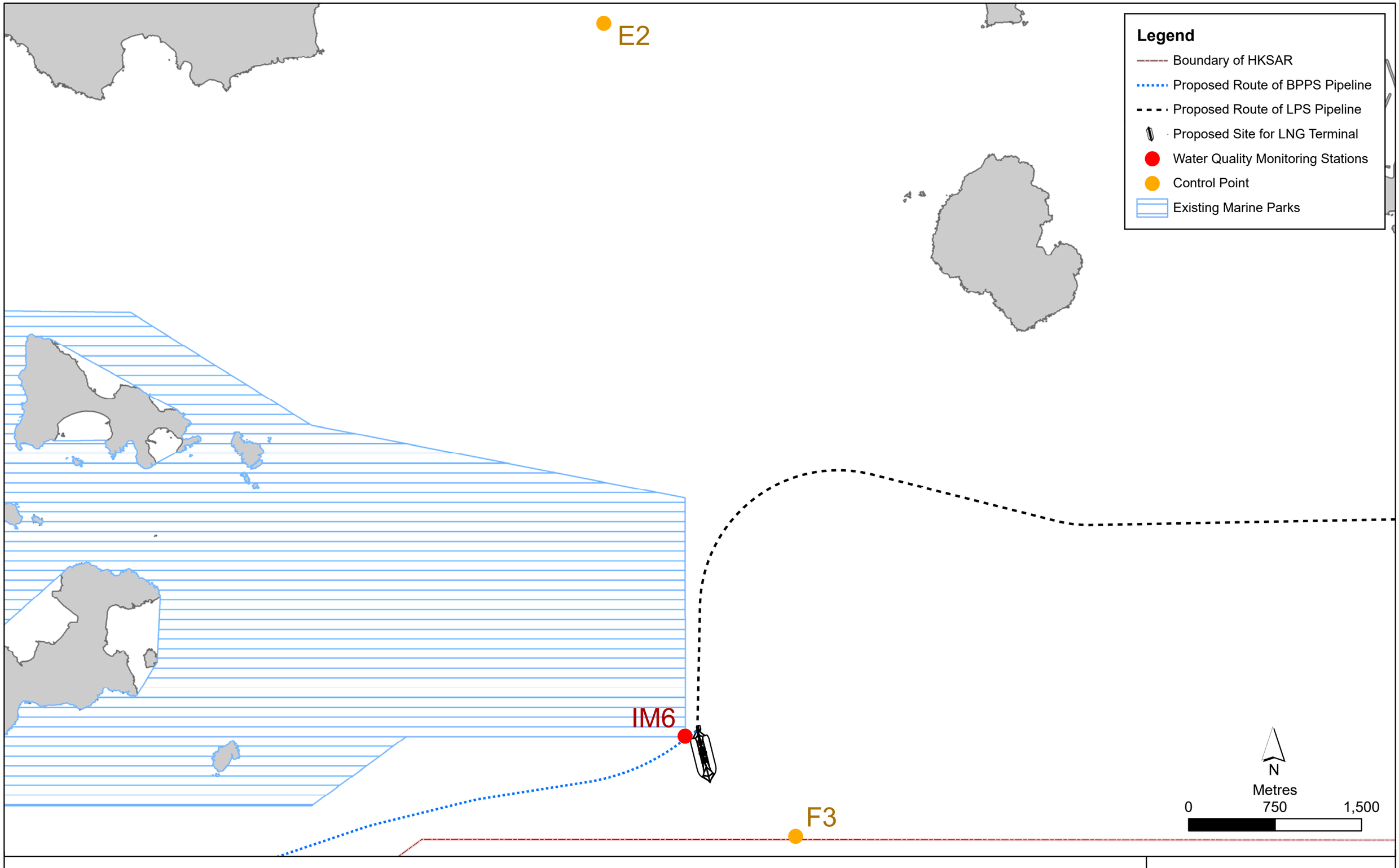

Figure 2.1

Water Quality Monitoring Locations

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Date: 24/4/2020

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TABLE 2.4 ACTION AND LIMIT LEVELS FOR OPERATION PHASE WATER QUALITY MONITORING

Parameters	Action Level	Limit Level
First-year Operation Phase Water Quality Monitoring		
DO in mg L^{-1} [a]	Surface and Middle 4.0 mg L^{-1} Bottom 2.2 mg L^{-1}	Surface and Middle 3.0 mg L^{-1} Bottom 1.5 mg L^{-1}
Water Temperature in °C (Depth-averaged [b]) [c]	± 1.5 °C of baseline data, and ± 1.5 °C of the relevant control station's water temperature at the same tide of the same day	± 2.0 °C of baseline data, and ± 2.0 °C of the relevant control station's water temperature at the same tide of the same day
Turbidity in NTU (Depth-averaged [b]) [c]	18.3 NTU, and 120% of the relevant control station's turbidity at the same tide of the same day	30.8 NTU, and 130% of the relevant control station's turbidity at the same tide of the same day
SS in mg L^{-1} (Depth-averaged [b]) [c]	17.5 mg L^{-1}, and 120% of the relevant control station's SS at the same tide of the same day	29.5 mg L^{-1}, and 130% of the relevant control station's SS at the same tide of the same day
TIN in mg L^{-1} (Depth-averaged [b]) [c]	0.5 mg L^{-1}, and 120% of the relevant control station's TIN at the same tide of the same day	0.8 mg L^{-1}, and 130% of the relevant control station's TIN at the same tide of the same day
BOD_5 in mg L^{-1} (Depth-averaged [b]) [c]	1.9 mg L^{-1}, and 120% of the relevant control station's BOD5 at the same tide of the same day	2.8 mg L^{-1}, and 130% of the relevant control station's BOD5 at the same tide of the same day
TRC in mg L^{-1} (Depth-averaged [b]) [c]	0.02 mg L^{-1}	0.02 mg L^{-1}

Notes:
a. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
b. "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
c. For water temperature, salinity, SS, turbidity, BOD_5, TIN and TRC, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

The Event and Action Plan for operation phase water quality monitoring is provided in ***Table 2.5***.

TABLE 2.5 EVENT AND ACTION PLAN FOR OPERATION PHASE WATER QUALITY MONITORING

Event	Action			
	ET	IEC	Contractor(s)	Project Proponents
Action Level being exceeded by one sampling day	1. Repeat *in-situ* measurement to confirm findings; 2. Check monitoring data, plant, equipment and Contractor(s)'s working methods; 3. Identify source(s) of impact and record in notification of exceedance; 4. Inform IEC, Contractor(s) and Project Proponents.	1. Check monitoring data submitted by ET and Contractor(s)'s working methods.	1. Confirm receipt of notification of exceedance in writing; 2. Check plant and equipment and rectify unacceptable practice.	1. Confirm receipt of notification of exceedance in writing.
Action Level being exceeded by two or more consecutive sampling days	1. Repeat *in-situ* measurement to confirm findings; 2. Check monitoring data, plant, equipment and Contractor(s)'s working methods; 3. Identify source(s) of impact and record in notification of exceedance; 4. Inform IEC, Contractor(s) and Project Proponents; 5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.	1. Check monitoring data submitted by ET and Contractor(s)'s working methods; 2. Discuss with ET and Contractor(s) on additional mitigation measures and advise Project Proponents accordingly; 3. Assess the effectiveness of the implemented mitigation measures.	1. Confirm receipt of notification of exceedance in writing; 2. Check plant and equipment and rectify unacceptable practice; 3. Consider changes of working methods; 4. Discuss with ET and IEC on additional mitigation measures and propose them to Project Proponents within 3 working days; 5. Implement the agreed mitigation measures.	1. Confirm receipt of notification of exceedance in writing; 2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented; 3. Ensure additional mitigation measures are properly implemented.

Event	Action			
	ET	IEC	Contractor(s)	Project Proponents
Limit Level being exceeded by one sampling day	1. Repeat *in situ* measurement to confirm findings; 2. Check monitoring data, plant, equipment and Contractor(s)'s working methods; 3. Identify source(s) of impact and record in notification of exceedance; 4. Inform IEC, Contractor(s), Project Proponents and EPD; 5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.	1. Check monitoring data submitted by ET and Contractor(s)'s working methods; 2. Discuss with ET and Contractor(s) on additional mitigation measures and advise Project Proponents accordingly; 3. Assess the effectiveness of the implemented mitigation measures.	1. Confirm receipt of notification of exceedance in writing; 2. Check plant and equipment and rectify unacceptable practice; 3. Critically review the need to change working methods; 4. Discuss with ET and IEC on additional mitigation measures and propose them to Project Proponents within 3 working days; 5. Implement the agreed mitigation measures.	1. Confirm receipt of notification of exceedance in writing; 2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented; 3. Ensure additional mitigation measures are properly implemented; 4. Request Contractor(s) to critically review the working methods.
Limit Level being exceeded by two or more consecutive sampling days	1. Repeat *in situ* measurement to confirm findings; 2. Check monitoring data, plant, equipment and Contractor(s)'s working methods; 3. Identify source(s) of impact and record in notification of exceedance; 4. Inform IEC, Contractor(s), Project Proponents and EPD; 5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.	1. Check monitoring data submitted by ET and Contractor(s)'s working methods; 2. Discuss with ET and Contractor(s) on additional mitigation measures and advise Project Proponents accordingly; 3. Assess the effectiveness of the implemented mitigation measures.	1. Confirm receipt of notification of exceedance in writing; 2. Check plant and equipment and rectify unacceptable practice; 3. Critically review the need to change working methods; 4. Discuss with ET and IEC on additional mitigation measures and propose them to Project Proponents within 3 working days; 5. Implement the agreed mitigation measures; 6. As directed by Project Proponents, slow down or stop all or part of the marine construction works until no exceedance of Limit Level.	1. Confirm receipt of notification of exceedance in writing; 2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented; 3. Ensure additional mitigation measures are properly implemented; 4. Request Contractor(s) to critically review the working methods; 5. Consider and instruct, if necessary, the Contractor(s) to slow down or to stop all or part of the marine construction works until no exceedance of Limit Level.

2.3 QA/QC REQUIREMENTS

2.3.1 CALIBERATION OF IN-SITU INSTRUMENTS

In situ monitoring equipment for the measurement of DO, Temperature, Turbidity, pH and Salinity was checked, calibrated and certified by a laboratory accredited under HOKLAS before use, while the test kit for TRC was checked against the calibration check set provided by the manufacturer before commencement of monitoring. Copies of the calibration certificates for the measuring equipment for DO, Temperature, Turbidity, pH and Salinity are attached in ***Annex A***. The *in situ* monitoring equipment for the measurement of DO, Temperature, Turbidity, pH and Salinity was subsequently re-calibrated every three months throughout the water quality monitoring. Responses of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibrations for dissolved oxygen meter were carried out before commencement of monitoring and after completion of all measurements each day.

On-site calibration of field equipment followed the "Guide to On-Site Test Methods for the Analysis of Waters", BS 1427: 2009. Sufficient stocks of spare parts were maintained for replacements when necessary. Backup monitoring equipment was also made available to ensure monitoring could proceed uninterrupted even when equipment is under maintenance, calibration etc.

2.3.2 DECONTAMINATION PROCEDURES

Water sampling equipment used during the course of the monitoring was decontaminated by manual washing and rinsed with clean seawater/distilled water after each sampling event. All disposable equipment was discarded after sampling.

2.3.3 SAMPLING MANAGEMENT AND SUPERVISION

All sampling bottles were labelled with the sample ID (including the indication of sampling station and tidal stage e.g. IM6_ME_S_R1), laboratory number and sampling date. All water samples were handled under chain of custody protocols and relinquished to the laboratory representatives at locations specified by the laboratory.

2.3.4 QUALITY CONTROL MEASURES FOR SAMPLE TESTING

The sample testing was performed by ALS Technichem (HK) Pty Ltd. The following quality control programme was performed by the laboratory for every batch of 20 samples:

- One method blank; and
- One set of quality control (QC) samples (including method QC and sample duplicate).

2.4 OPERATION PHASE WATER QUALITY MONITORING RESULTS

Operation phase water quality monitoring was conducted at three monitoring locations once per week for 13 sessions between 3 October and 28 December 2023. The detailed monitoring schedule is shown in ***Annex B***. The monitoring results with weather and sea conditions at each monitoring day are shown in ***Annex C***. Graphical presentation of water quality monitoring results is given in ***Annex D***. During the monitoring sessions, the major activity on site was the operation of the LNG Terminal and no observable pollution source was recorded at

the monitoring stations. No other external factors (e.g. surface runoff from nearby landmass, adverse weather) were identified that might affect water quality at the monitoring stations during the monitoring period.

Overall, deterioration of water quality and indirect impacts at water and ecological sensitive receivers were not detected. The operation of the Project did not result in unacceptable water quality impacts to the nearby water and ecological sensitive receivers, which aligns with the EIA study predictions.

2.5 SUMMARY OF EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMIT

There were no Project related Action and Limit Level exceedances for operation phase water quality monitoring in the reporting period.

2.6 SUMMARY OF ENVIRONMENTAL COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTION

There were no environmental complaints, notification of summons and successful prosecutions recorded for the operation of the Project in the reporting period.

3. CONCULSION

This is the quarterly report for the operation phase water quality monitoring for the LNG Terminal which summarises the key monitoring results for the reporting period of October to December 2023 in accordance with the *Updated EM&A Manual* of the Project.

Operation phase water quality monitoring was conducted at three monitoring locations once per week for 13 sessions between 3 October and 28 December 2023. There were no Project related Action and Limit Level exceedances for operation phase water quality monitoring in the reporting period. Overall, deterioration of water quality and indirect impacts at water and ecological sensitive receivers were not detected. The operation of the Project did not result in unacceptable water quality impacts to the nearby water and ecological sensitive receivers, which aligns with the EIA study predictions.

There were no environmental complaints, notification of summons and successful prosecutions recorded for the operation of the Project in the reporting period.

The monitoring activities conducted in the reporting period have been reviewed and are considered effective. As such, no change to the monitoring methodology is recommended. Based on the EM&A findings for the reporting period, the environmental performance for the operation of the Project is generally in line with the EIA predictions and considered acceptable.

ANNEX A CALIBRATION CERTIFICATES

ALS Technichem (HK) Pty Ltd
11/F., Chung Shun Knitting Centre,
1 - 3 Wing Yip Street,
Kwai Chung, N.T., Hong Kong
T: +852 2610 1044
F: +852 2610 2021
www.alsglobal.com

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	JOHNNY HO	**WORK ORDER:**	HK2329342
CLIENT:	EGS (ASIA) LTD		
ADDRESS:	15/F., NORTH POINT INDUSTRIAL BUILDING, 499 KING'S ROAD, NORTH POINT, HONG KONG	**SUB-BATCH:**	0
		LABORATORY:	HONG KONG
		DATE RECEIVED:	25-Jul-2023
		DATE OF ISSUE:	26-Jul-2023

SPECIFIC COMMENTS

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client.
The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the laboratory or quoted from relevant international standards.

The "Next Calibration Date" is recommended according to best practice principle as practised by the laboratory or quoted from relevant international standards.

The validity of equipment/ meter performance only applies to the result(s) stated in the report.

Equipment Type:	Multifunctional Meter
Service Nature:	Performance Check
Scope:	Dissolved Oxygen, pH Value, Turbidity, Salinity and Temperature
Brand Name/ Model No.:	[YSI]/ [6820-V2-M]
Serial No./ Equipment No.:	[07H100241]/ [MPP22]
Date of Calibration:	25-July-2023

GENERAL COMMENTS

This report superseded any previous report(s) with same work order number.

Ms. Lin Wai Yu, Iris
Assistant Manager - Inorganics

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2329342

SUB-BATCH: 0
DATE OF ISSUE: 26-Jul-2023
CLIENT: EGS (ASIA) LTD

Equipment Type: Multifunctional Meter
Brand Name/ Model No.: [YSI]/ [6820-V2-M]
Serial No./ Equipment No.: [07H100241]/ [MPP22]
Date of Calibration: 25-July-2023 Date of Next Calibration: 25-October-2023

PARAMETERS:

Dissolved Oxygen **Method Ref: APHA (23rd edition), 4500O: G**

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.96	2.80	-0.16
5.49	5.43	-0.06
7.18	7.19	+0.01
	Tolerance Limit (mg/L)	±0.20

pH Value **Method Ref: APHA (23rd edition), 4500H: B**

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	3.91	-0.09
7.0	6.99	-0.01
10.0	9.89	-0.11
	Tolerance Limit (pH unit)	±0.20

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris
Assistant Manager - Inorganics

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2329342

SUB-BATCH: 0
DATE OF ISSUE: 26-Jul-2023
CLIENT: EGS (ASIA) LTD

Equipment Type: Multifunctional Meter
Brand Name/ Model No.: [YSI]/ [6820-V2-M]
Serial No./ Equipment No.: [07H100241]/ [MPP22]
Date of Calibration: 25-July-2023 Date of Next Calibration: 25-October-2023

PARAMETERS:

Turbidity **Method Ref: APHA (23rd edition), 2130B**

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	4.3	+7.5
40	40.7	+1.8
80	81.4	+1.8
400	N/A	N/A
800	N/A	N/A
	Tolerance Limit (%)	±10.0

Salinity **Method Ref: APHA (23rd edition), 2520B**

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	--
10	9.73	-2.7
20	19.46	-2.7
30	29.65	-1.2
	Tolerance Limit (%)	±10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris
Assistant Manager - Inorganics

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2329342

SUB-BATCH: 0
DATE OF ISSUE: 26-Jul-2023
CLIENT: EGS (ASIA) LTD

Equipment Type: Multifunctional Meter
Brand Name/ Model No.: [YSI]/ [6820-V2-M]
Serial No./ Equipment No.: [07H100241]/ [MPP22]
Date of Calibration: 25-July-2023 Date of Next Calibration: 25-October-2023

PARAMETERS:

Temperature

Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
11.9	12.01	+0.1
20.7	19.75	-0.9
39.5	38.79	-0.7
	Tolerance Limit (°C)	±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	DOMINIC LAI	**WORK ORDER:**	HK2340210
CLIENT:	EGS (ASIA) LTD		
ADDRESS:	15/F., NORTH POINT INDUSTRIAL BUILDING, 499 KING'S ROAD, NORTH POINT, HONG KONG	**SUB-BATCH:**	0
		LABORATORY:	HONG KONG
		DATE RECEIVED:	10-Oct-2023
		DATE OF ISSUE:	12-Oct-2023

GENERAL COMMENTS

The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the laboratory or quoted from relevant international standards.
The "Next Calibration Date" is recommended according to best practice principle as practised by the laboratory or quoted from relevant international standards.
The validity of equipment/ meter performance only applies to the result(s) stated in the report.
This report superseded any previous report(s) with same work order number.

EQUIPMENT INFORMATION

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client.

Equipment Type:	Multifunctional Meter
Service Nature:	Performance Check
Scope:	Dissolved Oxygen, pH Value, Turbidity, Salinity and Temperature
Brand Name/ Model No.:	[YSI]/ [6920-V2-M]
Serial No./ Equipment No.:	[08C100240]/ [MPP30]
Date of Calibration:	10-October-2023

Ms. Lin Wai Yu, Iris
Assistant Manager - Inorganics

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2340210

SUB-BATCH: 0
DATE OF ISSUE: 12-Oct-2023
CLIENT: EGS (ASIA) LTD

Equipment Type: Multifunctional Meter
Brand Name/ Model No.: [YSI]/ [6920-V2-M]
Serial No./ Equipment No.: [08C100240]/ [MPP30]
Date of Calibration: 10-October-2023 Date of Next Calibration: 10-January-2024

PARAMETERS:

Dissolved Oxygen **Method Ref: APHA (23rd edition), 4500O: G**

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.06	3.09	+0.03
4.04	4.19	+0.15
7.26	7.18	-0.08
	Tolerance Limit (mg/L)	±0.20

pH Value **Method Ref: APHA (23rd edition), 4500H: B**

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	3.88	-0.12
7.0	7.01	+0.01
10.0	9.82	-0.18
	Tolerance Limit (pH unit)	±0.20

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2340210

SUB-BATCH: 0
DATE OF ISSUE: 12-Oct-2023
CLIENT: EGS (ASIA) LTD

Equipment Type: Multifunctional Meter
Brand Name/ Model No.: [YSI]/ [6920-V2-M]
Serial No./ Equipment No.: [08C100240]/ [MPP30]
Date of Calibration: 10-October-2023 Date of Next Calibration: 10-January-2024

PARAMETERS:

Turbidity **Method Ref: APHA (23rd edition), 2130B**

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	3.7	-7.5
40	43.3	+8.2
80	84.3	+5.4
	Tolerance Limit (%)	±10.0

Salinity **Method Ref: APHA (23rd edition), 2520B**

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	--
10	9.55	-4.5
20	19.38	-3.1
30	28.78	-4.1
	Tolerance Limit (%)	±10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2340210

SUB-BATCH: 0
DATE OF ISSUE: 12-Oct-2023
CLIENT: EGS (ASIA) LTD

Equipment Type: Multifunctional Meter
Brand Name/ Model No.: [YSI]/ [6920-V2-M]
Serial No./ Equipment No.: [08C100240]/ [MPP30]
Date of Calibration: 10-October-2023 Date of Next Calibration: 10-January-2024

PARAMETERS:

Temperature **Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.**

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
14.5	14.20	-0.3
21.0	21.58	+0.6
40.5	40.27	-0.2
	Tolerance Limit (°C)	±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	LAM MEI SHING	**WORK ORDER:**	HK2346638
CLIENT:	EGS (ASIA) LTD		
ADDRESS:	15/F., NORTH POINT INDUSTRIAL BUILDING, 499 KING'S ROAD, NORTH POINT, HONG KONG	**SUB-BATCH:**	0
		LABORATORY:	HONG KONG
		DATE RECEIVED:	21-Nov-2023
		DATE OF ISSUE:	22-Nov-2023

GENERAL COMMENTS

The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the laboratory or quoted from relevant international standards.
The validity of equipment/ meter performance only applies to the result(s) stated in the report.
This report superseded any previous report(s) with same work order number.

EQUIPMENT INFORMATION

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client.

Equipment Type:	Multifunctional Meter
Service Nature:	Performance Check
Scope:	Dissolved Oxygen, pH Value, Turbidity, Salinity and Temperature
Brand Name/ Model No.:	[YSI]/ [6820-C-M]
Serial No./ Equipment No.:	[02J0058-AB]/ [MPP16]
Date of Calibration:	21-November-2023

Ms. Lin Wai Yu, Iris
Assistant Manager - Inorganics

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2346638

SUB-BATCH: 0
DATE OF ISSUE: 22-Nov-2023
CLIENT: EGS (ASIA) LTD

Equipment Type: Multifunctional Meter
Brand Name/ Model No.: [YSI]/ [6820-C-M]
Serial No./ Equipment No.: [02J0058-AB]/ [MPP16]
Date of Calibration: 21-November-2023

PARAMETERS:

Dissolved Oxygen **Method Ref: APHA (23rd edition), 4500O: G**

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.94	2.89	-0.05
5.20	5.23	+0.03
7.63	7.68	+0.05
	Tolerance Limit (mg/L)	±0.20

pH Value **Method Ref: APHA (23rd edition), 4500H: B**

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	3.92	-0.08
7.0	6.94	-0.06
10.0	10.15	+0.15
	Tolerance Limit (pH unit)	±0.20

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris
Assistant Manager - Inorganics

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2346638

SUB-BATCH: 0
DATE OF ISSUE: 22-Nov-2023
CLIENT: EGS (ASIA) LTD

Equipment Type: Multifunctional Meter
Brand Name/ Model No.: [YSI]/ [6820-C-M]
Serial No./ Equipment No.: [02J0058-AB]/ [MPP16]
Date of Calibration: 21-November-2023

PARAMETERS:

Turbidity **Method Ref: APHA (23rd edition), 2130B**

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	3.9	-2.5
40	38.7	-3.2
80	78.6	-1.8
	Tolerance Limit (%)	±10.0

Salinity **Method Ref: APHA (23rd edition), 2520B**

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	--
10	9.56	-4.4
20	19.04	-4.8
30	28.46	-5.1
	Tolerance Limit (%)	±10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris
Assistant Manager - Inorganics

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2346638

SUB-BATCH: 0
DATE OF ISSUE: 22-Nov-2023
CLIENT: EGS (ASIA) LTD

Equipment Type: Multifunctional Meter
Brand Name/ Model No.: [YSI]/ [6820-C-M]
Serial No./ Equipment No.: [02J0058-AB]/ [MPP16]
Date of Calibration: 21-November-2023

PARAMETERS:

Temperature **Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.**

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
11.5	11.45	-0.1
20.0	19.76	-0.2
40.0	40.02	+0.0
	Tolerance Limit (°C)	±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris
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ANNEX B MONITORING SCHEDULE

Environmental Team Consultancy Services for the Hong Kong Offshore LNG Terminal Project
Operation Phase Water Quality Monitoring (October 2023)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1/Oct	2/Oct	3/Oct	4/Oct	5/Oct	6/Oct	7/Oct
		Operation Phase Water Quality Monitoring ebb tide 13:48 - 15:48 flood tide 8:05 - 10:05				
8/Oct	9/Oct	10/Oct	11/Oct	12/Oct	13/Oct	14/Oct
				Operation Phase Water Quality Monitoring ebb tide 10:09 - 12:09 flood tide 16:40 - 18:40		
15/Oct	16/Oct	17/Oct	18/Oct	19/Oct	20/Oct	21/Oct
				Operation Phase Water Quality Monitoring ebb tide 13:56 - 15:56 flood tide 8:44 - 10:44		
22/Oct	23/Oct	24/Oct	25/Oct	26/Oct	27/Oct	28/Oct
				Operation Phase Water Quality Monitoring ebb tide 9:11 - 11:11 flood tide 15:56 - 17:56		
29/Oct	30/Oct	31/Oct				

Environmental Team Consultancy Services for the Hong Kong Offshore LNG Terminal Project
Operation Phase Water Quality Monitoring (November 2023)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1/Nov	2/Nov	3/Nov	4/Nov
			Operation Phase Water Quality Monitoring ebb tide 13:25 - 15:45 flood tide 8:11 - 10:11			
5/Nov	6/Nov	7/Nov	8/Nov	9/Nov	10/Nov	11/Nov
					Operation Phase Water Quality Monitoring ebb tide 9:28 - 11:28 flood tide 15:41 - 17:41	
12/Nov	13/Nov	14/Nov	15/Nov	16/Nov	17/Nov	18/Nov
				Operation Phase Water Quality Monitoring ebb tide 13:02 - 15:02 flood tide 7:56 - 9:56		
19/Nov	20/Nov	21/Nov	22/Nov	23/Nov	24/Nov	25/Nov
				Operation Phase Water Quality Monitoring ebb tide 7:49 - 9:49 flood tide 14:37 - 16:37		
26/Nov	27/Nov	28/Nov	29/Nov	30/Nov		
			Operation Phase Water Quality Monitoring ebb tide 12:25 - 14:25 flood tide 7:23 - 9:23			

Environmental Team Consultancy Services for the Hong Kong Offshore LNG Terminal Project
Operation Phase Water Quality Monitoring (December 2023)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1/Dec	2/Dec
3/Dec	4/Dec	5/Dec	6/Dec	7/Dec	8/Dec	9/Dec
					Operation Phase Water Quality Monitoring ebb tide 7:32 - 9:32 flood tide 14:12 - 16:12	
10/Dec	11/Dec	12/Dec	13/Dec	14/Dec	15/Dec	16/Dec
	Operation Phase Water Quality Monitoring ebb tide 10:12 - 12:12 flood tide 15:22 - 17:22					
17/Dec	18/Dec	19/Dec	20/Dec	21/Dec	22/Dec	23/Dec
	Operation Phase Water Quality Monitoring ebb tide 15:57 - 17:57 flood tide 10:36 - 12:36					
24/Dec	25/Dec	26/Dec	27/Dec	28/Dec	29/Dec	30/Dec
				Operation Phase Water Quality Monitoring ebb tide 11:53 - 13:53 flood tide 7:21 - 9:21		
31/Dec						

ANNEX C OPERATION PHASE WATER QUALITY MONITORING RESULTS

Water Quality Monitoring Data Log Sheet **Date: 2023/10/3**

Tide	Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	Current Direction	Temperature (°C)			Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Total Residual Chlorine (mg/L)			Suspended Solids (mg/L)			Total Inorganic Nitrogen (mg/L)			5-day Biochemical Oxygen Demand (mg/L)		
									Value	Average	DA	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
Mid-Ebb	E2	Fine	Calm	14:34	9.4	S	0.15	100	29.9	30.0	29.3	30.9	30.8	8.2	8.2	114.7	118.5	7.3	7.6	6.8	3.2	3.0	7.2	<0.001	<0.001	<0.001	4.8	4.6	9.6	0.13	0.13	0.13	<1.0	<1.0	<1.0
							0.15	100	30.1			30.8		8.2		122.2		7.8			2.8			<0.001			4.3			0.13			<1.0		
						M	0.22	83	29.0	29.0		31.3	31.2	8.1	8.1	92.7	93.0	6.0	6.0		9.7	9.1		<0.001	<0.001		11.8	11.7		0.14	0.14		<1.0	<1.0	
							0.22	83	29.1			31.2		8.1		93.2		6.0			8.5			<0.001			11.5			0.13			<1.0		
						B	0.40	92	28.9	28.9		31.5	31.4	8.1	8.1	92.3	91.5	6.0	5.9	5.9	9.4	9.6		<0.001	<0.001		12.3	12.5		0.13	0.14		<1.0	<1.0	
							0.17	59	28.9			31.4		8.1		90.6		5.9			9.7			<0.001			12.7			0.14			<1.0		
	IM6	Fine	Calm	14:03	17.0	S	0.11	268	29.0	29.1	28.9	31.9	31.7	8.1	8.1	100.8	101.1	6.5	6.5	6.4	3.1	3.0	4.2	<0.001	<0.001	<0.001	4.7	4.6	6.0	0.08	0.09	0.04	<1.0	<1.0	<1.0
							0.17	122	29.2			31.4		8.1		101.3		6.5			2.9			<0.001			4.4			0.10			<1.0		
						M	0.20	297	28.9	28.9		32.7	32.7	8.1	8.1	98.8	98.9	6.4	6.4		4.3	4.3		<0.001	<0.001		6.4	6.3		<0.02	<0.02		<1.0	<1.0	
							0.20	297	28.9			32.7		8.1		99.0		6.4			4.3			<0.001			6.1			<0.02			<1.0		
						B	0.16	288	28.8	28.8		32.8	32.8	8.1	8.1	97.9	97.7	6.3	6.3	6.3	5.3	5.3		<0.001	<0.001		7.1	7.3		<0.02	<0.02		<1.0	<1.0	
							0.16	288	28.8			32.8		8.1		97.4		6.3			5.3			<0.001			7.5			<0.02			<1.0		
Mid-Flood	F3	Cloudy	Moderate	8:23	18.0	S	0.74	258	29.0	29.0	28.9	31.1	31.1	8.1	8.1	101.7	101.9	6.6	6.6	6.6	3.8	3.9	4.0	<0.001	<0.001	<0.001	5.9	6.0	8.6	0.12	0.12	0.05	<1.0	<1.0	<1.0
							0.74	258	29.0			31.1		8.1		102.0		6.6			3.9			<0.001			6.1			0.11			<1.0		
						M	0.31	217	28.9	28.9		32.8	32.8	8.1	8.1	102.4	102.5	6.6	6.6		1.8	1.8		<0.001	<0.001		7.5	7.3		0.03	0.03		<1.0	<1.0	
							0.42	237	28.9			32.8		8.1		102.6		6.6			1.7			<0.001			7.1			<0.02			<1.0		
						B	0.17	280	28.9	28.9		32.8	31.1	8.1	8.1	101.4	101.5	6.5	6.5	6.5	6.9	6.4		<0.001	<0.001		12.1	12.4		<0.02	<0.02		<1.0	<1.0	
							0.64	292	28.9			32.8		8.1		101.6		6.5			5.9			<0.001			12.6			<0.02			<1.0		
	IM6	Fine	Calm	8:08	16.5	S	0.34	309	28.8	28.8	28.9	31.6	31.6	8.1	8.1	98.6	98.5	6.4	6.4	6.4	1.6	1.6	3.5	<0.001	<0.001	<0.001	3.4	3.6	5.8	0.13	0.13	0.07	<1.0	<1.0	<1.0
							0.34	309	28.8			31.6		8.1		98.4		6.4			1.5			<0.001			3.8			0.13			<1.0		
						M	0.09	197	28.9	28.9		32.4	32.4	8.1	8.1	100.2	100.2	6.5	6.5		2.2	2.0		<0.001	<0.001		4.4	4.3		0.06	0.06		<1.0	<1.0	
							0.09	197	28.9			32.4		8.1		100.2		6.5			2.0			<0.001			4.2			0.06			<1.0		
						B	0.21	98	28.9	28.9		32.8	32.8	8.1	8.1	101.0	100.7	6.5	6.5	6.5	6.5	6.9		<0.001	<0.001		9.6	9.4		<0.02	<0.02		<1.0	<1.0	
							0.21	98	28.9			32.8		8.1		100.3		6.4			7.2			<0.001			9.2			<0.02			<1.0		

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

Water Quality Monitoring Data Log Sheet **Date: 2023/10/12**

Tide	Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	Current Direction	Temperature (°C)			Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Total Residual Chlorine (mg/L)			Suspended Solids (mg/L)			Total Inorganic Nitrogen (mg/L)			5-day Biochemical Oxygen Demand (mg/L)		
									Value	Average	DA	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
Mid-Ebb	E2	Fine	Moderate	10:09	9.7	S	0.2	60	27.3	27.3		31.3	31.3	8.1	8.1	93.3	93.9	6.2	6.2	6.2	3.7	3.6	10.1	<0.001	<0.001	<0.001	4.9	4.9	11.1	0.07	0.07	0.06	<1.0	<1.0	<1.0
							0.4	233	27.3			31.3		8.1		94.5		6.3			3.5			<0.001			4.8			0.07			<1.0		
						M	0.2	118	27.2	27.2	27.3	31.4	31.4	8.1	8.1	91.2	91.5	6.1	6.1		4.6	4.6		<0.001	<0.001		4.2	4.6		0.06	0.06		<1.0	<1.0	
							0.1	344	27.2			31.4		8.1		91.7		6.1			4.6			<0.001			5.0			0.05			<1.0		
						B	0.5	342	27.3	27.3		31.6	31.6	8.0	8.0	90.2	89.8	6.0	6.0	6.0	22.1	22.0		<0.001	<0.001		30.9	23.7		0.06	0.06		<1.0	<1.0	
							0.5	342	27.3			31.6		8.0		89.4		5.9			21.9			<0.001			16.5			0.05			<1.0		
	IM6	Fine	Moderate	10:43	17.3	S	0.2	167	27.1	27.1		31.4	31.4	7.9	7.9	97.6	97.8	6.5	6.5	6.4	1.3	1.4	4.7	<0.001	<0.001	<0.001	3.6	2.8	6.4	0.05	0.05	0.04	<1.0	<1.0	<1.0
							0.2	167	27.1			31.4		7.9		97.9		6.5			1.4			<0.001			1.9			0.04			<1.0		
						M	0.2	82	27.3	27.3	27.2	32.2	32.2	7.9	7.9	94.9	94.9	6.3	6.3		3.6	3.4		<0.001	<0.001		4.0	3.7		0.03	0.03		<1.0	<1.0	
							0.0	8	27.3			32.2		7.9		94.9		6.3			3.2			<0.001			3.3			0.03			<1.0		
						B	0.2	352	27.3	27.3		32.3	32.3	7.9	7.9	95.5	95.2	6.3	6.3	6.3	9.3	9.3		<0.001	<0.001		13.4	12.7		0.05	0.04		<1.0	<1.0	
							0.3	343	27.3			32.3		7.9		94.8		6.3			9.2			<0.001			12.0			0.03			<1.0		
Mid-Flood	F3	Cloudy	Rough	16:40	17.9	S	0.81	240	27.5	27.5		31.5	31.5	8.0	8.0	104.0	105.1	6.9	7.0	6.6	1.5	1.4	6.7	<0.001	<0.001	<0.001	3.4	3.1	9.9	0.03	0.03	0.03	<1.0	<1.0	<1.0
							0.81	240	27.5			31.5		8.0		106.2		7.0			1.3			<0.001			2.7			0.03			<1.0		
						M	0.15	116	27.2	27.2	27.3	32.2	32.2	8.0	8.0	95.4	95.0	6.3	6.3		4.8	4.9		<0.001	<0.001		4.0	4.0		0.03	0.03		<1.0	<1.0	
							0.18	221	27.2			32.2		8.0		94.6		6.3			4.9			<0.001			3.9			0.02			<1.0		
						B	0.96	328	27.2	27.2		32.3	32.3	8.0	8.0	95.3	94.7	6.3	6.3	6.3	13.7	13.8		<0.001	<0.001		25.1	22.6		0.04	0.04		<1.0	<1.0	
							0.96	328	27.2			32.3		8.0		94.1		6.2			13.8			<0.001			20.1			0.03			<1.0		
	IM6	Cloudy	Rough	16:55	16.7	S	0.79	240	27.4	27.4		31.7	31.7	8.0	8.0	103.5	103.7	6.9	6.9	6.8	1.8	1.8	7.4	<0.001	<0.001	<0.001	2.6	2.7	8.1	0.03	0.03	0.03	<1.0	<1.0	<1.0
							0.79	240	27.4			31.7		8.0		103.8		6.9			1.7			<0.001			2.7			0.03			<1.0		
						M	0.20	213	27.4	27.4	27.3	31.8	31.8	7.9	7.9	100.2	100.9	6.6	6.5		2.8	2.7		<0.001	<0.001		5.4	4.7		0.03	0.03		<1.0	<1.0	
							0.40	1	27.4			31.8		7.9		101.5		6.7			2.6			<0.001			4.0			0.03			<1.0		
						B	0.13	181	27.2	27.2		32.2	32.2	7.9	7.9	96.5	95.7	6.4	6.4	6.3	18.3	17.7		<0.001	<0.001		16.0	16.8		0.03	0.04		<1.0	<1.0	
							0.06	238	27.2			32.2		7.9		94.9		6.3			17.1			<0.001			17.6			0.04			<1.0		

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

Water Quality Monitoring Data Log Sheet **Date: 2023/10/19**

Tide	Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	Current Direction	Temperature (°C)			Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Total Residual Chlorine (mg/L)			Suspended Solids (mg/L)			Total Inorganic Nitrogen (mg/L)			5-day Biochemical Oxygen Demand (mg/L)		
									Value	Average	DA	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
Mid-Ebb	E2	Cloudy	Rough	14:31	9.0	S	0.75	79	26.6	26.6	26.5	31.7	31.7	8.0	8.0	91.8	91.8	6.2	6.2	6.2	11.0	11.0	11.7	<0.001	<0.001	<0.001	18.1	17.8	16.0	0.11	0.12	0.12	<1.0	<1.0	<1.0
							0.75	79	26.6			31.7		8.0		91.8		6.2			11.0			<0.001			17.5			0.12			<1.0		
						M	0.42	179	26.5	26.5		31.7	31.7	8.0	8.0	92.5	92.2	6.2	6.2		11.6	11.6		<0.001	<0.001		15.5	15.3		0.12	0.12		<1.0	<1.0	
							0.24	292	26.5			31.7		8.0		91.8		6.2			11.5			<0.001			15.1			0.12			<1.0		
						B	0.08	280	26.5	26.5		31.7	31.7	8.0	8.0	95.4	94.4	6.4	6.3	6.3	12.6	12.6		<0.001	<0.001		15.0	15.0		0.12	0.12		<1.0	<1.0	
							0.29	208	26.5			31.7		8.0		93.4		6.3			12.6			<0.001			14.9			0.11			<1.0		
	IM6	Cloudy	Rough	14:00	17.6	S	0.46	263	26.5	26.5	26.5	32.3	32.3	7.9	7.9	94.5	94.5	6.3	6.3	6.3	7.2	7.2	10.2	<0.001	<0.001	<0.001	8.4	8.9	14.9	0.08	0.08	0.07	<1.0	<1.0	<1.0
							0.36	347	26.5			32.3		7.9		94.5		6.3			7.1			<0.001			9.4			0.08			<1.0		
						M	0.41	278	26.5	26.5		32.3	32.3	7.9	7.9	94.1	94.2	6.3	6.3		7.7	7.6		<0.001	<0.001		10.0	9.8		0.06	0.06		<1.0	<1.0	
							0.41	229	26.5			32.3		7.9		94.3		6.3			7.4			<0.001			9.6			0.06			<1.0		
						B	0.61	352	26.5	26.5		32.4	32.4	7.9	7.9	94.4	94.3	6.3	6.3	6.3	17.0	16.0		<0.001	<0.001		20.1	26.0		0.06	0.06		<1.0	<1.0	
							0.61	352	26.5			32.4		7.9		94.2		6.3			14.9			<0.001			31.8			0.06			<1.0		
Mid-Flood	F3	Rainy	Rough	9:04	17.8	S	0.72	229	26.5	26.5	26.5	32.3	32.3	8.1	8.1	95.1	95.0	6.4	6.4	6.4	6.3	6.3	10.8	<0.001	0.005	0.002	8.2	8.1	16.8	0.06	0.06	0.06	<1.0	<1.0	<1.0
							1.08	260	26.5			32.3		8.1		94.9		6.4			6.3			0.009			8.0			0.06			<1.0		
						M	0.86	298	26.5	26.5		32.3	32.3	8.1	8.1	95.4	95.4	6.4	6.4		6.7	6.6		<0.001	<0.001		6.8	7.2		0.06	0.06		<1.0	<1.0	
							1.36	265	26.5			32.3		8.1		95.3		6.4			6.5			<0.001			7.6			0.06			<1.0		
						B	1.23	246	26.4	26.4		32.6	32.6	8.1	8.1	95.8	95.7	6.4	6.4	6.4	19.9	19.4		<0.001	<0.001		32.5	35.0		0.05	0.05		<1.0	<1.0	
							1.23	246	26.4			32.6		8.1		95.5		6.4			18.8			<0.001			37.4			0.05			<1.0		
	IM6	Rainy	Rough	8:47	16.2	S	0.48	87	26.5	26.5	26.5	32.3	32.3	8.0	8.0	94.6	94.7	6.3	6.4	6.3	9.4	9.3	10.3	<0.001	<0.001	0.002	9.6	9.9	12.8	0.06	0.06	0.06	<1.0	<1.0	<1.0
							0.48	87	26.5			32.3		8.0		94.8		6.4			9.2			<0.001			10.1			0.06			<1.0		
						M	0.40	254	26.5	26.5		32.3	32.3	8.0	8.0	94.3	94.4	6.3	6.3		8.9	8.9		<0.001	<0.001		11.9	12.1		0.06	0.06		<1.0	<1.0	
							0.40	254	26.5			32.3		8.0		94.5		6.3			8.9			<0.001			12.2			0.06			<1.0		
						B	0.06	58	26.5	26.5		32.3	32.3	8.0	8.0	94.8	94.7	6.4	6.4	6.4	13.4	12.7		<0.001	0.003		16.4	16.6		0.06	0.06		<1.0	<1.0	
							0.59	304	26.5			32.3		8.0		94.6		6.4			11.9			0.005			16.8			0.06			<1.0		

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

Water Quality Monitoring Data Log Sheet **Date: 2023/10/26**

Tide	Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	Current Direction	Temperature (°C)			Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Total Residual Chlorine (mg/L)			Suspended Solids (mg/L)			Total Inorganic Nitrogen (mg/L)			5-day Biochemical Oxygen Demand (mg/L)		
									Value	Average	DA	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
Mid-Ebb	E2	Fine	Moderate	9:47	9.4	S	0.26	109	26.2	26.2	26.2	32.2	32.2	8.0	8.0	97.6	97.7	6.6	6.6	6.6	1.9	1.9	2.6	<0.001	<0.001	0.002	2.6	2.5	3.8	0.15	0.15	0.15	<1.0	<1.0	<1.0
							0.26	109	26.2			32.2		8.0		97.8		6.6			1.9			<0.001			2.4			0.15			<1.0		
						M	0.13	201	26.2	26.2		32.2	32.2	8.0	8.0	96.7	97.2	6.5			2.0	2.0		<0.001	0.003		3.0	3.3		0.16	0.16		<1.0	<1.0	
							0.45	95	26.2			32.2		8.0		97.6		6.6			2.0			0.004			3.5			0.15			<1.0		
						B	0.76	141	26.2	26.2		32.3	32.3	8.0	8.0	96.7	96.4	6.5	6.5	6.5	3.9	3.9		<0.001	0.001		5.6	5.8		0.15	0.15		<1.0	<1.0	
							0.22	112	26.2			32.3		8.0		96.1		6.5			3.9			0.001			5.9			0.15			<1.0		
	IM6	Fine	Moderate	9:14	17.5	S	0.32	227	26.0	26.0	26.0	32.6	32.6	7.9	7.9	99.5	99.5	6.7	6.7	6.7	1.5	1.5	2.3	<0.001	<0.001	0.002	2.1	2.2	2.7	0.09	0.09	0.09	<1.0	<1.0	<1.0
							0.32	227	26.0			32.6		8.0		99.5		6.7			1.5			<0.001			2.2			0.09			<1.0		
						M	0.27	317	26.0	26.0		32.7	32.7	7.9	7.9	98.5	98.4	6.6	6.6		1.8	1.8		<0.001	0.005		2.3	2.3		0.08	0.09		<1.0	<1.0	
							0.24	65	26.0			32.7		7.9		98.3		6.6			1.8			0.009			2.3			0.09			<1.0		
						B	0.22	333	26.0	26.0		32.7	32.7	7.9	7.9	98.9	98.9	6.7	6.7	6.7	3.5	3.5		<0.001	<0.001		3.5	3.8		0.08	0.08		<1.0	<1.0	
							0.22	333	26.0			32.7		7.9		98.8		6.7			3.5			<0.001			4.0			0.08			<1.0		
Mid-Flood	F3	Fine	Moderate	16:10	17.8	S	1.03	279	26.4	26.4	26.2	32.4	32.4	8.0	8.0	102.6	102.9	6.9	6.9	6.7	1.0	1.0	2.1	<0.001	0.002	0.002	2.3	2.2	3.3	0.10	0.10	0.09	<1.0	<1.0	<1.0
							0.84	271	26.4			32.4		8.0		103.2		6.9			0.9			0.002			2.1			0.10			<1.0		
						M	0.41	316	26.1	26.1		32.6	32.6	8.0	8.0	97.4	97.7	6.6	6.6		1.6	1.6		<0.001	<0.001		2.7	2.8		0.09	0.09		<1.0	<1.0	
							0.36	222	26.1			32.6		8.0		97.9		6.6			1.5			<0.001			2.9			0.09			<1.0		
						B	0.12	170	26.0	26.0		32.6	32.6	8.0	8.0	96.0	96.0	6.5	6.5	6.5	3.7	3.7		<0.001	0.005		4.9	5.0		0.09	0.09		<1.0	<1.0	
							0.56	253	26.0			32.6		8.0		96.0		6.5			3.7			0.008			5.1			0.09			<1.0		
	IM6	Fine	Moderate	15:56	16.4	S	0.73	342	26.4	26.4	26.3	32.5	32.5	7.9	7.9	99.9	100.0	6.7	6.7	6.7	1.7	1.8	2.6	<0.001	<0.001	<0.001	2.1	2.2	3.1	0.10	0.10	0.09	<1.0	<1.0	<1.0
							0.37	6	26.4			32.5		7.9		100.1		6.7			1.8			<0.001			2.2			0.10			<1.0		
						M	0.36	222	26.3	26.3		32.5	32.5	7.9	7.9	98.9	99.0	6.7	6.7		2.1	2.3		<0.001	<0.001		2.6	2.7		0.09	0.09		<1.0	<1.0	
							0.36	222	26.3			32.5		7.9		99.1		6.7			2.4			<0.001			2.8			0.09			<1.0		
						B	0.12	168	26.2	26.2		32.5	32.5	7.9	7.9	99.6	99.3	6.7	6.7	6.7	3.7	3.8		<0.001	<0.001		4.5	4.4		0.09	0.09		<1.0	<1.0	
							0.49	281	26.2			32.5		7.9		98.9		6.7			3.8			<0.001			4.2			0.09			<1.0		

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

Water Quality Monitoring Data Log Sheet **Date: 2023/11/1**

Tide	Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	Current Direction	Temperature (°C)			Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Total Residual Chlorine (mg/L)			Suspended Solids (mg/L)			Total Inorganic Nitrogen (mg/L)			5-day Biochemical Oxygen Demand (mg/L)		
									Value	Average	DA	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
Mid-Ebb	E2	Fine	Rough	14:00	9.5	S	0.08	167	26.5	26.5	26.4	32.1	32.1	8.1	8.1	116.1	116.7	7.8	7.8	7.7	3.3	3.3	9.6	<0.001	<0.001	0.002	7.2	7.3	16.2	0.11	0.11	0.12	<1.0	<1.0	<1.0
							0.08	167	26.5			32.1		8.1		117.2		7.9			3.3			<0.001			7.4			0.10			<1.0		
						M	0.04	106	26.4	26.4		32.1	32.1	8.0	8.0	110.5	111.2	7.4	7.5		4.1	4.1		<0.001	0.003		8.2	8.4		0.11	0.11		<1.0	<1.0	
							0.31	160	26.4			32.1		8.1		111.9		7.5			4.0			0.004			8.6			0.11			<1.0		
						B	0.05	140	26.3	26.3		32.1	32.1	8.0	8.0	105.5	106.0	7.1	7.1	7.1	21.6	21.5		<0.001	<0.001		30.5	33.0		0.15	0.15		<1.0	<1.0	
							0.05	140	26.3			32.1		8.0		106.5		7.2			21.4			<0.001			35.4			0.15			<1.0		
	IM6	Fine	Rough	13:25	16.9	S	0.24	240	26.3	26.3	26.1	32.1	32.1	7.9	7.9	111.1	111.3	7.5	7.5	7.4	2.0	2.0	3.3	<0.001	<0.001	0.001	5.3	5.5	6.9	0.14	0.14	0.10	<1.0	<1.0	<1.0
							0.70	273	26.4			32.1		7.9		111.4		7.5			1.9			<0.001			5.7			0.14			<1.0		
						M	0.37	241	26.1	26.1		32.5	32.4	8.0	8.0	109.4	109.7	7.4	7.4		3.6	3.6		0.003	0.002		6.3	6.5		0.08	0.11		<1.0	<1.0	
							0.37	241	26.1			32.4		8.0		110.0		7.4			3.5			<0.001			6.7			0.13			<1.0		
						B	0.25	141	26.0	26.0		32.6	32.6	8.0	8.0	106.9	107.1	7.2	7.4	7.2	4.5	4.3		<0.001	<0.001		8.6	8.8		0.05	0.05		<1.0	<1.0	
							0.25	141	26.0			32.6		8.0		107.2		7.2			4.1			<0.001			9.0			0.05			<1.0		
Mid-Flood	F3	Cloudy	Moderate	08:32	17	S	0.46	292	26.0	26.0	26.0	32.4	32.4	8.1	8.1	106.4	106.6	7.2	7.2	7.2	1.5	1.5	2.7	<0.001	<0.001	0.001	3.6	3.4	4.8	0.08	0.08	0.05	<1.0	<1.0	<1.0
							0.14	147	26.0			32.4		8.1		106.7		7.2			1.4			<0.001			3.2			0.08			<1.0		
						M	0.21	287	26.0	26.0		32.6	32.6	8.1	8.1	106.2	106.0	7.2	7.2		1.5	1.5		<0.001	<0.001		4.2	4.3		0.05	0.05		<1.0	<1.0	
							0.21	287	26.0			32.6		8.1		105.7		7.1			1.5			<0.001			4.4			0.05			<1.0		
						B	0.39	254	25.9	25.9		32.7	32.7	8.1	8.1	105.1	105.7	7.1	7.1	7.1	5.0	5.2		<0.001	0.002		6.8	6.6		0.03	0.03		<1.0	<1.0	
							0.39	254	25.9			32.7		8.1		106.3		7.2			5.3			0.002			6.4			0.03			<1.0		
	IM6	Cloudy	Moderate	08:18	16.5	S	0.28	297	26.0	26.0	26.0	32.3	32.3	8.0	8.0	103.4	103.2	7.0	7.0	7.0	1.6	1.6	5.0	<0.001	<0.001	0.003	3.9	4.2	8.0	0.12	0.12	0.09	<1.0	<1.0	<1.0
							0.29	155	26.0			32.3		8.0		103.0		7.0			1.5			<0.001			4.4			0.12			<1.0		
						M	0.66	117	26.0	26.0		32.4	32.4	8.0	8.0	103.1	103.1	7.0	7.0		3.1	3.1		<0.001	0.005		6.0	5.7		0.10	0.11		<1.0	<1.0	
							0.66	117	26.0			32.4		8.0		103.0		7.0			3.1			0.008			5.4			0.11			<1.0		
						B	0.38	305	26.0	26.0		32.5	32.6	8.0	8.0	103.6	104.1	7.0	7.0	7.0	10.4	10.4		0.008	0.005		14.5	14.2		0.06	0.06		<1.0	<1.0	
							0.38	305	26.0			32.6		8.0		104.5		7.1			10.3			<0.001			13.8			0.05			<1.0		

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

Water Quality Monitoring Data Log Sheet **Date: 2023/11/10**

Tide	Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	Current Direction	Temperature (°C)			Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Total Residual Chlorine (mg/L)			Suspended Solids (mg/L)			Total Inorganic Nitrogen (mg/L)			5-day Biochemical Oxygen Demand (mg/L)		
									Value	Average	DA	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
Mid-Ebb	E2	Cloudy	Moderate	10:05	9.2	S	0.48	220	25.7	25.7	25.5	31.8	31.8	8.2	8.2	108.8	108.9	7.4	7.4	7.3	2.1	2.1	3.6	<0.001	<0.001	0.001	3.4	3.2	6.4	0.04	0.04	0.05	<1.0	<1.0	<1.0
							0.48	220	25.7			31.8		8.2		109.0		7.4			2.1			<0.001			3.0			0.04			<1.0		
						M	0.29	112	25.4	25.4		31.9	31.9	8.2	8.2	104.9	105.1	7.2	7.2		1.8	1.9		<0.001	0.002		3.9	3.8		0.05	0.05		<1.0	<1.0	
							0.29	112	25.4			31.9		8.2		105.3		7.2			1.9			0.002			3.6			0.05			<1.0		
						B	0.10	31	25.3	25.3		32.2	32.2	8.2	8.2	99.7	99.6	6.8	6.8	6.8	7.0	6.8		<0.001	<0.001		12.0	12.4		0.06	0.06		<1.0	<1.0	
							0.10	31	25.3			32.2		8.2		99.5		6.8			6.5			<0.001			12.7			0.06			<1.0		
	IM6	Cloudy	Moderate	9:33	17.0	S	0.40	253	25.3	25.3	25.2	32.8	32.8	8.2	8.2	103.1	103.2	7.0	7.0	7.0	1.3	1.2	1.8	<0.001	<0.001	0.001	2.7	2.5	3.3	0.03	0.03	0.03	<1.0	<1.0	<1.0
							0.40	253	25.3			32.8		8.2		103.3		7.1			1.1			<0.001			2.3			0.03			<1.0		
						M	0.45	257	25.2	25.2		32.8	32.8	8.2	8.2	100.3	100.4	6.9	6.9		1.7	1.7		<0.001	0.001		3.2	3.0		0.03	0.03		<1.0	<1.0	
							0.45	257	25.2			32.8		8.2		100.4		6.9			1.7			0.001			2.8			<0.02			<1.0		
						B	0.09	169	25.2	25.2		32.8	32.9	8.2	8.2	97.9	97.9	6.7	6.7	6.7	2.6	2.6		<0.001	<0.001		4.6	4.4		<0.02	<0.02		<1.0	<1.0	
							0.09	169	25.2			32.9		8.2		97.9		6.7			2.6			<0.001			4.2			<0.02			<1.0		
Mid-Flood	F3	Fine	Rough	15:58	18	S	0.78	291	26.3	26.3	26.0	32.6	32.6	8.1	8.1	110.7	112.0	7.4	7.5	7.1	0.3	0.3	1.7	<0.001	<0.001	<0.001	3.2	3.0	4.4	<0.02	0.02	0.02	<1.0	<1.0	<1.0
							0.78	291	26.3			32.6		8.1		113.2		7.6			0.3			<0.001			2.8			0.02			<1.0		
						M	0.45	247	25.9	25.9		32.9	32.9	8.0	8.0	98.2	98.5	6.6	6.7		1.3	1.3		<0.001	<0.001		4.0	4.2		<0.02	<0.02		<1.0	<1.0	
							0.45	247	25.9			32.9		8.0		98.7		6.7			1.3			<0.001			4.3			<0.02			<1.0		
						B	0.56	319	25.9	25.9		32.9	32.9	8.0	8.0	97.8	97.3	6.6	6.6	6.6	3.4	3.5		<0.001	<0.001		6.1	6.0		<0.02	<0.02		<1.0	<1.0	
							0.56	319	25.9			32.9		8.0		96.8		6.5			3.5			<0.001			5.8			<0.02			<1.0		
	IM6	Fine	Rough	15:43	16.6	S	0.57	302	26.4	26.4	26.2	32.6	32.6	8.1	8.1	113.6	114.3	7.6	7.7	7.4	0.8	0.8	2.8	<0.001	<0.001	<0.001	2.3	2.4	4.6	0.02	0.02	0.02	<1.0	<1.0	<1.0
							0.57	302	26.4			32.6		8.1		115.0		7.7			0.7			<0.001			2.5			0.02			<1.0		
						M	0.47	299	26.2	26.2		32.7	32.7	8.1	8.1	105.5	106.5	7.1	7.2		1.8	1.7		<0.001	<0.001		4.0	4.0		0.02	0.02		<1.0	<1.0	
							0.47	299	26.2			32.7		8.1		107.5		7.2			1.5			<0.001			4.0			<0.02			<1.0		
						B	0.21	3	25.9	25.9		32.9	32.9	8.2	8.2	102.1	100.9	6.9	6.8	6.8	5.6	5.9		<0.001	<0.001		7.6	7.4		<0.02	<0.02		<1.0	<1.0	
							0.26	94	25.9			32.9		8.1		99.7		6.7			6.2			<0.001			7.1			<0.02			<1.0		

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

Water Quality Monitoring Data Log Sheet **Date: 2023/11/16**

Tide	Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	Current Direction	Temperature (°C)			Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Total Residual Chlorine (mg/L)			Suspended Solids (mg/L)			Total Inorganic Nitrogen (mg/L)			5-day Biochemical Oxygen Demand (mg/L)		
									Value	Average	DA	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
Mid-Ebb	E2	Cloudy	Rough	13:45	9.0	S	0.65	200	24.9	24.9	24.9	32.5	32.5	8.1	8.1	94.5	94.2	6.5	6.5	6.5	10.2	10.3	11.0	<0.001	<0.001	<0.001	13.6	14.4	13.5	0.11	0.11	0.11	<1.0	<1.0	<1.0
							0.63	156	24.9			32.5		8.1		93.9		6.5			10.4			<0.001			15.1			0.11			<1.0		
						M	0.43	177	24.9	24.9		32.5	32.5	8.1	8.1	95.5	95.4	6.6	6.6		12.0	11.6		<0.001	<0.001		13.1	13.4		0.11	0.11		<1.0	<1.0	
							0.43	177	24.9			32.5		8.1		95.2		6.6			11.1			<0.001			13.6			0.11			<1.0		
						B	0.38	258	24.9	24.9		32.5	32.5	8.1	8.1	99.7	99.0	6.9	6.8	6.8	10.6	11.1		<0.001	<0.001		13.4	12.7		0.11	0.11		<1.0	<1.0	
							0.29	139	24.9			32.5		8.1		98.3		6.8			11.6			<0.001			11.9			0.11			<1.0		
	IM6	Cloudy	Rough	13:07	17.0	S	0.70	105	25.2	25.2	25.1	32.9	32.9	8.1	8.1	95.3	95.3	6.5	6.5	6.5	3.9	3.9	5.6	<0.001	<0.001	<0.001	5.4	5.5	6.7	0.06	0.06	0.06	<1.0	<1.0	<1.0
							0.70	105	25.2			32.9		8.1		95.2		6.5			3.8			<0.001			5.5			0.06			<1.0		
						M	0.38	292	25.1	25.2		32.9	32.9	8.1	8.1	96.1	96.0	6.6	6.6		4.2	4.2		<0.001	<0.001		5.2	5.6		0.06	0.06		<1.0	<1.0	
							0.78	108	25.2			32.9		8.1		95.9		6.6			4.1			<0.001			6.0			0.06			<1.0		
						B	0.10	22	25.1	25.1		32.9	32.9	8.1	8.1	97.7	97.1	6.7	6.6	6.6	8.9	8.9		<0.001	<0.001		6.8	9.2		0.06	0.06		<1.0	<1.0	
							0.10	22	25.1			32.9		8.1		96.4		6.6			8.8			<0.001			11.5			0.06			<1.0		
Mid-Flood	F3	Cloudy	Rough	08:40	18	S	0.49	280	25.2	25.2	25.2	32.9	32.9	8.2	8.2	93.2	93.2	6.4	6.4	6.4	3.2	3.3	7.2	<0.001	0.002	0.001	4.5	4.6	10.0	0.06	0.06	0.06	<1.0	<1.0	<1.0
							1.02	294	25.2			32.9		8.2		93.2		6.4			3.3			0.002			4.7			0.06			<1.0		
						M	0.28	189	25.2	25.2		32.9	32.9	8.2	8.2	93.6	93.5	6.4	6.4		4.8	5.0		<0.001	0.002		6.1	6.1		0.07	0.08		<1.0	<1.0	
							0.38	118	25.2			32.9		8.2		93.4		6.4			5.2			0.002			6.0			0.08			<1.0		
						B	0.59	351	25.2	25.2		32.9	32.9	8.1	8.1	95.4	94.8	6.5	6.5	6.5	13.2	13.2		<0.001	<0.001		18.8	19.3		0.04	0.04		<1.0	<1.0	
							0.59	351	25.2			32.9		8.1		94.2		6.4			13.2			<0.001			19.8			0.04			<1.0		
	IM6	Cloudy	Rough	08:26	16	S	0.40	337	25.2	25.2	25.2	32.8	32.8	8.1	8.1	93.0	93.2	6.4	6.4	6.4	3.5	3.4	4.9	<0.001	<0.001	<0.001	4.3	4.5	7.3	0.06	0.05	0.05	<1.0	<1.0	<1.0
							0.40	337	25.1			32.8		8.1		93.3		6.4			3.2			<0.001			4.6			0.04			<1.0		
						M	0.05	2	25.2	25.2		32.8	32.8	8.1	8.1	92.8	92.9	6.3	6.4		4.6	4.7		<0.001	<0.001		9.6	8.4		0.04	0.06		<1.0	<1.0	
							0.45	250	25.2			32.8		8.1		92.9		6.4			4.8			<0.001			7.1			0.07			<1.0		
						B	0.35	96	25.2	25.2		32.8	32.8	8.1	8.1	94.9	94.4	6.5	6.5	6.5	6.1	6.6		<0.001	<0.001		10.1	9.1		0.04	0.05		<1.0	<1.0	
							0.15	349	25.2			32.8		8.1		93.9		6.4			7.0			<0.001			8.0			0.06			<1.0		

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

Water Quality Monitoring Data Log Sheet **Date: 2023/11/23**

Tide	Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	Current Direction	Temperature (°C)			Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Total Residual Chlorine (mg/L)			Suspended Solids (mg/L)			Total Inorganic Nitrogen (mg/L)			5-day Biochemical Oxygen Demand (mg/L)		
									Value	Average	DA	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
Mid-Ebb	E2	Cloudy	Calm	8:00	9.0	S	0.33	152	23.4	23.4	23.4	32.8	32.8	8.1	8.1	93.6	93.7	6.6	6.6	6.6	1.6	1.7	2.2	<0.001	<0.001	<0.001	2.3	2.5	3.4	0.14	0.15	0.14	<1.0	<1.0	<1.0
							0.33	152	23.4			32.8		8.1		93.7		6.6			1.7			<0.001			2.6			0.15			<1.0		
						M	0.11	281	23.4			32.8		8.1		94.4		6.7			1.8			<0.001			3.0			0.14			<1.0		
							0.11	281	23.4			32.8		8.1		93.9		6.6			1.9			<0.001			3.4			0.14			<1.0		
						B	0.20	6	23.5	23.5		32.9	32.9	8.1	8.1	96.7	96.0	6.8	6.8	6.8	3.0	3.0		<0.001	<0.001		4.8	4.7		0.13	0.13		<1.0	<1.0	
							0.31	76	23.5			32.9		8.1		95.2		6.7			3.0			<0.001			4.5			0.13			<1.0		
	IM6	Cloudy	Calm	7:57	17.0	S	0.28	93	23.7	23.7	23.7	33.1	33.1	8.1	8.1	93.0	93.1	6.5	6.5	6.5	2.3	2.3	2.5	<0.001	0.002	0.001	2.8	2.6	3.5	0.07	0.08	0.08	<1.0	<1.0	<1.0
							0.28	93	23.7			33.1		8.1		93.1		6.5			2.2			0.002			2.4			0.08			<1.0		
						M	0.43	233	23.7	23.7		33.1	33.1	8.1	8.1	93.2	93.2	6.5	6.5		2.4	2.4		<0.001	<0.001		3.5	3.7		0.08	0.08		<1.0	<1.0	
							0.13	330	23.7			33.1		8.1		93.2		6.5			2.3			<0.001			3.9			0.08			<1.0		
						B	0.15	113	23.7	23.7		33.1	33.1	8.1	8.1	95.6	95.2	6.7	6.7	6.7	2.6	2.8		<0.001	<0.001		4.0	4.2		0.08	0.08		<1.0	<1.0	
							0.15	113	23.7			33.1		8.1		94.8		6.6			2.9			<0.001			4.4			0.07			<1.0		
Mid-Flood	F3	Fine	Calm	14:55	17.8	S	0.29	244	24.6	24.6	24.1	33.1	33.1	8.1	8.1	100.8	101.2	7.0	7.0	6.9	1.3	1.3	2.5	<0.001	<0.001	<0.001	1.8	1.7	2.7	0.06	0.06	0.06	<1.0	<1.0	<1.0
							0.29	244	24.6			33.1		8.1		101.6		7.0			1.2			<0.001			1.6			0.06			<1.0		
						M	0.21	64	23.8	23.8		33.1	33.1	8.1	8.1	97.1	96.9	6.8	6.8		2.5	2.4		<0.001	<0.001		3.0	2.9		0.06	0.06		<1.0	<1.0	
							0.31	46	23.8			33.1		8.1		96.6		6.8			2.2			<0.001			2.8			0.06			<1.0		
						B	0.21	10	23.8	23.8		33.1	33.1	8.1	8.1	98.0	97.7	6.9	6.8	6.8	4.0	3.8		<0.001	<0.001		3.7	3.5		0.06	0.06		<1.0	<1.0	
							0.50	335	23.8			33.1		8.1		97.3		6.8			3.6			<0.001			3.3			0.06			<1.0		
	IM6	Fine	Calm	14:39	16	S	0.52	309	24.0	24.0	23.9	33.0	33.0	8.0	8.0	98.0	98.0	6.8	6.8	6.8	1.7	1.7	3.1	<0.001	0.004	0.002	4.0	3.9	4.8	0.08	0.08	0.07	<1.0	<1.0	<1.0
							0.52	309	24.0			33.0		8.0		98.0		6.8			1.7			0.007			3.7			0.08			<1.0		
						M	0.35	276	23.8	23.8		33.1	33.1	8.0	8.0	97.2	97.0	6.8	6.8		2.4	2.3		<0.001	<0.001		4.4	4.6		0.07	0.07		<1.0	<1.0	
							0.85	197	23.8			33.1		8.0		96.8		6.8			2.2			<0.001			4.8			0.07			<1.0		
						B	0.51	290	23.8	23.8		33.1	33.1	8.0	8.0	98.5	98.4	6.9	6.9	6.9	5.1	5.4		<0.001	<0.001		6.0	5.8		0.07	0.07		<1.0	<1.0	
							0.51	290	23.8			33.1		8.0		98.2		6.9			5.6			<0.001			5.6			0.07			<1.0		

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

Water Quality Monitoring Data Log Sheet **Date: 2023/11/29**

Tide	Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	Current Direction	Temperature (°C)			Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Total Residual Chlorine (mg/L)			Suspended Solids (mg/L)			Total Inorganic Nitrogen (mg/L)			5-day Biochemical Oxygen Demand (mg/L)		
									Value	Average	DA	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
Mid-Ebb	E2	Cloudy	Rough	13:11	9.2	S	0.03	239	23.6	23.6	23.6	32.8	32.8	8.3	8.3	97.0	97.0	6.8	6.8	6.8	9.1	9.0	12.6	<0.001	<0.001	<0.001	10.6	10.6	15.4	0.14	0.14	0.14	<1.0	<1.0	<1.0
							0.07	25	23.6			32.8		8.3		96.9		6.8			8.9			<0.001			10.6			0.14			<1.0		
						M	0.53	59	23.6	23.6		32.8	32.8	8.3	8.3	96.1	96.3	6.8	6.8		12.2	11.8		<0.001	<0.001		13.1	13.0		0.14	0.13		<1.0	<1.0	
							0.53	59	23.6			32.8		8.3		96.4		6.8			11.4			<0.001			12.8			0.12			<1.0		
						B	0.10	168	23.6	23.6		32.8	32.8	8.3	8.3	97.6	97.2	6.9	6.8		18.2	17.0		<0.001	<0.001		22.7	22.8		0.14	0.14		<1.0	<1.0	
							0.17	173	23.6			32.8		8.3		96.8		6.8			15.8			<0.001			22.8			0.14			<1.0		
	IM6	Cloudy	Rough	12:33	16.8	S	0.39	96	23.6	23.6	23.6	33.1	33.1	8.2	8.2	97.6	97.6	6.9	6.9	6.8	8.4	8.7	10.4	<0.001	0.001	0.001	10.2	10.3	12.7	0.07	0.07	0.07	<1.0	<1.0	<1.0
							0.39	96	23.6			33.1		8.2		97.6		6.9			8.9			0.001			10.3			0.07			<1.0		
						M	0.32	25	23.6	23.6		33.1	33.1	8.1	8.1	96.9	96.9	6.8	6.8		10.4	10.7		<0.001	<0.001		13.6	13.5		0.06	0.07		<1.0	<1.0	
							0.14	224	23.6			33.1		8.1		96.9		6.8			10.9			<0.001			13.3			0.07			<1.0		
						B	0.26	7	23.6	23.6		33.1	33.1	8.0	8.0	97.8	97.5	6.9	6.8		11.9	12.0		<0.001	<0.001		14.4	14.3		0.07	0.07		<1.0	<1.0	
							0.40	115	23.6			33.1		8.1		97.1		6.8			12.1			<0.001			14.1			0.06			<1.0		
Mid-Flood	F3	Cloudy	Rough	07:54	17.9	S	0.48	303	23.6	23.6	23.7	33.1	33.1	8.3	8.3	99.6	99.7	7.0	7.0	7.0	5.3	5.5	13.5	<0.001	0.005	0.003	6.4	6.4	15.6	0.05	0.05	0.04	<1.0	<1.0	<1.0
							0.48	303	23.6			33.1		8.3		99.8		7.0			5.6			0.008			6.3			0.05			<1.0		
						M	0.48	175	23.7	23.7		33.2	33.2	8.3	8.3	98.9	98.9	6.9	6.9		9.1	9.3		<0.001	<0.001		9.7	9.9		0.04	0.04		<1.0	<1.0	
							0.23	253	23.7			33.2		8.3		98.9		6.9			9.5			<0.001			10.0			0.04			<1.0		
						B	0.25	326	23.7	23.7		33.2	33.2	8.3	8.3	98.2	98.1	6.9	6.9	6.9	27.2	25.8		<0.001	0.002		30.2	30.5		0.03	0.04		<1.0	<1.0	
							0.25	326	23.7			33.2		8.3		97.9		6.9			24.4			0.003			30.7			0.04			<1.0		
	IM6	Cloudy	Rough	07:28	16.6	S	0.37	338	23.6	23.6	23.6	33.2	33.2	8.2	8.2	97.1	97.1	6.8	6.8	6.8	9.2	9.3	9.9	<0.001	<0.001	<0.001	11.5	11.4	12.6	0.04	0.04	0.04	<1.0	<1.0	<1.0
							0.15	303	23.6			33.2		8.2		97.0		6.8			9.3			<0.001			11.2			0.04			<1.0		
						M	0.17	246	23.6	23.6		33.3	33.2	8.1	8.1	96.9	96.8	6.8	6.8		9.7	9.5		<0.001	<0.001		12.7	12.5		0.04	0.04		<1.0	<1.0	
							0.23	264	23.6			33.2		8.1		96.7		6.8			9.2			<0.001			12.2			0.04			<1.0		
						B	0.12	282	23.6	23.6		33.3	33.3	8.0	8.0	97.5	97.4	6.8	6.8	6.8	11.2	11.1		<0.001	<0.001		13.8	13.9		0.04	0.04		<1.0	<1.0	
							0.12	282	23.6			33.3		8.0		97.2		6.8			11.0			<0.001			14.0			0.04			<1.0		

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

Water Quality Monitoring Data Log Sheet **Date: 2023/12/08**

Tide	Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	Current Direction	Temperature (°C)			Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Total Residual Chlorine (mg/L)			Suspended Solids (mg/L)			Total Inorganic Nitrogen (mg/L)			5-day Biochemical Oxygen Demand (mg/L)		
									Value	Average	DA	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
Mid-Ebb	E2	Cloudy	Calm	8:06	9.2	S	0.34	115	22.3	22.3	22.3	32.9	32.9	8.2	8.2	111.7	112.1	8.0	8.1	8.0	3.4	3.5	3.6	<0.001	<0.001	<0.001	4.9	4.8	5.5	0.05	0.05	0.05	1.3	1.3	1.2
							0.34	115	22.3			32.9		8.2		112.4		8.1			3.6			<0.001			4.6			0.05			1.2		
						M	0.21	320	22.3	22.3		32.9	32.9	8.2	8.2	110.0	110.3	7.9	7.9		3.7	3.6		<0.001	<0.001		5.8	5.6		0.05	0.05		1.1	1.2	
							0.37	215	22.3			32.9		8.2		110.5		7.9			3.4			<0.001			5.4			0.05			1.2		
						B	0.23	340	22.4	22.4		32.9	32.9	8.2	8.2	108.3	108.9	7.8	7.8	7.8	3.4	3.7		<0.001	<0.001		6.0	6.1		0.04	0.05		1.5	1.3	
							0.28	130	22.4			32.9		8.2		109.4		7.9			3.9			<0.001			6.2			0.05			1.1		
	IM6	Cloudy	Calm	7:34	16.8	S	0.14	321	22.7	22.7	22.7	33.2	33.2	8.1	8.1	100.5	100.4	7.2	7.1	7.1	1.1	1.1	1.3	<0.001	<0.001	<0.001	2.3	2.4	2.8	0.04	0.04	0.04	<1.0	<1.0	<1.0
							0.16	190	22.7			33.2		8.1		100.3		7.1			1.0			<0.001			2.4			0.04			<1.0		
						M	0.38	263	22.7	22.7		33.2	33.2	8.1	8.1	99.8	100.0	7.1	7.1		1.2	1.2		<0.001	<0.001		2.9	2.7		0.04	0.04		<1.0	<1.0	
							0.70	19	22.7			33.2		8.1		100.1		7.1			1.2			<0.001			2.5			0.03			<1.0		
						B	0.64	164	22.7	22.7		33.2	33.2	8.1	8.1	99.7	99.5	7.1	7.1	7.1	1.7	1.8		<0.001	<0.001		3.6	3.5		0.04	0.04		<1.0	<1.0	
							0.64	164	22.7			33.2		8.1		99.2		7.1			1.8			<0.001			3.3			0.04			<1.0		
Mid-Flood	F3	Cloudy	Rough	14:30	18.2	S	0.49	305	22.9	22.9	22.8	33.2	33.2	8.2	8.2	105.2	105.9	7.5	7.5	7.3	1.2	1.2	2.9	<0.001	<0.001	<0.001	2.1	2.2	3.4	0.02	0.02	0.04	<1.0	<1.0	<1.0
							0.49	305	22.9			33.2		8.2		106.6		7.6			1.1			<0.001			2.3			0.02			<1.0		
						M	0.09	196	22.8	22.8		33.3	33.3	8.1	8.1	98.0	98.5	7.0	7.0		2.1	2.2		<0.001	<0.001		3.2	3.1		0.04	0.04		<1.0	<1.0	
							0.09	196	22.8			33.3		8.1		98.9		7.0			2.2			<0.001			2.9			0.04			<1.0		
						B	0.26	12	22.8	22.8		33.3	33.3	8.1	8.1	97.4	97.0	6.9	6.9	6.9	5.4	5.4		<0.001	<0.001		5.2	5.0		0.05	0.05		<1.0	<1.0	
							0.1	324	22.8			33.3		8.1		96.5		6.9			5.3			<0.001			4.7			0.05			<1.0		
	IM6	Cloudy	Rough	14:12	16.7	S	1.7	268	23.0	23.0	22.9	33.3	33.3	8.1	8.1	103.3	103.5	7.3	7.3	7.2	1.7	1.9	2.4	<0.001	0.002	0.001	2.6	2.6	3.6	0.02	0.02	0.03	<1.0	<1.0	<1.0
							1.7	268	23.0			33.3		8.1		103.7		7.4			2.0			0.003			2.6			0.02			<1.0		
						M	0.24	60	22.9	22.9		33.3	33.3	8.1	8.1	100.6	99.7	7.1	7.2		2.3	2.3		<0.001	<0.001		3.8	3.6		0.04	0.04		<1.0	<1.0	
							0.22	182	22.9			33.3		8.1		100.8		7.2			2.3			<0.001			3.4			0.04			<1.0		
						B	1.41	238	22.8	22.8		33.3	33.3	8.0	8.0	99.9	99.9	7.1	7.1	7.1	3.2	3.2		<0.001	0.002		4.4	4.7		0.04	0.04		<1.0	<1.0	
							0.39	19	22.8			33.3		8.0		99.9		7.1			3.1			0.002			5.0			0.04			<1.0		

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

Water Quality Monitoring Data Log Sheet **Date: 2023/12/11**

Tide	Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	Current Direction	Temperature (°C)			Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Total Residual Chlorine (mg/L)			Suspended Solids (mg/L)			Total Inorganic Nitrogen (mg/L)			5-day Biochemical Oxygen Demand (mg/L)		
									Value	Average	DA	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
Mid-Ebb	E2	Cloudy	Moderate	10:44	9.1	S	0.30	326	23.2	23.2	23.1	32.8	32.8	8.3	8.3	131.8	133.2	9.3	9.4	9.1	1.2	1.2	1.6	<0.001	<0.001	<0.001	4.5	4.4	4.0	<0.02	<0.02	<0.02	1.5	1.5	1.2
							0.07	255	23.2			32.8		8.3		134.5		9.5			1.2			<0.001			4.3			<0.02			1.4		
						M	0.05	231	23.1	23.1		33.0	33.0	8.3	8.3	125.0	125.2	8.9	8.9		1.6	1.5		<0.001	<0.001		3.9	4.0		<0.02	<0.02		1.2	1.2	
							0.33	182	23.1			33.0		8.3		125.4		8.9			1.4			<0.001			4.1			<0.02			1.2		
						B	0.52	94	23.1	23.1		33.0	33.0	8.3	8.3	121.8	122.5	8.6	8.7	8.7	2.1	2.0		<0.001	<0.001		3.4	3.6		<0.02	<0.02		<1.0	<1.0	
							0.38	192	23.1			33.0		8.3		123.1		8.7			1.8			<0.001			3.7			<0.02			<1.0		
	IM6	Cloudy	Moderate	10:13	16.9	S	0.21	120	23.0	23.0	23.0	33.2	33.2	8.1	8.1	112.1	112.3	7.9	8.0	7.9	1.0	1.0	1.4	<0.001	0.002	0.003	3.0	3.2	3.5	<0.02	<0.02	<0.02	<1.0	<1.0	<1.0
							0.21	120	23.0			33.2		8.1		112.5		8.0			1.0			0.002			3.3			<0.02			<1.0		
						M	0.21	313	23.0	23.0		33.2	33.2	8.1	8.1	110.0	110.1	7.8	7.8		1.3	1.2		<0.001	0.002		3.5	3.4		<0.02	<0.02		<1.0	<1.0	
							0.21	313	23.0			33.2		8.1		110.2		7.8			1.1			0.002			3.2			<0.02			<1.0		
						B	0.08	221	23.0	23.0		33.2	33.2	8.1	8.1	108.3	108.4	7.7	7.7	7.7	2.2	2.1		<0.001	0.005		4.1	3.9		<0.02	<0.02		<1.0	<1.0	
							0.08	221	23.0			33.2		8.1		108.5		7.7			1.9			0.008			3.7			<0.02			<1.0		
Mid-Flood	F3	Cloudy	Moderate	15:37	18.1	S	0.03	243	23.6	23.6	23.2	33.2	33.2	8.2	8.2	118.4	118.4	8.3	8.3	8.1	0.2	0.2	0.9	<0.001	<0.001	<0.001	1.2	1.4	1.9	<0.02	<0.02	0.02	<1.0	<1.0	<1.0
							0.09	98	23.5			33.2		8.2		118.4		8.3			0.2			<0.001			1.5			<0.02			<1.0		
						M	0.07	285	23.0	23.0		33.2	33.2	8.2	8.2	110.0	110.8	7.8	7.9		1.2	1.1		<0.001	<0.001		1.8	1.9		<0.02	<0.02		<1.0	<1.0	
							0.35	304	23.0			33.2		8.2		111.6		7.9			1.0			<0.001			2.0			<0.02			<1.0		
						B	0.4	4	23.0	23.0		33.2	33.3	8.2	8.2	106.8	106.8	7.6	7.6	7.6	1.3	1.3		<0.001	<0.001		2.5	2.4		<0.02	0.02		<1.0	<1.0	
							0.4	4	23.0			33.3		8.2		106.7		7.6			1.3			<0.001			2.3			0.02			<1.0		
	IM6	Cloudy	Moderate	15:23	16.7	S	0.13	343	23.1	23.1	23.0	33.2	33.2	8.1	8.1	114.4	114.7	8.1	8.1	8.0	0.5	0.6	1.7	<0.001	<0.001	<0.001	1.8	2.0	2.8	<0.02	<0.02	<0.02	<1.0	<1.0	<1.0
							0.13	343	23.1			33.2		8.1		115.0		8.1			0.6			<0.001			2.2			<0.02			<1.0		
						M	0.67	1	23.0	23.0		33.3	33.3	8.1	8.1	109.7	110.1	7.8	7.8		1.1	1.1		<0.001	<0.001		2.8	2.6		<0.02	<0.02		<1.0	<1.0	
							0.07	5	23.0			33.3		8.1		110.5		7.8			1.0			<0.001			2.4			<0.02			<1.0		
						B	0.43	286	23.0	23.0		33.3	33.3	8.1	8.1	107.7	107.8	7.6	7.6	7.6	3.3	3.4		<0.001	<0.001		3.6	3.9		<0.02	<0.02		<1.0	<1.0	
							0.02	341	23.0			33.3		8.1		107.8		7.6			3.4			<0.001			4.2			<0.02			<1.0		

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

Water Quality Monitoring Data Log Sheet **Date: 2023/12/18**

Tide	Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	Current Direction	Temperature (°C)			Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Total Residual Chlorine (mg/L)			Suspended Solids (mg/L)			Total Inorganic Nitrogen (mg/L)			5-day Biochemical Oxygen Demand (mg/L)		
									Value	Average	DA	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
Mid-Ebb	E2	Cloudy	Moderate	16:33	9.4	S	0.57	132	21.8	21.8	21.8	32.8	21.8	8.1	8.1	95.9	95.7	7.0	6.9	7.0	10.4	10.1	11.3	<0.001	<0.001	0.001	10.5	10.7	12.2	0.16	0.16	0.16	<1.0	1.4	2.1
							0.20	35	21.8			32.8		8.1		95.4		6.9			9.7			<0.001			10.8			0.16			1.8		
						M	0.21	263	21.8			32.8		8.1		96.8		7.0			10.9			<0.001			11.8			0.16			1.5		
							0.21	4	21.8			32.8		8.1		96.2		7.0			10.5			<0.001			12.1			0.16			1.9		
						B	0.19	175	21.8			32.7		8.1		100.3		7.3			13.1			<0.001			14.2			0.17			2.9		
							0.33	282	21.8			32.7		8.1		98.7		7.2			13.3			0.001			13.9			0.17			3.6		
	IM6	Cloudy	Moderate	15:58	17.0	S	0.24	84	22.2	22.2	22.2	33.1	33.1	8.1	8.1	99.6	99.6	7.2	7.2	7.2	5.2	4.8	6.6	<0.001	<0.001	0.002	5.3	5.2	7.7	0.10	0.10	0.09	1.3	1.2	1.1
							0.24	84	22.2			33.1		8.1		99.5		7.2			4.4			<0.001			5.1			0.09			1.1		
						M	0.27	212	22.2	22.2		33.1	33.1	8.1	8.1	99.7	99.5	7.2	7.2		6.6	6.8		<0.001	<0.001		7.2	7.2		0.09	0.09		<1.0	<1.0		
							0.27	212	22.2			33.1		8.1		99.3		7.1			6.9			<0.001			7.1			0.08			<1.0		
						B	0.19	298	22.2	22.2		33.1	33.1	8.1	8.1	101.2	100.8	7.3	7.2	7.2	8.3	8.2		<0.001	0.003		10.7	10.8		0.09	0.09		<1.0	<1.0		
							0.19	298	22.2			33.1		8.1		100.3		7.2			8.1			0.004			10.8			0.09			<1.0		
Mid-Flood	F3	Cloudy	Rough	11:02	18	S	0.22	191	22.0	22.0	22.0	32.9	32.9	8.0	8.0	98.9	98.9	7.1	7.1	7.1	5.5	5.4	8.7	<0.001	<0.001	0.001	6.1	6.3	8.3	0.09	0.09	0.09	<1.0	<1.0	<1.0
							0.22	291	22.0			32.9		8.0		98.8		7.1			5.3			<0.001			6.4			0.08			<1.0		
						M	0.24	317	22.0	22.0		32.9	32.9	8.0	8.0	98.2	98.3	7.1	7.1		7.4	6.9		<0.001	0.001		5.0	5.2		0.09	0.09		<1.0	<1.0		
							0.19	267	22.0			32.9		8.0		98.3		7.1			6.3			0.001			5.4			0.09			<1.0		
						B	0.32	297	22.0	22.0		32.9	32.9	8.0	8.0	98.0	97.9	7.1	7.1	7.1	13.6	13.7		<0.001	<0.001		8.8	13.4		0.09	0.09		<1.0	<1.0		
							0.35	317	22.0			32.9		8.0		97.7		7.1			13.8			<0.001			18.0			0.09			<1.0		
	IM6	Cloudy	Rough	10:40	16	S	0.24	26	21.9	21.9	21.9	32.9	32.9	7.9	7.9	97.5	97.5	7.1	7.1	7.0	5.5	5.5	6.4	<0.001	<0.001	0.001	6.5	6.4	7.5	0.10	0.10	0.10	<1.0	<1.0	<1.0
							0.24	295	21.9			32.9		7.9		97.4		7.1			5.5			<0.001			6.2			0.10			<1.0		
						M	0.16	271	21.9	21.9		32.9	32.9	7.9	7.9	97.0	97.0	7.0	7.0		5.6	5.6		<0.001	0.001		7.0	6.9		0.10	0.11		<1.0	<1.0		
							0.07	200	21.9			32.9		7.9		97.0		7.0			5.6			0.001			6.8			0.11			<1.0		
						B	0.28	163	21.9	21.9		32.9	32.9	7.9	7.9	96.6	96.5	7.0	7.0	7.0	7.3	8.0		<0.001	0.001		10.8	9.3		0.10	0.10		<1.0	<1.0		
							0.45	334	21.9			32.9		7.9		96.4		7.0			8.6			0.001			7.8			0.10			<1.0		

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

Water Quality Monitoring Data Log Sheet **Date: 2023/12/28**

Tide	Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	Current Direction	Temperature (°C)			Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Total Residual Chlorine (mg/L)			Suspended Solids (mg/L)			Total Inorganic Nitrogen (mg/L)			5-day Biochemical Oxygen Demand (mg/L)		
									Value	Average	DA	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
Mid-Ebb	E2	Fine	Moderate	12:23	9.1	S	0.09	160	19.4	19.4	19.3	33.4	33.4	8.2	8.2	99.9	100.1	7.6	7.6	7.5	4.0	3.9	4.8	<0.001	<0.001	<0.001	4.8	4.6	5.9	0.06	0.06	0.06	<1.0	<1.0	<1.0
							0.10	256	19.5			33.4		8.2		100.3		7.6			3.8			<0.001			4.4			0.06			<1.0		
						M	0.16	8	19.2	19.2		33.4	33.4	8.2	8.2	98.8	98.9	7.5	7.5		4.8	4.9		<0.001	<0.001		5.7	6.0		0.06	0.06		<1.0	<1.0	
							0.25	51	19.2			33.4		8.2		98.9		7.5			4.9			<0.001			6.2			0.06			<1.0		
						B	0.15	30	19.2	19.2		33.4	33.4	8.1	8.1	99.3	99.1	7.5	7.5	7.5	5.4	5.6		<0.001	<0.001		7.3	7.2		0.07	0.07		<1.0	<1.0	
							0.16	5	19.2			33.4		8.1		98.9		7.5			5.8			<0.001			7.1			0.07			<1.0		
	IM6	Fine	Moderate	11:53	17.0	S	0.17	100	19.7	19.7	19.5	33.4	33.4	8.1	8.1	99.6	100.0	7.5	7.5	7.5	3.4	3.6	3.9	<0.001	<0.001	<0.001	3.8	3.5	4.3	0.05	0.05	0.05	<1.0	<1.0	<1.0
							0.17	100	19.7			33.4		8.1		100.3		7.5			3.7			<0.001			3.2			0.04			<1.0		
						M	0.18	37	19.5	19.5		33.4	33.4	8.1	8.1	98.6	98.6	7.4	7.4		3.7	3.8		<0.001	<0.001		4.4	4.3		0.05	0.05		<1.0	<1.0	
							0.18	37	19.5			33.4		8.1		98.6		7.4			3.9			<0.001			4.2			0.05			<1.0		
						B	0.12	161	19.4	19.4		33.4	33.4	8.1	8.1	97.5	97.5	7.4	7.4	7.4	4.4	4.3		<0.001	<0.001		5.2	5.2		0.06	0.06		<1.0	<1.0	
							0.15	333	19.4			33.4		8.1		97.5		7.4			4.2			<0.001			5.2			0.06			<1.0		
Mid-Flood	F3	Cloudy	Rough	7:54	17.6	S	0.41	309	19.4	19.4	19.4	33.5	33.5	8.2	8.2	98.8	99.0	7.5	7.5	7.4	3.7	3.6	4.8	<0.001	<0.001	<0.001	4.4	4.5	6.2	0.06	0.06	0.06	<1.0	<1.0	<1.0
							0.41	309	19.4			33.5		8.2		99.1		7.5			3.5			<0.001			4.6			0.06			<1.0		
						M	0.57	259	19.4	19.4		33.5	33.5	8.2	8.2	98.0	98.3	7.4	7.4		4.5	4.2		<0.001	<0.001		3.6	3.5		0.06	0.06		<1.0	<1.0	
							0.39	260	19.4			33.5		8.2		98.6		7.4			3.9			<0.001			3.3			0.06			<1.0		
						B	0.22	323	19.4	19.4		33.5	33.5	8.2	8.2	98.5	98.3	7.4	7.4	7.4	7.0	6.7		<0.001	<0.001		11.2	10.7		0.06	0.06		<1.0	<1.0	
							0.22	323	19.4			33.5		8.2		98.0		7.4			6.4			<0.001			10.1			0.06			<1.0		
	IM6	Cloudy	Rough	7:36	16.3	S	0.12	290	19.5	19.5	19.6	33.5	33.5	8.1	8.1	97.8	97.9	7.4	7.4	7.4	7.4	7.4	8.1	<0.001	<0.001	0.001	9.1	8.0	9.8	0.08	0.08	0.07	1.4	1.3	1.1
							0.23	303	19.5			33.5		8.1		98.0		7.4			7.4			<0.001			6.9			0.08			1.2		
						M	0.2	192	19.6	19.6		33.5	33.5	8.1	8.1	97.6	97.7	7.3	7.4		8.1	8.5		<0.001	0.002		11.9	11.9		0.05	0.06		<1.0	<1.0	
							0.23	109	19.6			33.5		8.1		97.7		7.4			8.9			0.002			11.9			0.06			<1.0		
						B	0.18	283	19.6	19.6		33.5	33.5	8.1	8.1	98.9	98.5	7.4	7.4	7.4	9.0	8.4		<0.001	<0.001		9.3	9.5		0.06	0.06		<1.0	<1.0	
							0.42	248	19.6			33.5		8.1		98.0		7.4			7.7			<0.001			9.6			0.06			<1.0		

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

ANNEX D GRAPHICAL PRESENTATION OF OPERATION PHASE WATER QUALITY MONITORING RESULTS

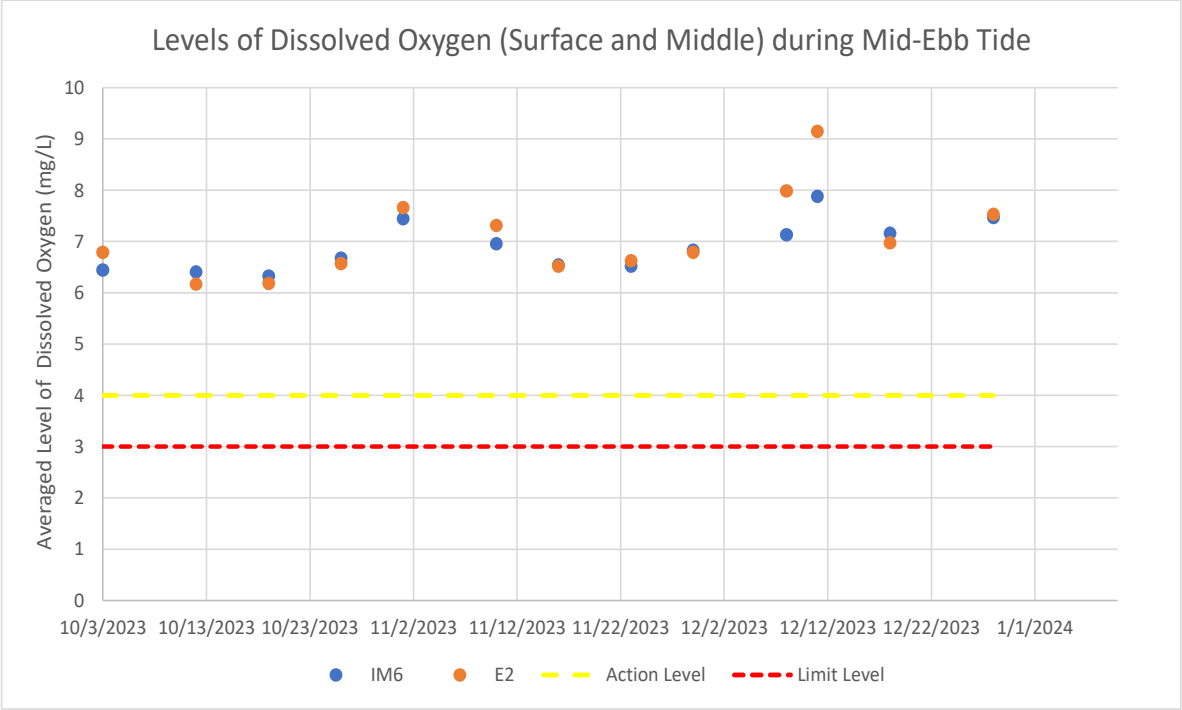

Figure 1: Levels of Dissolved Oxygen (Surface and Middle) during mid-ebb tide between October and December 2023

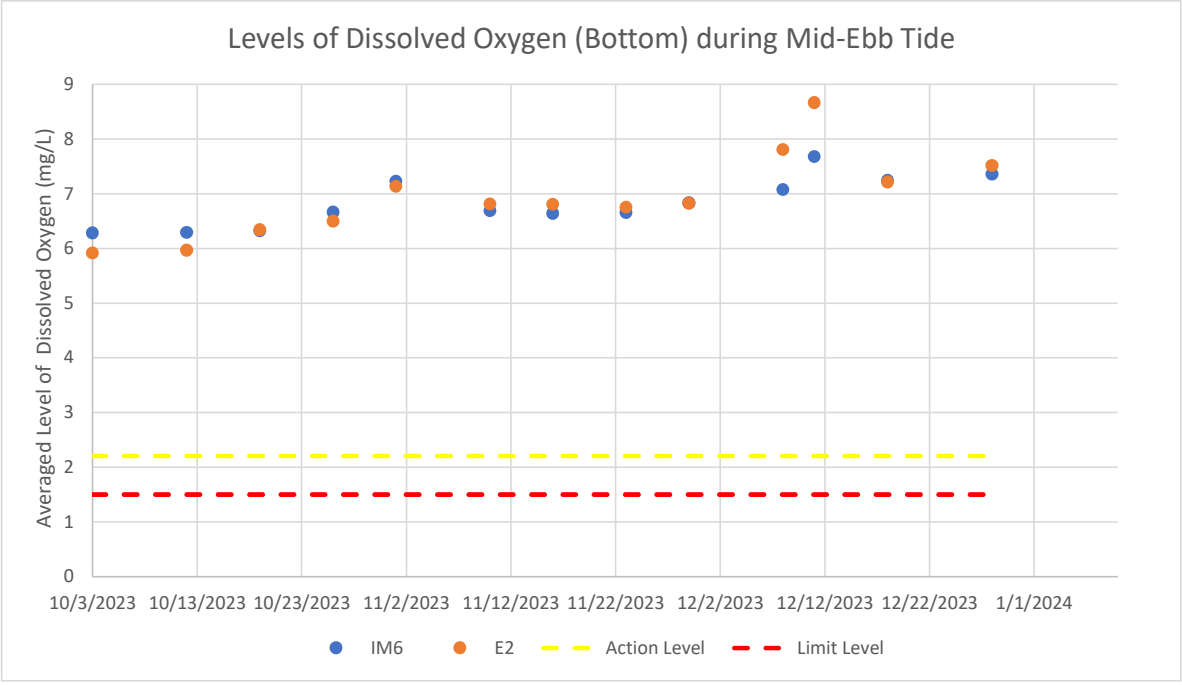

Figure 2: Levels of Dissolved Oxygen (Bottom) during mid-ebb tide between October and December 2023

Source: \\HKHKGDC02\Data\Hong Kong\Projects\0505354 CLP Power Hong Kong Limited FSRU Pre-con EM&A.RC\07 Data\15 Operation WQ

Date: January 2024

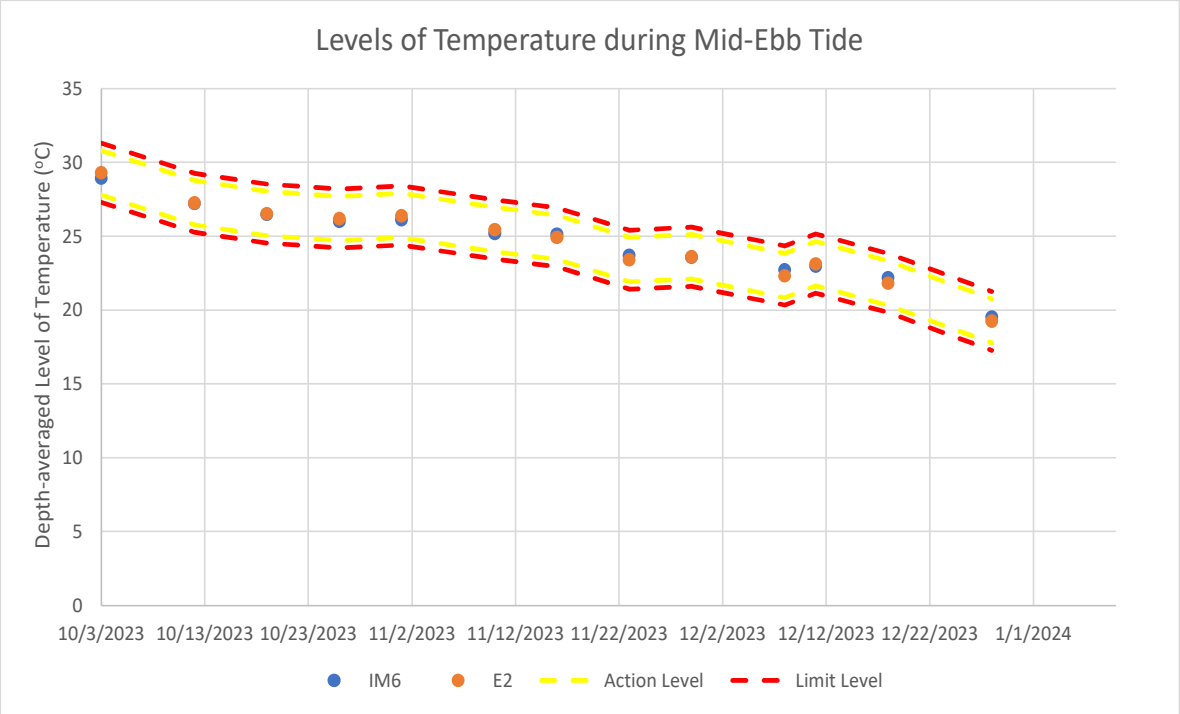

Figure 3: Levels of Temperature during mid-ebb tide between October and December 2023

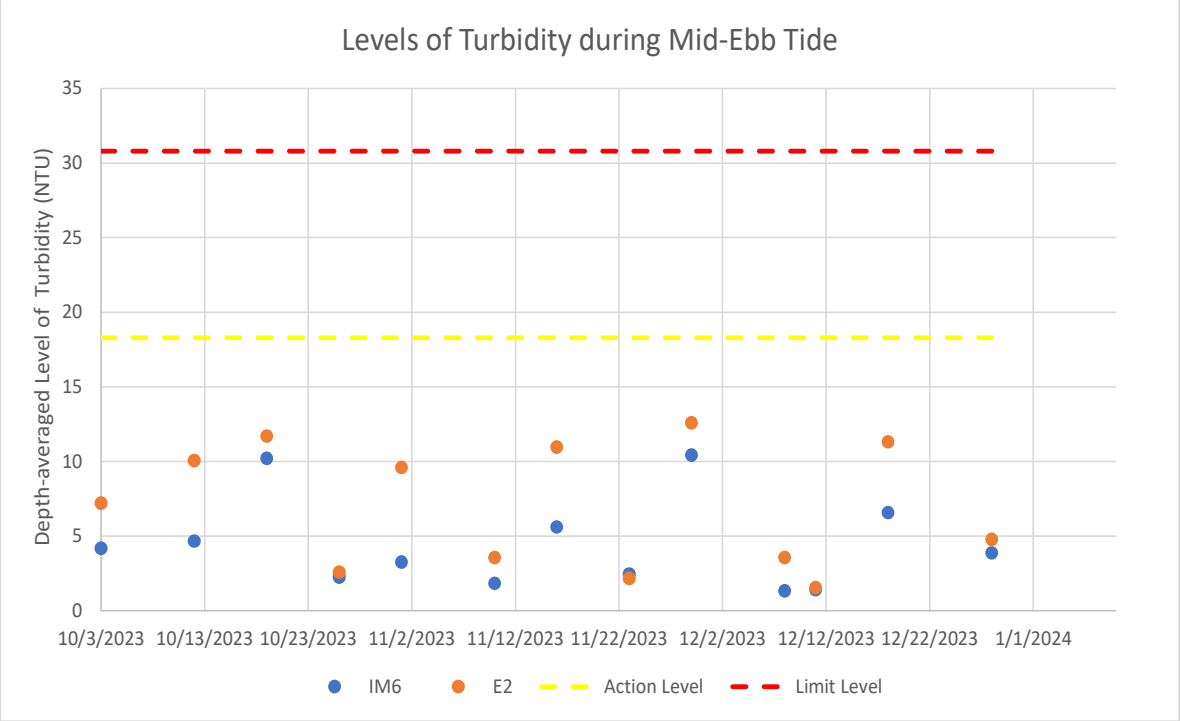

Figure 4: Levels of Turbidity during mid-ebb tide between October and December 2023

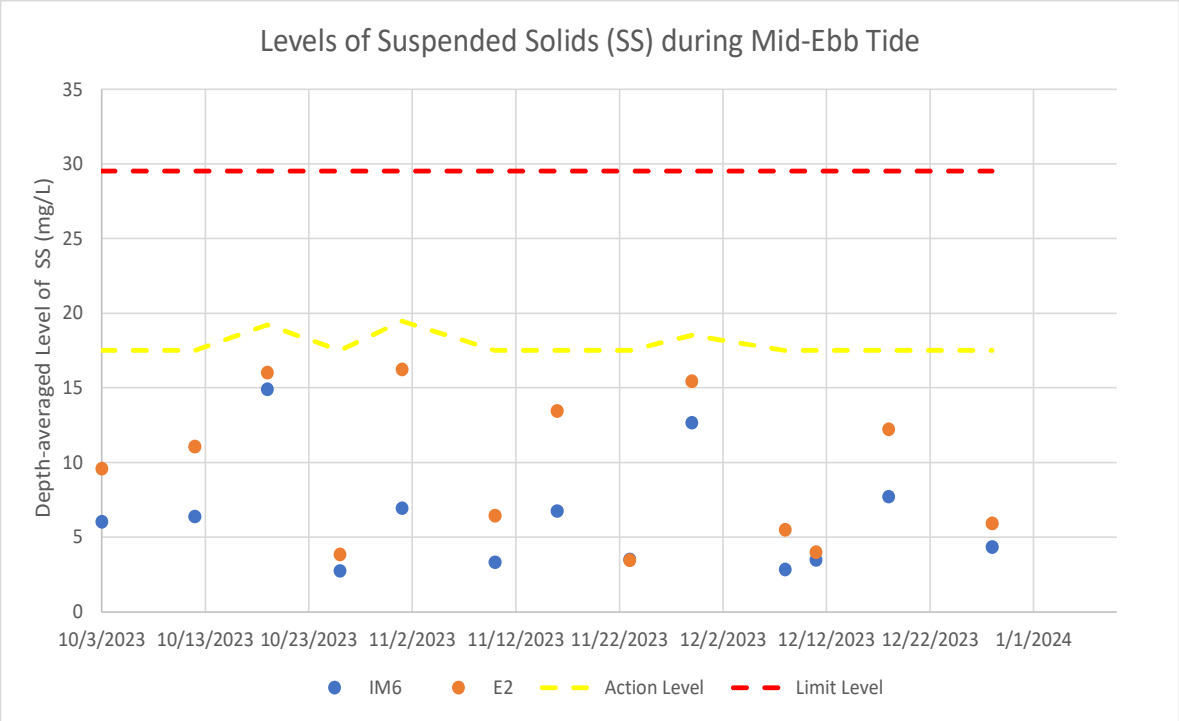

Figure 5: Levels of Suspended Solids during mid-ebb tide between October and December 2023

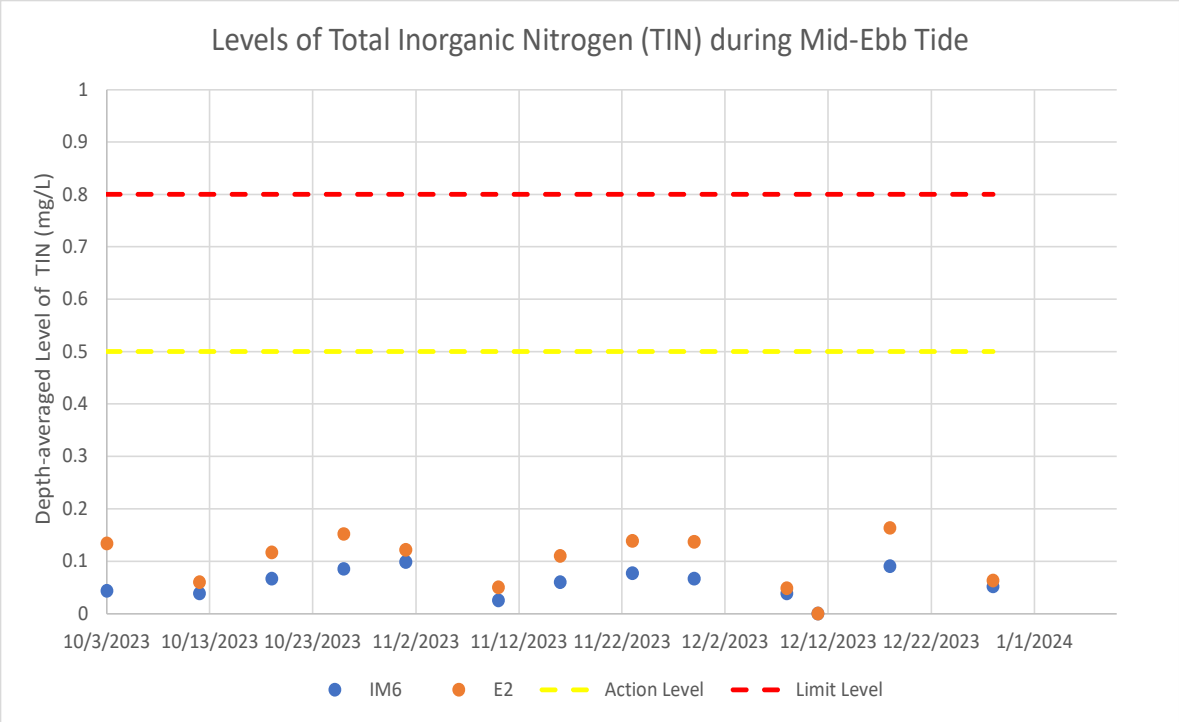

Figure 6: Levels of Total Inorganic Nitrogen during mid-ebb tide between October and December 2023

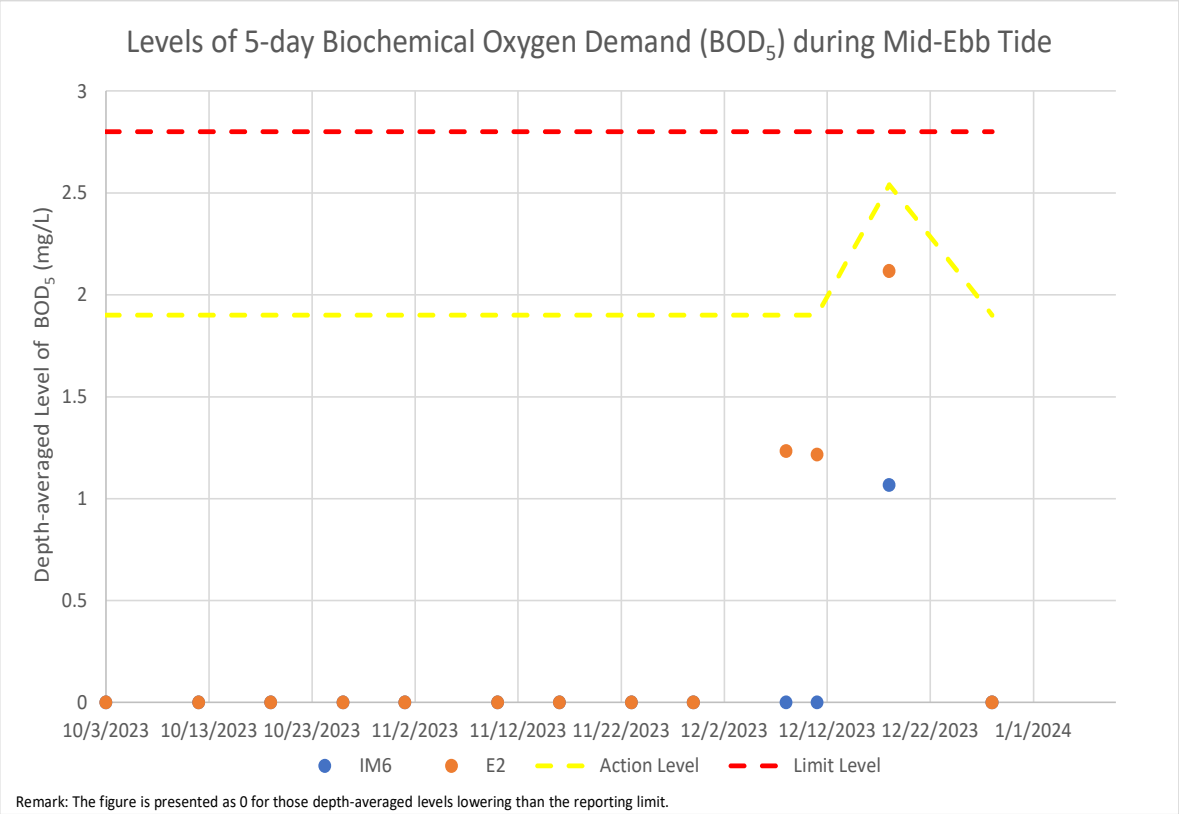

Figure 7: Levels of 5-day Biochemical Oxygen Demand during mid-ebb tide between October and December 2023

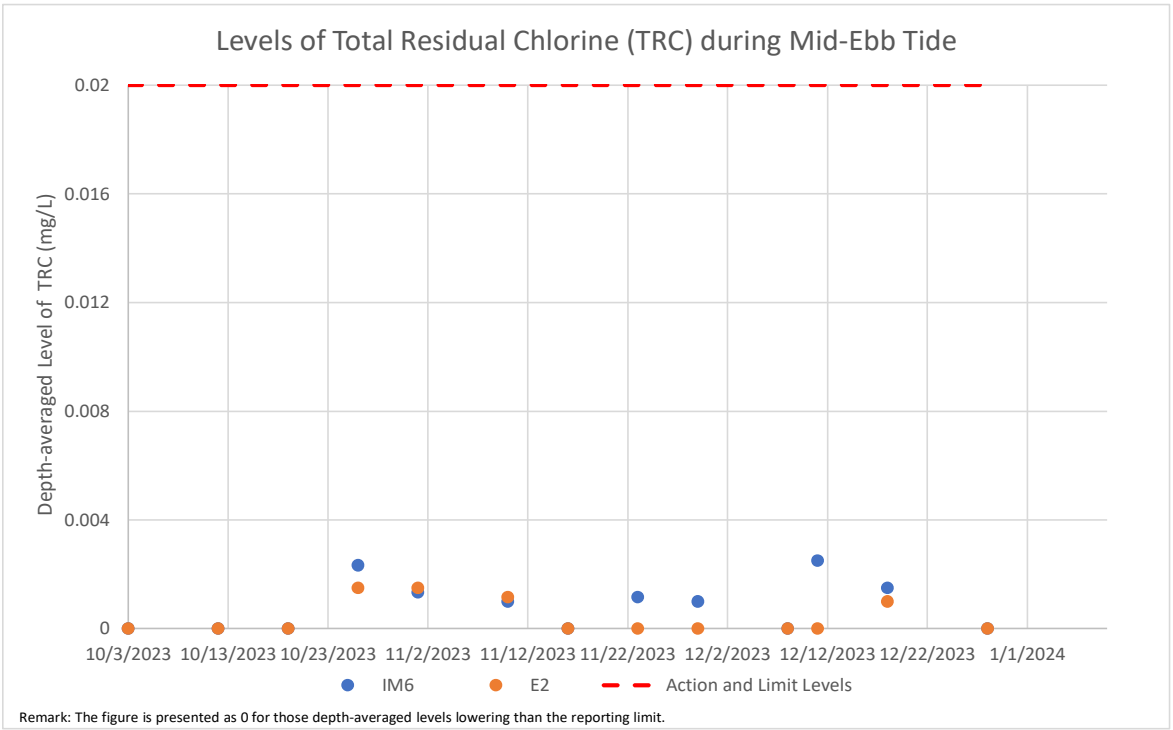

Figure 8: Levels of Total Residual Chlorine during mid-ebb tide between October and December 2023

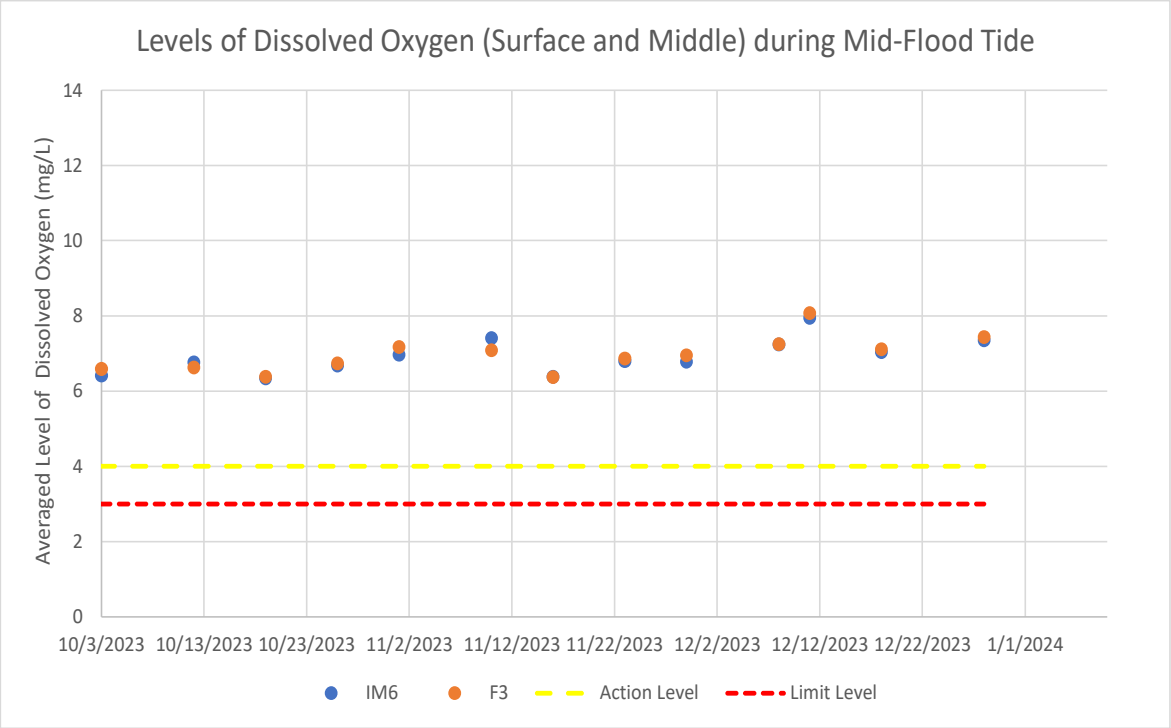

Figure 9: Levels of Dissolved Oxygen (Surface and Middle) during mid-flood tide between October and December 2023

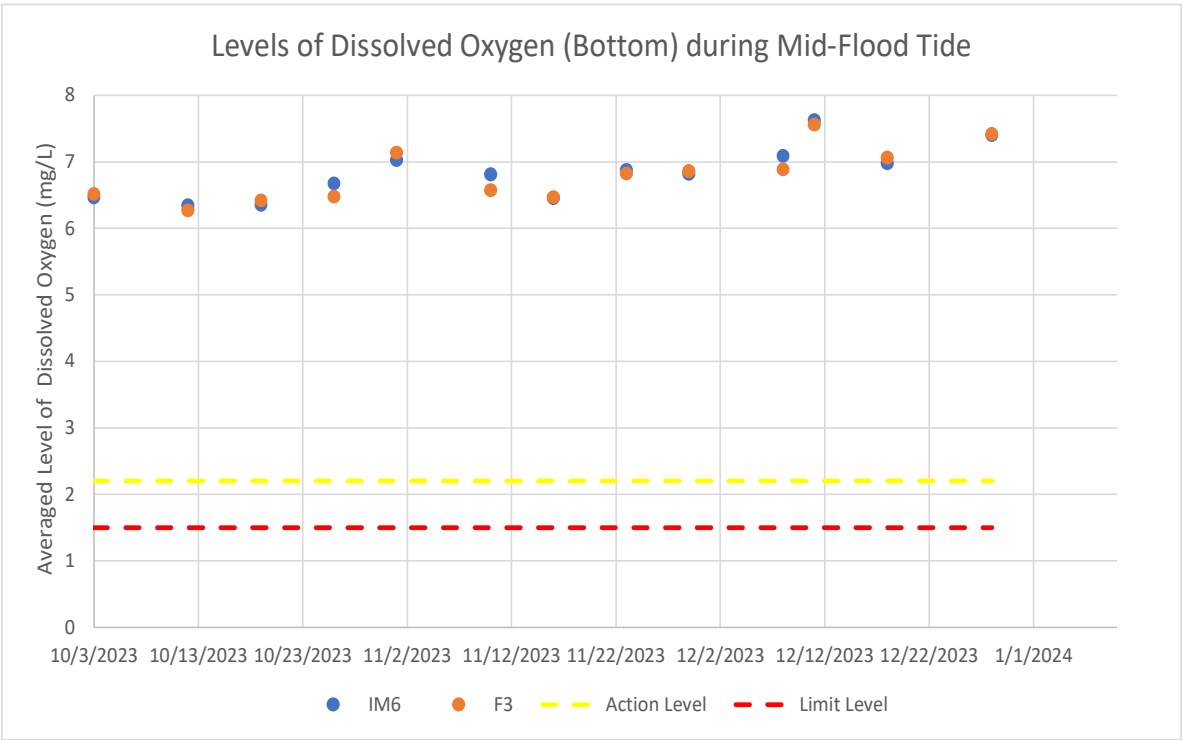

Figure 10: Levels of Dissolved Oxygen (Bottom) during mid-flood tide between October and December 2023

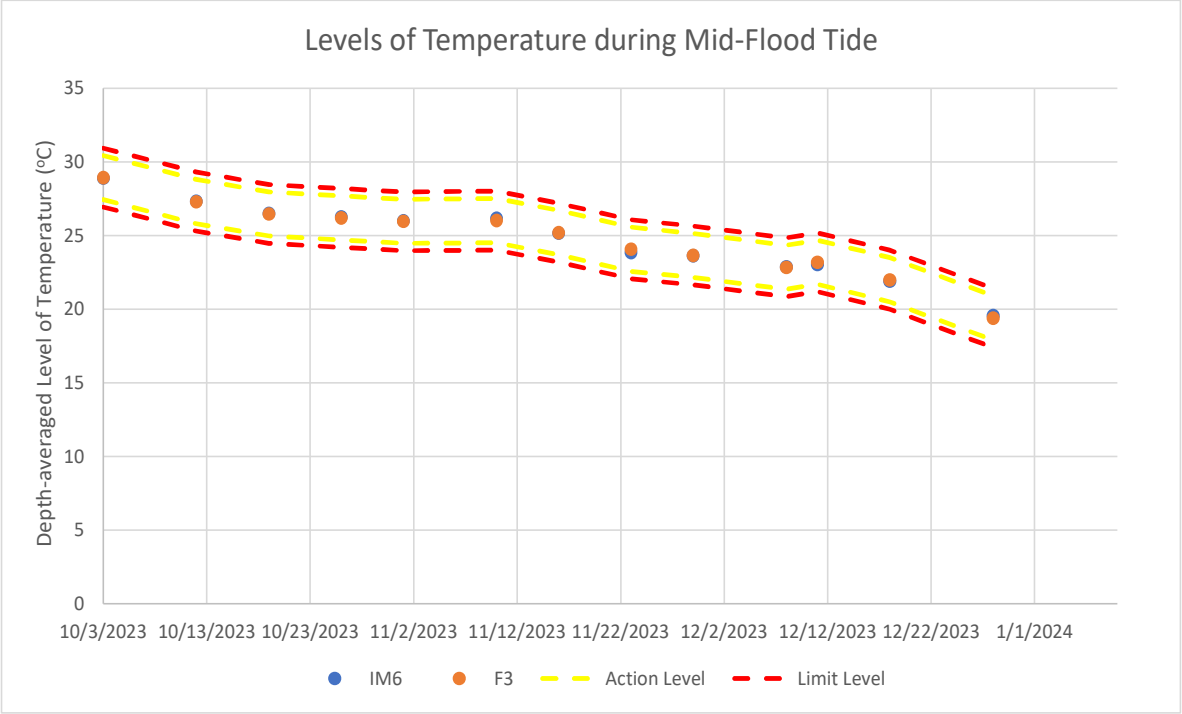

Figure 11: Levels of Temperature during mid-flood tide between October and December 2023

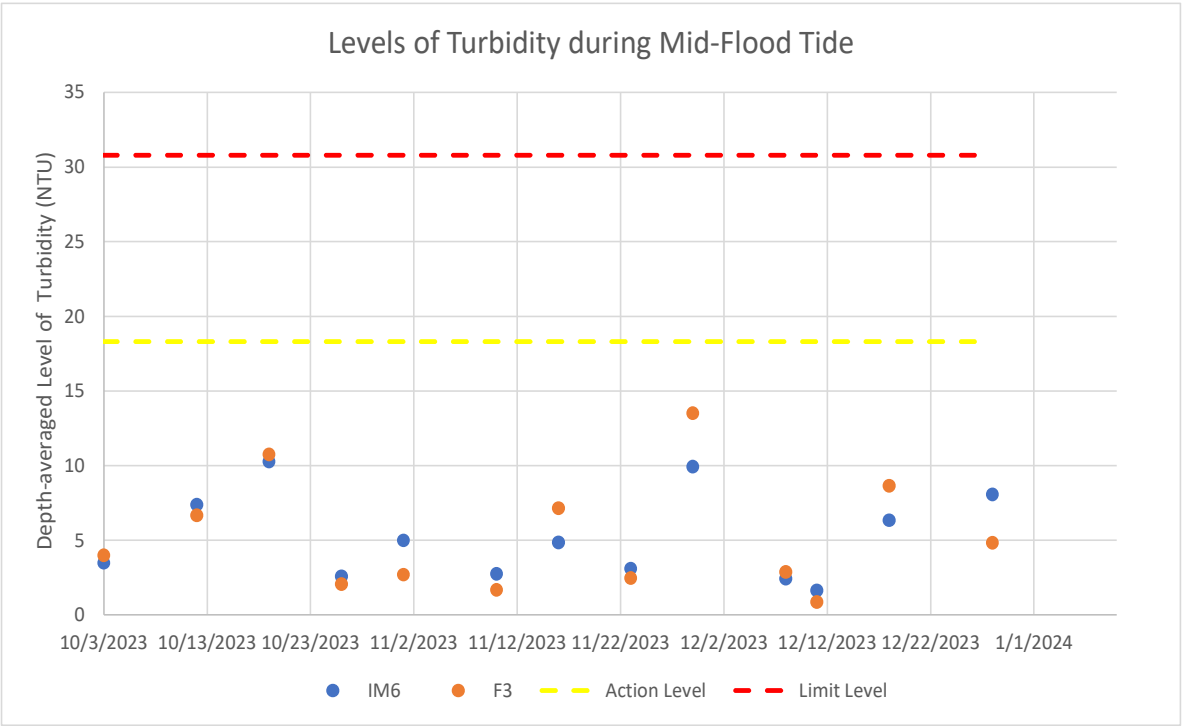

Figure 12: Levels of Turbidity during mid-flood tide between October and December 2023

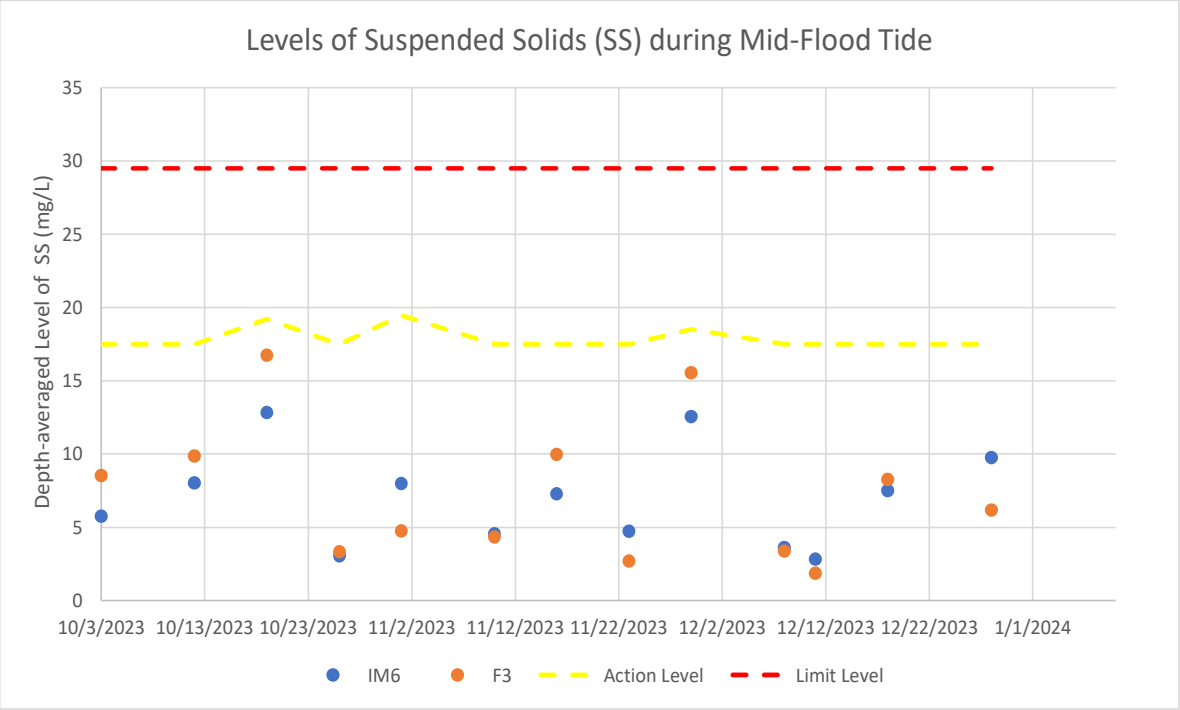

Figure 13: Levels of Suspended Solids during mid-flood tide between October and December 2023

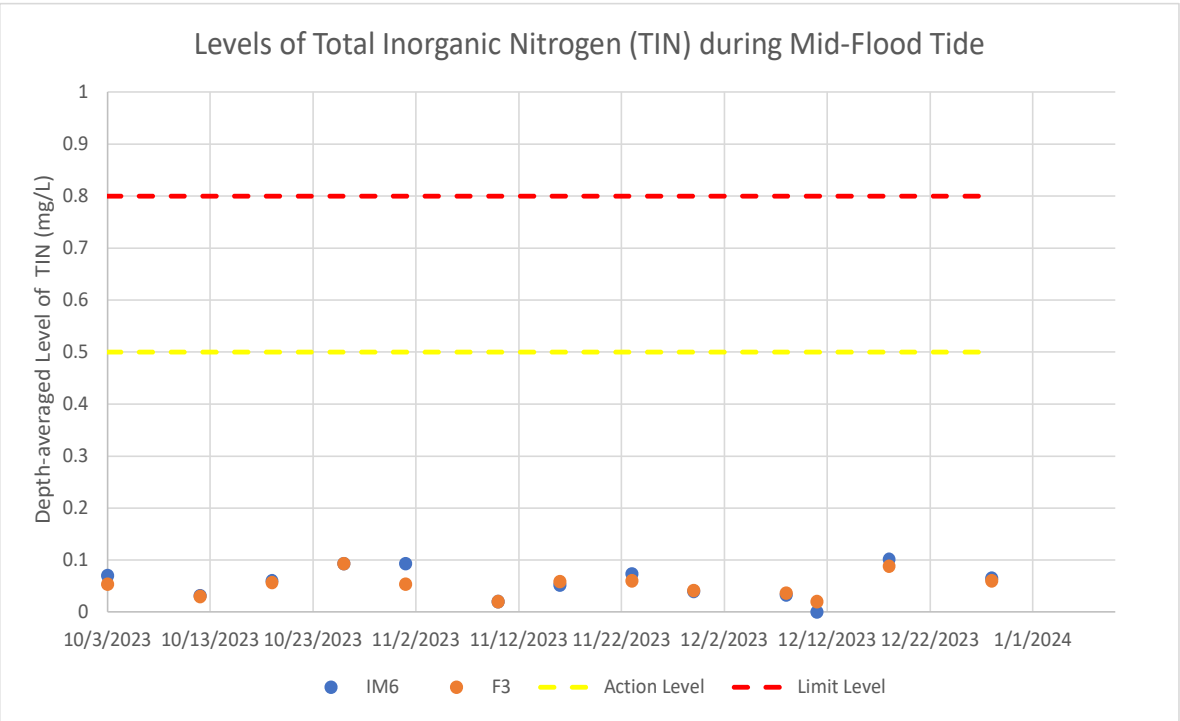

Figure 14: Levels of Total Inorganic Nitrogen during mid-flood tide between October and December 2023

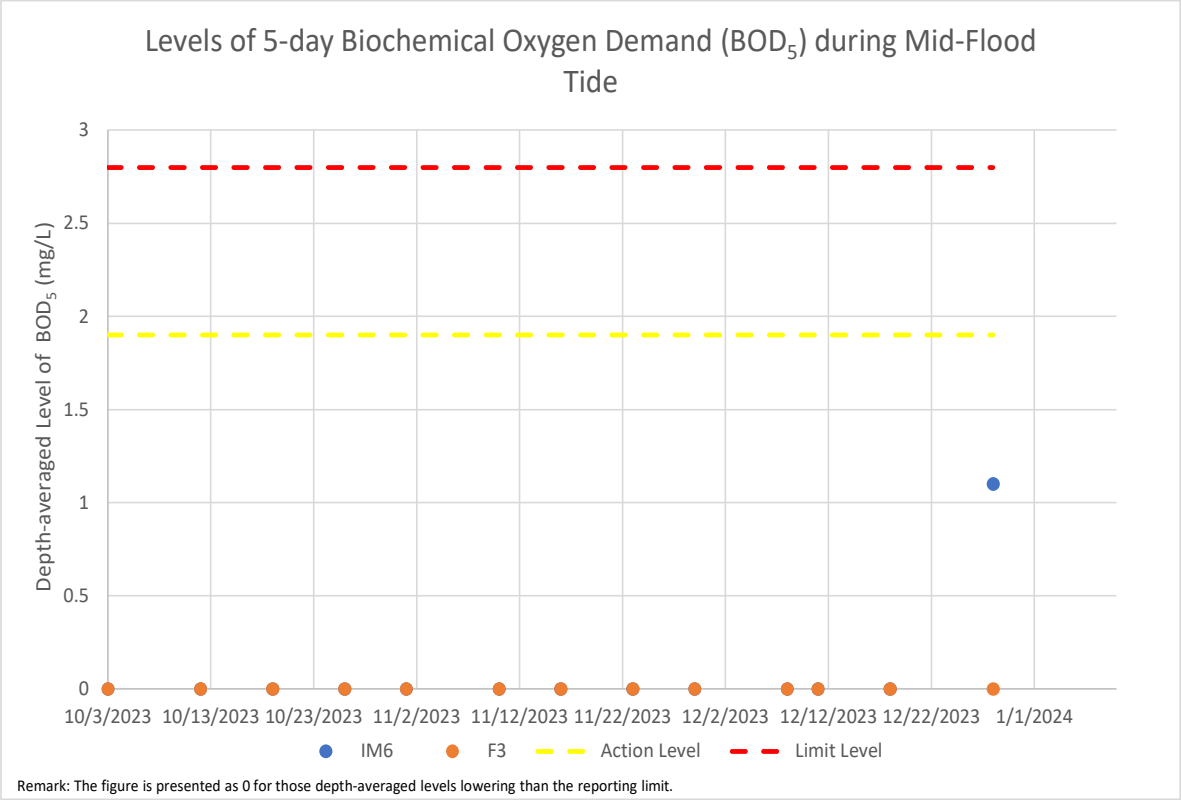

Figure 15: Levels of 5-day Biochemical Oxygen Demand during mid-flood tide between October and December 2023

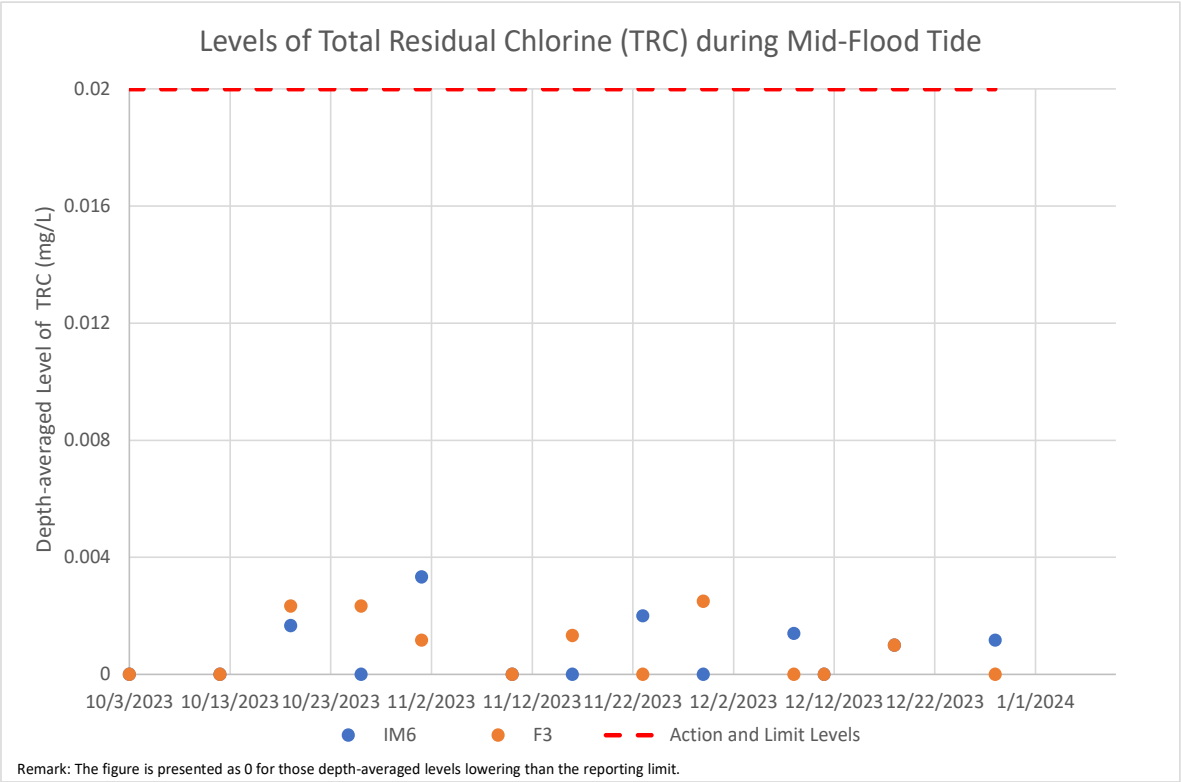

Figure 16: Levels of Total Residual Chlorine during mid-flood tide between October and December 2023

Source: \\HKHKGDC02\Data\Hong Kong\Projects\0505354 CLP Power Hong Kong Limited FSRU Pre-con EM&A.RC\07 Data\15 Operation WQ

Date: January 2024

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