水務署
Water Supplies Department

Contract No. 13/WSD/17

Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Operation Phase Monthly EM&A Report No.6 (Period from 1 December to 31 December 2024)

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Date:	14 January 2025

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Our ref.: LES/J2024-01/CS/L063
Date : 14 January 2025

By Post and Email

Water Supplies Department
New Works Branch
Consultants Management Division
6/F, Sha Tin Government Offices,
1 Sheung Wo Che Road, Sha Tin,
New Territories

Attn: Mr. W F Cheung/ S K Wong

Dear Sirs,

Independent Environmental Checker (IEC) for Construction and Operation of the First Stage Desalination Plant at Tseung Kwan O (Quotation Ref. No. TKO1/IEC/003)

Verification of Operation Phase Monthly Environmental Monitoring and Audit (EM&A) Report for December 2024

Referring to the Operation Phase Monthly Environmental Monitoring and Audit Report (December 2024) Rev.3.0 as submitted by the Environmental Team on 14 January 2025, we hereby verify the captioned report for further submission to the Director's Representative of the Project according to Clause 3.5 of the Environmental Permit EP-503/2015/B and Further Environmental Permit FEP-01/503/2015/B.

Should you have any queries, please contact the undersigned at 61496683, or email at serenashek@lamenviro.com.

Yours sincerely,
For and On Behalf Of
Lam Environmental Services Limited

Serena Shek
Independent Environmental Checker

Binnies	(Attn.: Derek Lai)	By E-mail
Aurecon	(Attn.: Toby Wan)	By E-mail

REVISION HISTORY

REV.	DESCRIPTION OF MODIFICATION	DATE
1.	1st Issue	9/1/2025
2.	2nd Issue	13/1/2025
3.	3rd Issue	14/1/2025

CONTENTS

EXECUTIVE SUMMARY

INTRODUCTION

A1. The Project, Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant (TKODP), is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO) and is currently governed by a Further Environmental Permit (EP No. FEP – 01/503/2015/B) for the operation phase of the Contract.

A2. In accordance with the Environmental Monitoring and Audit (EM&A) Manual for the Contract, EM&A works for marine water quality, waste management and ecology should be carried out by Environmental Team (ET), Aurecon Hong Kong Limited (Aurecon), during the Tseung Kwan O Desalination Plant.

A3. The TKODP commenced the operation stage on 1 July 2024. This is the 6th Operation Phase Monthly EM&A Report, prepared by Aurecon, for the Contract summarizing the monitoring results and audit findings of the EM&A programme at and around Tseung Kwan O Area 137 (TKO 137) during first-year operation of Tseung Kwan O Desalination Plant in December 2024.

A4. The EM&A programme for this contract has covered environmental monitoring on water quality and Contractor's environmental performance auditing in the aspects of dust, landfill gas, water quality, waste management, Landscape and Visual and Ecology.

SUMMARY OF EXCEEDANCE & INVESTIGATION & FOLLOW-UP

WATER QUALITY MONITORING

A5. The EM&A works for operation phase marine water quality were conducted during the reporting period in accordance with the EM&A Manual. Thirteen (13) of SS obtained had exceeded the Action Level. Twenty-seven (27) of SS obtained during the reporting period had exceeded the Limit Level.

A6. The EM&A works for continuous monitoring of effluent quality were conducted during the reporting period in accordance with the EM&A Manual. No exceedance of the sampling was obtained during the reporting period.

A7. Due to the suspension of production at the plant, there was no effluent discharge from the TKODP during the periods listed below:

- From 12 a.m. on 1 December 2024 to 10 a.m. on 5 December 2024
- From 10 p.m. on 5 December 2024 to 10 a.m. on 6 December 2024
- From 10 p.m. on 9 December 2024 to 10 a.m. on 10 December 2024
- From 10 p.m. on 10 December 2024 to 10 a.m. on 11 December 2024
- From 10 p.m. on 16 December 2024 to 10 a.m. on 23 December 2024
- From 8 p.m. on 23 December 2024 to 2 p.m. on 27 December 2024

Therefore, the effluent sampling was suspended on 1, 2, 3, 4, 17, 18, 19, 20, 22, 24, 25 and 26 December 2024.

ECOLOGY IMPACT MONITORING

A8. Monthly operation phase coral monitoring works was conducted on 18 December 2024. There is no AL/LL exceedance during the monitoring period.

A9. Operation phase fishery monitoring for wet season 2024 was carried out on 24 and 31 August 2024. The detail of the monitoring was presented in the 4th Operation Phase Monthly EM&A Report.

LANDFILL GAS MONITORING

A10. In this reporting period, monthly landfill gas monitoring was conducted on 10 and 11 December 2024. No exceedances of action level and limit level was observed.

WEEKLY SITE INSPECTIONS

A11. In this reporting period, site inspections were carried out by ET on 3, 10, 18, 23 and 31 December 2024. Joint site inspections of the operation work by ET were and IEC were carried out on 18 December 2024 to audit the mitigation measures implementation status.

A12. EPD conducted a site visit on 12 December 2024, and no comments were made during the visit.

COMPLAINT HANDLING AND PROSECUTION

A13. No environmental complaint, notification of summons and prosecution was received in the reporting period.

REPORTING CHANGE

A14. There was no change to be reported that may affect the on-going EM&A programme.

A15. According to the contractor's information, the works of TKODP were substantially completed on 30 June 2024 and the plant commenced the operation phase on 1 July 2024. The outstanding construction works were being carried out during this reporting period. Details of the construction phase monitoring will be presented in the Construction Phase Monthly EM&A Report.

A16. A Justification of Termination of the EM&A Programme for the Construction Phase was submitted to EPD on 2 December 2024 and pending for EPD approval.

1. BASIC CONTRACT INFORMATION

BACKGROUND

1.1. The Acciona Agua, S.A. Trading, Jardine Engineering Corporation, Limited and China State Construction Engineering (Hong Kong) Limited as AJC Joint Venture (AJCJV) is contracted to carry out the Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant (TKODP) under Contract No. 13/WSD/17 (the Contract).

1.2. Aurecon Hong Kong Limited (Aurecon) is commissioned by AJCJV to undertake the Environmental Team (ET) services as required and/or implied, both explicitly and implicitly, in the Environmental Permit (EP), Environmental Impact Assessment Report (EIA Report) (Register No. AEIAR-192/2015) and Environmental Monitoring and Audit Manual (EM&A Manual) for the Contract; and to carry out the Environmental Monitoring and Audit (EM&A) programme in fulfillment of the EIA Report's EM&A requirements and Contract No. 13/WSD/17 Specification requirements.

1.3. Pursuant to the Environmental Impact Assessment Ordinance (EIAO), the Director of Environmental Protection granted the Environmental Permit (No. EP-01/503/2015/B) to Water Supplies Department (WSD); and granted the Further Environmental Permit (No. FEP-01/503/2015/B) to AJCJV for the Contract.

THE REPORTING SCOPE

1.4. This is the 6th Operation Phase Monthly EM&A Report for the Contract which summarizes the key findings of the EM&A programme of the Tseung Kwan O Desalination Plant Operation phase during the reporting period from 1 December 2024 to 31 December 2024.

CONTRACT ORGANIZATION

1.5. The Contract Organization structure for Operation Phase is presented in **Figure 1.1**.

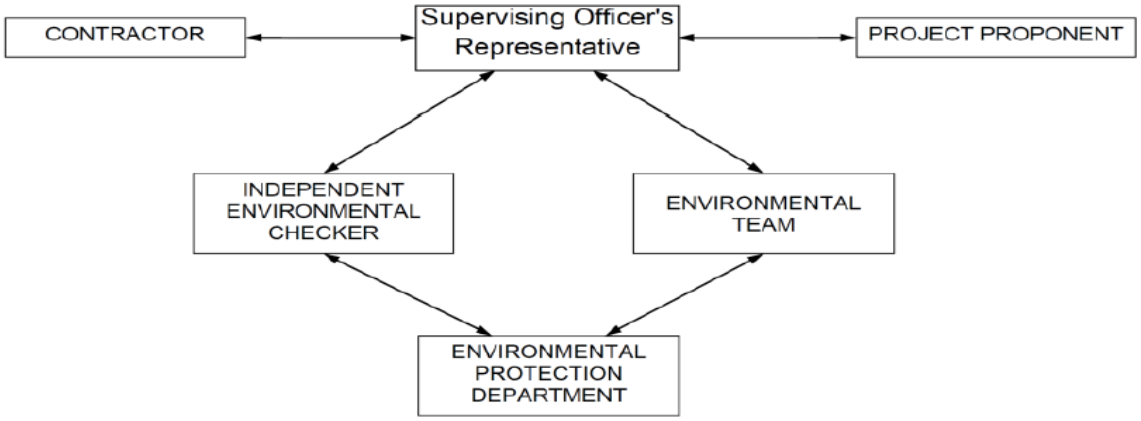


Figure 1.1 Contract Organization Chart

1.6. Contact details of the key personnel are presented in **Table 1.1** below:

Table 1.1 Contact Details of Key Personnel

Party	Position	Name	Telephone no.
Contract Proponent (Water Supplies Department)	SE/CM2	Milton Law	2634-3573
Supervising Officer (Binnies Hong Kong Limited)	Project Manager	Augustine Li	2608-7671
	Chief Resident Engineer	David Wong	5229-8638
The Jardine Engineering Corporation, Limited, China State Construction Engineering (Hong Kong) Limited and Acciona Agua, S.A. Trading	Project Manager	Stephen Yeung	2807-4665
	Environmental Monitoring Manager	Brian Kam	9456-9541
	Operation Manager	Arnes Parra, Victor	6468-6710
	Environmental Monitoring Manager	Tommy Law	6468-1782
Aurecon Hong Kong Limited	Environmental Team Leader	Toby Wan	9719-5422
Lam Environmental Services Limited	Independent Environmental Checker (IEC)	Serena Shek	6149-6683

SUMMARY OF OPERATION WORKS

1.7. Details of the major operation activities undertaken in this reporting period are shown below.

1.8. As informed by the Contractor, key activities carried out in this reporting period for the Contract included the followings:

- Potable Water Production

1.9. The key environmental mitigation measures implemented for the Contract in this reporting period associated with the above operation works include:

- Regularly monitoring of the effluent

- Sorting and storage of general refuse and operation waste

1.10. Summary of the valid permits, licences, and/or notifications on environmental protection for this Contract is presented in **Table 1.2**.

Table 1.2 Summary of the Status of Valid Environmental Licence, Notification, Permit and Documentations

Permit/ Licences	Valid Period		Status	Remark
	From	To		
Environmental Permit				
EP-503/2015/B	Throughout the Contract		Valid	-Issued on 3 April 2024
FEP – 01/503/2015/B	Throughout the Contract		Valid	-Issued on 3 April 2024
Billing Account for Disposal				
7036276	Throughout the Contract		Valid	-
Sludge (Special Waste) Disposal (Admission Ticket)				
17913	01/07/2024	31/12/2024	Valid	-
101428	1/1/2025	30/6/2025	Valid	
Chemical Waste Producer Registration				
5213-839-A2987-01	Throughout the Contract		Valid	-
Wastewater Discharge Licence (Land and Marine works)				
WT00044188-2023	16/06/2023	30/06/2028	Valid	- For Plant T&C and operation. - Variation sampling point S.P.1 is approved by the EPD on 25 June 2024 (EPD ref.: EP640/W3/D1358/462874). EPD advise that we can use the current discharge license for the anti-scalant dosing and discharge limit. They agreed that the report can show the 5PPM is the lowest detection limit. The variation of application was withdrawn on 13 Dec 2024.

1.11. The status for all environmental aspects is presented in **Table 1.3**.

Table 1.3 Summary of Status for Key Environmental Aspects under the EM&A Manual

Parameters	Status
Water Quality	
Baseline Monitoring under EM&A Manual	The baseline water quality monitoring was conducted between 12 May 2020 to 6 Jun 2020.
Operation phase Marine Impact Monitoring	On-going
Continuous Monitoring of Effluent Quality	On-going
Waste Management	
Mitigation Measures in Waste Management Plan	On-going
Landfill Gas	
Monthly Monitoring for buildings, manholes and utility pits within the Project Site and along the fresh water mains	On-going
Ecology (Coral)	
Operation phase Regular Coral Monitoring (Monthly)	On-going
Ecology (Fishery)	
Operation phase Regular Fishery Monitoring (Seasonally)	On-going
Landscape	
Operation phase Landscape and Visual Site Inspection	On-going
Environmental Audit	
Site Inspection covering Measures of Air Quality, Water Quality, Waste, Ecological Quality, Fisheries, Landscape and Visual	On-going

1.12. Other than the EM&A work by ET, environmental briefings, trainings, and regular environmental management meetings were conducted, in order to enhance environmental awareness and closely monitor the environmental performance of the contractors.

1.13. The EM&A programme has been implemented in accordance with the recommendations presented in the approved EIA Report and the EM&A Manual. A summary of implementation status of the environmental mitigation measures for the operation phase of the Contract during the reporting period is provided in **Appendix B**.

2. WATER QUALITY

2.1. In accordance with the recommendations of the EIA, water quality monitoring is required during operation phase. The following Section provides details of the water quality monitoring to be undertaken by the Environmental Team (ET) to verify the distance of sediment and brine plume dispersion and to identify whether the potential exists for any indirect impacts to occur to ecological sensitive receivers.

2.2. The water quality monitoring programme was carried out to allow any deteriorating water quality to be readily detected and timely action taken to rectify the situation.

2.3. Water quality monitoring for the Contract can be divided into the following stages:

(a) Operation phase Marine Water Quality Monitoring – first year upon commissioning

(b)Continuous Monitoring of Effluent Quality

WATER QUALITY PARAMETERS

2.4. Parameters to be measured in the marine water quality monitoring and the Continuous Monitoring of Effluent Quality are listed in **Table 2.1** and **Table 2.2** respectively.

a) Operation phase Marine Water Quality Monitoring

2.5. The parameters for the marine water quality monitoring 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 most potential to be affected by the operation works or are a standard check on water quality conditions.

Table 2.1 Parameters measured in the Marine Water Quality Monitoring

Parameters	Unit	Abbreviation
In-situ measurements		
Dissolved oxygen	mg/L	DO
Temperature	^{o}C	-
pH	-	-
Turbidity	NTU	-
Salinity	0/00	-
Total Residual Chlorine	mg/L	TRC
Laboratory measurements		
Suspended Solids	mg/L	SS
Iron-Soluble	mg/L	Fe
Anti-scalant as Reactive Phosphorus*	mg/L	PO4 as P-

*Remark: Anti-scalant water quality testing will only be conducted whenever anti-scalant dosage is adopted.

b) Continuous Monitoring of Effluent Quality

2.6. The monitoring requirement for the continuous effluent quality monitoring shall be conducted in accordance with the effluent parameters and standards stipulated by the Water Pollution Control Ordinance Discharge License (No.: WT00044188-2023) conditions.

Table 2.2 Parameters measured in the Continuous Monitoring of Effluent Quality

Parameters	Unit	Abbreviation
In-situ measurements		
Temperature	°C	-
pH	pH	-
Salinity	0/00	-
Total Residual Chlorine	mg/L	TRC
Laboratory measurements		
Suspended Solids	mg/L	SS
Iron-Soluble	mg/L	Fe
Total Inorganic Nitrogen	mg/L	-
Total Phosphorus	mg/L	-
Sodium Metabisulphite	mg/L	SMBS
Anti-scalant as Reactive Phosphorus *	mg/L	PO4 as P-

*Remark: Anti-scalant water quality testing will only be conducted whenever anti-scalant dosage is adopted.

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

MONITORING EQUIPMENT

a) Operation phase Marine Water Quality Monitoring

2.8. For water quality monitoring, the following equipment were used:

Dissolved Oxygen and Temperature Measuring Equipment - The instrument was a portable, weatherproof dissolved oxygen measuring instrument complete with cable, sensor, comprehensive operation manuals, and was operable from a DC power source. It was capable of measuring: dissolved oxygen levels in the range of 0 - 20 mg/L and 0 - 200% saturation; and a temperature of 0 - 45 degrees Celsius. It has a membrane electrode with automatic temperature compensation complete with a cable of not less than 35 m in length. Sufficient stocks of spare electrodes and cables were available for replacement where necessary (e.g. YSI model 59 DO meter, YSI 5739 probe, YSI 5795A submersible stirrer with reel and cable or an approved similar instrument).

Turbidity Measurement Equipment - The instrument was a portable, weatherproof turbidity-measuring unit complete with cable, sensor and comprehensive operation manuals. The equipment was operated from a DC power source, it has a photoelectric sensor capable of measuring turbidity between 0 - 1000 NTU and complete with a cable with at least 35 m in length (for example Hach 2100P or an approved similar instrument).

Salinity Measurement Instrument - A portable salinometer capable of measuring salinity in the range of 0 - 40 ppt was provided for measuring salinity of the water at each monitoring location.

Water Depth Gauge – A portable, battery-operated echo sounder (for example Seafarer 700 or a similar approved instrument) was used for the determination of water depth at each designated monitoring station. This unit will preferably be affixed to the bottom of the work boat if the same vessel is to be used throughout the monitoring programme. The echo sounder was suitably calibrated.

Positioning Device – A Global Positioning System (GPS) was used during monitoring to allow accurate recording of the position of the monitoring vessel before taking measurements. The Differential GPS, or equivalent instrument, was suitably calibrated at appropriate checkpoint (e.g. Quarry Bay Survey Nail) to verify that the monitoring station is at the correct position before the water quality monitoring commence.

Water Sampling Equipment - A water sampler, consisting of a PVC or glass cylinder of not less than two litres, which can be effectively sealed with cups at both ends, was used. The water sampler has a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler is at the selected water depth.

Total Residual Chlorine -Total residual chlorine (TRC) shall be measured in-situ using approved test kit.

b) Continuous Monitoring of Effluent Quality

2.9. The equipment to be used for the effluent quality monitoring was summarizes in **Table 2.3**.

Table 2.3 Parameters measured in the Continuous Monitoring of Effluent Quality

Equipment	Model
Refrigerated Sampler	Teledyne ISCO 5800
Online sampler for real-time monitoring (Xylem WTW IQ SensorNet system and sensors)	DIQ/S 284-PR: Universal Transmitter to operate up to 4 digital IQ sensors, with PROFIBUS-connection

Equipment	Model
	TetraCon® 700 IQ SW: Digital 4 electrode conductivity cell, in seawater design, suited for heavily polluted water, for use with the IQ SENSOR NET. With integrated temperature sensor
	VisoTurb® 700 IQ SW: Digital turbidity sensor for industrial and seawater applications (ultrasonic cleaning) for use with the IQ SENSOR NET system
	SensoLyt® 700 IQ SW: Robust digital pH/ORP sensor for SensoLyt® SEA/ DWA/ECA/PtA pH/ORP electrodes, in sea water design, for use with the IQ SENSOR NET. With built-in pre-amplifier and temperature sensor (NTC), with SensCheck function
	FDO®700 IQ SW: Digital calibration free optical D.O. sensor (universal use). Optimized for measuring and controlling the O2 input in seawater applications, for use with IQ SENSOR NET. Factory calibrated system composed of sensor FDO® 700 IQ SW, membrane cap SCFDO® 700 and protective cap MSK FDO®
	Chlorine 3017M: Online analyzer for photometric measurement of free and total chlorine, according to colorimetric DPD Method (ISO &US EPA); outputs (selectable): 4 to 20 mA or RS 485

Based on Section 5.1.3 of the EM&A Manual, the online sampler for real-time monitoring will be tested before use by HOKLAS-accredited laboratory and will be re-calibrated at monthly intervals throughout the stages of effluent quality monitoring.

SAMPLING / TESTING PROTOCOLS

2.10. All in situ monitoring instruments were checked, calibrated, and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme before use, and subsequently re-calibrated at monthly intervals throughout the stages of the water

quality monitoring. Responses of sensors and electrodes were checked with certified standard solutions before each use.

2.11. On-site calibration of field equipment was following 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 made available so that monitoring can proceed uninterrupted even when equipment is under maintenance, calibration etc.

LABORATORY MEASUREMENT AND ANALYSIS

a) Operation phase Marine Water Quality Monitoring

2.12. Sufficient volume of each water sample was collected for carrying out the laboratory analyses. Using chain of custody forms, collected water samples were transferred to a HOKLAS accredited laboratory (Acumen Laboratory and Testing Limit - HOKLAS 241) for immediate processing. The determination work was start within the next working day after collection of the water samples. Analytical methodology and sample preservation of other parameters were based on the latest edition of Standard Methods for the Examination of Waste and Wastewater published by APHA, AWWA and WPCF and methods by USEPA, or suitable method in accordance with requirements of HOKLAS or another internationally accredited scheme. The QA/QC details were in accordance with the requirements of HOKLAS or another internationally accredited scheme.

2.13. Parameters for laboratory measurements, standard methods and detection limits are presented in **Table 2.4**.

Table 2.4 Laboratory measurements, standard methods, and corresponding detection limits of marine water quality monitoring

Parameters	Standard Methods	Detection Limit	Reporting Limit	Precision
Dissolved oxygen	Instrumental, CTD	0.1	-	±25%
Temperature	Instrumental, CTD	0.1	-	±25%
pH	Instrumental, CTD	0.1	-	±25%
Turbidity	Instrumental, CTD	0.1	-	±25%
Salinity	Instrumental, CTD	0.1	-	±25%
Suspended Solids	APHA 23rd Ed 2540D	1.0	2.5	±17%
Iron	APHA 3111 B	0.2	-	±25%
Total residual chlorine	APHA 4500CL: G	0.01mg/L	-	±25%
Anti-scalant*	Content acrylic polymers determination method	5 mg/L	-	-

*Remark: A proposal for update anti-scalant monitoring under the operation phase EM&A programme is proposed via email on 27 May 2024. EPD has agreed to update the anti-scalant monitoring detection limit, action and limit level from 0.2 mg/L to 5.0 mg/L (EPD ref. ()In EP 2/N8/E/120 Pt.14).

b) Continuous Monitoring of Effluent Quality

2.14. Analyses of the sample shall be carried out using American Public Health Association Standard Method for the Examination of Water and Wastewater or other internationally accepted standard methods proposed by the Licensee and approved by the Authority which could achieve the monitoring requirement.

Table 2.5 Measurements Methods for Continuous Monitoring of Effluent Quality

Parameters	Standard Methods
Flow Rate (m3 / day)	In-house method
Temperature(°C)	Instrumental
Salinity ($^0/_{00}$)	Instrumental
pH (pH units)	Instrumental
Suspended Solids (mg / L)	APHA 2540E
Iron (mg / L)	APHA 3111 B
Total Inorganic Nitrogen (mg / L)	In-house method
Total Phosphorous (mg / L)	In-house method
Total Residual Chlorine	APHA 4500CL: G
Sodium Metabisulphite	--
Anti-scalant 'ACUMER' 4035*	

*Remark: Anti-scalant water quality testing will only be conducted whenever anti-scalant dosage is adopted.

MONITORING LOCATION

a) Operation phase Marine Water Quality Monitoring

2.15. The operation phase water quality monitoring locations are in accordance with the EM&A Manual and detailed in **Table 2.6** below. A schedule for water quality monitoring was prepared by the ET and submitted to IEC and EPD prior to the commencement of the monitoring.

Table 2.6 Location of Water Quality Monitoring Stations

Station	Easting	Northing	Description
CE	843550	815243	Upstream control station at ebb tide
CF	846843	810193	Upstream control station at flood tide
WSR1	846864	812014	Ecological sensitive receiver at Tung Lung Chau
WSR2	847645	812993	Fisheries sensitive receiver at Tung Lung Chau
WSR3	848023	813262	Ecological sensitive receiver at Tung Lung Chau
WSR4	847886	814154	Ecological sensitive receiver at Tai Miu Wan
WSR16	845039	815287	Ecological sensitive receiver at Fat Tong Chau
WSR33	847159	814488	Ecological sensitive receiver at Tai Miu Wan
WSR36	846878	814081	Ecological sensitive receiver at Kwun Tsai
WSR37	846655	813810	Ecological sensitive receiver at Tit Cham Chau
NF1	846542	813614	Edge of Mixing zone, ~ 200m west of outfall diffuser
NF2	846942	813614	Edge of Mixing zone, ~ 200m east of outfall diffuser
NF3	846742	813414	Edge of Mixing zone, ~ 200m south of outfall diffuser

2.16. WSR1 to WSR37 were identified in accordance with Annex 14 of the EIAO-TM as well as Clause 3.4.4.2 of the Environmental Impact Assessment Study Brief for Desalination Plant at Tseung Kwan O (No. ESB-266/2013). WSR1 to WSR3 are sited near the Tung Lung Chau Fish Culture Zone; WSR16 and WSR36 are sited near the coral assemblages along the coastlines of Fat Tong Chau and Kwun Tsai respectively; WSR 4 and WSR33 are sited near the Coastal Protection Area and coral assemblages in waters of Tai Miu Wan; WSR37 is sited near the fisheries resource including spawning and nursery grounds at the coastal water of Tit Cham Chau. NF1 to NF3 are the Edge of Mixing zone.

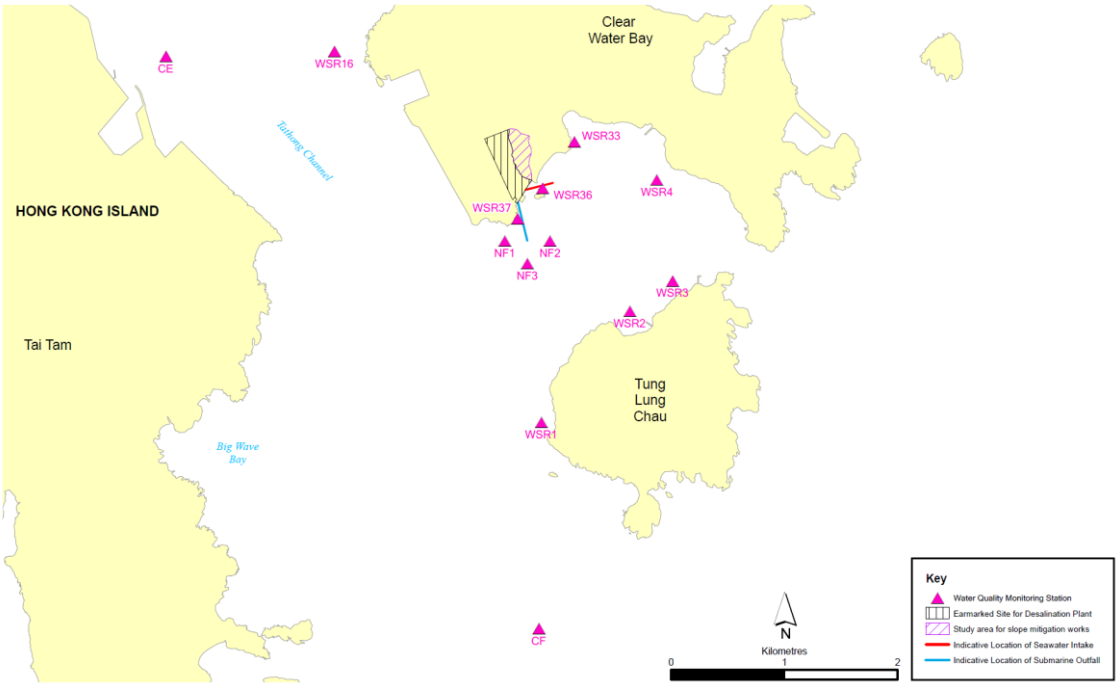


Figure 2.1 Water Quality Monitoring Locations under EM&A Manual

b) Continuous Monitoring of Effluent Quality

2.17. In accordance with the discharge license, the Continuous Monitoring shall be sampling at Brine Outfall Shaft.

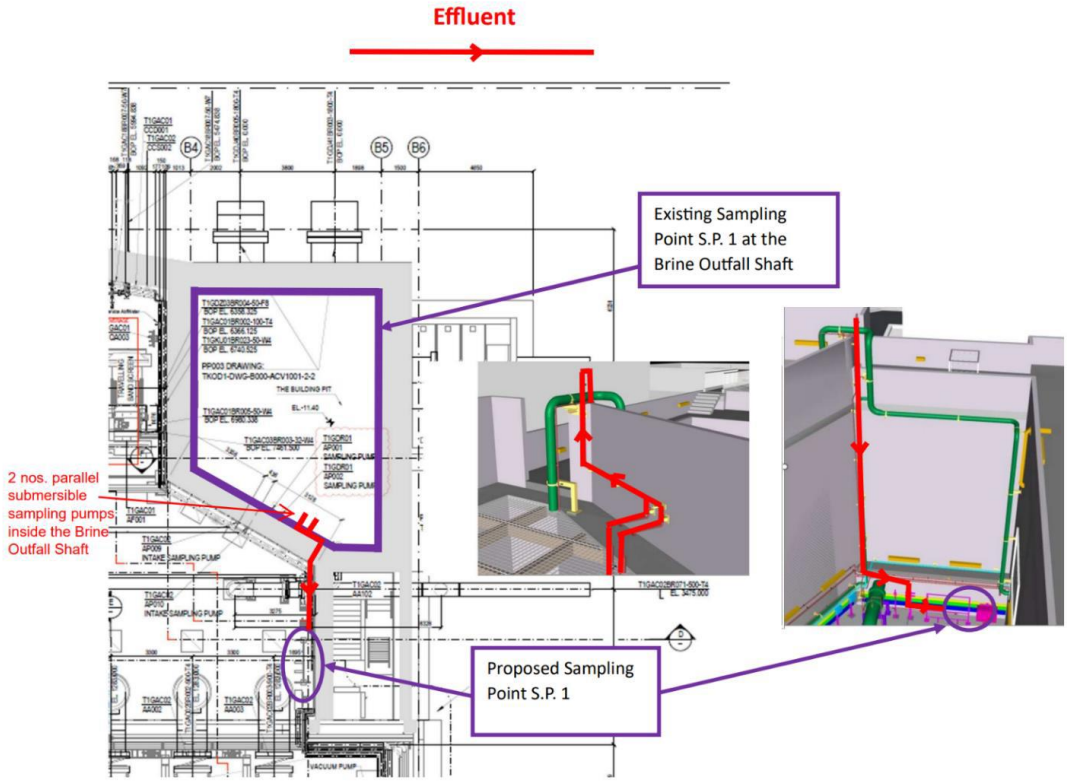


Figure 2.2 Continuous Monitoring locations

SAMPLING FREQUENCY

a) Impact Marine Water Quality Monitoring

2.18. Water quality monitoring was carried out three days per week during the operation phase. Monitoring at each station was undertaken once per day. The interval between two sets of monitoring was not less than 36 hours. The monitoring frequency would be increased in the case of exceedances of Action/Limit Levels if considered necessary by ET. Monitoring frequency would be maintained as far as practicable.

b) Continuous Monitoring of Effluent Quality

2.19. The effluent should be collected in a full 24-hour period. Twenty four-hour flow-weighted composite effluent sample for subsequent chemical analysis and testing should be prepared by the following procedures:

- Collect effluent sub-sample at bi-hourly interval over a 24 hour period
- Obtain flow record of the Project for the 24-hour sampling period
- Calculate the volume of each sub-sample for preparation of flow-weighted composite sample
- Transfer the appropriate volume of sub-samples to a clean container and mix thoroughly

SAMPLING DEPTHS & REPLICATION

a) Operation phase Marine Water Quality Monitoring

2.20. During water quality monitoring, each station was sampled, and measurements/ water samples were taken at three depths, 1 m below the sea surface, mid-depth, and 1 m above the seabed. For in situ measurements, duplicate readings were made at each water depth at each station. Duplicate water samples were collected at each water depth at each station.

b) Continuous Monitoring of Effluent Quality

2.21. The effluent sampling should be planned carefully to ensure appropriate volume of effluent sub-samples is collected to prepare sufficient amount of flow-weighted composite effluent sample for carrying out subsequent chemical analysis and testing.

ACTION AND LIMIT LEVELS

2.22. The Action and Limit Levels have been set based on the derivation criteria specified in the EM&A Manual. The Action/Limit Levels have been derived and are presented in **Table 2.7 and Table 2.8**.

a) Operation phase Marine Water Quality Monitoring

Table 2.7 Derived Action and Limit Levels for Water Quality

Parameters	Action	Limit
Operation phase Marine Water Quality Monitoring		
DO in mg/L	Surface and Middle 7.30 mg L^{-1} Bottom 7.31 mg L^{-1} Tung Lung Chau Fish Culture Zone 5.1 mgL^{-1} or level at control station (Whichever the lower)	Surface and Middle 4 mg L^{-1} Bottom 2 mg L^{-1} Tung Lung Chau Fish Culture Zone 5.0 mgL^{-1} or level at control station (Whichever the lower)
SS in mg/L (Depth-averaged)	5.00 mg L^{-1} or 20% exceedance of value at any impact station compared with corresponding data from control station	6.00 mg L^{-1} or 30% exceedance of value at any impact station compared with corresponding data from control station
Turbidity in NTU (Depth-averaged)	2.41 NTU or 20% exceedance of value at any impact station compared with corresponding data from control station	2.84 NTU or 30% exceedance of value at any impact station compared with corresponding data from control station
Salinity in PSU (Depth-averaged)	34.25 PSU or 9% exceedance of value at any impact station compared with corresponding data from control station	34.56 PSU or 10% exceedance of value at any impact station compared with corresponding data from control station
Iron in mg/L (Depth-averaged)	0.3 mg/L	0.3 mg/L
Total residual chlorine in mg/L	0.01 mg/L	0.01 mg/L
*Anti-scalant in mg/L (Depth-averaged)	5.0 mg/L	5.0 mg/L

Notes:
i."Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
ii.For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
iii.For Turbidity, SS, iron and Salinity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
iv.*A proposal for update anti-scalant monitoring under the operation phase EM&A programme is proposed via email on 27 May 2024. EPD has agreed to update the anti-scalant monitoring detection limit, action and limit level from 0.2 mg/L to 5.0 mg/L (EPD ref. ()In EP 2/N8/E/120 Pt.14).

b) Continuous Monitoring of Effluent Quality

Table 2.8 Derived Limit Levels for Water Quality

Parameters	Limit
Continuous Monitoring of Effluent Quality	
Flow Rate in m^3/day	216841
Temperature in °C	Maximum 40
Salinity	71347
SS in mg/L	13
pH	6-9
Iron in mg/L	0.6
Total residual chlorine in mg/L	0.1
Total Inorganic Nitrogen in mg/L	2
Total Phosphorous in mg/L	1
Sodium Metabisulphite in mg/L	0.5
Anti scalant in mg/L*	2.2

*Remark:
1. Anti-scalant water quality testing will only be conducted whenever anti-scalant dosage is adopted.

MONITORING RESULTS AND OBSERVATIONS

a) Operation phase Marine Water Quality Monitoring

2.23. The operation phase of Tseung Kwan O Desalination Plant was commenced on 1 July 2024. Marine water quality monitoring for the operation phase of Tseung Kwan O Desalination Plant was conducted in the reporting period at the thirteen monitoring stations (CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2 and NF3). The Action and Limit Level would be referred to the approved EM&A Manual Table 2.7.

2.24. The marine water quality monitoring was conducted at the thirteen monitoring stations on 3, 5, 7, 10, 12, 14, 17, 19, 21, 24, 26, 28 and 31 December 2024.

2.25. Thirteen (13) of the operation phase water quality monitoring results of SS obtained had exceeded the Action Level. Twenty-seven (27) of SS obtained during the reporting period had exceeded the Limit Level.

2.26. Investigation on the reason of exceedance has been carried out, where the exceedances of SS on 3, 5, 10, 17, 19, 21, 26, 28 and 31 December 2024 were concluded to be unrelated to the Contract as detailed in the Incident Reports on Action Level or Limit Level Non-compliance along with supporting materials in **Appendix K**.

2.27. Monitoring results of 8 key parameters: Salinity, DO, turbidity, SS, pH, temperature, Total Residual Chlorine and Iron in this reporting, are summarized in **Table 2.9**, and detailed results are presented in **Appendix F**.

b) Continuous Monitoring of Effluent Quality

2.28. Continuous Monitoring of Effluent Quality was conducted sampling point in the reporting month. No exceedance of the sampling was obtained during the reporting period. The detailed results are summarized in **Table 2.10**, and presented in **Appendix F.**

2.29. Due to the suspension of production at the plant, there was no effluent discharge from the TKODP during the periods listed below:

- From 12 a.m. on 1 December 2024 to 10 a.m. on 5 December 2024
- From 10 p.m. on 5 December 2024 to 10 a.m. on 6 December 2024
- From 10 p.m. on 9 December 2024 to 10 a.m. on 10 December 2024
- From 10 p.m. on 10 December 2024 to 10 a.m. on 11 December 2024
- From 10 p.m. on 16 December 2024 to 10 a.m. on 23 December 2024
- From 8 p.m. on 23 December 2024 to 2 p.m. on 27 December 2024

Therefore, the effluent sampling was suspended on 1, 2, 3, 4, 17, 18, 19, 20, 22, 24, 25 and 26 December 2024.

Table 2.9 Summary of Impact Water Quality Monitoring Results

Locations		Parameters								
		Salinity (ppt)	Dissolved Oxygen (mg/L)		pH	Turbidity (NTU)	Suspended Solids (mg/L)	Temp. (°C)	TRC (mg/L)	Iron (mg/L)
			Surface & Middle	Bottom						
CE	Avg.	31.92	8.54	8.55	8.20	2.41	3.76	21.45	<0.01	<0.1
	Min.	30.53	7.79	7.84	8.05	1.99	2.50	20.90	<0.01	<0.1
	Max.	32.61	9.49	9.47	8.37	2.61	7.00	22.24	<0.01	<0.1
CF	Avg.	31.91	8.77	8.76	8.19	2.40	4.06	21.53	<0.01	<0.1
	Min.	30.86	7.95	7.96	7.94	2.02	2.50	20.98	<0.01	<0.1
	Max.	33.24	9.38	9.34	8.34	2.73	9.00	22.16	<0.01	<0.1
WSR1	Avg.	31.95	8.71	8.73	8.12	1.81	4.22	21.53	<0.01	<0.1
	Min.	30.99	7.95	7.97	7.94	1.20	2.50	21.04	<0.01	<0.1
	Max.	32.92	9.25	9.33	8.34	2.19	8.00	22.30	<0.01	<0.1
WSR2	Avg.	31.80	8.64	8.63	8.21	1.80	4.29	21.56	<0.01	<0.1
	Min.	30.53	8.10	8.08	8.05	1.29	2.50	20.94	<0.01	<0.1
	Max.	32.78	9.09	9.08	8.37	2.17	13.00	22.41	<0.01	<0.1
WSR3	Avg.	31.87	8.73	8.71	8.16	1.69	4.04	21.49	<0.01	<0.1
	Min.	30.91	8.29	8.30	7.97	1.29	2.50	20.97	<0.01	<0.1
	Max.	32.87	9.23	9.22	8.36	2.17	8.00	22.24	<0.01	<0.1
WSR4	Avg.	31.69	8.51	8.50	8.19	1.73	4.35	21.57	<0.01	<0.1
	Min.	30.65	8.09	8.01	8.02	1.30	2.50	20.92	<0.01	<0.1
	Max.	32.68	9.18	9.12	8.36	2.10	9.00	22.37	<0.01	<0.1
WSR16	Avg.	31.77	8.48	8.49	8.16	1.76	3.94	21.49	<0.01	<0.1
	Min.	31.09	8.02	8.05	7.91	1.19	2.50	20.91	<0.01	<0.1
	Max.	32.66	9.15	9.22	8.33	2.22	8.00	22.06	<0.01	<0.1

Locations		Parameters								
		Salinity (ppt)	Dissolved Oxygen (mg/L)		pH	Turbidity (NTU)	Suspended Solids (mg/L)	Temp. (°C)	TRC (mg/L)	Iron (mg/L)
			Surface & Middle	Bottom						
WSR33	Avg.	32.03	8.74	8.74	8.15	1.72	4.18	21.57	<0.01	<0.1
	Min.	31.18	8.08	8.03	7.99	1.34	2.50	21.10	<0.01	<0.1
	Max.	33.04	9.28	9.32	8.38	1.98	8.00	22.22	<0.01	<0.1
WSR36	Avg.	31.85	8.50	8.49	8.15	1.70	3.78	21.52	<0.01	<0.1
	Min.	30.75	7.83	7.82	7.99	1.26	2.50	20.97	<0.01	<0.1
	Max.	33.15	9.21	9.19	8.35	2.19	8.00	22.11	<0.01	<0.1
WSR37	Avg.	32.02	8.70	8.70	8.15	1.75	4.33	21.50	<0.01	<0.1
	Min.	31.04	7.99	7.97	7.93	1.29	2.50	20.86	<0.01	<0.1
	Max.	32.71	9.24	9.28	8.25	2.05	10.00	22.16	<0.01	<0.1
NF1	Avg.	31.88	8.65	8.64	8.14	1.64	4.42	21.53	<0.01	<0.1
	Min.	30.52	8.16	8.09	7.91	1.14	2.50	21.01	<0.01	<0.1
	Max.	32.78	9.12	9.16	8.34	2.06	9.00	22.20	<0.01	<0.1
NF2	Avg.	31.99	8.60	8.59	8.17	1.64	4.30	21.48	<0.01	<0.1
	Min.	30.86	7.90	7.89	8.01	1.31	2.50	21.02	<0.01	<0.1
	Max.	32.73	9.19	9.19	8.39	2.11	9.00	22.13	<0.01	<0.1
NF3	Avg.	31.95	8.72	8.72	8.17	1.73	4.11	21.41	<0.01	<0.1
	Min.	30.58	7.77	7.83	7.93	1.31	2.50	20.84	<0.01	<0.1
	Max.	33.07	9.38	9.39	8.40	2.12	8.00	22.30	<0.01	<0.1

Notes:

i. "Avg", "Min" and "Max" is the average, minimum and maximum respectively of the data from measurements conducted under mid-flood and mid-ebb tides at three water depths, except that of DO where the data for "Surface & Middle" and "Bottom" are calculated separately.

ii. Measurement data of Suspending Solids would be rounding to 2.5mg/L if the value was less than 2.5mg/L to facilitate data analysing.

Table 2.10 Summary of Continuous Effluent Monitoring Results

	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)	Suspended Solids (mg/L)	Total Inorganic Nitrogen (mg/L)	Total Phosphorus (mg/L)	*Sodium Metabisulphite (mg/L)	Iron (mg/L)
Avg.	46.00	7.74	20.59	0.01	2	0.14	0.01	<2	<0.1
Min.	38.35	6.38	15.90	0.00	2	0.07	0.01	<2	<0.1
Max.	55.05	8.24	27.42	0.06	2	0.19	0.03	<2	<0.1

* Remark: As confirmed by various laboratories in Hong Kong, the lowest detection limit for Sodium Metabisulphite is <2 mg/L. Due to the limitation of the laboratory, the lowest result for Sodium Metabisulphite will only be shown as < 2 mg/L.

3. WASTE

3.1. The waste generated from this Contract includes inert construction and demolition (C&D) materials, and non-inert C&D materials. Non-inert C&D materials are made up of general refuse, vegetative wastes and recyclable wastes such as plastics and paper/cardboard packaging waste. Steel materials generated from the Contract are also grouped into non-inert C&D materials as the materials were not disposed of with other inert C&D materials. With reference to relevant handling records and trip tickets of this Contract, the quantities of different types of waste generated in the reporting month are summarized in **Table 3.1**. Details of cumulative waste management data are presented as a waste flow table in **Appendix G**.

Table 3.1 Quantities of Waste Generated from the Contract during the reporting period

Reporting Month	**Actual Quantities of Inert C&D Materials Generated Monthly**						**Actual Quantities of C&D Wastes Generated Monthly**				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / cardboard packaging	Plastics (1)	Chemical Waste	Others, e.g., general refuse
	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)
Dec 2024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	31.47

Notes: (1) Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material

3.2. No dewatered sludge was generated by the operation in the reporting period.

4. LANDFILL GAS MONITORING

MONITORING REQUIREMENT

4.1. In accordance with Section 11 of the EM&A Manual, monthly monitoring of landfill gas is required for the first year of operation at buildings within the Project Site and consultation zone. Part of the desalination plant and the indicative area of natural slope mitigation works fall within the SENT Landfill Extension Consultation Zone; and part of the 1,200 mm diameter freshwater mains along Wan Po Road falls within the SENT Landfill and SENT Landfill Extension Consultation Zones, TKO Stage II/III Restored Landfill and TKO Stage I Restored Landfill Consultation Zones.

4.2. Routine monitoring is required at buildings within the Project Site and consultation zones. The monitoring frequency will be monthly for the first year of operation.

4.3. For the manholes and utility pits within the Project Site and along the fresh water mains, each manhole/ utility pit should be monitored with two measurements (at mid depth and base). Each measurement should be monitored for a minimum of 10 minutes. A steady reading and peak reading should be recorded at each manhole/ utility pit and for each measurement.

4.4. Monitoring of oxygen, methane, carbon dioxide and barometric pressure would be performed monthly during the operation phase.

MONITORING LOCATION

4.5. The area required to be monitored for landfill gas in the reporting period is shown in **Figure 4.1, Figure 4.2 and Figure 4.3**.

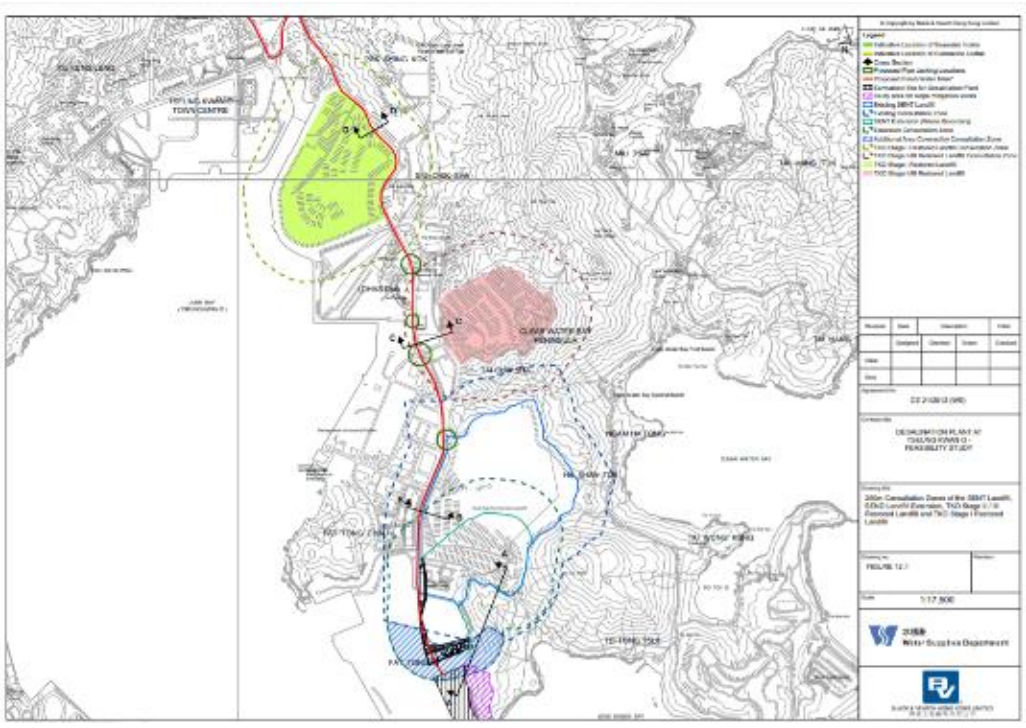


Figure 4.1 Overview of the SENT Extension Consultation Zone and the Contract Site Area

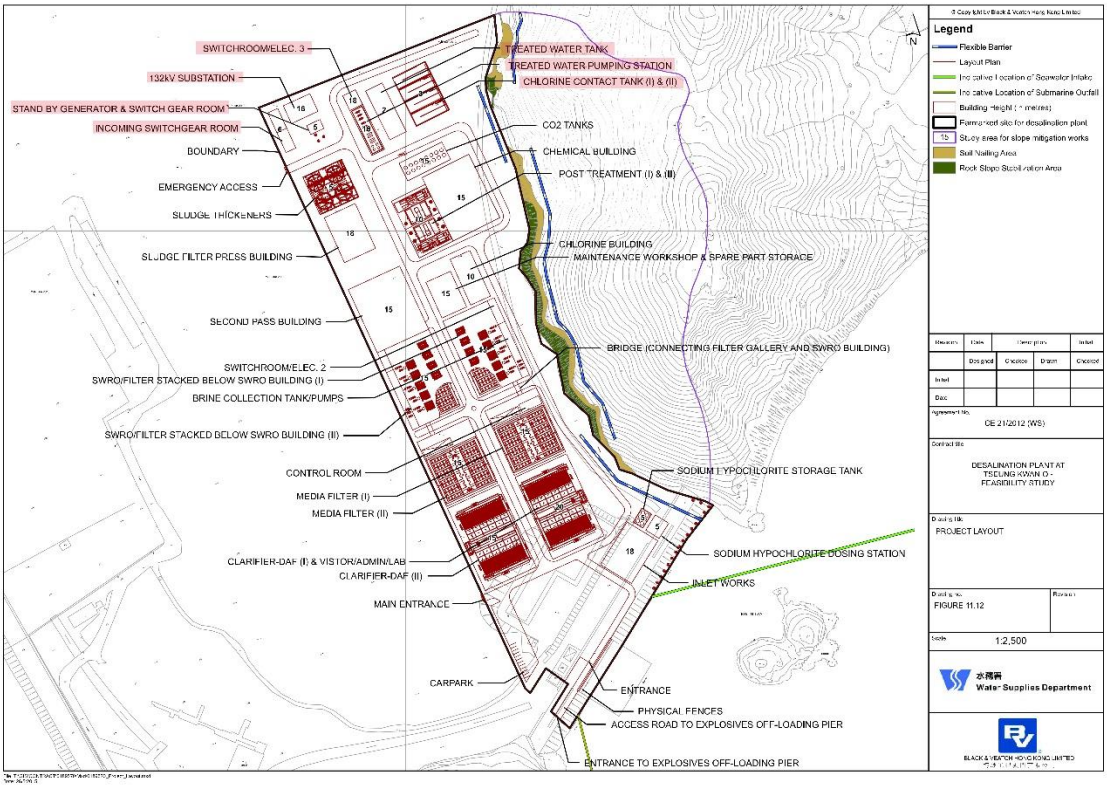


Figure 4.2 Landfill Gas Monitoring Location For Building

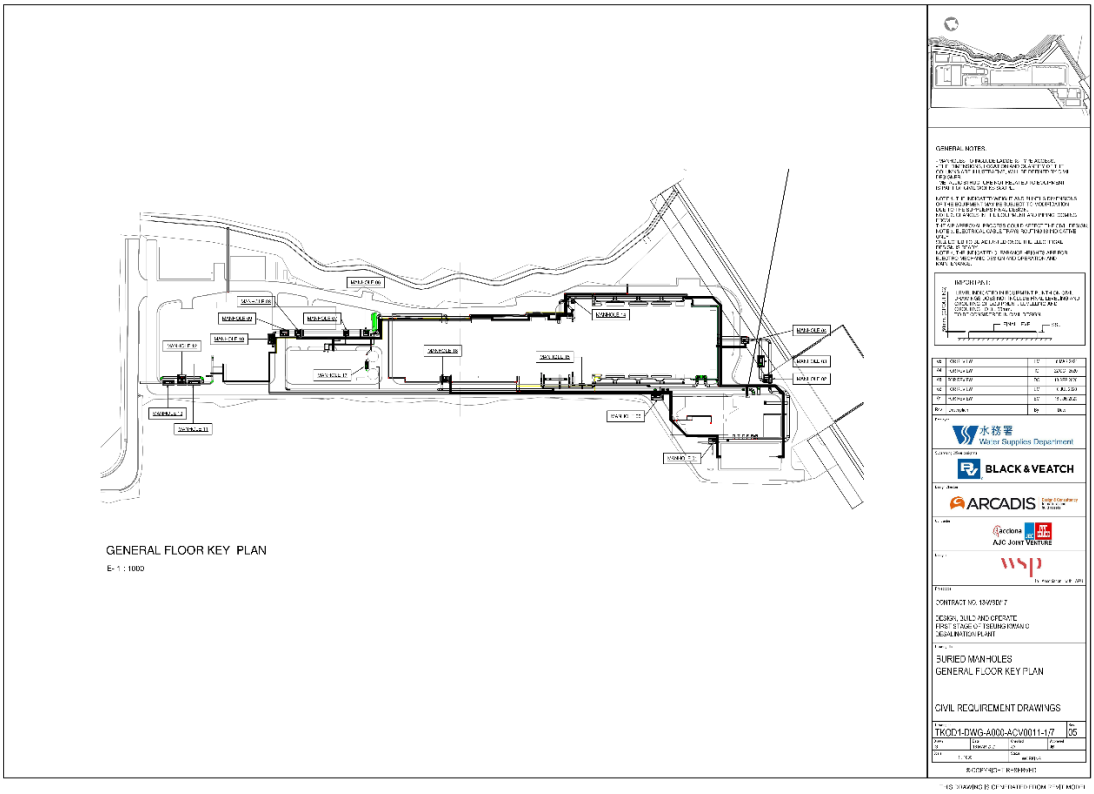


Figure 4.3 Landfill Gas Monitoring Location For Manholes/Pits

MONITORING PARAMETERS

4.6. The landfill gas monitoring parameters and the action and limit level are summarized in **Table 4.1**.

Table 4.1 Action and Limit Level for Landfill Gas Monitoring Equipment

Parameters	Action Level	Limit Level
Oxygen (O_2)	<19% O_2	<19% O_2
Methane (CH_4)	>10% LEL	>20% LEL
Carbon Dioxide (CO_2)	>0.5% CO_2	>1.5% CO_2

MONITORING EQUIPMENT

4.7. Landfill Gas monitoring was carried out using intrinsically-safe, portable multi-gas monitoring instruments. The gas monitoring equipment is:

- Complying with the Landfill Gas Hazard Assessment Guidance Note as intrinsically safe;
- Capable of continuous barometric pressure and gas pressure measurements;
- Normally operated in diffusion mode unless required for spot sampling, when it should be capable of operating by means of an aspirator or pump;
- Having low battery, fault and over range indication incorporated;
- Capable of storing monitoring data, and shall be capable of being downloaded directly;
- Measure in the following ranges:

methane	0-100% LOWER EXPLOSION LIMIT (LEL) AND 0-100% V/V;
oxygen	0-25% V/V;
carbon dioxide	0-5% v/v; and
barometric pressure	mBar (absolute)

- alarm (both audibly and visually) in the event that the concentrations of the following are exceeded:

methane	>10% LEL;
oxygen	<19%
carbon dioxide	>0.5% by volume
barometric pressure	mBar (absolute)

4.8. Monitoring equipment used in the reporting period are summarized in **Table 4.2**. The Landfill Gas monitoring equipment calibration certificate is presented in **Appendix E**.

Table 4.2 Landfill Gas Monitoring Equipment

Equipment	Brand and Model	Calibration Expiry Date
Portable Gas Detector	Altair 5X	22 April 2025

MONITORING RESULTS AND OBSERVATIONS

4.9. In this reporting period, monthly landfill gas monitoring was conducted on 10 and 11 December 2024. No exceedances of action level and limit level was observed. The detail of result was presented in **Appendix F**.

5. LANDSCAPE

MONITORING REQUIREMENTS

5.1. In accordance with Section 8.1 of the EM&A Manual, weekly site audit shall be carried out by the ET include checking whether good site practices are being properly implemented by the Contractor and the extent of the works area within the Clear Water Bay Country Park should be checked by the ET during the weekly site audit.

SITE INSPECTION

5.2. Weekly site audit was carried out by the ET in the reporting month, no trespass by the Contractor outside the works area of the Project and Clear Water Bay Country Park, and no damage to the vegetation and rocky shore outside the Project area was observed in the reporting month. All plants were observed to be in satisfactory condition in the reporting month.

5.3. If non-compliance were found during the operation phase, the actions in accordance with the Event and Action Plan will be carried out according to **Appendix D.**

6. ECOLOGY (CORAL MONITORING)

6.1. Under the approval conditions of the EIA Report for the Project, an EM&A programme on coral for the operation phase of the Project is recommended. Pursuant to these EIA approval conditions and Condition 3.1 of the EP and FEP, details of the regular coral monitoring programme have been proposed based on the baseline coral monitoring results in the Report on operation Baseline Coral Monitoring and Regular Coral Monitoring Methodology.

MONITORING LOCATION

6.2. In accordance with Appendix B Section 5.1 of the approved supplementary EM&A Manual, two indirect impact sites (C2 and C3) and one control site (C8) as shown in **Figure 6.1** should be monitored during the operation Phase. Operation coral survey should be conducted at the indirect impact and control sites. Ten selected hard coral colonies with similar species should be tagged at each of the control and indirect impact sites before commencement of the operation phase. Tagged hard coral colonies should be monitored in open waters during the operation phase.

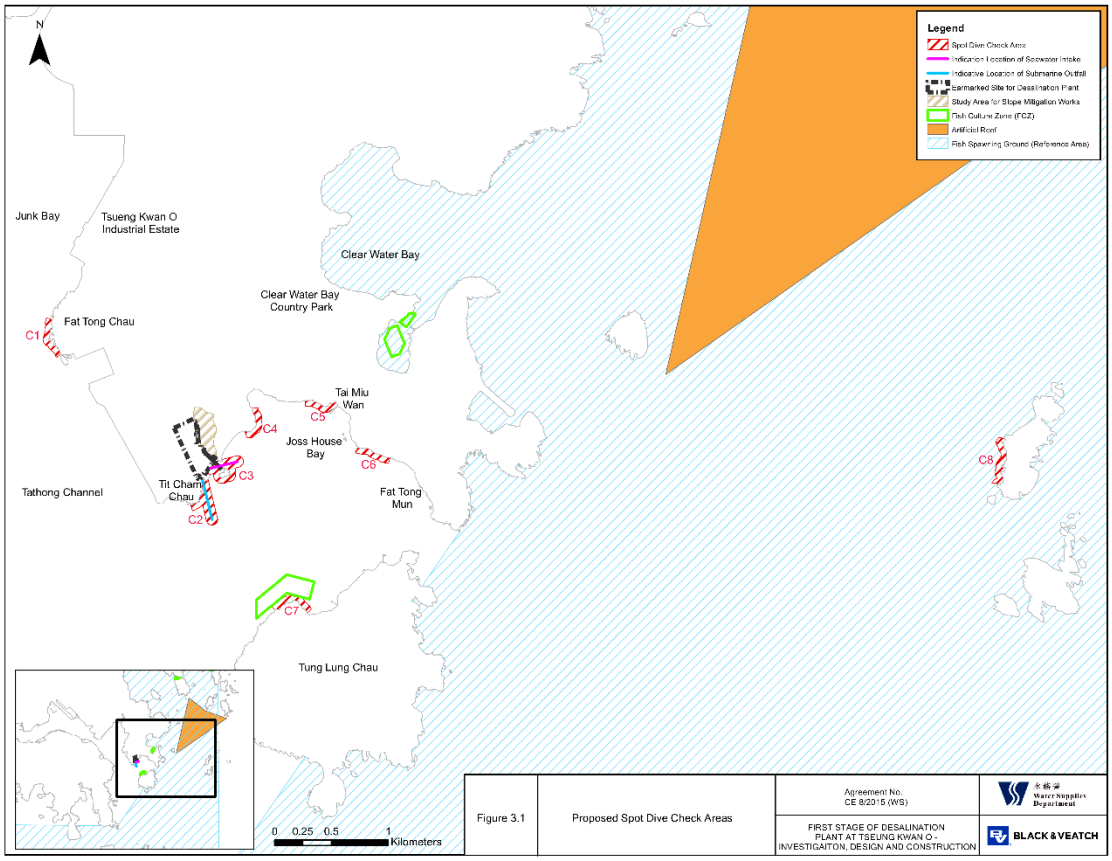


Figure 6.1 Spot Dive Check Areas Two Proposed Indirect Impact Sites (C2 and C3) and one control site (C8) during Operation Phase

ACTION AND LIMIT LEVELS

6.3. The Action and Limit Levels have been set based on the derivation criteria specified in the EM&A Manual. The Action/Limit Levels have been derived and are presented in **Table 6.1**.

Table 6.1 Action and Limit Level for Coral Monitoring Equipment

Parameter	Action Level Definition	Limit Level Definition
Mortality	If during Impact Monitoring a 15% increase in the percentage of partial mortality on the corals occurs at more than 20% of the tagged indirect impact site coral colonies that is not recorded on the tagged corals at the control site, then the Action Level is exceeded	If during Impact Monitoring a 25% increase in the percentage of partial mortality on the corals occurs at more than 20% of the tagged indirect impact site coral colonies that is not recorded on the tagged corals at the control site, then the Limit Level is exceeded

Note: If the defined Action Level or Limit Level for coral monitoring is exceeded, the actions as set out in **Table E3** will be implemented.

6.4. If non-compliance were found during the opertaion works, the actions in accordance with the Event and Action Plan will be carried out according to **Appendix D.**

MONITORING FREQUENCY

6.5. Operation phase coral monitoring shall be monitored once per month as the requirement of the first year of operational phase.

MONITORING RESULT AND OBSERVATION

6.6. Operation phase coral monitoring works was conducted on 18 December 2024. A total of 30 tagged coral colonies (10 at control site and 20 and two indirect impact sites) were monitored. All coral colonies were good in general. The detail of the monitoring is presented in **Appendix H**.

7. ECOLOGY (FISHERY MONITORING)

7.1. The purpose of the operation phase regular fisheries monitoring programme is to monitor the potential impacts on fisheries resources in the vicinity of the project site. Apart from the regular fisheries monitoring programme, a water quality monitoring programme in addition to the water quality monitoring programme in the approved EM&A Manual is also described in Section 2.4 to (i) provide supplementary information in the interpretation of the findings of the fisheries monitoring and (ii) assist the monitoring of the potential impact on the Tung Lung Chau Fish Culture Zone (FCZ) in Joss House Bay.

MONITORING LOCATION

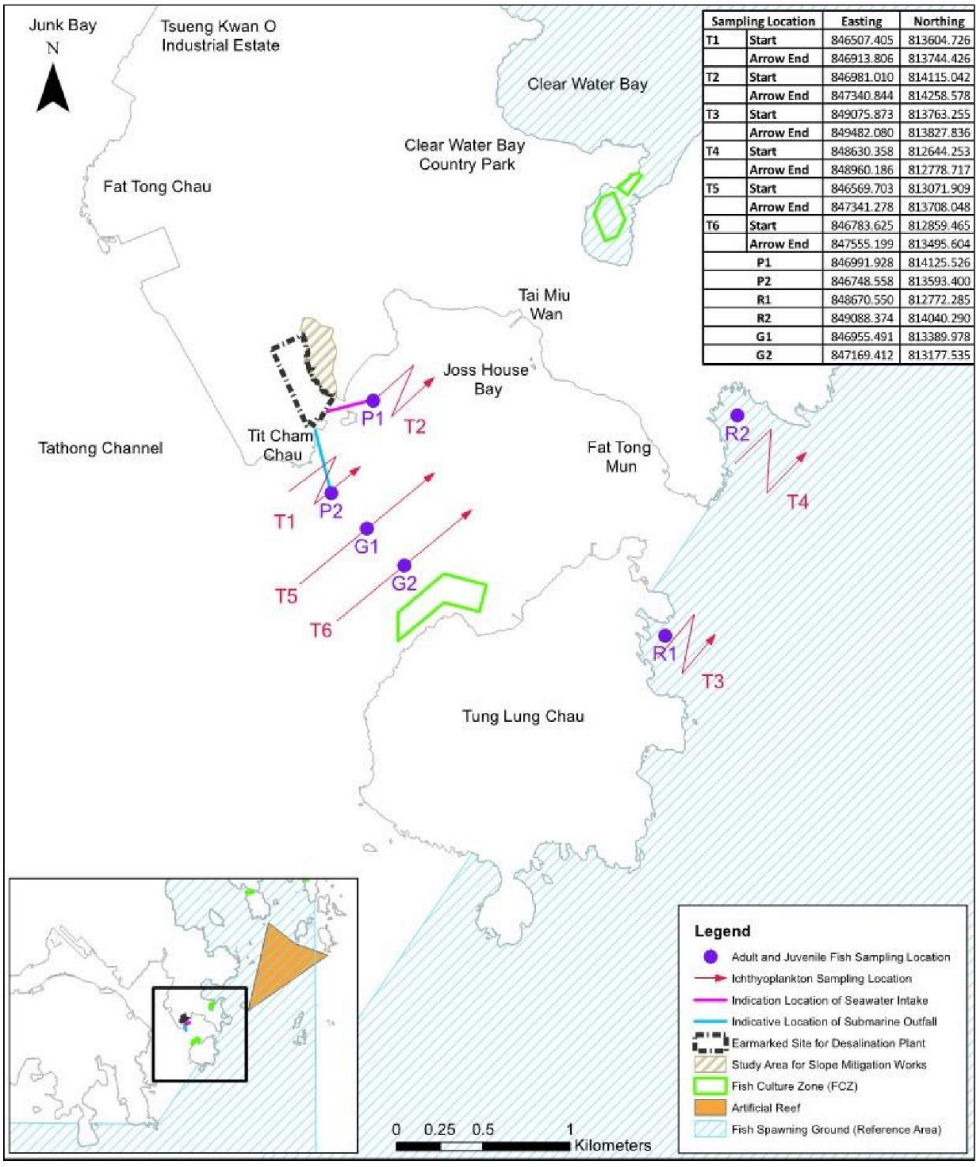
7.2. In accordance with Section 2.3 of the approved Methodology Paper on Regular Fisheries Monitoring, it is recommended to set up six (6) fisheries monitoring locations in Joss House Bay and its vicinity to monitor the fisheries resources.

7.3. Two (2) sampling locations are set up in close proximity of the direct footprint of the proposed submarine utilities around TKO Area 137. These sampling locations represent the potential Project impact zones (i.e. areas at and in close proximity to the footprint of the proposed submarine utilities that will be directly affected by the Project works).

7.4. Two (2) gradient locations are proposed between the proposed submarine utilities and Tung Lung Chau FCZ to assist in the interpretation and identification of any potential fisheries impact in the vicinity of the FCZ.

7.5. Two (2) reference locations are proposed in the outer Joss House Bay between the waters of Tung Lung Chau and Fat Tong Mun. These reference locations are further away and will not be affected by the Project discharge (based on the EIA prediction) and will serve as control stations. Any significant fisheries impact identified at the reference locations should be caused by other natural factors or non-Project activities. The trends of fisheries conditions recorded in the reference locations will be used to assist in the interpretation of the trends of fisheries impact identified in the impact and gradient locations.

7.6. The coordinates of the proposed monitoring locations are shown in **Figure 7.1.**



Sampling Location		Easting	Northing
T1	Start	846507.405	813604.726
	Arrow End	846913.806	813744.426
T2	Start	846981.010	814115.042
	Arrow End	847340.844	814258.578
T3	Start	849075.873	813763.255
	Arrow End	849482.080	813827.836
T4	Start	848630.358	812644.253
	Arrow End	848960.186	812778.717
T5	Start	846569.703	813071.909
	Arrow End	847341.278	813708.048
T6	Start	846783.625	812859.465
	Arrow End	847555.199	813495.604
	P1	846991.928	814125.526
	P2	846748.558	813593.400
	R1	848670.550	812772.285
	R2	849088.374	814040.290
	G1	846955.491	813389.978
	G2	847169.412	813177.535

Figure 7.1 Monitoring Location of Regular Fishery Monitoring during Operation Phase

MONITORING FREQUENCY

7.7. Operation phase fishery monitoring shall be carried out 2 times in wet season (April to October) and 2 times in dry season (December to March) to examine the following:

- Fish species composition;
- Abundance: number of fish captured;
- Diversity of fish resources: species diversity and evenness;
- Size: range of total length; Biomass in weight; and
- Values of catches of commercial species: catch per unit effort (CPUE) and yield per unit effort (YPUE).

MONITORING RESULT AND OBSERVATION

7.8. Operation phase fishery monitoring for wet season 2024 was carried out on 24 and 31 August 2024. The detail of the monitoring was presented in the 4th Operation Phase Monthly EM&A Report.

8. SUMMARY OF EXCEEDANCE, COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTIONS

8.1. The Environmental Complaint Handling Procedure is shown in below **Figure 9.1**:

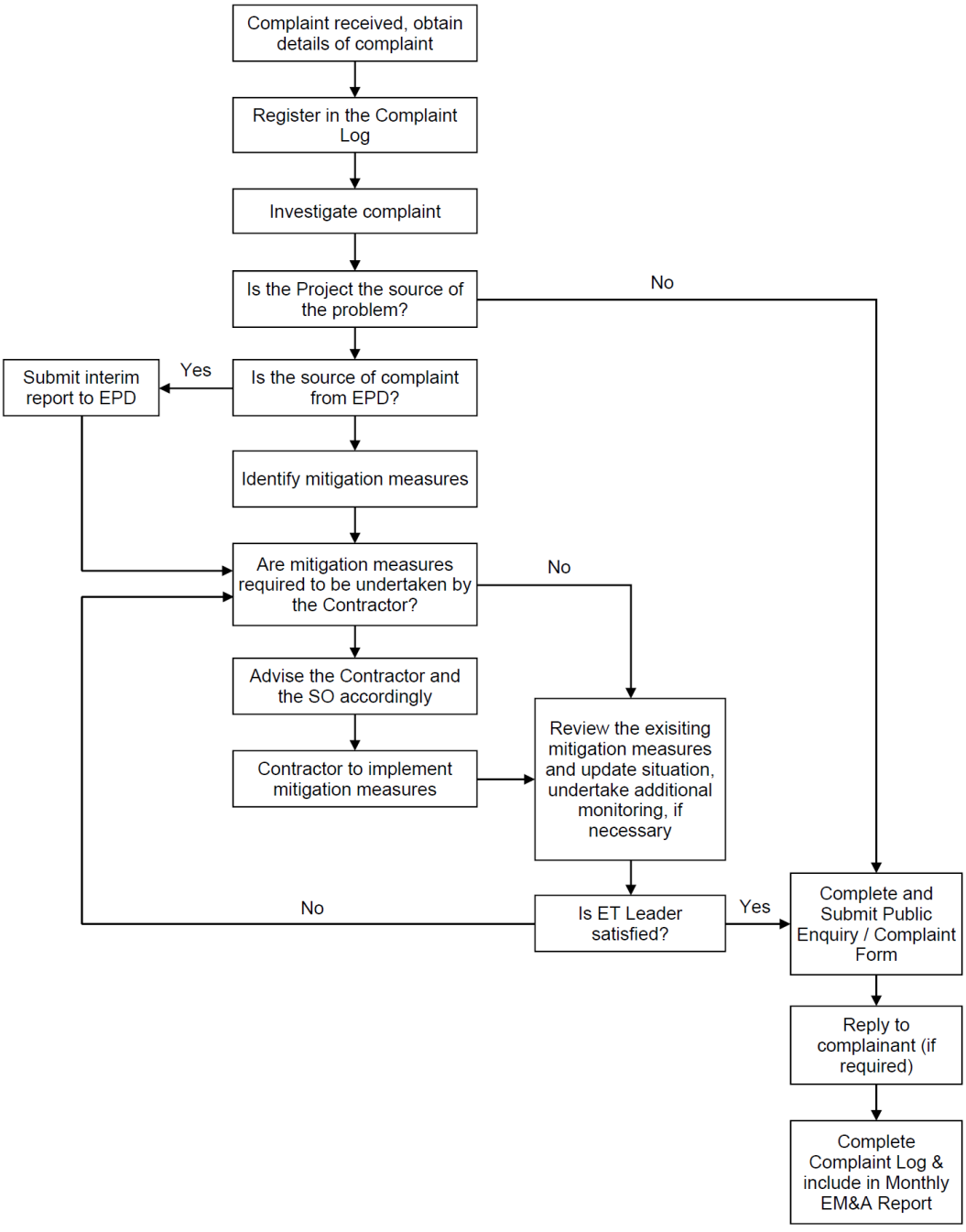


Figure 9.1 Environmental Complaint Handling Procedures

8.2. Operation phase EM&A works for water quality were conducted at the thirteen monitoring stations (CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37 NF1, NF2 and NF3) during the reporting period in accordance with the EM&A Manual.

8.3. The marine water quality monitoring was conducted at the thirteen monitoring stations on 3, 5, 7, 10, 12, 14, 17, 19, 21, 24, 26, 28 and 31 December 2024. Thirty (13) of SS obtained had exceeded the Action Level. Twenty-seven (27) of SS obtained during the reporting period had exceeded the Limit Level. After investigation, all exceedances were concluded unrelated to the Project.

8.4. Continuous Monitoring of Effluent Quality was conducted sampling point in the reporting month. No exceedance of the sampling was obtained during the reporting period.

8.5. Due to the suspension of production at the plant, there was no effluent discharge from the TKODP during the periods listed below:

- From 12 a.m. on 1 December 2024 to 10 a.m. on 5 December 2024
- From 10 p.m. on 5 December 2024 to 10 a.m. on 6 December 2024
- From 10 p.m. on 9 December 2024 to 10 a.m. on 10 December 2024
- From 10 p.m. on 10 December 2024 to 10 a.m. on 11 December 2024
- From 10 p.m. on 16 December 2024 to 10 a.m. on 23 December 2024
- From 8 p.m. on 23 December 2024 to 2 p.m. on 27 December 2024

Therefore, the effluent sampling was suspended on 1, 2, 3, 4, 17, 18, 19, 20, 22, 24, 25 and 26 December 2024.

8.6. Operation phase coral monitoring works was conducted on 18 December 2024. There is no AL/LL exceedance during the monitoring period. The detail of the monitoring was presented in **Appendix H**.

8.7. Operation phase fishery monitoring for wet season 2024 was carried out on 24 and 31 August 2024. The detail of the monitoring was presented in the 4th Operation Phase Monthly EM&A Report.

8.8. In this reporting period, monthly landfill gas monitoring was conducted on 10 and 11 December 2024. No exceedances of action level and limit level was observed.

8.9. No environmental complaint, notification of summons and prosecution Statistics on complaint and notification of summons and prosecution are summarized in **Appendix J**.

9. EM&A SITE INSPECTION

9.1. Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting period, site inspections were carried out on 3, 10, 18, 23 and 31 December 2024 at the site portions listed in **Table 10.1** below.

Table 10.1 Summaries of Site Inspection Record

Date	Inspected Site Portion	Time
3 December 2024	TKO Area 137	14:30 – 15:30
10 December 2024	TKO Area 137	14:30 – 15:30
18 December 2024	TKO Area 137	09:15 – 12:00
23 December 2024	TKO Area 137	14:30 – 15:30
31 December 2024	TKO Area 137	14:30 – 15:30

9.2. Joint site inspections with IEC were carried out on 18 December 2024.

9.3. EPD conducted a site visit on 12 December 2024, and no comments were made during the visit.

9.4. Environmental deficiencies were observed during weekly site inspection. Key observations during the site inspections and during the reporting period are summarized in **Table 10.2**.

Table 10.2 Site Observations

Date	Environmental Observations	Follow-up Status
3 December 2024	No major environmental deficiency was observed.	N/A
10 December 2024	No major environmental deficiency was observed.	N/A
18 December 2024	No major environmental deficiency was observed.	N/A
23 December 2024	No major environmental deficiency was observed.	N/A
31 December 2024	No major environmental deficiency was observed.	N/A

9.5. According to the EIA Study Report, Environmental Permit, contract documents and EM&A Manual, the mitigation measures detailed in the documents should be implemented as much as practical during the reporting period. An updated Implementation Status of Environmental Mitigation Measures (EMIS) is provided in **Appendix B**. Site inspection proforma of the reporting period is provided in **Appendix I**.

10. FUTURE KEY ISSUES

10.1. Works to be undertaken in the next reporting month are:

- Potable Water Production

10.2. The major environmental impacts brought by the above operation works include:

- Effluent of the water production work and system cleaning works;
- Waste generation from the operation activities

10.3. The key environmental mitigation measures implemented for the Contract in this reporting period associated with the above operation works include:

- Regularly monitoring of the effluent
- Sorting and storage of general refuse and operation waste

11. CONCLUSIONS AND RECOMMENDATIONS

11.1. This is the 6th Monthly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 1 December 2024 to 31 December 2024, in accordance with the EM&A Manual and the requirement under FEP-01/503/2015/B.

11.2. The EM&A works for operation phase water quality were conducted during the reporting period in accordance with the EM&A Manual. Thirty (13) of SS obtained had exceeded the Action Level. Twenty-seven (27) of SS obtained during the reporting period had exceeded the Limit Level. After investigation, all exceedances were concluded unrelated to the Project.

11.3. Continuous Monitoring of Effluent Quality was conducted sampling point in the reporting month. No exceedance of the sampling was obtained during the reporting period.

11.4. Due to the suspension of production at the plant, there was no effluent discharge from the TKODP during the periods listed below:

- From 12 a.m. on 1 December 2024 to 10 a.m. on 5 December 2024
- From 10 p.m. on 5 December 2024 to 10 a.m. on 6 December 2024
- From 10 p.m. on 9 December 2024 to 10 a.m. on 10 December 2024
- From 10 p.m. on 10 December 2024 to 10 a.m. on 11 December 2024
- From 10 p.m. on 16 December 2024 to 10 a.m. on 23 December 2024
- From 8 p.m. on 23 December 2024 to 2 p.m. on 27 December 2024

Therefore, the effluent sampling was suspended on 1, 2, 3, 4, 17, 18, 19, 20, 22, 24, 25 and 26 December 2024.

11.5. Operation phase coral monitoring works was conducted on 18 December 2024. There is no AL/LL exceedance during the monitoring period.

11.6. Operation phase fishery monitoring for wet season 2024 was carried out on 24 and 31 August 2024. The detail of the monitoring was presented in the 4th Operation Phase Monthly EM&A Report.

11.7. In this reporting period, monthly landfill gas monitoring was conducted on 10 and 11 December 2024. No exceedances of action level and limit level was observed.

11.8. Weekly environmental site inspections were conducted during the reporting period. Observations and reminders were reported during the site inspections. All items are rectified within the reporting period. The environmental performance of the project was therefore considered satisfactory.

11.9. EPD conducted a site visit on 12 December 2024, and no comments were made during the visit.

11.10. No environmental complaint, notification of summons and prosecution was received in the reporting period.

11.11. The ET will keep track on the operation works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Appendix A

Overview of Desalination Plant in Tseung Kwan O

N

846 500 E

847 000 E

814 500 N

814 000 N

TEMPORARY WORKS AREA 1

GLA-TSK 692 TGLA

GLA-TSK 692 TGLA

GLA-TSK 692 TGLA

GLA/TRO-088

ROW FOR GLA/TRO-088

GLA-TSK 745 TGLA

GLA-TSK 567

PORTION A

PORTION B

PROPOSED WORKS LIMIT FOR SLOPE MITIGATION WORKS IN COUNTRY PARK

INDICATIVE LOCATION OF PROPOSED SEAWATER INTAKE

INDICATIVE LOCATION OF PROPOSED OUTFALL

A B C D E F G H J K L M N O

LEGEND:

- BOUNDARY OF SENT LANDFILL EXTENSION
- BOUNDARY OF WORKS AREA FOR TKO DESALINATION PLANT
- SITE PHASING
- ALLOCATED LAND BOUNDARIES

GLA-TSK 692 TGLA

NOTE:

TEMPORARY WORKS AREA 1 WILL BE HANDED OVER AT +6 MPD WITH A TOLERANCE OF ±500mm.

POINT	EASTING	NORTHING
A	846581.93	814505.03
B	846610.11	813979.23
C	846614.73	813975.12
D	846629.09	813997.84
E	846644.75	813986.74
F	846646.80	813985.28
G	846677.24	814034.67
H	846686.56	814028.89
I	846766.21	814158.11
J	846459.65	814448.83
K	846578.45	814048.11
L	846813.89	814105.63
M	846814.60	814117.96
N	846676.84	814207.77
O	846756.68	814164.57

PRELIMINARY – NOT FOR CONSTRUCTION

Revision	Date	Description	Initial
B	10/03	UPDATE NOTES	YLC
A	07/18	UPDATE COORDINATES	YLC

	Designed	Checked	Drawn	Checked
Initial	YLC	CKH	SZ	WLS
Date	02/18	02/18	02/18	02/18

Approved

Agreement No.
CE 8/2015 (WS)

Contract No.
13/WSD/17

Contract Title
DESIGN, BUILD AND OPERATE FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT

Drawing Title
SITE HANDOVER WORKS AREAS

Drawing No.
190495/K/TEND/10/0003

Revision
B

Scale
A1 1 : 1500
A3 1 : 3000

水務署
Water Supplies Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

BUILDINGS IN FIRST STAGE

CODE	NAME OF BUILDING	TOTAL G.F.A. (m^2)	SITE COVERAGE (m^2)
B	COMBINE SHAFT	759,876	759,876
C	ACTIDAFF	10027,547	5455,346
G	REVERSE OSMOSIS BUILDING AND ELECTRICAL BUILDING	4511,455	5367,935
H	CO2 TANKS AREA	-	-
J	PRODUCT WATER STORAGE TANK, PUMP STATION AND ELECTRICAL BUILDING	1974,610	2833,980
K	SLUDGE TREATMENT BUILDING, TANK AND PUMP ROOM	2531,044	1228,361
M	ADMINISTRATION BUILDING & ELECTRICAL BUILDING C	2459,713	1114,062
N	MAIN ELECTRICAL AND CENTRAL CHILLER PLANT BUILDING	-	459,893
R1	ELECTROCHLORINATION BUILDING & ELECTRICAL BUILDING A	657,992	525,776
S	132 kV SUBSTATION	-	943,560
T	IRRIGATION WATER TANK AND PUMP ROOM	-	156,148
R2	CHEMICAL BUILDING	813,056	813,056
V	VISITOR GALLERY	1330,410	1330,410
X1	GUARD HOUSE AND FS CONTROL ROOM	39,585	39,585
X2	GUARD HOUSE	22,035	22,035
Y	R + D OUTDOOR	-	-
Z	WASTE WATER TREATMENT PLANT	48,000	48,000
	TOTAL =	25175,323	21498,023

LEGEND / ABBREVIATION

HL WINDOW	HIGH LEVEL WINDOW
M.L.	METAL LOUVRES
C.L.	CAT LADDER
A.U.T.	ACCESSIBLE UNISEX TOILET
⌖	PROPOSED FINISH FLOOR LEVEL IN METER ABOVE P.D.
⌖	STRUCTURAL FLOOR LEVEL IN METER ABOVE P.D.
M/A/L	MECHANICAL VENTILATION & ARTIFICIAL LIGHTING
F.E.	4.5kg CO^2 FIRE EXTINGUISHER
H.R.	HOSE REEL
Ⓐ	FIREMAN'S LIFT
Ⓓ	LIFT FOR THE BARRIER FREE ACCESS
P.D.	PIPE DUCT

PLOT RATIO & SITE COVERAGE CALCULATION:

SITE AREA OF THE FIRST STAGE = [illegible]

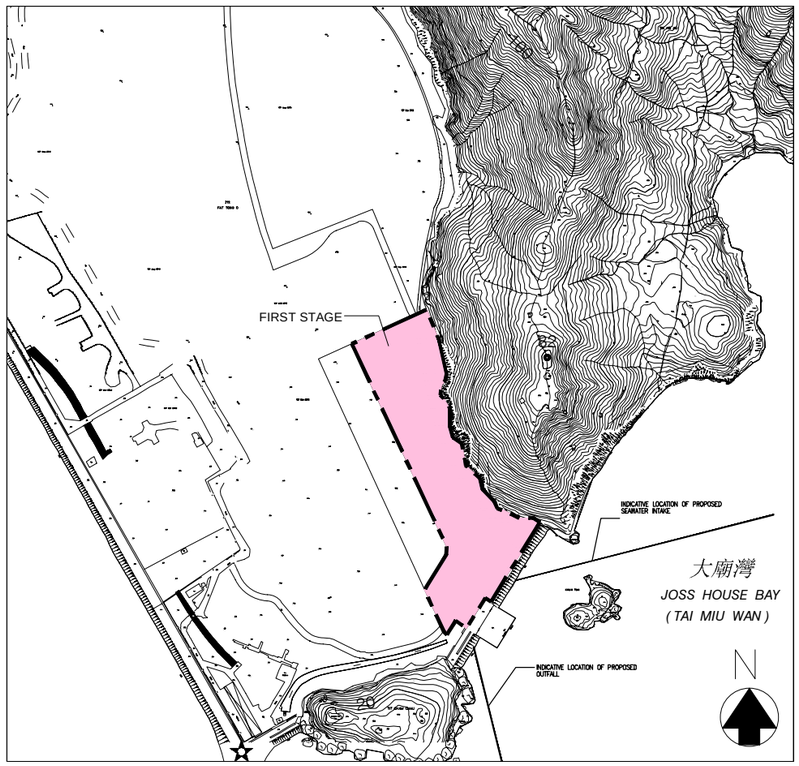
TOTAL G.F.A. = [illegible]
TOTAL SITE COVERAGE = [illegible]

PLOT RATIO = 25092.141 / 56108
= 0.447 < PERMITTED

SITE COVERAGE = 21414.841 / 56108 x 100
= 38.167%

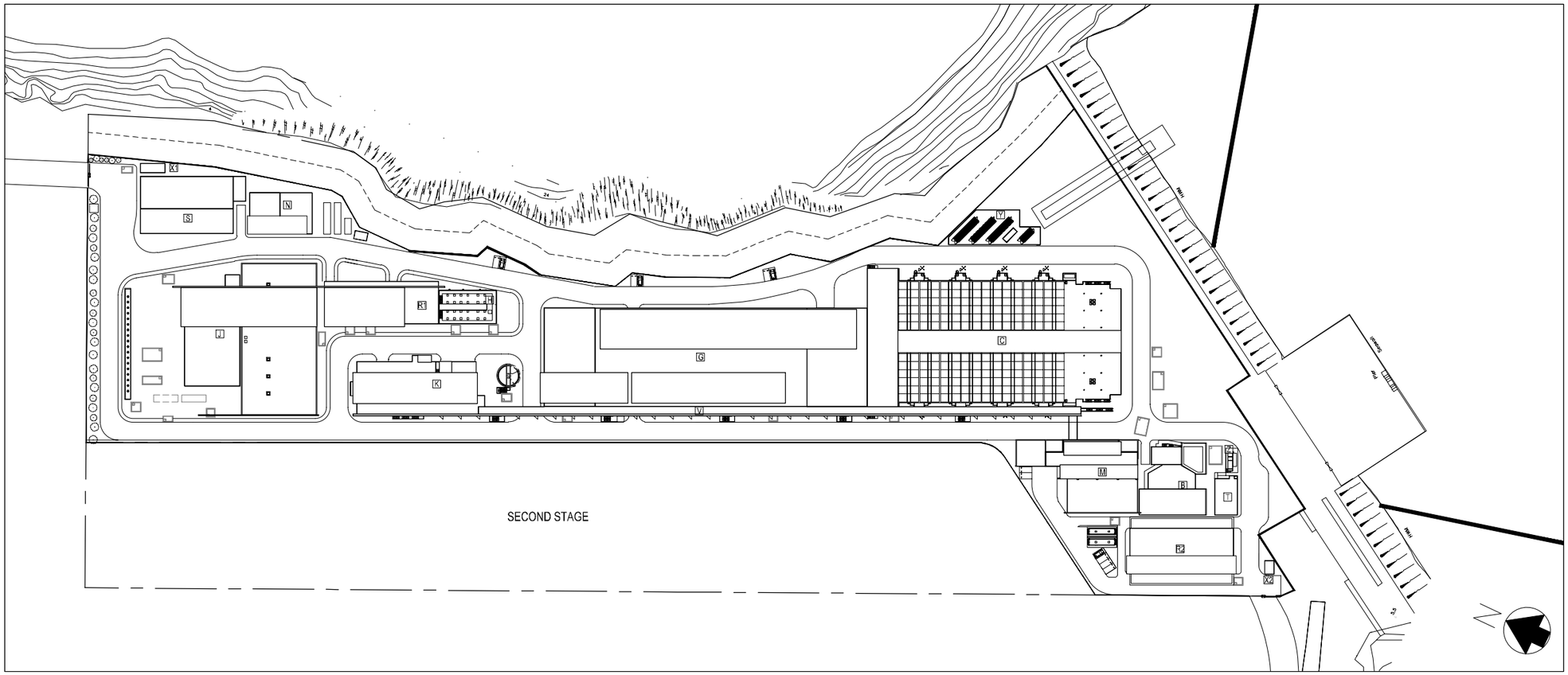
SITE LOCATION PLAN

1 : 5000



FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT

1 : 1000



Rev	Description	By	Date
0	TENDER SUBMISSION	CAD	JAN 19

Employer: 水務署 Water Supplies Department

Employer's Consultant: BLACK & VEATCH

Tenderer: acciona / JEC / CRCC — AJC JOINT VENTURE

Designer: wsp

Project title:
CONTRACT NO. 13/WSD/17

DESIGN, BUILD AND OPERATE
FIRST STAGE OF TSEUNG KWAN O
DESALINATION PLANT

Drawing title:
ARCHITECTURAL –
PLOT RATIO AND SITE COVERAGE CALCULATION, LEGEND ABBREVIATION

Drawing no.	Rev.
TKO/AJC/W/A000/AR/001	0

Drawn	Date	Checked	Approved
CKAL	JAN 19	S.C.	T.C.

Scale: N.T.S.
Status: –

Appendix B

Summary of Implementation Status of Environmental Mitigation

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
Air Quality								
S4.8.1	Ultra-low-sulphur diesel (ULSD) will be used for all construction plant on-site, as defined as diesel fuel containing not more than 0.005% sulphur by weight) as stipulated in Environment, Transport and Works Bureau Technical Circular (ETWB-TC(W)) No 19/2005 on Environmental Management on Construction Sites.	Land site/ During construction/ During Operation	Contractor(s)		✓	✓	Implemented	Environment, Transport and Works Bureau Technical Circular (ETWB- TC(W)) No 19/2005 on Environmental Management on Construction Sites
Water Quality								
S6.9 and S6.12	The sterilization water should be dechlorinated with total residual chlorine (TRC) level below 1 mg/L before discharge to public sewer. In situ testing of TRC should also be conducted for the discharge of chlorinated water for pipeline disinfection to ensure sufficient dechlorination before discharge to public sewer.	Sterilization of water mains prior to commissioning	Contractor(s)		✓	✓	N/A	Technical Memorandum for Effluents Discharged into Drainage and Sewerage Systems Inland and Coastal Waters
S6.9	The cleaning and flushing water should also be treated and desilted to the relevant discharge requirement stipulated in TM-DSS before discharging.	Sterilization of water mains prior to commissioning	Contractor(s)		✓	✓	Implemented	
S6.9	Site drainage should be well maintained, and good construction practices should be observed to ensure that oil, fuels, solvents, and other chemicals are managed, stored and handled properly and do not enter the nearby water streams.	Land site & drainage/ During construction/ During operation	Contractor(s)		✓	✓	Implemented	-
Waste Management								
S8.5	Provision of sufficient waste disposal points and regular collection for disposal.	All area/ During construction/ During operation	Contractor(s)		✓	✓	Implemented	DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness.
S8.5	Chemical waste container shall be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Chemical waste container shall have a capacity of less than 450 L unless the specifications have been approved by the EPD.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	A label in English and Chinese shall be displayed on the chemical container in accordance with instructions prescribed in Schedule 2 of the Regulations.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
S8.5	Storage areas for chemical waste shall be enclosed on at least 3 sides.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall have adequate ventilation.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall be covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary).	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall be arranged so that incompatible materials are appropriately separated.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	General refuse will be stored in enclosed bins or compaction units separately from construction and chemical wastes.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented after reminder	
S8.5	Adequate number of waste containers will be provided to avoid over-spillage of waste.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	DEVB TC(W) No. 8/2010 Enhanced Specification for Site Cleanliness and Tidiness.
S8.5	A reputable waste collector will be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimize odour, pest and litter impacts.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	-
S8.5	Recycling bins will be provided at strategic locations within the Site to facilitate recovery of recyclable materials (including aluminum can, wastepaper, glass bottles and plastic bottles) from the Site. Materials recovered will be sold for recycling.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	-
Landscape & Visual								
S11.10 & 11.11	The construction area and area allowed for temporary structures, such as the contractor's office, will be minimized to a practical minimum. (MM1)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	-

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
S11.10 & 11.11	At the detailed design stage, the design team will seek to minimize the landscape footprint of the Project and above ground facilities, while satisfying all other requirements. (MM2)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	-
S11.10 & 11.11	Design principles will be adopted to take into account the surrounding area, particularly Clear Water Bay Country Park behind and the nearby waterfront, with due consideration given to: - green roofs where practical (i.e. without equipment on the roof); - roadside planting; - aesthetic treatment of all structures; - vertical greening; - screen planting along application site; and - landscape enhancement with amenity planting where practical including planting along the edge (site boundary) fence with native shrubs where feasible, to reduce their visual impact and blend them into the surrounding landscape. (MM3)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	-
S11.10 & 11.11	All trees within the Project Site or the potential slope mitigation works area will be carefully protected during construction according to DEVB TCW No. 10/2013 – Tree Preservation (MM4)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	ETWB TCW No. 3/2006 - Tree Preservation.
S11.10 & 11.11	No tree within the Country Park will be felled. Trees within the Site unavoidably affected by the works will be transplanted where necessary and practical. For trees that need to be felled, compensatory planting will be provided to the satisfaction of relevant Government departments. A compensatory tree planting proposal including locations of tree compensation will be submitted to seek relevant government department's approval, in accordance with DEVB TC(W) No. 10/2013. (MM5)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	DEVB TC(W) No. 10/2013
S11.10 & 11.11	Any slope mitigation works necessary to address natural terrain hazards, will be minimized to minimize any potential environmental impact to the Country Park e.g. soil nailing and rock stabilization will aim to avoid existing trees e.g. should any restoration of vegetation be necessary, the best planting matrix with native species will be established, with the aim of resembling the existing vegetation. (MM6)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	
S11.10 & 11.11	Dredging works for the installation of intake structures and outfall diffusers should be minimized to avoid or reduce any potential environmental impacts to as low as reasonably practicable (ALARP). The intake and outfall structures (e.g. intake openings and diffuser heads) will be prefabricated and transferred to site for	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
	installation. (MM7)							
S11.10 & 11.11	All night-time lighting will be reduced to a practical minimum both in terms of number of level and will be hooded and directional. (MM8) units and lux level and will be hooded and directional. (MM8)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	-
Landfill Gas Hazard								
S12.7	During all works, safety procedures should be implemented to minimize the risks of fires and explosions, asphyxiation of workers and toxicity effects resulting from contact with contaminated soil and groundwater.	All area/ Detailed design/ During construction/operation	Contractor(s)	✓	✓	✓	Implemented	-
S12.7	During trenching and excavation as well as creation of confined spaces at near to or below ground level, precautions should be clearly laid down and rigidly Gas detection equipment and appropriate breathing apparatus should be available and used when entering confined spaces or trenches deeper than 1 meter.	All area/ Detailed design/ During construction/operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	The Contractor should make the workers are aware of potential hazards of working in confined spaces (any chamber, manhole or culvert which is large enough to permit access to personnel). Such work in confined spaces is controlled by the Factories and Industrial Undertakings (Confined Spaces) Regulations of the Factories and Industrial Undertakings Ordinance. Following the Safety Guide to Working in Confined Spaces ensures compliance with the above regulations.	All area/ Detailed design/ During construction/operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Safety officers, specifically trained with regard to landfill gas and leachate related hazards and the appropriate actions to take in adverse circumstances, should be present on the site throughout the works, in particular, when works are undertaken below grade.	All area/ Detailed design/ During construction/operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	All personnel who work on site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of the works, the possible presence of contaminated water and the need to avoid physical contact with it.	All area/ Detailed design/ During construction/operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Monitoring for landfill gas should be undertaken in all excavations, manholes, chambers (particularly during pipe jacking) and any confined spaces through the use of an intrinsically safe portable instrument, appropriately calibrated and capable of measuring the concentrations of methane. carbon dioxide and oxygen.	All area/ Detailed design/ During construction/operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Monitoring frequency and areas to be monitored should be specified prior to commencement of groundwork, either by the Safety Officer, or by an appropriately qualified person. All measurements should be recorded and documented.	All area/ Detailed design/ During construction/operation	Contractor(s)	✓	✓	✓	Implemented	

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
S12.7	Proceed drilling with adequate care and precautions against the potential hazards which may be encountered.	All area/ Detailed design/ During construction/operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Prior to the commencement of the site works, the drilling contractor should devise a 'method-of- working' statement covering all normal and emergency procedures (including but not limited to number of operatives, experience and special skills of operatives, normal method of operations, emergency procedures, *supervisors* responsibilities, storage and use of safety equipment, safety procedures and signs, barriers and guarding). The site *supervisor* and all operatives must be familiar with this statement.	All area/ During construction/operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Where below ground service entries are necessary to the Incoming Switchgear Room, 132 kV Substation and Chlorine Store (I) and (II), the entry point should be sealed to prevent gas entry. In addition, any below grade cable trenches entering the Incoming Switchgear Room and 132 kV Substation can become the pathway for landfill gas and hence grilled metal covers should be used.	All area/ Detailed design/ During construction/operation	Contractor(s)	✓	✓	✓	N/A	
S12.7	It is recommended regular landfill gas monitoring should be carried out at the Incoming Switchgear Room, 132 kV Substation and Chlorine Store (I) and (II). The monitoring frequency will be monthly for the first year of operation. If the monitoring results show no sign of landfill gas migration, reduce the monitoring frequency to once every six months.	All area/ Detailed design/ During construction/operation	Contractor(s)	✓	✓	✓	N/A	
S12.7	The manholes and utility pits within the Project Site and along the fresh water mains. Each manhole/ utility pit should be monitored with two measurements (at mid depth and base). Each measurement should be monitored for a minimum of 10 minutes. A steady reading and peak reading should be recorded at each manhole/ utility pit and for each measurement. The need for venting the manhole/ utility pit and further monitoring will be reviewed after the initial monitoring.	All area/ Detailed design/ During construction/operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	All construction, operation and maintenance personnel working on-site as well as visitors should be made aware of the hazards of landfill gas and its possible presence on-site. This should be achieved through a combination of posting warning signs in prominent places and also by access to detailed information on landfill gas hazards and the designs and procedural means by which these hazards are being minimized on-site.	All area/ Detailed design/ During construction/operation	Contractor(s)	✓	✓	✓	Implemented	

Note: D – Design stage C – Construction O – Operation

Appendix C

Impact Monitoring Schedule

Contract No. 13/WSD/17
Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant
Water Quality Monitoring Schedule (December 2024)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 08:04-11:34		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 08:22-11:52		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 10:15-13:45
8	9	10	11	12	13	14
		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood:08:00 - 09:57		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-ebb:08:00 - 11:04		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-ebb: 09:29 - 12:59
15	16	17	18	19	20	21
		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 08:00-10:14		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 08:16-11:46		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood:09:37 - 13:07
22	23	24	25	26	27	28
		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-ebb: 08:00-09:03		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-ebb: 08:00 - 10:33		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-ebb: 09:20 - 11:44
29	30	31				
		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 08:00 - 10:51				

Remarks:
1. Monitoring Parameters: Dissolved oxygen, Temperature, pH, Turbidity, Salinity, Suspended Solids, Iron, Total Residual Chlorine.

Note:
- Due to safety concern of vessel transportation earlier than 0700, Water Quality Monitoring would start at 0800.
- Prioritized routing: Mid-ebb: CE→WSR16→WSR37→WSR36→WSR33→Remaining stations and Mid-flood: CF→WSR1→WSR2→WSR3→WSR4→Remaining stations

Contract No. 13/WSD/17
Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant
Tentative Water Quality Monitoring Schedule (January 2025)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
				Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 08:00-10:39		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 08:27-11:57
5	6	7	8	9	10	11
		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood:10:32 - 14:02		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-ebb:08:00 - 09:27		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-ebb: 09:11 - 11:10
12	13	14	15	16	17	18
		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 08:00-10:49		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 08:00-10:30		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood:08:05 - 11:35
19	20	21	22	23	24	25
		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 09:37-13:07		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 10:31-14:01		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 08:07-11:37
26	27	28	29	30	31	
		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 08:00-10:06		Impact Water Quality monitoring for CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36, WSR37, NF1, NF2, NF3 Monitoring Period: Mid-flood: 08:00-10:58		

Remarks:
1. Monitoring Parameters: Dissolved oxygen, Temperature, pH, Turbidity, Salinity, Suspended Solids, Iron, Total Residual Chlorine

Note:
- Due to safety concern of vessel transportation earlier than 0700, Water Quality Monitoring would start at 0800.
- Prioritized routing: Mid-ebb: CE→WSR16→WSR37→WSR36→WSR33→Remaining stations and Mid-flood: CF→WSR1→WSR2→WSR3→WSR4→Remaining stations

Contract No. 13/WSD/17
Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant
Landfill Gas Monitoring Schedule (December 2024)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
		Landfill Gas Monitoring	Landfill Gas Monitoring			
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Remarks:
1. Monitoring Parameters: Oxygen, Methane, Carbon Dioxide and Barometric Pressure

Contract No. 13/WSD/17
Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant
Tentative Landfill Gas Monitoring Schedule (January 2025)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
		Landfill Gas Monitoring	Landfill Gas Monitoring			
19	20	21	22	23	24	25
26	27	28	29	30	31	

Remarks:
1. Monitoring Parameters: Oxygen, Methane, Carbon Dioxide and Barometric Pressure

Contract No. 13/WSD/17
Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant
Ecological Monitoring Schedule

Dec-24

	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
			Regular Operation Phase Coral Monitoring			
22	23	24	25	26	27	28
29	30	31				

The schedule may change due to unforeseen circumstances (adverse weather, etc.)

Contract No. 13/WSD/17
Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant
Tentative Ecological Monitoring Schedule

Jan-25

	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
	Regular Operation Phase Coral Monitoring					
26	27	28	29	30	31	

The schedule may change due to unforeseen circumstances (adverse weather, etc.)

Appendix D

Event / Action Plan

Table D1 Event and Action Plan for Water Quality Monitoring

Event	Action			
	ET	IEC	Contractor(s)	ER
Action Level being exceeded by one sampling day	1. Repeat *in situ* measurement on the next day of exceedance 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 ER.	1. Check monitoring data submitted by ET and Contractor(s)'s working methods; 2. Inform EPD.	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 on the next day of exceedance 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 ER; 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. Inform EPD; 3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly; 4. 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 ER 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.
Limit Level being exceeded by one sampling day	1. Repeat *in situ* measurement on the next day of exceedance 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 ER; 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. Inform EPD; 3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly; 4. 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 ER 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 on the next day of exceedance 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 ER; 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. Inform EPD; 3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly; 4. 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 ER within 3 working days; 5. Implement the agreed mitigation measures. 6. As directed by ER, slow down or stop all or part of the marine construction works/ production volume of the desalination plant 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/ production volume of the desalination plant until no exceedance of Limit Level.

Notes : ET = Environmental Team, IEC = Independent Environmental Checker; ER = Engineering Representatives
The above actions should be taken within 1 working day after the exceedance is identified during operation phase.

Table D2 Event and Action Plan for Ecology during Operation Phase

Event	Action			
	ET	IEC	Contractor(s)	ER
Non-conformity on one occassion	1. Identify source 2. Inform IEC and ER 3. Discuss remedial actions with IEC, the ER and the Contractor 4. Monitor/ audit/ review remedial actions until rectification has been completed	1. Check monitoring/ auditing results 2. Check the Contractor's working method 3. Discuss with the ET and Contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures 5. Check the implementation of remedial measures	1. Take immediate action to avoid further problem 2. Amend working methods if needed 3. Submit proposals for remedial actions to ET, ER and IEC 4. Rectify damage and implement the agreed remedial actions	1. Notify Contractor 2. Ensure remedial measures are properly implemented 3. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the works in case of serious non-conformity until situation is rectified
Repeated Non-comformity	1. Identify source 2. Inform IEC, ER, EPD and AFCD 3. Increase monitoring and audit frequency 4. Discuss remedial actions with the IEC, the ER and the Contractor 5. Monitor/ audit/ review remedial actions until rectification has been completed 6. If non-conformity stops, cease additional monitoring/ auditing	1. Check monitoring/ auditing results 2. Check the Contractor's working method 3. Discuss with the ET and Contractor on possible remedial measures 4. Supervise the implementation of remedial measures 5. Advise the ER on effectiveness of proposed remedial measures and keep EPD and AFCD informed	1. Take immediate action to avoid further problem 2. Amend working methods if needed 3. Submit proposals for remedial actions to ET, ER and IEC 4. Rectify damage and implement the agreed remedial actions	1. Notify Contractor 2. Ensure remedial measures are properly implemented 3. Consider and instruct, if necessary, the Contactor to slow down or to stop all or part of the works in the case of serious non-conformity until situation is rectified

Notes : ET = Environmental Team, IEC = Independent Environmental Checker; ER = Engineering Representatives

Table D3 Event and Action Plan for Operation Phase Coral Monitoring

Event	Action			
	ET Leader	IEC	SOR **	Contractor
Action Level Exceedance	1. Check monitoring data 2. Inform the IEC, SOR and Contractor of the findings; 3. Increase the monitoring to at least once a month to confirm findings; 4. Propose mitigation measures for consideration	1. Discuss monitoring with the ET and the Contractor; 2. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise the SOR accordingly.	1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET; 2. Make agreement on the measures to be implemented.	1. Inform the SOR and confirm notification of the non-compliance in writing; 2. Discuss with the ET and the IEC and propose measures to the IEC and the SOR; 3. Implement the agreed measures.
Limit Level Exceedance	1. Undertake Steps 1-4 as in the Action Level Exceedance. If further exceedance of Limit Level, propose enhancement measures for consideration.	1. Discuss monitoring with the ET and the Contractor; 2. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise the SOR accordingly.	1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET; 2. Make agreement on the measures to be implemented.	1. Inform the SOR and confirm notification of the non-compliance in writing; 2. Discuss with the ET and the IEC and propose measures to the IEC and the SOR; 3. Implement the agreed measures.

*Remark: ** The "SOR" is equivalent to the "ER" as defined in the EM&A Manual of the Project*

Table D4 Event and Action Plan for Operation Phase LFG Hazard

Parameters	Level	Action
Oxygen (O_2)	Action Level < 19% O_2	Ventilate trench/void to restore O_2 to > 19%
	Limit Level < 19% O_2	Stop works Evacuate personnel/prohibit entry Increase ventilation to restore O_2 to > 19%
Methane (CH_4)	Action Level >10% LEL	Post "No Smoking" signs Prohibit hot works Increase ventilation to restore CH_4 to <10% LEL
	Limit Level >20% LEL	Stop works Evacuate personnel/prohibit entry Increase ventilation to restore CH_4 to<10% LEL
Carbon Dioxide (CO_2)	Action Level >0.5% CO_2 Limit Level >1.5% CO_2	Ventilate to restore CO_2 to < 0.5% Stop works Evacuate personnel / prohibit entry Increase ventilation to restore CO_2 to <0.5%

Appendix E

Water Quality Monitoring Equipment and Landfill Gas Equipment Calibration Certification

專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED
Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
Email: info@qualityprotest.com; Website: www.qualityprotest.com
Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD120079
Date of Issue : 23 December 2024

PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited
Unit E, 12/F, Ford Glory Plaza 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment :	YSI ProDSS Multi Parameters
Manufacturer :	YSI
Serial Number :	22C106561
Date of Received :	18 December 2024
Date of Calibration :	20 December 2024
Date of Next Calibration :	19 March 2025

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500-H^+ B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520 B
Dissolved oxygen	APHA 23e 4500-O G (Membrane Electrode Method)
Turbidity	APHA 21e 2130 B (Nephelometric Method)

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.03	0.03	Satisfactory
7.42	7.39	-0.03	Satisfactory
10.01	9.97	-0.04	Satisfactory

Tolerance of pH value should be less than ± 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
18.5	17.8	-0.7	Satisfactory
21.0	20.8	-0.2	Satisfactory
36.0	36.0	0.0	Satisfactory

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

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.15	1.50	Satisfactory
20	20.91	4.55	Satisfactory
30	31.93	6.43	Satisfactory

Tolerance of Salinity should be less than ± 10.0 (%)

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

FUNG Yuen-ching
Laboratory Manager

專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED
Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD120079
Date of Issue : 23 December 2024

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
9.10	9.08	-0.02	Satisfactory
6.87	6.51	-0.36	Satisfactory
4.61	4.11	-0.50	Satisfactory
0.74	0.38	-0.36	Satisfactory

Tolerance of Dissolved oxygen should be less than ± 0.5 (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance [a]	Result
0	0.39	--	Satisfactory
10	10.15	1.5	Satisfactory
20	19.75	-1.3	Satisfactory
100	97.55	-2.5	Satisfactory
800	753.00	-5.9	Satisfactory

Tolerance of Turbidity should be less than ± 10.0 (%)

[a] For 0 NTU, Display Reading should be less than 1 NTU

Remark(s): -

- *The "Date of Next Calibration" is recommended according to best practice principles followed by QPT or relevant international standards.*
- *The results relate only to the calibrated equipment as received.*
- *The performance of the equipment stated in this report is checked using independent reference material, with results compared against a calibrated secondary source.*
- *"Displayed Reading" denotes the figure shown on the item under calibration/checking, regardless of equipment precision or significant figures.*
- *The "Tolerance Limit" mentioned is the acceptance criteria applicable to similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.*

--- END OF REPORT ---

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www.alsglobal.com

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	MR. TOBY WAN	**WORK ORDER:**	HK2452995
CLIENT:	AURECON HONG KONG LIMITED		
ADDRESS:	UNIT 1608, 16/F, TOWER B, MANULIFE FINANCIAL CENTRE, 223-231 WAI YIP STREET, KWUN TONG, HONG KONG	**SUB-BATCH:**	0
		LABORATORY:	HONG KONG
		DATE RECEIVED:	03-Dec-2024
		DATE OF ISSUE:	21-Dec-2024

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:	pH meter
Service Nature:	Performance Check
Scope:	pH Value
Brand Name/ Model No.:	[Xylem]/ [SensoLyt®700IQ SW, SensoLyt® SEA]
Serial No./ Equipment No.:	[24111620]/ [N/A]
Date of Calibration:	03-December-2024

Mr Chan Siu Ming, Vico
Assistant Laboratory Manager
Environmental

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2452995

SUB-BATCH: 0
DATE OF ISSUE: 21-Dec-2024
CLIENT: AURECON HONG KONG LIMITED

Equipment Type: pH meter
Brand Name/ Model No.: [Xylem]/ [SensoLyt®700IQ SW, SensoLyt® SEA]
Serial No./ Equipment No.: [24111620]/ [N/A]
Date of Calibration: 03-December-2024 Date of Next Calibration: 03-March-2025

PARAMETERS:

pH Value

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

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	4.20	+0.20
7.0	7.19	+0.19
10.0	10.07	+0.07
	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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Assistant Laboratory Manager
Environmental

--------- END OF REPORT --------

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	MR. TOBY WAN	**WORK ORDER:**	HK2452995
CLIENT:	AURECON HONG KONG LIMITED		
ADDRESS:	UNIT 1608, 16/F, TOWER B, MANULIFE FINANCIAL CENTRE, 223-231 WAI YIP STREET, KWUN TONG, HONG KONG	**SUB-BATCH:**	1
		LABORATORY:	HONG KONG
		DATE RECEIVED:	03-Dec-2024
		DATE OF ISSUE:	21-Dec-2024

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:	Salinity Meter
Service Nature:	Performance Check
Scope:	Salinity
Brand Name/ Model No.:	[Xylem]/ [TetraCon® 700 IQ SW]
Serial No./ Equipment No.:	[24110178]/ [N/A]
Date of Calibration:	03-December-2024

Mr Chan Siu Ming, Vico
Assistant Laboratory Manager
Environmental

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2452995

SUB-BATCH: 1
DATE OF ISSUE: 21-Dec-2024
CLIENT: AURECON HONG KONG LIMITED

Equipment Type: Salinity Meter
Brand Name/ Model No.: [Xylem]/ [TetraCon® 700 IQ SW]
Serial No./ Equipment No.: [24110178]/ [N/A]
Date of Calibration: 03-December-2024 Date of Next Calibration: 03-March-2025

PARAMETERS:

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
20	20.1	+0.5
	Tolerance Limit (%)	±10.0

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

Mr Chan Siu Ming, Vico
Assistant Laboratory Manager
Environmental

-------- END OF REPORT --------

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	MR. TOBY WAN	**WORK ORDER:**	HK2452995
CLIENT:	AURECON HONG KONG LIMITED		
ADDRESS:	UNIT 1608, 16/F, TOWER B, MANULIFE FINANCIAL CENTRE, 223-231 WAI YIP STREET, KWUN TONG, HONG KONG	**SUB-BATCH:**	4
		LABORATORY:	HONG KONG
		DATE RECEIVED:	03-Dec-2024
		DATE OF ISSUE:	21-Dec-2024

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:	Thermometer
Service Nature:	Performance Check
Scope:	Temperature
Brand Name/ Model No.:	[Xylem]/ [TetraCon® 700IQ SW, SensoLyt®700IQ SW]
Serial No./ Equipment No.:	[24111620]/ [N/A]
Date of Calibration:	03-December-2024

Mr Chan Siu Ming, Vico
Assistant Laboratory Manager
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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2452995

SUB-BATCH: 4
DATE OF ISSUE: 21-Dec-2024
CLIENT: AURECON HONG KONG LIMITED

Equipment Type: Thermometer
Brand Name/ Model No.: [Xylem]/ [TetraCon® 700IQ SW, SensoLyt®700IQ SW]
Serial No./ Equipment No.: [24111620]/ [N/A]
Date of Calibration: 03-December-2024 Date of Next Calibration: 03-March-2025

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)
20.5	20.4	-0.1
	Tolerance Limit (°C)	±2.0

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

Mr Chan Siu Ming, Vico
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-------- END OF REPORT --------

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	MR. TOBY WAN	**WORK ORDER:**	HK2452995
CLIENT:	AURECON HONG KONG LIMITED		
ADDRESS:	UNIT 1608, 16/F, TOWER B, MANULIFE FINANCIAL CENTRE, 223-231 WAI YIP STREET, KWUN TONG, HONG KONG	**SUB-BATCH:**	5
		LABORATORY:	HONG KONG
		DATE RECEIVED:	03-Dec-2024
		DATE OF ISSUE:	21-Dec-2024

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.
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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:	Chlorine Meter
Service Nature:	Performance Check
Scope:	Total Residual Chlorine
Brand Name/ Model No.:	[Xylem]/ [Chlorine 3017M]
Serial No./ Equipment No.:	[21D102738]/ [N/A]
Date of Calibration:	03-December-2024

Mr Chan Siu Ming, Vico
Assistant Laboratory Manager
Environmental

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2452995

SUB-BATCH: 5
DATE OF ISSUE: 21-Dec-2024
CLIENT: AURECON HONG KONG LIMITED

Equipment Type: Chlorine Meter
Brand Name/ Model No.: [Xylem]/ [Chlorine 3017M]
Serial No./ Equipment No.: [21D102738]/ [N/A]
Date of Calibration: 03-December-2024 Date of Next Calibration: 03-March-2025

PARAMETERS:

Total Residual Chlorine

Method Ref: APHA (23rd edition), 4500Cl: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (%)
0.20	0.215	+7.5
	Tolerance Limit (%)	±10.0

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

Mr Chan Siu Ming, Vico
Assistant Laboratory Manager
Environmental

-------- END OF REPORT --------

MSA Hong Kong Ltd.
25/F Jupiter Tower, 9 Jupiter Street, Hong Kong
The Safety Company Tel 852-22587588 Fax 25478780 Email info.hk@msasafety.com Website www.msasafety.com

Ref. 2024/04/014 Date: 23-Apr-24
Customer Aurecon Hong Kong Ltd.

CERTIFICATE FOR CALIBRATION CHECK TEST

Model	Serial No.	Calibration Check Gas	Regulator	Full Scale	Response
Altair 5X	221165	1.45% Methane,	.25litre/min	100% LEL	29% LEL
		15% Oxygen		30% Vol	15% O2
		60ppm Carbon Monoxide		1999 ppm	60 ppm CO
		20ppm Hydrogen Sulfide		200 ppm	20 ppm H2S
		10% Vol Carbon Dioxide		10% Vol	3% CO2

Remarks: Regular inspection completed. Calibration passed

MSA Hong Kong Ltd. certify that instrument/s listed above has/have been calibrated check tested on:
23-Apr-24

This instrument was calibrated in accordance with all requirements of the specifications of MSA.

This instrument must be calibration checked prior to use in accordance with the instruction manual.

This instrument was calibrated using NIST traceable equipment and was in accordance with all requirements of the drawings and specifications of MSA.

For and on behalf of
MSA Hong Kong Ltd.

Authorised Signature

Appendix F

Water Quality Monitoring Data & Landfill Gas Monitoring Data

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CE	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:16:00 AM	9.08	8.12	31.25	21.89	2.14	7.00	<0.1	<0.01
CE	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:16:00 AM	9.08	8.09	31.21	21.88	2.15	4.00	<0.1	<0.01
CE	3/12/2024	Sunny	Mid-Flood	Moderate	M	11	11:17:00 AM	8.96	8.07	31.19	21.81	2.11	5.00	<0.1	<0.01
CE	3/12/2024	Sunny	Mid-Flood	Moderate	M	11	11:17:00 AM	9.07	8.10	31.19	21.89	2.13	4.00	<0.1	<0.01
CE	3/12/2024	Sunny	Mid-Flood	Moderate	B	21	11:18:00 AM	9.03	8.08	31.20	21.80	1.99	3.00	<0.1	<0.01
CE	3/12/2024	Sunny	Mid-Flood	Moderate	B	21	11:18:00 AM	9.07	8.11	31.20	21.88	2.07	3.00	<0.1	<0.01
CF	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:04:00 AM	9.15	7.98	30.99	22.11	2.35	3.00	<0.1	<0.01
CF	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:04:00 AM	9.19	7.98	31.00	22.14	2.33	2.50	<0.1	<0.01
CF	3/12/2024	Sunny	Mid-Flood	Moderate	M	10	8:05:00 AM	9.19	7.99	31.06	22.15	2.36	8.00	<0.1	<0.01
CF	3/12/2024	Sunny	Mid-Flood	Moderate	M	10	8:05:00 AM	9.13	7.99	31.05	22.08	2.31	5.00	<0.1	<0.01
CF	3/12/2024	Sunny	Mid-Flood	Moderate	B	18	8:06:00 AM	9.12	7.98	31.02	22.14	2.33	6.00	<0.1	<0.01
CF	3/12/2024	Sunny	Mid-Flood	Moderate	B	18	8:06:00 AM	9.17	7.94	31.02	22.08	2.34	4.00	<0.1	<0.01
WSR01	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:30:00 AM	8.91	7.96	31.70	22.22	1.91	4.00	<0.1	<0.01
WSR01	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:30:00 AM	8.81	7.96	31.66	22.21	1.86	7.00	<0.1	<0.01
WSR01	3/12/2024	Sunny	Mid-Flood	Moderate	M	5	8:31:00 AM	8.86	7.98	31.67	22.27	1.85	5.00	<0.1	<0.01
WSR01	3/12/2024	Sunny	Mid-Flood	Moderate	M	5	8:31:00 AM	8.96	7.94	31.75	22.17	1.87	6.00	<0.1	<0.01
WSR01	3/12/2024	Sunny	Mid-Flood	Moderate	B	8	8:32:00 AM	8.95	7.95	31.74	22.17	1.93	6.00	<0.1	<0.01
WSR01	3/12/2024	Sunny	Mid-Flood	Moderate	B	8	8:32:00 AM	8.90	7.97	31.71	22.22	1.87	3.00	<0.1	<0.01
WSR02	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:51:00 AM	8.58	8.14	30.53	22.37	1.53	4.00	<0.1	<0.01
WSR02	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:51:00 AM	8.55	8.18	30.58	22.36	1.48	8.00	<0.1	<0.01
WSR02	3/12/2024	Sunny	Mid-Flood	Moderate	M	5	8:52:00 AM	8.65	8.16	30.56	22.31	1.61	4.00	<0.1	<0.01
WSR02	3/12/2024	Sunny	Mid-Flood	Moderate	M	5	8:52:00 AM	8.57	8.16	30.55	22.34	1.62	7.00	<0.1	<0.01
WSR02	3/12/2024	Sunny	Mid-Flood	Moderate	B	8	8:53:00 AM	8.62	8.16	30.64	22.30	1.58	5.00	<0.1	<0.01
WSR02	3/12/2024	Sunny	Mid-Flood	Moderate	B	8	8:53:00 AM	8.69	8.15	30.62	22.28	1.54	9.00	<0.1	<0.01
WSR03	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:07:00 AM	8.90	8.03	32.16	21.90	1.52	6.00	<0.1	<0.01
WSR03	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:07:00 AM	8.83	8.00	32.20	21.91	1.56	4.00	<0.1	<0.01
WSR03	3/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:08:00 AM	8.90	7.98	32.14	21.98	1.48	6.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR03	3/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:08:00 AM	8.86	8.00	32.20	22.00	1.54	7.00	<0.1	<0.01
WSR03	3/12/2024	Sunny	Mid-Flood	Moderate	B	8	9:09:00 AM	8.75	8.01	32.18	21.94	1.50	3.00	<0.1	<0.01
WSR03	3/12/2024	Sunny	Mid-Flood	Moderate	B	8	9:09:00 AM	8.78	8.02	32.21	21.94	1.48	5.00	<0.1	<0.01
WSR04	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:23:00 AM	8.20	8.06	30.73	22.22	1.82	7.00	<0.1	<0.01
WSR04	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:23:00 AM	8.19	8.02	30.68	22.22	1.85	9.00	<0.1	<0.01
WSR04	3/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:24:00 AM	8.31	8.04	30.65	22.12	1.85	7.00	<0.1	<0.01
WSR04	3/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:24:00 AM	8.34	8.03	30.65	22.22	1.87	6.00	<0.1	<0.01
WSR04	3/12/2024	Sunny	Mid-Flood	Moderate	B	6	9:25:00 AM	8.24	8.04	30.67	22.14	1.91	5.00	<0.1	<0.01
WSR04	3/12/2024	Sunny	Mid-Flood	Moderate	B	6	9:25:00 AM	8.33	8.02	30.71	22.17	1.87	3.00	<0.1	<0.01
WSR16	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:53:00 AM	8.40	7.93	31.98	22.06	1.37	6.00	<0.1	<0.01
WSR16	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:53:00 AM	8.52	7.93	32.01	22.03	1.59	4.00	<0.1	<0.01
WSR16	3/12/2024	Sunny	Mid-Flood	Moderate	M	8	10:54:00 AM	8.42	7.93	32.04	22.06	1.38	3.00	<0.1	<0.01
WSR16	3/12/2024	Sunny	Mid-Flood	Moderate	M	8	10:54:00 AM	8.50	7.91	32.04	22.04	1.32	6.00	<0.1	<0.01
WSR16	3/12/2024	Sunny	Mid-Flood	Moderate	B	15	10:55:00 AM	8.43	7.92	31.94	22.00	1.34	4.00	<0.1	<0.01
WSR16	3/12/2024	Sunny	Mid-Flood	Moderate	B	15	10:55:00 AM	8.49	7.94	32.03	21.99	1.33	2.50	<0.1	<0.01
WSR33	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:40:00 AM	8.86	7.99	31.65	22.18	1.70	3.00	<0.1	<0.01
WSR33	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:40:00 AM	8.96	8.00	31.60	22.22	1.67	4.00	<0.1	<0.01
WSR33	3/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:41:00 AM	8.91	8.02	31.65	22.17	1.67	4.00	<0.1	<0.01
WSR33	3/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:41:00 AM	8.92	8.02	31.71	22.13	1.70	4.00	<0.1	<0.01
WSR33	3/12/2024	Sunny	Mid-Flood	Moderate	B	6	9:42:00 AM	8.88	7.99	31.64	22.21	1.71	3.00	<0.1	<0.01
WSR33	3/12/2024	Sunny	Mid-Flood	Moderate	B	6	9:42:00 AM	8.99	8.01	31.70	22.22	1.72	6.00	<0.1	<0.01
WSR36	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:57:00 AM	8.53	8.08	31.06	21.94	1.74	3.00	<0.1	<0.01
WSR36	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:57:00 AM	8.55	8.10	31.05	21.96	1.70	3.00	<0.1	<0.01
WSR36	3/12/2024	Sunny	Mid-Flood	Moderate	M	3	9:58:00 AM	8.50	8.07	31.13	21.92	1.74	7.00	<0.1	<0.01
WSR36	3/12/2024	Sunny	Mid-Flood	Moderate	M	3	9:58:00 AM	8.43	8.10	31.13	21.99	1.73	8.00	<0.1	<0.01
WSR36	3/12/2024	Sunny	Mid-Flood	Moderate	B	6	9:58:00 AM	8.49	8.07	31.09	21.95	1.79	8.00	<0.1	<0.01
WSR36	3/12/2024	Sunny	Mid-Flood	Moderate	B	6	9:58:00 AM	8.49	8.06	31.11	22.00	1.76	7.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR37	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:14:00 AM	9.00	7.96	31.04	22.09	1.71	9.00	<0.1	<0.01
WSR37	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:14:00 AM	8.94	7.94	31.06	22.16	1.68	10.00	<0.1	<0.01
WSR37	3/12/2024	Sunny	Mid-Flood	Moderate	M	4	10:15:00 AM	8.97	7.97	31.13	22.08	1.77	5.00	<0.1	<0.01
WSR37	3/12/2024	Sunny	Mid-Flood	Moderate	M	4	10:15:00 AM	8.98	7.97	31.10	22.06	1.72	5.00	<0.1	<0.01
WSR37	3/12/2024	Sunny	Mid-Flood	Moderate	B	7	10:16:00 AM	8.84	7.93	31.12	22.11	1.65	9.00	<0.1	<0.01
WSR37	3/12/2024	Sunny	Mid-Flood	Moderate	B	7	10:16:00 AM	8.89	7.97	31.11	22.14	1.72	6.00	<0.1	<0.01
NF1	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:38:00 AM	8.42	8.00	30.52	21.97	1.85	8.00	<0.1	<0.01
NF1	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:38:00 AM	8.55	8.02	30.57	21.99	1.89	3.00	<0.1	<0.01
NF1	3/12/2024	Sunny	Mid-Flood	Moderate	M	7	10:39:00 AM	8.52	7.98	30.53	21.99	1.87	4.00	<0.1	<0.01
NF1	3/12/2024	Sunny	Mid-Flood	Moderate	M	7	10:39:00 AM	8.52	7.97	30.56	21.94	1.86	7.00	<0.1	<0.01
NF1	3/12/2024	Sunny	Mid-Flood	Moderate	B	12	10:40:00 AM	8.51	7.99	30.53	22.02	1.85	4.00	<0.1	<0.01
NF1	3/12/2024	Sunny	Mid-Flood	Moderate	B	12	10:40:00 AM	8.54	8.01	30.55	22.04	1.87	3.00	<0.1	<0.01
NF2	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:30:00 AM	8.22	8.17	31.74	22.03	2.04	6.00	<0.1	<0.01
NF2	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:30:00 AM	8.34	8.20	31.68	22.05	2.07	5.00	<0.1	<0.01
NF2	3/12/2024	Sunny	Mid-Flood	Moderate	M	5	10:31:00 AM	8.34	8.19	31.66	22.02	1.99	4.00	<0.1	<0.01
NF2	3/12/2024	Sunny	Mid-Flood	Moderate	M	5	10:31:00 AM	8.34	8.19	31.71	22.05	2.00	6.00	<0.1	<0.01
NF2	3/12/2024	Sunny	Mid-Flood	Moderate	B	10	10:32:00 AM	8.34	8.17	31.71	22.09	2.05	2.50	<0.1	<0.01
NF2	3/12/2024	Sunny	Mid-Flood	Moderate	B	10	10:32:00 AM	8.22	8.16	31.72	22.08	2.01	5.00	<0.1	<0.01
NF3	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:23:00 AM	9.01	7.98	32.21	21.84	1.39	5.00	<0.1	<0.01
NF3	3/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:23:00 AM	8.90	7.95	32.25	21.90	1.40	2.50	<0.1	<0.01
NF3	3/12/2024	Sunny	Mid-Flood	Moderate	M	6	10:24:00 AM	8.98	7.93	32.20	21.88	1.37	3.00	<0.1	<0.01
NF3	3/12/2024	Sunny	Mid-Flood	Moderate	M	6	10:24:00 AM	9.00	7.98	32.22	21.89	1.40	6.00	<0.1	<0.01
NF3	3/12/2024	Sunny	Mid-Flood	Moderate	B	11	10:25:00 AM	8.92	7.97	32.28	21.85	1.48	4.00	<0.1	<0.01
NF3	3/12/2024	Sunny	Mid-Flood	Moderate	B	11	10:25:00 AM	8.98	7.95	32.29	21.87	1.43	2.50	<0.1	<0.01
CE	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:49:00 AM	8.75	8.09	31.10	21.80	2.43	3.00	<0.1	<0.01
CE	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:49:00 AM	8.76	8.10	31.16	21.80	2.46	4.00	<0.1	<0.01
CE	5/12/2024	Sunny	Mid-Flood	Moderate	M	12	11:50:00 AM	8.74	8.11	31.19	21.78	2.45	5.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CE	5/12/2024	Sunny	Mid-Flood	Moderate	M	12	11:50:00 AM	8.84	8.10	31.21	21.78	2.46	5.00	<0.1	<0.01
CE	5/12/2024	Sunny	Mid-Flood	Moderate	B	24	11:51:00 AM	8.77	8.12	31.18	21.77	2.44	3.00	<0.1	<0.01
CE	5/12/2024	Sunny	Mid-Flood	Moderate	B	24	11:51:00 AM	8.77	8.11	31.20	21.79	2.42	6.00	<0.1	<0.01
CF	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:24:00 AM	8.83	8.23	31.10	21.92	2.61	6.00	<0.1	<0.01
CF	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:24:00 AM	8.88	8.24	31.17	21.91	2.58	3.00	<0.1	<0.01
CF	5/12/2024	Sunny	Mid-Flood	Moderate	M	11	8:25:00 AM	8.93	8.23	31.17	21.91	2.53	5.00	<0.1	<0.01
CF	5/12/2024	Sunny	Mid-Flood	Moderate	M	11	8:25:00 AM	8.87	8.24	31.10	21.92	2.59	3.00	<0.1	<0.01
CF	5/12/2024	Sunny	Mid-Flood	Moderate	B	20	8:26:00 AM	8.80	8.26	31.10	21.89	2.47	5.00	<0.1	<0.01
CF	5/12/2024	Sunny	Mid-Flood	Moderate	B	20	8:26:00 AM	8.87	8.24	31.15	21.91	2.49	4.00	<0.1	<0.01
WSR01	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:50:00 AM	9.18	8.22	31.83	21.61	2.11	4.00	<0.1	<0.01
WSR01	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:50:00 AM	9.06	8.24	31.87	21.65	2.02	6.00	<0.1	<0.01
WSR01	5/12/2024	Sunny	Mid-Flood	Moderate	M	4	8:51:00 AM	9.15	8.24	31.94	21.63	2.09	3.00	<0.1	<0.01
WSR01	5/12/2024	Sunny	Mid-Flood	Moderate	M	4	8:51:00 AM	9.18	8.24	31.91	21.65	2.04	6.00	<0.1	<0.01
WSR01	5/12/2024	Sunny	Mid-Flood	Moderate	B	8	8:52:00 AM	9.11	8.23	31.86	21.60	2.05	3.00	<0.1	<0.01
WSR01	5/12/2024	Sunny	Mid-Flood	Moderate	B	8	8:52:00 AM	9.12	8.24	31.86	21.65	2.11	5.00	<0.1	<0.01
WSR02	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:11:00 AM	8.75	8.11	32.35	21.99	1.54	4.00	<0.1	<0.01
WSR02	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:11:00 AM	8.78	8.11	32.33	22.02	1.53	4.00	<0.1	<0.01
WSR02	5/12/2024	Sunny	Mid-Flood	Moderate	M	5	9:12:00 AM	8.67	8.11	32.34	22.02	1.54	4.00	<0.1	<0.01
WSR02	5/12/2024	Sunny	Mid-Flood	Moderate	M	5	9:12:00 AM	8.70	8.10	32.31	22.03	1.55	3.00	<0.1	<0.01
WSR02	5/12/2024	Sunny	Mid-Flood	Moderate	B	9	9:13:00 AM	8.69	8.12	32.28	22.02	1.55	3.00	<0.1	<0.01
WSR02	5/12/2024	Sunny	Mid-Flood	Moderate	B	9	9:13:00 AM	8.78	8.10	32.35	22.04	1.57	4.00	<0.1	<0.01
WSR03	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:27:00 AM	8.47	8.11	32.44	21.77	2.17	4.00	<0.1	<0.01
WSR03	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:27:00 AM	8.47	8.09	32.34	21.77	2.08	6.00	<0.1	<0.01
WSR03	5/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:28:00 AM	8.49	8.12	32.35	21.76	2.08	4.00	<0.1	<0.01
WSR03	5/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:28:00 AM	8.52	8.09	32.41	21.77	2.17	3.00	<0.1	<0.01
WSR03	5/12/2024	Sunny	Mid-Flood	Moderate	B	7	9:29:00 AM	8.52	8.10	32.39	21.78	2.11	3.00	<0.1	<0.01
WSR03	5/12/2024	Sunny	Mid-Flood	Moderate	B	7	9:29:00 AM	8.47	8.12	32.41	21.77	2.15	4.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR04	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:43:00 AM	8.09	8.28	31.29	21.86	1.73	4.00	<0.1	<0.01
WSR04	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:43:00 AM	8.11	8.28	31.21	21.91	1.87	6.00	<0.1	<0.01
WSR04	5/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:44:00 AM	8.06	8.26	31.23	21.88	1.89	4.00	<0.1	<0.01
WSR04	5/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:44:00 AM	7.99	8.26	31.17	21.87	1.88	4.00	<0.1	<0.01
WSR04	5/12/2024	Sunny	Mid-Flood	Moderate	B	7	9:45:00 AM	8.01	8.28	31.21	21.90	1.90	5.00	<0.1	<0.01
WSR04	5/12/2024	Sunny	Mid-Flood	Moderate	B	7	9:45:00 AM	8.01	8.27	31.28	21.90	1.88	4.00	<0.1	<0.01
WSR16	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:23:00 AM	9.04	8.14	31.64	22.01	1.45	7.00	<0.1	<0.01
WSR16	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:23:00 AM	9.05	8.16	31.69	22.05	1.48	4.00	<0.1	<0.01
WSR16	5/12/2024	Sunny	Mid-Flood	Moderate	M	8	11:24:00 AM	8.99	8.14	31.67	22.01	1.40	6.00	<0.1	<0.01
WSR16	5/12/2024	Sunny	Mid-Flood	Moderate	M	8	11:24:00 AM	8.99	8.17	31.64	22.01	1.39	6.00	<0.1	<0.01
WSR16	5/12/2024	Sunny	Mid-Flood	Moderate	B	15	11:25:00 AM	9.02	8.15	31.61	22.01	1.37	8.00	<0.1	<0.01
WSR16	5/12/2024	Sunny	Mid-Flood	Moderate	B	15	11:25:00 AM	9.05	8.14	31.72	22.04	1.41	4.00	<0.1	<0.01
WSR33	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:00:00 AM	8.28	8.16	32.16	21.71	1.84	8.00	<0.1	<0.01
WSR33	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:00:00 AM	8.29	8.15	32.26	21.69	1.81	4.00	<0.1	<0.01
WSR33	5/12/2024	Sunny	Mid-Flood	Moderate	M	4	10:01:00 AM	8.30	8.13	32.24	21.68	1.83	8.00	<0.1	<0.01
WSR33	5/12/2024	Sunny	Mid-Flood	Moderate	M	4	10:01:00 AM	8.20	8.13	32.22	21.70	1.84	4.00	<0.1	<0.01
WSR33	5/12/2024	Sunny	Mid-Flood	Moderate	B	7	10:02:00 AM	8.22	8.15	32.18	21.70	1.82	5.00	<0.1	<0.01
WSR33	5/12/2024	Sunny	Mid-Flood	Moderate	B	7	10:02:00 AM	8.19	8.15	32.18	21.67	1.80	7.00	<0.1	<0.01
WSR36	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:17:00 AM	8.27	8.10	31.15	21.71	1.66	4.00	<0.1	<0.01
WSR36	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:17:00 AM	8.36	8.07	31.15	21.72	1.65	5.00	<0.1	<0.01
WSR36	5/12/2024	Sunny	Mid-Flood	Moderate	M	3	10:18:00 AM	8.32	8.10	31.26	21.71	1.66	3.00	<0.1	<0.01
WSR36	5/12/2024	Sunny	Mid-Flood	Moderate	M	3	10:18:00 AM	8.28	8.07	31.16	21.70	1.64	4.00	<0.1	<0.01
WSR36	5/12/2024	Sunny	Mid-Flood	Moderate	B	5	10:18:00 AM	8.32	8.07	31.23	21.73	1.66	3.00	<0.1	<0.01
WSR36	5/12/2024	Sunny	Mid-Flood	Moderate	B	5	10:18:00 AM	8.32	8.07	31.16	21.72	1.64	4.00	<0.1	<0.01
WSR37	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:34:00 AM	9.24	8.10	31.96	21.76	1.98	6.00	<0.1	<0.01
WSR37	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:34:00 AM	9.20	8.10	32.04	21.79	1.92	8.00	<0.1	<0.01
WSR37	5/12/2024	Sunny	Mid-Flood	Moderate	M	4	10:35:00 AM	9.16	8.11	32.05	21.81	1.98	5.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR37	5/12/2024	Sunny	Mid-Flood	Moderate	M	4	10:35:00 AM	9.25	8.10	32.01	21.78	1.95	6.00	<0.1	<0.01
WSR37	5/12/2024	Sunny	Mid-Flood	Moderate	B	7	10:36:00 AM	9.28	8.12	31.99	21.76	1.95	5.00	<0.1	<0.01
WSR37	5/12/2024	Sunny	Mid-Flood	Moderate	B	7	10:36:00 AM	9.17	8.09	32.06	21.76	1.97	3.00	<0.1	<0.01
NF1	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:05:00 AM	8.16	8.12	31.28	22.05	1.40	4.00	<0.1	<0.01
NF1	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:05:00 AM	8.29	8.10	31.28	22.03	1.43	2.50	<0.1	<0.01
NF1	5/12/2024	Sunny	Mid-Flood	Moderate	M	7	11:06:00 AM	8.18	8.12	31.23	22.06	1.46	8.00	<0.1	<0.01
NF1	5/12/2024	Sunny	Mid-Flood	Moderate	M	7	11:06:00 AM	8.26	8.11	31.24	22.04	1.43	4.00	<0.1	<0.01
NF1	5/12/2024	Sunny	Mid-Flood	Moderate	B	13	11:07:00 AM	8.23	8.12	31.23	22.03	1.41	5.00	<0.1	<0.01
NF1	5/12/2024	Sunny	Mid-Flood	Moderate	B	13	11:07:00 AM	8.28	8.09	31.29	22.02	1.40	3.00	<0.1	<0.01
NF2	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:52:00 AM	8.24	8.07	32.66	21.75	1.53	4.00	<0.1	<0.01
NF2	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:52:00 AM	8.28	8.08	32.58	21.77	1.49	5.00	<0.1	<0.01
NF2	5/12/2024	Sunny	Mid-Flood	Moderate	M	5	10:53:00 AM	8.19	8.08	32.56	21.72	1.52	3.00	<0.1	<0.01
NF2	5/12/2024	Sunny	Mid-Flood	Moderate	M	5	10:53:00 AM	8.26	8.08	32.62	21.75	1.49	4.00	<0.1	<0.01
NF2	5/12/2024	Sunny	Mid-Flood	Moderate	B	10	10:54:00 AM	8.29	8.08	32.66	21.75	1.53	5.00	<0.1	<0.01
NF2	5/12/2024	Sunny	Mid-Flood	Moderate	B	10	10:54:00 AM	8.22	8.08	32.60	21.76	1.49	4.00	<0.1	<0.01
NF3	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:43:00 AM	9.12	8.16	31.01	21.75	1.54	3.00	<0.1	<0.01
NF3	5/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:43:00 AM	9.13	8.16	30.97	21.73	1.57	4.00	<0.1	<0.01
NF3	5/12/2024	Sunny	Mid-Flood	Moderate	M	6	10:44:00 AM	9.18	8.13	30.99	21.72	1.59	4.00	<0.1	<0.01
NF3	5/12/2024	Sunny	Mid-Flood	Moderate	M	6	10:44:00 AM	9.19	8.13	30.97	21.74	1.56	6.00	<0.1	<0.01
NF3	5/12/2024	Sunny	Mid-Flood	Moderate	B	11	10:45:00 AM	9.10	8.16	30.96	21.73	1.57	4.00	<0.1	<0.01
NF3	5/12/2024	Sunny	Mid-Flood	Moderate	B	11	10:45:00 AM	9.10	8.13	30.91	21.74	1.55	4.00	<0.1	<0.01
CE	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	1:44:00 PM	8.30	8.28	32.28	21.07	2.49	4.00	<0.1	<0.01
CE	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	1:44:00 PM	8.37	8.27	32.26	21.08	2.50	2.50	<0.1	<0.01
CE	7/12/2024	Sunny	Mid-Flood	Moderate	M	10	1:45:00 PM	8.34	8.27	32.25	21.05	2.48	5.00	<0.1	<0.01
CE	7/12/2024	Sunny	Mid-Flood	Moderate	M	10	1:45:00 PM	8.25	8.27	32.29	21.08	2.46	5.00	<0.1	<0.01
CE	7/12/2024	Sunny	Mid-Flood	Moderate	B	20	1:46:00 PM	8.37	8.30	32.26	21.09	2.48	5.00	<0.1	<0.01
CE	7/12/2024	Sunny	Mid-Flood	Moderate	B	20	1:46:00 PM	8.32	8.28	32.27	21.09	2.47	2.50	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CF	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:21:00 AM	8.07	8.08	31.44	21.43	2.61	5.00	<0.1	<0.01
CF	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:21:00 AM	7.95	8.09	31.39	21.43	2.60	3.00	<0.1	<0.01
CF	7/12/2024	Sunny	Mid-Flood	Moderate	M	10	10:22:00 AM	8.03	8.10	31.42	21.41	2.59	3.00	<0.1	<0.01
CF	7/12/2024	Sunny	Mid-Flood	Moderate	M	10	10:22:00 AM	7.97	8.11	31.39	21.43	2.58	6.00	<0.1	<0.01
CF	7/12/2024	Sunny	Mid-Flood	Moderate	B	18	10:23:00 AM	7.96	8.09	31.41	21.40	2.57	7.00	<0.1	<0.01
CF	7/12/2024	Sunny	Mid-Flood	Moderate	B	18	10:23:00 AM	8.00	8.09	31.40	21.43	2.60	9.00	<0.1	<0.01
WSR01	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:48:00 AM	8.07	8.13	31.79	21.07	1.23	3.00	<0.1	<0.01
WSR01	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:48:00 AM	8.13	8.15	31.74	21.06	1.23	6.00	<0.1	<0.01
WSR01	7/12/2024	Sunny	Mid-Flood	Moderate	M	5	10:49:00 AM	8.19	8.16	31.78	21.04	1.20	3.00	<0.1	<0.01
WSR01	7/12/2024	Sunny	Mid-Flood	Moderate	M	5	10:49:00 AM	8.14	8.13	31.75	21.05	1.24	6.00	<0.1	<0.01
WSR01	7/12/2024	Sunny	Mid-Flood	Moderate	B	8	10:50:00 AM	8.18	8.13	31.78	21.05	1.20	2.50	<0.1	<0.01
WSR01	7/12/2024	Sunny	Mid-Flood	Moderate	B	8	10:50:00 AM	8.06	8.13	31.74	21.07	1.21	2.50	<0.1	<0.01
WSR02	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:09:00 AM	8.92	8.12	32.18	21.27	1.70	2.50	<0.1	<0.01
WSR02	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:09:00 AM	8.86	8.10	32.17	21.28	1.70	4.00	<0.1	<0.01
WSR02	7/12/2024	Sunny	Mid-Flood	Moderate	M	5	11:10:00 AM	8.91	8.11	32.19	21.28	1.69	4.00	<0.1	<0.01
WSR02	7/12/2024	Sunny	Mid-Flood	Moderate	M	5	11:10:00 AM	8.87	8.12	32.22	21.26	1.70	2.50	<0.1	<0.01
WSR02	7/12/2024	Sunny	Mid-Flood	Moderate	B	9	11:11:00 AM	8.87	8.13	32.21	21.29	1.70	5.00	<0.1	<0.01
WSR02	7/12/2024	Sunny	Mid-Flood	Moderate	B	9	11:11:00 AM	8.87	8.13	32.16	21.28	1.68	3.00	<0.1	<0.01
WSR03	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:25:00 AM	8.51	8.26	31.08	21.21	1.38	2.50	<0.1	<0.01
WSR03	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:25:00 AM	8.37	8.26	31.08	21.18	1.39	5.00	<0.1	<0.01
WSR03	7/12/2024	Sunny	Mid-Flood	Moderate	M	4	11:26:00 AM	8.43	8.23	31.04	21.20	1.39	7.00	<0.1	<0.01
WSR03	7/12/2024	Sunny	Mid-Flood	Moderate	M	4	11:26:00 AM	8.41	8.23	31.07	21.18	1.41	4.00	<0.1	<0.01
WSR03	7/12/2024	Sunny	Mid-Flood	Moderate	B	7	11:27:00 AM	8.49	8.26	31.02	21.22	1.38	3.00	<0.1	<0.01
WSR03	7/12/2024	Sunny	Mid-Flood	Moderate	B	7	11:27:00 AM	8.41	8.25	31.07	21.20	1.42	6.00	<0.1	<0.01
WSR04	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:41:00 AM	8.34	8.21	31.69	21.17	1.90	3.00	<0.1	<0.01
WSR04	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:41:00 AM	8.38	8.18	31.73	21.15	1.91	3.00	<0.1	<0.01
WSR04	7/12/2024	Sunny	Mid-Flood	Moderate	M	4	11:42:00 AM	8.33	8.21	31.72	21.14	1.92	2.50	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR04	7/12/2024	Sunny	Mid-Flood	Moderate	M	4	11:42:00 AM	8.42	8.21	31.68	21.15	1.90	5.00	<0.1	<0.01
WSR04	7/12/2024	Sunny	Mid-Flood	Moderate	B	6	11:43:00 AM	8.33	8.20	31.70	21.13	1.92	4.00	<0.1	<0.01
WSR04	7/12/2024	Sunny	Mid-Flood	Moderate	B	6	11:43:00 AM	8.33	8.21	31.71	21.16	1.92	6.00	<0.1	<0.01
WSR16	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	1:21:00 PM	8.70	8.21	32.62	21.26	1.20	6.00	<0.1	<0.01
WSR16	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	1:21:00 PM	8.66	8.22	32.65	21.25	1.22	3.00	<0.1	<0.01
WSR16	7/12/2024	Sunny	Mid-Flood	Moderate	M	8	1:22:00 PM	8.60	8.22	32.66	21.29	1.22	4.00	<0.1	<0.01
WSR16	7/12/2024	Sunny	Mid-Flood	Moderate	M	8	1:22:00 PM	8.62	8.23	32.66	21.29	1.19	4.00	<0.1	<0.01
WSR16	7/12/2024	Sunny	Mid-Flood	Moderate	B	14	1:23:00 PM	8.66	8.23	32.64	21.26	1.22	3.00	<0.1	<0.01
WSR16	7/12/2024	Sunny	Mid-Flood	Moderate	B	14	1:23:00 PM	8.70	8.22	32.62	21.27	1.22	2.50	<0.1	<0.01
WSR33	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:59:00 AM	9.21	8.02	32.16	21.50	1.72	4.00	<0.1	<0.01
WSR33	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:59:00 AM	9.22	8.03	32.11	21.48	1.69	3.00	<0.1	<0.01
WSR33	7/12/2024	Sunny	Mid-Flood	Moderate	M	4	12:00:00 PM	9.17	8.03	32.11	21.52	1.70	5.00	<0.1	<0.01
WSR33	7/12/2024	Sunny	Mid-Flood	Moderate	M	4	12:00:00 PM	9.22	8.02	32.11	21.49	1.69	3.00	<0.1	<0.01
WSR33	7/12/2024	Sunny	Mid-Flood	Moderate	B	7	12:01:00 PM	9.28	8.04	32.10	21.48	1.70	6.00	<0.1	<0.01
WSR33	7/12/2024	Sunny	Mid-Flood	Moderate	B	7	12:01:00 PM	9.22	8.04	32.10	21.52	1.71	5.00	<0.1	<0.01
WSR36	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	12:16:00 PM	9.11	8.00	31.99	21.38	1.80	4.00	<0.1	<0.01
WSR36	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	12:16:00 PM	9.11	7.99	31.99	21.36	1.78	2.50	<0.1	<0.01
WSR36	7/12/2024	Sunny	Mid-Flood	Moderate	M	4	12:17:00 PM	9.10	8.01	31.96	21.38	1.76	7.00	<0.1	<0.01
WSR36	7/12/2024	Sunny	Mid-Flood	Moderate	M	4	12:17:00 PM	8.96	8.00	31.93	21.38	1.79	4.00	<0.1	<0.01
WSR36	7/12/2024	Sunny	Mid-Flood	Moderate	B	7	12:17:00 PM	8.99	7.99	31.94	21.37	1.76	3.00	<0.1	<0.01
WSR36	7/12/2024	Sunny	Mid-Flood	Moderate	B	7	12:17:00 PM	8.97	8.01	31.99	21.36	1.77	3.00	<0.1	<0.01
WSR37	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	12:35:00 PM	8.85	8.19	32.40	21.14	1.80	6.00	<0.1	<0.01
WSR37	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	12:35:00 PM	8.87	8.18	32.40	21.12	1.80	5.00	<0.1	<0.01
WSR37	7/12/2024	Sunny	Mid-Flood	Moderate	M	4	12:36:00 PM	8.86	8.19	32.34	21.16	1.76	3.00	<0.1	<0.01
WSR37	7/12/2024	Sunny	Mid-Flood	Moderate	M	4	12:36:00 PM	8.78	8.18	32.35	21.13	1.80	5.00	<0.1	<0.01
WSR37	7/12/2024	Sunny	Mid-Flood	Moderate	B	7	12:37:00 PM	8.78	8.21	32.35	21.16	1.76	5.00	<0.1	<0.01
WSR37	7/12/2024	Sunny	Mid-Flood	Moderate	B	7	12:37:00 PM	8.86	8.19	32.35	21.16	1.76	2.50	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF1	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	1:06:00 PM	9.06	8.14	32.55	21.19	1.17	2.50	<0.1	<0.01
NF1	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	1:06:00 PM	9.08	8.14	32.53	21.15	1.16	2.50	<0.1	<0.01
NF1	7/12/2024	Sunny	Mid-Flood	Moderate	M	7	1:07:00 PM	9.04	8.13	32.57	21.17	1.16	4.00	<0.1	<0.01
NF1	7/12/2024	Sunny	Mid-Flood	Moderate	M	7	1:07:00 PM	9.13	8.15	32.54	21.16	1.14	4.00	<0.1	<0.01
NF1	7/12/2024	Sunny	Mid-Flood	Moderate	B	12	1:08:00 PM	9.16	8.14	32.58	21.16	1.17	6.00	<0.1	<0.01
NF1	7/12/2024	Sunny	Mid-Flood	Moderate	B	12	1:08:00 PM	9.03	8.13	32.52	21.18	1.18	4.00	<0.1	<0.01
NF2	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	12:56:00 PM	8.93	8.29	31.97	21.18	1.58	2.50	<0.1	<0.01
NF2	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	12:56:00 PM	9.07	8.30	31.96	21.19	1.56	3.00	<0.1	<0.01
NF2	7/12/2024	Sunny	Mid-Flood	Moderate	M	5	12:57:00 PM	9.05	8.27	31.91	21.22	1.55	3.00	<0.1	<0.01
NF2	7/12/2024	Sunny	Mid-Flood	Moderate	M	5	12:57:00 PM	8.97	8.28	31.91	21.22	1.54	6.00	<0.1	<0.01
NF2	7/12/2024	Sunny	Mid-Flood	Moderate	B	9	12:58:00 PM	8.97	8.28	31.92	21.19	1.57	6.00	<0.1	<0.01
NF2	7/12/2024	Sunny	Mid-Flood	Moderate	B	9	12:58:00 PM	8.96	8.30	31.97	21.19	1.58	5.00	<0.1	<0.01
NF3	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	12:48:00 PM	8.59	8.04	32.89	21.13	1.56	2.50	<0.1	<0.01
NF3	7/12/2024	Sunny	Mid-Flood	Moderate	S	1	12:48:00 PM	8.71	8.06	32.88	21.11	1.60	3.00	<0.1	<0.01
NF3	7/12/2024	Sunny	Mid-Flood	Moderate	M	6	12:49:00 PM	8.66	8.06	32.89	21.11	1.56	5.00	<0.1	<0.01
NF3	7/12/2024	Sunny	Mid-Flood	Moderate	M	6	12:49:00 PM	8.71	8.06	32.84	21.13	1.58	4.00	<0.1	<0.01
NF3	7/12/2024	Sunny	Mid-Flood	Moderate	B	11	12:50:00 PM	8.67	8.04	32.88	21.12	1.60	4.00	<0.1	<0.01
NF3	7/12/2024	Sunny	Mid-Flood	Moderate	B	11	12:50:00 PM	8.59	8.04	32.87	21.14	1.58	3.00	<0.1	<0.01
CE	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	8:00:00 AM	9.06	8.14	32.49	21.80	2.34	6.00	<0.1	<0.01
CE	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	8:00:00 AM	9.14	8.14	32.47	21.82	2.36	3.00	<0.1	<0.01
CE	10/12/2024	Sunny	Mid-Ebb	Moderate	M	11	8:01:00 AM	9.09	8.17	32.46	21.81	2.36	4.00	<0.1	<0.01
CE	10/12/2024	Sunny	Mid-Ebb	Moderate	M	11	8:01:00 AM	9.08	8.15	32.45	21.80	2.34	5.00	<0.1	<0.01
CE	10/12/2024	Sunny	Mid-Ebb	Moderate	B	21	8:02:00 AM	9.11	8.17	32.44	21.82	2.33	4.00	<0.1	<0.01
CE	10/12/2024	Sunny	Mid-Ebb	Moderate	B	21	8:02:00 AM	9.10	8.17	32.42	21.82	2.31	3.00	<0.1	<0.01
CF	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	11:20:00 AM	9.24	8.16	32.57	21.98	2.11	6.00	<0.1	<0.01
CF	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	11:20:00 AM	9.16	8.17	32.63	21.96	2.15	3.00	<0.1	<0.01
CF	10/12/2024	Sunny	Mid-Ebb	Moderate	M	10	11:21:00 AM	9.28	8.18	32.66	21.96	2.14	4.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CF	10/12/2024	Sunny	Mid-Ebb	Moderate	M	10	11:21:00 AM	9.24	8.16	32.66	21.93	2.13	5.00	<0.1	<0.01
CF	10/12/2024	Sunny	Mid-Ebb	Moderate	B	20	11:22:00 AM	9.17	8.18	32.64	21.98	2.15	6.00	<0.1	<0.01
CF	10/12/2024	Sunny	Mid-Ebb	Moderate	B	20	11:22:00 AM	9.23	8.17	32.56	21.93	2.11	4.00	<0.1	<0.01
WSR01	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	10:54:00 AM	9.22	8.26	31.87	21.80	1.92	4.00	<0.1	<0.01
WSR01	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	10:54:00 AM	9.25	8.23	31.88	21.85	1.94	6.00	<0.1	<0.01
WSR01	10/12/2024	Sunny	Mid-Ebb	Moderate	M	4	10:55:00 AM	9.28	8.23	31.92	21.82	1.91	4.00	<0.1	<0.01
WSR01	10/12/2024	Sunny	Mid-Ebb	Moderate	M	4	10:55:00 AM	9.32	8.26	31.92	21.81	1.93	5.00	<0.1	<0.01
WSR01	10/12/2024	Sunny	Mid-Ebb	Moderate	B	7	10:56:00 AM	9.33	8.24	31.86	21.82	1.94	6.00	<0.1	<0.01
WSR01	10/12/2024	Sunny	Mid-Ebb	Moderate	B	7	10:56:00 AM	9.27	8.23	31.95	21.80	1.95	4.00	<0.1	<0.01
WSR02	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	10:33:00 AM	8.98	8.29	31.08	21.98	1.71	7.00	<0.1	<0.01
WSR02	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	10:33:00 AM	8.99	8.26	31.01	21.99	1.73	11.00	<0.1	<0.01
WSR02	10/12/2024	Sunny	Mid-Ebb	Moderate	M	5	10:34:00 AM	9.03	8.26	31.08	21.95	1.70	5.00	<0.1	<0.01
WSR02	10/12/2024	Sunny	Mid-Ebb	Moderate	M	5	10:34:00 AM	9.01	8.27	31.13	21.95	1.71	3.00	<0.1	<0.01
WSR02	10/12/2024	Sunny	Mid-Ebb	Moderate	B	9	10:35:00 AM	8.97	8.27	31.01	21.96	1.72	6.00	<0.1	<0.01
WSR02	10/12/2024	Sunny	Mid-Ebb	Moderate	B	9	10:35:00 AM	8.99	8.26	31.03	21.95	1.71	4.00	<0.1	<0.01
WSR03	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	10:15:00 AM	9.11	8.17	31.37	21.82	1.68	3.00	<0.1	<0.01
WSR03	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	10:15:00 AM	9.23	8.17	31.42	21.80	1.66	3.00	<0.1	<0.01
WSR03	10/12/2024	Sunny	Mid-Ebb	Moderate	M	4	10:16:00 AM	9.25	8.15	31.37	21.81	1.67	3.00	<0.1	<0.01
WSR03	10/12/2024	Sunny	Mid-Ebb	Moderate	M	4	10:16:00 AM	9.14	8.16	31.39	21.82	1.74	3.00	<0.1	<0.01
WSR03	10/12/2024	Sunny	Mid-Ebb	Moderate	B	6	10:17:00 AM	9.15	8.18	31.36	21.85	1.77	3.00	<0.1	<0.01
WSR03	10/12/2024	Sunny	Mid-Ebb	Moderate	B	6	10:17:00 AM	9.22	8.16	31.43	21.81	1.76	5.00	<0.1	<0.01
WSR04	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	10:00:00 AM	8.68	8.09	31.42	22.05	1.45	3.00	<0.1	<0.01
WSR04	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	10:00:00 AM	8.66	8.10	31.39	22.04	1.47	3.00	<0.1	<0.01
WSR04	10/12/2024	Sunny	Mid-Ebb	Moderate	M	4	10:01:00 AM	8.71	8.09	31.42	22.05	1.46	7.00	<0.1	<0.01
WSR04	10/12/2024	Sunny	Mid-Ebb	Moderate	M	4	10:01:00 AM	8.62	8.11	31.37	22.03	1.49	4.00	<0.1	<0.01
WSR04	10/12/2024	Sunny	Mid-Ebb	Moderate	B	6	10:02:00 AM	8.63	8.09	31.46	22.02	1.47	4.00	<0.1	<0.01
WSR04	10/12/2024	Sunny	Mid-Ebb	Moderate	B	6	10:02:00 AM	8.66	8.09	31.48	22.02	1.49	8.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR16	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	8:25:00 AM	9.12	8.18	31.28	21.77	1.70	4.00	<0.1	<0.01
WSR16	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	8:25:00 AM	9.15	8.17	31.36	21.75	1.74	3.00	<0.1	<0.01
WSR16	10/12/2024	Sunny	Mid-Ebb	Moderate	M	8	8:26:00 AM	9.14	8.20	31.35	21.73	1.74	7.00	<0.1	<0.01
WSR16	10/12/2024	Sunny	Mid-Ebb	Moderate	M	8	8:26:00 AM	9.26	8.17	31.35	21.72	1.72	4.00	<0.1	<0.01
WSR16	10/12/2024	Sunny	Mid-Ebb	Moderate	B	15	8:27:00 AM	9.22	8.18	31.30	21.73	1.73	3.00	<0.1	<0.01
WSR16	10/12/2024	Sunny	Mid-Ebb	Moderate	B	15	8:27:00 AM	9.16	8.20	31.31	21.76	1.71	6.00	<0.1	<0.01
WSR33	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	9:43:00 AM	8.24	8.09	32.26	22.06	1.94	5.00	<0.1	<0.01
WSR33	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	9:43:00 AM	8.32	8.10	32.17	22.06	1.98	4.00	<0.1	<0.01
WSR33	10/12/2024	Sunny	Mid-Ebb	Moderate	M	4	9:44:00 AM	8.36	8.08	32.26	22.06	1.98	7.00	<0.1	<0.01
WSR33	10/12/2024	Sunny	Mid-Ebb	Moderate	M	4	9:44:00 AM	8.29	8.10	32.21	22.06	1.95	6.00	<0.1	<0.01
WSR33	10/12/2024	Sunny	Mid-Ebb	Moderate	B	6	9:45:00 AM	8.32	8.08	32.20	22.08	1.98	6.00	<0.1	<0.01
WSR33	10/12/2024	Sunny	Mid-Ebb	Moderate	B	6	9:45:00 AM	8.26	8.08	32.23	22.05	1.96	7.00	<0.1	<0.01
WSR36	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	9:27:00 AM	7.93	8.09	31.40	22.06	2.05	3.00	<0.1	<0.01
WSR36	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	9:27:00 AM	7.83	8.10	31.45	22.08	2.03	4.00	<0.1	<0.01
WSR36	10/12/2024	Sunny	Mid-Ebb	Moderate	M	3	9:28:00 AM	7.94	8.09	31.41	22.10	2.05	4.00	<0.1	<0.01
WSR36	10/12/2024	Sunny	Mid-Ebb	Moderate	M	3	9:28:00 AM	7.85	8.09	31.42	22.09	2.04	7.00	<0.1	<0.01
WSR36	10/12/2024	Sunny	Mid-Ebb	Moderate	B	6	9:28:00 AM	7.87	8.10	31.41	22.09	2.03	3.00	<0.1	<0.01
WSR36	10/12/2024	Sunny	Mid-Ebb	Moderate	B	6	9:28:00 AM	7.82	8.10	31.37	22.07	2.04	5.00	<0.1	<0.01
WSR37	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	9:21:00 AM	8.21	8.20	32.63	21.95	1.97	4.00	<0.1	<0.01
WSR37	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	9:21:00 AM	8.22	8.23	32.62	21.97	1.98	7.00	<0.1	<0.01
WSR37	10/12/2024	Sunny	Mid-Ebb	Moderate	M	4	9:22:00 AM	8.20	8.22	32.62	21.95	1.98	6.00	<0.1	<0.01
WSR37	10/12/2024	Sunny	Mid-Ebb	Moderate	M	4	9:22:00 AM	8.13	8.20	32.56	21.99	1.96	7.00	<0.1	<0.01
WSR37	10/12/2024	Sunny	Mid-Ebb	Moderate	B	8	9:23:00 AM	8.13	8.20	32.54	21.99	2.00	4.00	<0.1	<0.01
WSR37	10/12/2024	Sunny	Mid-Ebb	Moderate	B	8	9:23:00 AM	8.22	8.20	32.54	21.98	1.98	3.00	<0.1	<0.01
NF1	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	8:49:00 AM	8.16	8.08	32.78	22.09	1.63	3.00	<0.1	<0.01
NF1	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	8:49:00 AM	8.18	8.10	32.67	22.04	1.62	5.00	<0.1	<0.01
NF1	10/12/2024	Sunny	Mid-Ebb	Moderate	M	7	8:50:00 AM	8.08	8.09	32.70	22.05	1.66	4.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF1	10/12/2024	Sunny	Mid-Ebb	Moderate	M	7	8:50:00 AM	8.12	8.10	32.77	22.07	1.63	7.00	<0.1	<0.01
NF1	10/12/2024	Sunny	Mid-Ebb	Moderate	B	13	8:51:00 AM	8.09	8.08	32.70	22.07	1.64	5.00	<0.1	<0.01
NF1	10/12/2024	Sunny	Mid-Ebb	Moderate	B	13	8:51:00 AM	8.16	8.08	32.77	22.04	1.65	6.00	<0.1	<0.01
NF2	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	9:06:00 AM	8.07	8.08	31.41	21.89	1.58	6.00	<0.1	<0.01
NF2	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	9:06:00 AM	8.02	8.08	31.38	21.91	1.59	8.00	<0.1	<0.01
NF2	10/12/2024	Sunny	Mid-Ebb	Moderate	M	5	9:07:00 AM	8.01	8.07	31.39	21.93	1.67	5.00	<0.1	<0.01
NF2	10/12/2024	Sunny	Mid-Ebb	Moderate	M	5	9:07:00 AM	8.12	8.06	31.44	21.93	1.68	7.00	<0.1	<0.01
NF2	10/12/2024	Sunny	Mid-Ebb	Moderate	B	10	9:08:00 AM	8.13	8.08	31.46	21.93	1.61	7.00	<0.1	<0.01
NF2	10/12/2024	Sunny	Mid-Ebb	Moderate	B	10	9:08:00 AM	8.05	8.07	31.37	21.93	1.58	4.00	<0.1	<0.01
NF3	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	9:14:00 AM	8.28	8.30	32.03	21.76	2.01	5.00	<0.1	<0.01
NF3	10/12/2024	Sunny	Mid-Ebb	Moderate	S	1	9:14:00 AM	8.28	8.28	32.05	21.76	2.06	6.00	<0.1	<0.01
NF3	10/12/2024	Sunny	Mid-Ebb	Moderate	M	6	9:15:00 AM	8.37	8.30	32.07	21.72	2.05	4.00	<0.1	<0.01
NF3	10/12/2024	Sunny	Mid-Ebb	Moderate	M	6	9:15:00 AM	8.24	8.29	31.97	21.75	2.07	5.00	<0.1	<0.01
NF3	10/12/2024	Sunny	Mid-Ebb	Moderate	B	11	9:16:00 AM	8.32	8.28	31.96	21.71	2.01	5.00	<0.1	<0.01
NF3	10/12/2024	Sunny	Mid-Ebb	Moderate	B	11	9:16:00 AM	8.30	8.30	31.99	21.76	2.04	3.00	<0.1	<0.01
CE	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:16:00 AM	8.42	8.10	31.87	22.21	2.43	4.00	<0.1	<0.01
CE	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:16:00 AM	8.51	8.06	31.95	22.24	2.49	5.00	<0.1	<0.01
CE	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	10	8:17:00 AM	8.55	8.08	31.97	22.23	2.46	2.50	<0.1	<0.01
CE	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	10	8:17:00 AM	8.47	8.06	31.88	22.21	2.41	2.50	<0.1	<0.01
CE	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	19	8:18:00 AM	8.51	8.05	31.94	22.21	2.39	2.50	<0.1	<0.01
CE	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	19	8:18:00 AM	8.56	8.10	31.87	22.24	2.36	2.50	<0.1	<0.01
CF	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:41:00 AM	9.24	8.14	30.97	22.12	2.17	2.50	<0.1	<0.01
CF	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:41:00 AM	9.38	8.14	30.96	22.13	2.19	4.00	<0.1	<0.01
CF	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	10	11:42:00 AM	9.25	8.17	30.89	22.12	2.24	2.50	<0.1	<0.01
CF	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	10	11:42:00 AM	9.28	8.17	30.86	22.09	2.25	2.50	<0.1	<0.01
CF	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	19	11:43:00 AM	9.34	8.16	30.86	22.10	2.17	3.00	<0.1	<0.01
CF	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	19	11:43:00 AM	9.29	8.14	30.95	22.12	2.16	2.50	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR01	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:15:00 AM	8.65	8.00	31.19	22.15	1.91	4.00	<0.1	<0.01
WSR01	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:15:00 AM	8.56	7.98	31.21	22.14	1.92	2.50	<0.1	<0.01
WSR01	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:16:00 AM	8.57	7.99	31.25	22.18	1.88	2.50	<0.1	<0.01
WSR01	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:16:00 AM	8.61	7.97	31.25	22.14	1.89	5.00	<0.1	<0.01
WSR01	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	8	11:17:00 AM	8.59	7.96	31.20	22.15	1.91	3.00	<0.1	<0.01
WSR01	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	8	11:17:00 AM	8.53	7.98	31.16	22.17	1.89	3.00	<0.1	<0.01
WSR02	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:54:00 AM	9.00	8.09	31.44	22.38	1.76	2.50	<0.1	<0.01
WSR02	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:54:00 AM	9.09	8.10	31.39	22.39	1.77	4.00	<0.1	<0.01
WSR02	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:55:00 AM	9.00	8.05	31.34	22.38	1.75	2.50	<0.1	<0.01
WSR02	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:55:00 AM	9.02	8.08	31.45	22.39	1.79	2.50	<0.1	<0.01
WSR02	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	9	10:56:00 AM	9.02	8.09	31.37	22.41	1.77	2.50	<0.1	<0.01
WSR02	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	9	10:56:00 AM	9.08	8.07	31.44	22.39	1.78	2.50	<0.1	<0.01
WSR03	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:36:00 AM	9.02	8.09	31.53	22.24	1.73	2.50	<0.1	<0.01
WSR03	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:36:00 AM	9.05	8.09	31.61	22.24	1.71	3.00	<0.1	<0.01
WSR03	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:37:00 AM	8.99	8.06	31.62	22.24	1.75	3.00	<0.1	<0.01
WSR03	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:37:00 AM	9.07	8.06	31.61	22.22	1.73	3.00	<0.1	<0.01
WSR03	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:38:00 AM	9.09	8.10	31.56	22.24	1.76	2.50	<0.1	<0.01
WSR03	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:38:00 AM	9.03	8.11	31.58	22.24	1.77	2.50	<0.1	<0.01
WSR04	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:21:00 AM	8.24	8.15	31.17	22.26	1.61	2.50	<0.1	<0.01
WSR04	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:21:00 AM	8.17	8.14	31.07	22.28	1.60	2.50	<0.1	<0.01
WSR04	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:22:00 AM	8.11	8.12	31.08	22.29	1.58	2.50	<0.1	<0.01
WSR04	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:22:00 AM	8.11	8.10	31.07	22.28	1.61	2.50	<0.1	<0.01
WSR04	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:23:00 AM	8.22	8.12	31.14	22.30	1.55	2.50	<0.1	<0.01
WSR04	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:23:00 AM	8.17	8.15	31.14	22.30	1.59	2.50	<0.1	<0.01
WSR16	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:41:00 AM	8.70	8.17	31.28	21.86	1.81	2.50	<0.1	<0.01
WSR16	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:41:00 AM	8.61	8.15	31.33	21.85	1.78	4.00	<0.1	<0.01
WSR16	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:42:00 AM	8.63	8.18	31.32	21.87	1.80	2.50	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR16	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:42:00 AM	8.58	8.17	31.33	21.86	1.79	2.50	<0.1	<0.01
WSR16	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	15	8:43:00 AM	8.65	8.17	31.34	21.87	1.79	2.50	<0.1	<0.01
WSR16	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	15	8:43:00 AM	8.70	8.16	31.26	21.86	1.81	2.50	<0.1	<0.01
WSR33	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:04:00 AM	8.83	8.11	31.47	21.95	1.75	4.00	<0.1	<0.01
WSR33	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:04:00 AM	8.89	8.13	31.54	21.98	1.77	2.50	<0.1	<0.01
WSR33	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:05:00 AM	8.92	8.12	31.52	21.99	1.71	2.50	<0.1	<0.01
WSR33	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:05:00 AM	8.94	8.12	31.52	21.96	1.74	3.00	<0.1	<0.01
WSR33	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:06:00 AM	8.88	8.11	31.49	21.97	1.74	2.50	<0.1	<0.01
WSR33	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:06:00 AM	8.90	8.13	31.49	21.97	1.76	2.50	<0.1	<0.01
WSR36	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:48:00 AM	8.12	8.08	32.33	22.03	1.56	2.50	<0.1	<0.01
WSR36	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:48:00 AM	8.18	8.07	32.36	22.07	1.53	2.50	<0.1	<0.01
WSR36	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:49:00 AM	8.05	8.09	32.36	22.06	1.53	4.00	<0.1	<0.01
WSR36	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:49:00 AM	8.19	8.09	32.32	22.06	1.57	3.00	<0.1	<0.01
WSR36	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:49:00 AM	8.17	8.10	32.36	22.07	1.51	3.00	<0.1	<0.01
WSR36	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:49:00 AM	8.07	8.09	32.32	22.03	1.54	2.50	<0.1	<0.01
WSR37	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:40:00 AM	8.04	8.17	31.73	22.16	1.76	2.50	<0.1	<0.01
WSR37	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:40:00 AM	7.99	8.13	31.75	22.14	1.72	2.50	<0.1	<0.01
WSR37	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:41:00 AM	8.01	8.15	31.73	22.15	1.76	2.50	<0.1	<0.01
WSR37	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:41:00 AM	7.95	8.16	31.76	22.12	1.74	3.00	<0.1	<0.01
WSR37	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:42:00 AM	8.05	8.13	31.76	22.15	1.75	2.50	<0.1	<0.01
WSR37	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:42:00 AM	7.97	8.17	31.81	22.14	1.72	2.50	<0.1	<0.01
NF1	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:05:00 AM	8.55	8.04	32.14	22.14	1.67	3.00	<0.1	<0.01
NF1	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:05:00 AM	8.56	8.02	32.13	22.14	1.71	2.50	<0.1	<0.01
NF1	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	7	9:06:00 AM	8.57	7.99	32.09	22.15	1.67	4.00	<0.1	<0.01
NF1	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	7	9:06:00 AM	8.54	7.99	32.12	22.14	1.69	2.50	<0.1	<0.01
NF1	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	13	9:07:00 AM	8.54	8.00	32.14	22.15	1.67	2.50	<0.1	<0.01
NF1	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	13	9:07:00 AM	8.61	8.03	32.07	22.12	1.69	2.50	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF2	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:22:00 AM	8.78	8.06	30.92	21.86	1.64	2.50	<0.1	<0.01
NF2	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:22:00 AM	8.69	8.10	30.89	21.89	1.77	3.00	<0.1	<0.01
NF2	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:23:00 AM	8.82	8.06	30.90	21.86	1.68	3.00	<0.1	<0.01
NF2	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:23:00 AM	8.79	8.08	30.88	21.90	1.65	2.50	<0.1	<0.01
NF2	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	10	9:24:00 AM	8.78	8.11	30.86	21.90	1.63	2.50	<0.1	<0.01
NF2	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	10	9:24:00 AM	8.84	8.11	30.89	21.90	1.61	5.00	<0.1	<0.01
NF3	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:30:00 AM	9.06	7.99	30.61	21.90	1.53	2.50	<0.1	<0.01
NF3	12/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:30:00 AM	9.09	8.04	30.64	21.91	1.51	2.50	<0.1	<0.01
NF3	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:31:00 AM	8.96	8.01	30.64	21.90	1.52	5.00	<0.1	<0.01
NF3	12/12/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:31:00 AM	9.01	8.03	30.60	21.90	1.55	2.50	<0.1	<0.01
NF3	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:32:00 AM	8.98	8.01	30.60	21.89	1.59	4.00	<0.1	<0.01
NF3	12/12/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:32:00 AM	8.98	8.02	30.58	21.90	1.63	2.50	<0.1	<0.01
CE	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:44:00 AM	8.30	8.21	32.37	21.18	2.48	5.00	<0.1	<0.01
CE	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:44:00 AM	8.24	8.22	32.33	21.19	2.57	4.00	<0.1	<0.01
CE	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	11	9:45:00 AM	8.18	8.21	32.38	21.21	2.55	3.00	<0.1	<0.01
CE	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	11	9:45:00 AM	8.26	8.18	32.33	21.17	2.44	5.00	<0.1	<0.01
CE	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	21	9:46:00 AM	8.21	8.21	32.46	21.19	2.48	5.00	<0.1	<0.01
CE	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	21	9:46:00 AM	8.19	8.22	32.38	21.22	2.46	5.00	<0.1	<0.01
CF	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:20:00 PM	8.69	8.23	32.44	21.06	2.05	6.00	<0.1	<0.01
CF	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:20:00 PM	8.73	8.23	32.41	21.04	2.06	7.00	<0.1	<0.01
CF	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	10	1:21:00 PM	8.65	8.20	32.45	21.03	2.05	5.00	<0.1	<0.01
CF	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	10	1:21:00 PM	8.60	8.22	32.29	21.08	2.02	5.00	<0.1	<0.01
CF	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	19	1:22:00 PM	8.72	8.19	32.34	21.04	2.05	6.00	<0.1	<0.01
CF	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	19	1:22:00 PM	8.61	8.23	32.36	21.06	2.09	4.00	<0.1	<0.01
WSR01	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:54:00 PM	8.53	8.16	31.03	21.18	2.18	6.00	<0.1	<0.01
WSR01	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:54:00 PM	8.42	8.18	31.04	21.18	2.19	7.00	<0.1	<0.01
WSR01	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:55:00 PM	8.46	8.14	31.04	21.14	2.15	5.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR01	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:55:00 PM	8.52	8.16	30.99	21.17	2.18	7.00	<0.1	<0.01
WSR01	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	8	12:56:00 PM	8.50	8.14	31.06	21.16	2.19	5.00	<0.1	<0.01
WSR01	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	8	12:56:00 PM	8.44	8.14	31.01	21.14	2.14	4.00	<0.1	<0.01
WSR02	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:33:00 PM	8.20	8.31	32.75	20.99	1.91	5.00	<0.1	<0.01
WSR02	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:33:00 PM	8.10	8.31	32.72	20.98	1.87	4.00	<0.1	<0.01
WSR02	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:34:00 PM	8.20	8.30	32.70	20.97	1.90	2.50	<0.1	<0.01
WSR02	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:34:00 PM	8.15	8.27	32.77	20.99	1.87	4.00	<0.1	<0.01
WSR02	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	9	12:35:00 PM	8.08	8.28	32.74	20.94	1.87	5.00	<0.1	<0.01
WSR02	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	9	12:35:00 PM	8.12	8.31	32.78	20.97	1.90	7.00	<0.1	<0.01
WSR03	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:15:00 PM	9.08	8.12	32.35	21.04	1.65	8.00	<0.1	<0.01
WSR03	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:15:00 PM	9.09	8.14	32.22	21.06	1.68	6.00	<0.1	<0.01
WSR03	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:16:00 PM	9.04	8.11	32.18	21.03	1.68	6.00	<0.1	<0.01
WSR03	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:16:00 PM	9.02	8.13	32.16	21.05	1.65	6.00	<0.1	<0.01
WSR03	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:17:00 PM	9.00	8.12	32.31	21.01	1.63	4.00	<0.1	<0.01
WSR03	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:17:00 PM	9.07	8.10	32.35	21.07	1.67	8.00	<0.1	<0.01
WSR04	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:58:00 AM	8.30	8.15	31.46	20.94	2.09	8.00	<0.1	<0.01
WSR04	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:58:00 AM	8.26	8.15	31.33	20.93	2.08	6.00	<0.1	<0.01
WSR04	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:59:00 AM	8.36	8.16	31.38	20.95	2.07	4.00	<0.1	<0.01
WSR04	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:59:00 AM	8.38	8.18	31.41	20.95	2.06	5.00	<0.1	<0.01
WSR04	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:00:00 PM	8.25	8.14	31.40	20.94	2.05	4.00	<0.1	<0.01
WSR04	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:00:00 PM	8.38	8.15	31.51	20.92	2.10	4.00	<0.1	<0.01
WSR16	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:09:00 AM	8.51	8.22	31.17	21.08	2.07	7.00	<0.1	<0.01
WSR16	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:09:00 AM	8.61	8.20	31.36	21.04	2.05	4.00	<0.1	<0.01
WSR16	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	8	10:10:00 AM	8.57	8.22	31.26	21.07	2.09	5.00	<0.1	<0.01
WSR16	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	8	10:10:00 AM	8.60	8.19	31.29	21.10	2.07	5.00	<0.1	<0.01
WSR16	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	16	10:11:00 AM	8.55	8.20	31.20	21.05	2.10	2.50	<0.1	<0.01
WSR16	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	16	10:11:00 AM	8.55	8.21	31.31	21.10	2.08	3.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR33	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:41:00 AM	8.08	8.22	31.51	21.12	1.65	3.00	<0.1	<0.01
WSR33	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:41:00 AM	8.11	8.21	31.55	21.11	1.64	5.00	<0.1	<0.01
WSR33	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:42:00 AM	8.04	8.22	31.65	21.13	1.66	4.00	<0.1	<0.01
WSR33	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:42:00 AM	8.10	8.22	31.62	21.10	1.64	3.00	<0.1	<0.01
WSR33	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:43:00 AM	8.03	8.20	31.61	21.10	1.60	4.00	<0.1	<0.01
WSR33	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:43:00 AM	8.10	8.21	31.51	21.14	1.64	5.00	<0.1	<0.01
WSR36	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:25:00 AM	9.21	8.17	31.80	20.99	2.05	4.00	<0.1	<0.01
WSR36	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:25:00 AM	9.14	8.18	31.88	20.97	2.08	3.00	<0.1	<0.01
WSR36	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:26:00 AM	9.16	8.18	31.86	20.99	2.03	7.00	<0.1	<0.01
WSR36	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:26:00 AM	9.24	8.19	31.92	21.00	2.09	5.00	<0.1	<0.01
WSR36	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	6	11:26:00 AM	9.19	8.17	31.92	21.01	2.00	2.50	<0.1	<0.01
WSR36	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	6	11:26:00 AM	9.18	8.19	31.82	21.00	2.05	5.00	<0.1	<0.01
WSR37	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	9.24	8.07	32.58	21.13	1.70	4.00	<0.1	<0.01
WSR37	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	9.20	8.07	32.44	21.15	1.67	7.00	<0.1	<0.01
WSR37	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:15:00 AM	9.23	8.04	32.47	21.16	1.69	4.00	<0.1	<0.01
WSR37	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:15:00 AM	9.16	8.03	32.44	21.13	1.67	5.00	<0.1	<0.01
WSR37	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	8	11:16:00 AM	9.24	8.04	32.59	21.14	1.67	5.00	<0.1	<0.01
WSR37	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	8	11:16:00 AM	9.19	8.06	32.45	21.18	1.65	2.50	<0.1	<0.01
NF1	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:33:00 AM	8.33	8.24	32.37	21.07	2.03	5.00	<0.1	<0.01
NF1	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:33:00 AM	8.36	8.26	32.29	21.05	1.95	7.00	<0.1	<0.01
NF1	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	7	10:34:00 AM	8.24	8.25	32.37	21.06	1.99	8.00	<0.1	<0.01
NF1	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	7	10:34:00 AM	8.36	8.23	32.23	21.06	2.06	8.00	<0.1	<0.01
NF1	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	12	10:35:00 AM	8.30	8.24	32.33	21.09	2.01	5.00	<0.1	<0.01
NF1	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	12	10:35:00 AM	8.28	8.27	32.25	21.08	1.98	8.00	<0.1	<0.01
NF2	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:52:00 AM	8.54	8.14	32.62	21.10	1.48	4.00	<0.1	<0.01
NF2	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:52:00 AM	8.63	8.11	32.59	21.13	1.42	8.00	<0.1	<0.01
NF2	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:53:00 AM	8.57	8.15	32.68	21.15	1.55	5.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF2	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:53:00 AM	8.63	8.13	32.73	21.12	1.47	7.00	<0.1	<0.01
NF2	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	9	10:54:00 AM	8.60	8.15	32.72	21.15	1.47	6.00	<0.1	<0.01
NF2	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	9	10:54:00 AM	8.53	8.12	32.73	21.15	1.46	4.00	<0.1	<0.01
NF3	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:03:00 AM	9.30	8.15	31.99	21.16	2.04	6.00	<0.1	<0.01
NF3	14/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:03:00 AM	9.38	8.12	32.17	21.16	2.06	5.00	<0.1	<0.01
NF3	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	6	11:04:00 AM	9.27	8.15	32.01	21.13	2.02	7.00	<0.1	<0.01
NF3	14/12/2024	Cloudy	Mid-Ebb	Moderate	M	6	11:04:00 AM	9.26	8.15	32.02	21.12	2.01	7.00	<0.1	<0.01
NF3	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	12	11:05:00 AM	9.32	8.14	32.10	21.18	1.98	4.00	<0.1	<0.01
NF3	14/12/2024	Cloudy	Mid-Ebb	Moderate	B	12	11:05:00 AM	9.39	8.13	32.07	21.13	2.04	4.00	<0.1	<0.01
CE	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:19:00 AM	7.84	8.15	30.64	21.88	2.39	5.00	<0.1	<0.01
CE	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	11:19:00 AM	7.79	8.19	30.53	21.91	2.41	4.00	<0.1	<0.01
CE	17/12/2024	Sunny	Mid-Flood	Moderate	M	11	11:20:00 AM	7.82	8.20	30.55	21.89	2.36	3.00	<0.1	<0.01
CE	17/12/2024	Sunny	Mid-Flood	Moderate	M	11	11:20:00 AM	7.78	8.15	30.58	21.91	2.31	5.00	<0.1	<0.01
CE	17/12/2024	Sunny	Mid-Flood	Moderate	B	22	11:21:00 AM	7.86	8.20	30.59	21.89	2.26	5.00	<0.1	<0.01
CE	17/12/2024	Sunny	Mid-Flood	Moderate	B	22	11:21:00 AM	7.84	8.19	30.60	21.89	2.29	5.00	<0.1	<0.01
CF	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:03:00 AM	8.49	8.07	32.28	22.15	2.53	6.00	<0.1	<0.01
CF	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:03:00 AM	8.44	8.04	32.30	22.14	2.62	7.00	<0.1	<0.01
CF	17/12/2024	Sunny	Mid-Flood	Moderate	M	10	8:04:00 AM	8.41	8.05	32.33	22.12	2.64	5.00	<0.1	<0.01
CF	17/12/2024	Sunny	Mid-Flood	Moderate	M	10	8:04:00 AM	8.46	8.05	32.36	22.16	2.69	5.00	<0.1	<0.01
CF	17/12/2024	Sunny	Mid-Flood	Moderate	B	18	8:05:00 AM	8.48	8.05	32.34	22.13	2.61	6.00	<0.1	<0.01
CF	17/12/2024	Sunny	Mid-Flood	Moderate	B	18	8:05:00 AM	8.46	8.05	32.31	22.15	2.71	4.00	<0.1	<0.01
WSR01	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:29:00 AM	8.46	7.99	31.64	22.30	1.75	6.00	<0.1	<0.01
WSR01	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:29:00 AM	8.42	7.98	31.58	22.29	1.71	7.00	<0.1	<0.01
WSR01	17/12/2024	Sunny	Mid-Flood	Moderate	M	5	8:30:00 AM	8.40	8.00	31.58	22.30	1.74	5.00	<0.1	<0.01
WSR01	17/12/2024	Sunny	Mid-Flood	Moderate	M	5	8:30:00 AM	8.50	8.00	31.64	22.29	1.73	7.00	<0.1	<0.01
WSR01	17/12/2024	Sunny	Mid-Flood	Moderate	B	8	8:31:00 AM	8.38	7.98	31.57	22.28	1.74	5.00	<0.1	<0.01
WSR01	17/12/2024	Sunny	Mid-Flood	Moderate	B	8	8:31:00 AM	8.47	8.03	31.62	22.27	1.73	4.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR02	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:50:00 AM	8.19	8.10	30.74	22.01	2.08	5.00	<0.1	<0.01
WSR02	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	8:50:00 AM	8.22	8.12	30.69	22.02	2.17	4.00	<0.1	<0.01
WSR02	17/12/2024	Sunny	Mid-Flood	Moderate	M	5	8:51:00 AM	8.17	8.14	30.75	21.98	2.11	2.50	<0.1	<0.01
WSR02	17/12/2024	Sunny	Mid-Flood	Moderate	M	5	8:51:00 AM	8.25	8.12	30.68	21.99	2.15	4.00	<0.1	<0.01
WSR02	17/12/2024	Sunny	Mid-Flood	Moderate	B	9	8:52:00 AM	8.21	8.11	30.68	21.98	2.17	5.00	<0.1	<0.01
WSR02	17/12/2024	Sunny	Mid-Flood	Moderate	B	9	8:52:00 AM	8.18	8.12	30.66	21.99	2.13	7.00	<0.1	<0.01
WSR03	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:06:00 AM	8.86	7.98	31.49	22.02	1.58	8.00	<0.1	<0.01
WSR03	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:06:00 AM	8.83	7.97	31.59	22.03	1.53	6.00	<0.1	<0.01
WSR03	17/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:07:00 AM	8.83	7.97	31.49	22.03	1.51	6.00	<0.1	<0.01
WSR03	17/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:07:00 AM	8.87	7.98	31.59	21.99	1.50	6.00	<0.1	<0.01
WSR03	17/12/2024	Sunny	Mid-Flood	Moderate	B	7	9:08:00 AM	8.87	8.02	31.52	21.99	1.52	4.00	<0.1	<0.01
WSR03	17/12/2024	Sunny	Mid-Flood	Moderate	B	7	9:08:00 AM	8.78	7.99	31.51	22.02	1.53	8.00	<0.1	<0.01
WSR04	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:22:00 AM	8.31	8.05	31.38	22.34	1.73	8.00	<0.1	<0.01
WSR04	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:22:00 AM	8.37	8.05	31.37	22.34	1.72	6.00	<0.1	<0.01
WSR04	17/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:23:00 AM	8.25	8.03	31.35	22.33	1.69	4.00	<0.1	<0.01
WSR04	17/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:23:00 AM	8.29	8.03	31.37	22.33	1.70	5.00	<0.1	<0.01
WSR04	17/12/2024	Sunny	Mid-Flood	Moderate	B	7	9:24:00 AM	8.35	8.03	31.37	22.35	1.76	4.00	<0.1	<0.01
WSR04	17/12/2024	Sunny	Mid-Flood	Moderate	B	7	9:24:00 AM	8.28	8.03	31.45	22.37	1.73	4.00	<0.1	<0.01
WSR16	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:56:00 AM	8.19	8.05	32.23	21.91	2.09	7.00	<0.1	<0.01
WSR16	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:56:00 AM	8.14	8.05	32.26	21.94	2.20	4.00	<0.1	<0.01
WSR16	17/12/2024	Sunny	Mid-Flood	Moderate	M	8	10:57:00 AM	8.11	8.05	32.21	21.95	2.22	5.00	<0.1	<0.01
WSR16	17/12/2024	Sunny	Mid-Flood	Moderate	M	8	10:57:00 AM	8.11	8.04	32.26	21.95	2.21	5.00	<0.1	<0.01
WSR16	17/12/2024	Sunny	Mid-Flood	Moderate	B	14	10:58:00 AM	8.05	8.04	32.19	21.91	2.21	2.50	<0.1	<0.01
WSR16	17/12/2024	Sunny	Mid-Flood	Moderate	B	14	10:58:00 AM	8.18	8.03	32.25	21.92	2.22	3.00	<0.1	<0.01
WSR33	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:39:00 AM	8.86	8.04	31.90	22.17	1.56	3.00	<0.1	<0.01
WSR33	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:39:00 AM	8.82	8.04	32.00	22.20	1.61	5.00	<0.1	<0.01
WSR33	17/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:40:00 AM	8.83	7.99	31.94	22.19	1.64	4.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR33	17/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:40:00 AM	8.91	8.01	31.89	22.21	1.61	3.00	<0.1	<0.01
WSR33	17/12/2024	Sunny	Mid-Flood	Moderate	B	6	9:41:00 AM	8.89	8.02	32.00	22.18	1.53	4.00	<0.1	<0.01
WSR33	17/12/2024	Sunny	Mid-Flood	Moderate	B	6	9:41:00 AM	8.89	8.03	31.99	22.21	1.58	5.00	<0.1	<0.01
WSR36	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:56:00 AM	8.89	8.11	30.83	22.08	1.79	4.00	<0.1	<0.01
WSR36	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	9:56:00 AM	8.94	8.06	30.76	22.08	1.82	3.00	<0.1	<0.01
WSR36	17/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:57:00 AM	8.87	8.10	30.82	22.11	1.79	7.00	<0.1	<0.01
WSR36	17/12/2024	Sunny	Mid-Flood	Moderate	M	4	9:57:00 AM	8.88	8.09	30.81	22.10	1.80	5.00	<0.1	<0.01
WSR36	17/12/2024	Sunny	Mid-Flood	Moderate	B	6	9:57:00 AM	8.92	8.10	30.75	22.11	1.77	2.50	<0.1	<0.01
WSR36	17/12/2024	Sunny	Mid-Flood	Moderate	B	6	9:57:00 AM	8.84	8.09	30.77	22.09	1.78	5.00	<0.1	<0.01
WSR37	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:13:00 AM	9.04	8.12	31.52	22.12	2.00	4.00	<0.1	<0.01
WSR37	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:13:00 AM	8.99	8.14	31.55	22.15	2.04	7.00	<0.1	<0.01
WSR37	17/12/2024	Sunny	Mid-Flood	Moderate	M	4	10:14:00 AM	8.97	8.14	31.50	22.14	2.01	4.00	<0.1	<0.01
WSR37	17/12/2024	Sunny	Mid-Flood	Moderate	M	4	10:14:00 AM	9.13	8.13	31.59	22.11	2.04	5.00	<0.1	<0.01
WSR37	17/12/2024	Sunny	Mid-Flood	Moderate	B	7	10:15:00 AM	9.07	8.15	31.52	22.11	2.05	5.00	<0.1	<0.01
WSR37	17/12/2024	Sunny	Mid-Flood	Moderate	B	7	10:15:00 AM	8.97	8.13	31.58	22.15	2.02	2.50	<0.1	<0.01
NF1	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:41:00 AM	9.03	7.96	30.77	22.20	1.68	5.00	<0.1	<0.01
NF1	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:41:00 AM	8.92	7.91	30.76	22.17	1.66	7.00	<0.1	<0.01
NF1	17/12/2024	Sunny	Mid-Flood	Moderate	M	7	10:42:00 AM	9.03	7.96	30.76	22.18	1.66	8.00	<0.1	<0.01
NF1	17/12/2024	Sunny	Mid-Flood	Moderate	M	7	10:42:00 AM	8.90	7.96	30.77	22.19	1.64	8.00	<0.1	<0.01
NF1	17/12/2024	Sunny	Mid-Flood	Moderate	B	13	10:43:00 AM	8.97	7.96	30.78	22.20	1.66	5.00	<0.1	<0.01
NF1	17/12/2024	Sunny	Mid-Flood	Moderate	B	13	10:43:00 AM	9.01	7.91	30.69	22.16	1.64	8.00	<0.1	<0.01
NF2	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:31:00 AM	8.90	8.04	30.99	22.13	1.83	4.00	<0.1	<0.01
NF2	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:31:00 AM	8.82	8.01	30.98	22.12	1.81	8.00	<0.1	<0.01
NF2	17/12/2024	Sunny	Mid-Flood	Moderate	M	5	10:32:00 AM	8.87	8.03	30.96	22.12	1.82	5.00	<0.1	<0.01
NF2	17/12/2024	Sunny	Mid-Flood	Moderate	M	5	10:32:00 AM	8.87	8.06	30.96	22.10	1.81	7.00	<0.1	<0.01
NF2	17/12/2024	Sunny	Mid-Flood	Moderate	B	10	10:33:00 AM	8.82	8.06	31.02	22.11	1.81	6.00	<0.1	<0.01
NF2	17/12/2024	Sunny	Mid-Flood	Moderate	B	10	10:33:00 AM	8.82	8.02	31.00	22.13	1.83	4.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF3	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:22:00 AM	8.79	7.97	32.37	22.26	1.92	6.00	<0.1	<0.01
NF3	17/12/2024	Sunny	Mid-Flood	Moderate	S	1	10:22:00 AM	8.80	7.97	32.36	22.30	1.90	5.00	<0.1	<0.01
NF3	17/12/2024	Sunny	Mid-Flood	Moderate	M	6	10:23:00 AM	8.86	7.98	32.34	22.30	1.92	7.00	<0.1	<0.01
NF3	17/12/2024	Sunny	Mid-Flood	Moderate	M	6	10:23:00 AM	8.80	7.94	32.28	22.27	1.90	7.00	<0.1	<0.01
NF3	17/12/2024	Sunny	Mid-Flood	Moderate	B	11	10:24:00 AM	8.86	7.96	32.30	22.30	1.99	4.00	<0.1	<0.01
NF3	17/12/2024	Sunny	Mid-Flood	Moderate	B	11.1	10:24:00 AM	8.85	7.98	32.31	22.27	1.9	4.00	<0.1	<0.01
CE	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:43:00 AM	8.66	8.32	31.6	21.21	2.41	4.00	<0.1	<0.01
CE	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:43:00 AM	8.59	8.32	31.55	21.18	2.44	4.00	<0.1	<0.01
CE	19/12/2024	Cloudy	Mid-Flood	Moderate	M	10.65	11:44:00 AM	8.64	8.34	31.56	21.17	2.48	6.00	<0.1	<0.01
CE	19/12/2024	Cloudy	Mid-Flood	Moderate	M	10.65	11:44:00 AM	8.65	8.33	31.61	21.15	2.49	4.00	<0.1	<0.01
CE	19/12/2024	Cloudy	Mid-Flood	Moderate	B	20.3	11:45:00 AM	8.64	8.31	31.43	21.18	2.53	3.00	<0.1	<0.01
CE	19/12/2024	Cloudy	Mid-Flood	Moderate	B	20.3	11:45:00 AM	8.65	8.35	31.62	21.16	2.43	4.00	<0.1	<0.01
CF	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	8:16:00 AM	8.83	8.20	32.02	21.19	2.68	2.50	<0.1	<0.01
CF	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	8:16:00 AM	8.88	8.20	31.99	21.14	2.71	5.00	<0.1	<0.01
CF	19/12/2024	Cloudy	Mid-Flood	Moderate	M	10.65	8:17:00 AM	8.87	8.20	31.98	21.13	2.73	5.00	<0.1	<0.01
CF	19/12/2024	Cloudy	Mid-Flood	Moderate	M	10.65	8:17:00 AM	8.86	8.24	32.02	21.16	2.69	6.00	<0.1	<0.01
CF	19/12/2024	Cloudy	Mid-Flood	Moderate	B	20.3	8:18:00 AM	8.79	8.21	32	21.17	2.73	3.00	<0.1	<0.01
CF	19/12/2024	Cloudy	Mid-Flood	Moderate	B	20.3	8:18:00 AM	8.81	8.22	31.95	21.15	2.67	5.00	<0.1	<0.01
WSR01	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	8:42:00 AM	9.02	8.08	32.57	21.27	1.85	6.00	<0.1	<0.01
WSR01	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	8:42:00 AM	9.02	8.10	32.75	21.3	1.84	4.00	<0.1	<0.01
WSR01	19/12/2024	Cloudy	Mid-Flood	Moderate	M	4.45	8:43:00 AM	8.98	8.09	32.62	21.25	1.86	5.00	<0.1	<0.01
WSR01	19/12/2024	Cloudy	Mid-Flood	Moderate	M	4.45	8:43:00 AM	8.99	8.09	32.62	21.25	1.88	5.00	<0.1	<0.01
WSR01	19/12/2024	Cloudy	Mid-Flood	Moderate	B	7.9	8:44:00 AM	8.98	8.10	32.75	21.25	1.87	7.00	<0.1	<0.01
WSR01	19/12/2024	Cloudy	Mid-Flood	Moderate	B	7.9	8:44:00 AM	8.94	8.10	32.74	21.3	1.88	8.00	<0.1	<0.01
WSR02	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	9:04:00 AM	8.88	8.06	32.42	20.95	1.98	8.00	<0.1	<0.01
WSR02	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	9:04:00 AM	8.94	8.06	32.41	21	2	13.00	<0.1	<0.01
WSR02	19/12/2024	Cloudy	Mid-Flood	Moderate	M	4.9	9:05:00 AM	8.83	8.06	32.44	20.99	1.99	2.50	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR02	19/12/2024	Cloudy	Mid-Flood	Moderate	M	4.9	9:05:00 AM	8.87	8.10	32.54	20.99	2	3.00	<0.1	<0.01
WSR02	19/12/2024	Cloudy	Mid-Flood	Moderate	B	8.8	9:06:00 AM	8.86	8.06	32.53	20.99	2.02	2.50	<0.1	<0.01
WSR02	19/12/2024	Cloudy	Mid-Flood	Moderate	B	8.8	9:06:00 AM	8.95	8.07	32.56	20.95	1.97	3.00	<0.1	<0.01
WSR03	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	9:20:00 AM	8.77	8.22	31.01	21.24	1.83	8.00	<0.1	<0.01
WSR03	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	9:20:00 AM	8.66	8.22	31.07	21.24	1.87	6.00	<0.1	<0.01
WSR03	19/12/2024	Cloudy	Mid-Flood	Moderate	M	4.25	9:21:00 AM	8.66	8.19	31.04	21.18	1.88	3.00	<0.1	<0.01
WSR03	19/12/2024	Cloudy	Mid-Flood	Moderate	M	4.25	9:21:00 AM	8.66	8.19	30.93	21.25	1.87	2.50	<0.1	<0.01
WSR03	19/12/2024	Cloudy	Mid-Flood	Moderate	B	7.5	9:22:00 AM	8.78	8.18	31	21.23	1.83	3.00	<0.1	<0.01
WSR03	19/12/2024	Cloudy	Mid-Flood	Moderate	B	7.5	9:22:00 AM	8.67	8.19	30.91	21.23	1.85	2.50	<0.1	<0.01
WSR04	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	9:38:00 AM	8.42	8.31	32.36	21.25	1.46	3.00	<0.1	<0.01
WSR04	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	9:38:00 AM	8.4	8.32	32.31	21.2	1.47	8.00	<0.1	<0.01
WSR04	19/12/2024	Cloudy	Mid-Flood	Moderate	M	3.5	9:39:00 AM	8.39	8.28	32.25	21.26	1.3	6.00	<0.1	<0.01
WSR04	19/12/2024	Cloudy	Mid-Flood	Moderate	M	3.5	9:39:00 AM	8.44	8.28	32.35	21.24	1.51	3.00	<0.1	<0.01
WSR04	19/12/2024	Cloudy	Mid-Flood	Moderate	B	6	9:40:00 AM	8.48	8.32	32.23	21.22	1.44	5.00	<0.1	<0.01
WSR04	19/12/2024	Cloudy	Mid-Flood	Moderate	B	6	9:40:00 AM	8.41	8.31	32.4	21.26	1.58	5.00	<0.1	<0.01
WSR16	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:20:00 AM	8.04	8.20	31.68	20.95	2.07	4.00	<0.1	<0.01
WSR16	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:20:00 AM	8.07	8.19	31.6	20.96	1.91	4.00	<0.1	<0.01
WSR16	19/12/2024	Cloudy	Mid-Flood	Moderate	M	7.7	11:21:00 AM	8.08	8.19	31.56	20.96	2.06	4.00	<0.1	<0.01
WSR16	19/12/2024	Cloudy	Mid-Flood	Moderate	M	7.7	11:21:00 AM	8.03	8.20	31.6	20.93	2.08	6.00	<0.1	<0.01
WSR16	19/12/2024	Cloudy	Mid-Flood	Moderate	B	14.4	11:22:00 AM	8.07	8.16	31.56	20.95	2.06	3.00	<0.1	<0.01
WSR16	19/12/2024	Cloudy	Mid-Flood	Moderate	B	14.4	11:22:00 AM	8.05	8.16	31.62	20.91	2.05	2.50	<0.1	<0.01
WSR33	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	9:55:00 AM	8.47	8.09	32.22	21.29	1.83	6.00	<0.1	<0.01
WSR33	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	9:55:00 AM	8.47	8.07	32.18	21.33	1.87	6.00	<0.1	<0.01
WSR33	19/12/2024	Cloudy	Mid-Flood	Moderate	M	3.5	9:56:00 AM	8.57	8.09	32.3	21.32	1.85	2.50	<0.1	<0.01
WSR33	19/12/2024	Cloudy	Mid-Flood	Moderate	M	3.5	9:56:00 AM	8.51	8.09	32.12	21.33	1.82	4.00	<0.1	<0.01
WSR33	19/12/2024	Cloudy	Mid-Flood	Moderate	B	6	9:57:00 AM	8.5	8.09	32.25	21.33	1.87	4.00	<0.1	<0.01
WSR33	19/12/2024	Cloudy	Mid-Flood	Moderate	B	6	9:57:00 AM	8.46	8.09	32.21	21.33	1.86	3.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR36	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:14:00 AM	7.9	8.27	31.82	21.02	1.58	3.00	<0.1	<0.01
WSR36	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:14:00 AM	7.92	8.25	31.77	21.01	1.57	3.00	<0.1	<0.01
WSR36	19/12/2024	Cloudy	Mid-Flood	Moderate	M	3.25	10:15:00 AM	7.88	8.25	31.88	21.07	1.6	4.00	<0.1	<0.01
WSR36	19/12/2024	Cloudy	Mid-Flood	Moderate	M	3.25	10:15:00 AM	8.01	8.28	31.74	21.04	1.59	4.00	<0.1	<0.01
WSR36	19/12/2024	Cloudy	Mid-Flood	Moderate	B	5.5	10:15:00 AM	7.98	8.26	31.7	21.03	1.56	2.50	<0.1	<0.01
WSR36	19/12/2024	Cloudy	Mid-Flood	Moderate	B	5.5	10:15:00 AM	7.94	8.27	31.86	21.01	1.55	4.00	<0.1	<0.01
WSR37	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:31:00 AM	9.06	8.21	32.4	20.9	1.55	5.00	<0.1	<0.01
WSR37	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:31:00 AM	9.07	8.20	32.4	20.9	1.45	3.00	<0.1	<0.01
WSR37	19/12/2024	Cloudy	Mid-Flood	Moderate	M	3.95	10:32:00 AM	9.13	8.19	32.35	20.86	1.49	5.00	<0.1	<0.01
WSR37	19/12/2024	Cloudy	Mid-Flood	Moderate	M	3.95	10:32:00 AM	9.15	8.20	32.38	20.92	1.45	5.00	<0.1	<0.01
WSR37	19/12/2024	Cloudy	Mid-Flood	Moderate	B	6.9	10:33:00 AM	9.06	8.18	32.35	20.9	1.5	5.00	<0.1	<0.01
WSR37	19/12/2024	Cloudy	Mid-Flood	Moderate	B	6.9	10:33:00 AM	9.16	8.20	32.33	20.93	1.47	3.00	<0.1	<0.01
NF1	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:03:00 AM	8.46	8.34	31.63	21.05	2.01	3.00	<0.1	<0.01
NF1	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:03:00 AM	8.53	8.34	31.69	21.01	2.02	3.00	<0.1	<0.01
NF1	19/12/2024	Cloudy	Mid-Flood	Moderate	M	6.75	11:04:00 AM	8.43	8.34	31.63	21.07	2.02	6.00	<0.1	<0.01
NF1	19/12/2024	Cloudy	Mid-Flood	Moderate	M	6.75	11:04:00 AM	8.51	8.31	31.62	21.03	2.01	3.00	<0.1	<0.01
NF1	19/12/2024	Cloudy	Mid-Flood	Moderate	B	12.5	11:05:00 AM	8.46	8.33	31.63	21.01	2.04	4.00	<0.1	<0.01
NF1	19/12/2024	Cloudy	Mid-Flood	Moderate	B	12.5	11:05:00 AM	8.51	8.31	31.61	21.04	2.06	7.00	<0.1	<0.01
NF2	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:52:00 AM	9.01	8.16	31.96	21.03	1.31	5.00	<0.1	<0.01
NF2	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:52:00 AM	8.95	8.17	31.91	21.02	1.34	3.00	<0.1	<0.01
NF2	19/12/2024	Cloudy	Mid-Flood	Moderate	M	5.2	10:53:00 AM	8.94	8.16	31.85	21.07	1.35	4.00	<0.1	<0.01
NF2	19/12/2024	Cloudy	Mid-Flood	Moderate	M	5.2	10:53:00 AM	9.04	8.20	31.85	21.07	1.31	6.00	<0.1	<0.01
NF2	19/12/2024	Cloudy	Mid-Flood	Moderate	B	9.4	10:54:00 AM	8.99	8.18	32.04	21.02	1.36	9.00	<0.1	<0.01
NF2	19/12/2024	Cloudy	Mid-Flood	Moderate	B	9.4	10:54:00 AM	8.98	8.16	32.02	21.05	1.32	7.00	<0.1	<0.01
NF3	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:42:00 AM	8.41	8.35	31.36	20.96	2.12	4.00	<0.1	<0.01
NF3	19/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:42:00 AM	8.51	8.33	31.35	21	2.03	7.00	<0.1	<0.01
NF3	19/12/2024	Cloudy	Mid-Flood	Moderate	M	6.25	10:43:00 AM	8.38	8.36	31.35	21.01	2.01	5.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF3	19/12/2024	Cloudy	Mid-Flood	Moderate	M	6.25	10:43:00 AM	8.48	8.35	31.45	20.97	2.08	3.00	<0.1	<0.01
NF3	19/12/2024	Cloudy	Mid-Flood	Moderate	B	11.5	10:44:00 AM	8.4	8.35	31.35	21.01	1.93	5.00	<0.1	<0.01
NF3	19/12/2024	Cloudy	Mid-Flood	Moderate	B	11.5	10:44:00 AM	8.38	8.36	31.37	20.95	1.94	8.00	<0.1	<0.01
CE	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	12:44:00 PM	8.05	8.36	32.12	21.07	2.34	3.00	<0.1	<0.01
CE	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	12:44:00 PM	7.98	8.36	32.3	21.05	2.31	4.00	<0.1	<0.01
CE	21/12/2024	Cloudy	Mid-Flood	Moderate	M	10.25	12:45:00 PM	8.11	8.35	32.32	21.05	2.38	4.00	<0.1	<0.01
CE	21/12/2024	Cloudy	Mid-Flood	Moderate	M	10.25	12:45:00 PM	7.97	8.35	32.27	21.05	2.25	6.00	<0.1	<0.01
CE	21/12/2024	Cloudy	Mid-Flood	Moderate	B	19.5	12:46:00 PM	8.09	8.37	32.15	21.06	2.27	5.00	<0.1	<0.01
CE	21/12/2024	Cloudy	Mid-Flood	Moderate	B	19.5	12:46:00 PM	8.12	8.37	32.16	21.08	2.24	3.00	<0.1	<0.01
CF	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	9:39:00 AM	8.76	8.22	33.16	21.25	2.51	3.00	<0.1	<0.01
CF	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	9:39:00 AM	8.77	8.22	33.08	21.25	2.46	3.00	<0.1	<0.01
CF	21/12/2024	Cloudy	Mid-Flood	Moderate	M	9.9	9:40:00 AM	8.9	8.21	33.15	21.25	2.58	6.00	<0.1	<0.01
CF	21/12/2024	Cloudy	Mid-Flood	Moderate	M	9.9	9:40:00 AM	8.78	8.24	33.09	21.26	2.61	3.00	<0.1	<0.01
CF	21/12/2024	Cloudy	Mid-Flood	Moderate	B	18.8	9:41:00 AM	8.81	8.21	33.24	21.23	2.49	4.00	<0.1	<0.01
CF	21/12/2024	Cloudy	Mid-Flood	Moderate	B	18.8	9:41:00 AM	8.78	8.22	33.21	21.23	2.54	3.00	<0.1	<0.01
WSR01	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:02:00 AM	8.05	8.17	31.7	21.09	1.94	3.00	<0.1	<0.01
WSR01	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:02:00 AM	7.95	8.14	31.54	21.1	1.93	2.50	<0.1	<0.01
WSR01	21/12/2024	Cloudy	Mid-Flood	Moderate	M	4.4	10:03:00 AM	7.99	8.14	31.59	21.09	1.89	4.00	<0.1	<0.01
WSR01	21/12/2024	Cloudy	Mid-Flood	Moderate	M	4.4	10:03:00 AM	7.99	8.17	31.53	21.1	1.9	3.00	<0.1	<0.01
WSR01	21/12/2024	Cloudy	Mid-Flood	Moderate	B	7.8	10:04:00 AM	8.06	8.14	31.69	21.09	1.9	5.00	<0.1	<0.01
WSR01	21/12/2024	Cloudy	Mid-Flood	Moderate	B	7.8	10:04:00 AM	7.97	8.14	31.57	21.09	1.93	2.50	<0.1	<0.01
WSR02	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:21:00 AM	8.25	8.37	31.86	21.3	1.95	5.00	<0.1	<0.01
WSR02	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:21:00 AM	8.45	8.37	31.8	21.32	1.97	6.00	<0.1	<0.01
WSR02	21/12/2024	Cloudy	Mid-Flood	Moderate	M	4.6	10:22:00 AM	8.39	8.36	31.94	21.31	1.94	6.00	<0.1	<0.01
WSR02	21/12/2024	Cloudy	Mid-Flood	Moderate	M	4.6	10:22:00 AM	8.38	8.37	31.91	21.31	1.88	5.00	<0.1	<0.01
WSR02	21/12/2024	Cloudy	Mid-Flood	Moderate	B	8.2	10:23:00 AM	8.44	8.34	31.83	21.32	1.87	7.00	<0.1	<0.01
WSR02	21/12/2024	Cloudy	Mid-Flood	Moderate	B	8.2	10:23:00 AM	8.37	8.35	31.82	21.29	1.89	4.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR03	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:37:00 AM	8.93	8.26	32.17	20.98	1.59	3.00	<0.1	<0.01
WSR03	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:37:00 AM	8.81	8.25	32.22	20.97	1.61	5.00	<0.1	<0.01
WSR03	21/12/2024	Cloudy	Mid-Flood	Moderate	M	4	10:38:00 AM	8.87	8.24	32.2	20.99	1.6	4.00	<0.1	<0.01
WSR03	21/12/2024	Cloudy	Mid-Flood	Moderate	M	4	10:38:00 AM	8.78	8.24	32.15	20.97	1.56	5.00	<0.1	<0.01
WSR03	21/12/2024	Cloudy	Mid-Flood	Moderate	B	7	10:39:00 AM	8.78	8.25	32.19	20.99	1.59	4.00	<0.1	<0.01
WSR03	21/12/2024	Cloudy	Mid-Flood	Moderate	B	7	10:39:00 AM	8.77	8.26	32.12	20.98	1.56	3.00	<0.1	<0.01
WSR04	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:51:00 AM	8.46	8.21	31.84	21.07	1.5	8.00	<0.1	<0.01
WSR04	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	10:51:00 AM	8.32	8.23	31.86	21.09	1.49	4.00	<0.1	<0.01
WSR04	21/12/2024	Cloudy	Mid-Flood	Moderate	M	3.7	10:52:00 AM	8.43	8.23	31.72	21.08	1.52	6.00	<0.1	<0.01
WSR04	21/12/2024	Cloudy	Mid-Flood	Moderate	M	3.7	10:52:00 AM	8.47	8.20	31.79	21.08	1.49	5.00	<0.1	<0.01
WSR04	21/12/2024	Cloudy	Mid-Flood	Moderate	B	6.4	10:53:00 AM	8.47	8.20	31.85	21.11	1.5	6.00	<0.1	<0.01
WSR04	21/12/2024	Cloudy	Mid-Flood	Moderate	B	6.4	10:53:00 AM	8.27	8.20	31.65	21.07	1.52	4.00	<0.1	<0.01
WSR16	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	12:23:00 PM	8.2	8.11	31.23	21.36	2.05	5.00	<0.1	<0.01
WSR16	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	12:23:00 PM	8.02	8.09	31.09	21.33	2	5.00	<0.1	<0.01
WSR16	21/12/2024	Cloudy	Mid-Flood	Moderate	M	7.55	12:24:00 PM	8.14	8.11	31.25	21.36	2.04	3.00	<0.1	<0.01
WSR16	21/12/2024	Cloudy	Mid-Flood	Moderate	M	7.55	12:24:00 PM	8.17	8.09	31.17	21.36	2.01	4.00	<0.1	<0.01
WSR16	21/12/2024	Cloudy	Mid-Flood	Moderate	B	14.1	12:25:00 PM	8.15	8.10	31.25	21.35	2.05	3.00	<0.1	<0.01
WSR16	21/12/2024	Cloudy	Mid-Flood	Moderate	B	14.1	12:25:00 PM	8.16	8.08	31.23	21.36	2.02	3.00	<0.1	<0.01
WSR33	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:08:00 AM	8.28	8.26	31.75	21.25	1.35	5.00	<0.1	<0.01
WSR33	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:08:00 AM	8.46	8.27	31.73	21.27	1.37	7.00	<0.1	<0.01
WSR33	21/12/2024	Cloudy	Mid-Flood	Moderate	M	3.6	11:09:00 AM	8.41	8.28	31.75	21.24	1.34	6.00	<0.1	<0.01
WSR33	21/12/2024	Cloudy	Mid-Flood	Moderate	M	3.6	11:09:00 AM	8.38	8.25	31.76	21.26	1.38	3.00	<0.1	<0.01
WSR33	21/12/2024	Cloudy	Mid-Flood	Moderate	B	6.2	11:10:00 AM	8.4	8.27	31.81	21.26	1.34	8.00	<0.1	<0.01
WSR33	21/12/2024	Cloudy	Mid-Flood	Moderate	B	6.2	11:10:00 AM	8.34	8.27	31.82	21.24	1.36	4.00	<0.1	<0.01
WSR36	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:25:00 AM	8.49	8.25	32.98	21.43	1.65	5.00	<0.1	<0.01
WSR36	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:25:00 AM	8.44	8.28	33.01	21.4	1.68	2.50	<0.1	<0.01
WSR36	21/12/2024	Cloudy	Mid-Flood	Moderate	M	3.5	11:26:00 AM	8.55	8.28	33.08	21.43	1.73	3.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR36	21/12/2024	Cloudy	Mid-Flood	Moderate	M	3.5	11:26:00 AM	8.45	8.26	33.01	21.4	1.69	4.00	<0.1	<0.01
WSR36	21/12/2024	Cloudy	Mid-Flood	Moderate	B	6	11:26:00 AM	8.61	8.28	33.15	21.43	1.66	5.00	<0.1	<0.01
WSR36	21/12/2024	Cloudy	Mid-Flood	Moderate	B	6	11:26:00 AM	8.6	8.27	32.95	21.42	1.65	3.00	<0.1	<0.01
WSR37	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:42:00 AM	8.45	8.19	31.79	21.17	1.92	3.00	<0.1	<0.01
WSR37	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:42:00 AM	8.49	8.20	31.87	21.15	1.95	6.00	<0.1	<0.01
WSR37	21/12/2024	Cloudy	Mid-Flood	Moderate	M	4.4	11:43:00 AM	8.51	8.22	31.87	21.15	1.98	2.50	<0.1	<0.01
WSR37	21/12/2024	Cloudy	Mid-Flood	Moderate	M	4.4	11:43:00 AM	8.46	8.22	31.82	21.16	1.91	5.00	<0.1	<0.01
WSR37	21/12/2024	Cloudy	Mid-Flood	Moderate	B	7.8	11:44:00 AM	8.52	8.20	31.7	21.15	1.91	3.00	<0.1	<0.01
WSR37	21/12/2024	Cloudy	Mid-Flood	Moderate	B	7.8	11:44:00 AM	8.56	8.19	31.88	21.17	2.05	4.00	<0.1	<0.01
NF1	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	12:08:00 PM	8.73	8.11	32.66	21.19	1.42	3.00	<0.1	<0.01
NF1	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	12:08:00 PM	8.76	8.10	32.58	21.17	1.45	3.00	<0.1	<0.01
NF1	21/12/2024	Cloudy	Mid-Flood	Moderate	M	6.55	12:09:00 PM	8.66	8.10	32.7	21.15	1.47	7.00	<0.1	<0.01
NF1	21/12/2024	Cloudy	Mid-Flood	Moderate	M	6.55	12:09:00 PM	8.78	8.10	32.69	21.16	1.45	9.00	<0.1	<0.01
NF1	21/12/2024	Cloudy	Mid-Flood	Moderate	B	12.1	12:10:00 PM	8.62	8.11	32.64	21.15	1.48	3.00	<0.1	<0.01
NF1	21/12/2024	Cloudy	Mid-Flood	Moderate	B	12.1	12:10:00 PM	8.62	8.10	32.77	21.15	1.47	2.50	<0.1	<0.01
NF2	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:59:00 AM	8.46	8.38	32.44	21.06	1.41	3.00	<0.1	<0.01
NF2	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:59:00 AM	8.65	8.38	32.39	21.05	1.46	4.00	<0.1	<0.01
NF2	21/12/2024	Cloudy	Mid-Flood	Moderate	M	5.35	12:00:00 PM	8.45	8.38	32.46	21.07	1.41	3.00	<0.1	<0.01
NF2	21/12/2024	Cloudy	Mid-Flood	Moderate	M	5.35	12:00:00 PM	8.66	8.38	32.54	21.06	1.46	3.00	<0.1	<0.01
NF2	21/12/2024	Cloudy	Mid-Flood	Moderate	B	9.7	12:01:00 PM	8.53	8.39	32.51	21.06	1.43	4.00	<0.1	<0.01
NF2	21/12/2024	Cloudy	Mid-Flood	Moderate	B	9.7	12:01:00 PM	8.46	8.37	32.55	21.06	1.42	3.00	<0.1	<0.01
NF3	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:51:00 AM	8.8	8.28	33.05	21.09	1.46	3.00	<0.1	<0.01
NF3	21/12/2024	Cloudy	Mid-Flood	Moderate	S	1	11:51:00 AM	8.82	8.28	32.93	21.09	1.59	3.00	<0.1	<0.01
NF3	21/12/2024	Cloudy	Mid-Flood	Moderate	M	6	11:52:00 AM	8.74	8.29	33.07	21.09	1.66	3.00	<0.1	<0.01
NF3	21/12/2024	Cloudy	Mid-Flood	Moderate	M	6	11:52:00 AM	8.85	8.30	33.01	21.07	1.61	6.00	<0.1	<0.01
NF3	21/12/2024	Cloudy	Mid-Flood	Moderate	B	11	11:53:00 AM	8.92	8.30	33.06	21.08	1.58	4.00	<0.1	<0.01
NF3	21/12/2024	Cloudy	Mid-Flood	Moderate	B	11	11:53:00 AM	8.76	8.30	33.03	21.1	1.55	3.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CE	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:00:00 AM	8.23	8.25	32.59	21.38	2.56	2.50	<0.1	<0.01
CE	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:00:00 AM	8.26	8.21	32.55	21.36	2.61	3.00	<0.1	<0.01
CE	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	10.8	8:01:00 AM	8.23	8.25	32.58	21.37	2.48	5.00	<0.1	<0.01
CE	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	10.8	8:01:00 AM	8.22	8.25	32.56	21.34	2.47	3.00	<0.1	<0.01
CE	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	20.6	8:02:00 AM	8.24	8.21	32.57	21.35	2.45	4.00	<0.1	<0.01
CE	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	20.6	8:02:00 AM	8.25	8.23	32.61	21.4	2.49	2.50	<0.1	<0.01
CF	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:20:00 AM	9.07	8.31	31.64	21.26	2.31	2.50	<0.1	<0.01
CF	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:20:00 AM	9.03	8.33	31.64	21.29	2.33	2.50	<0.1	<0.01
CF	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	10.5	11:21:00 AM	9.04	8.29	31.62	21.25	2.29	3.00	<0.1	<0.01
CF	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	10.5	11:21:00 AM	9.02	8.31	31.62	21.25	2.31	2.50	<0.1	<0.01
CF	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	20	11:22:00 AM	9.07	8.31	31.59	21.27	2.31	2.50	<0.1	<0.01
CF	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	20	11:22:00 AM	9.04	8.33	31.62	21.25	2.32	2.50	<0.1	<0.01
WSR01	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:54:00 AM	9.06	8.11	32.87	21.24	1.45	2.50	<0.1	<0.01
WSR01	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:54:00 AM	9.06	8.11	32.9	21.25	1.4	2.50	<0.1	<0.01
WSR01	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.5	10:55:00 AM	9.08	8.10	32.92	21.22	1.46	2.50	<0.1	<0.01
WSR01	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.5	10:55:00 AM	9.04	8.10	32.81	21.21	1.4	3.00	<0.1	<0.01
WSR01	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:56:00 AM	9.08	8.13	32.83	21.21	1.41	5.00	<0.1	<0.01
WSR01	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:56:00 AM	9.08	8.14	32.86	21.26	1.44	2.50	<0.1	<0.01
WSR02	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:33:00 AM	8.49	8.31	31.62	21.19	1.77	2.50	<0.1	<0.01
WSR02	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:33:00 AM	8.48	8.28	31.59	21.2	1.8	4.00	<0.1	<0.01
WSR02	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.95	10:34:00 AM	8.45	8.30	31.62	21.22	1.8	2.50	<0.1	<0.01
WSR02	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.95	10:34:00 AM	8.49	8.31	31.63	21.2	1.79	4.00	<0.1	<0.01
WSR02	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	8.9	10:35:00 AM	8.47	8.28	31.59	21.22	1.8	2.50	<0.1	<0.01
WSR02	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	8.9	10:35:00 AM	8.45	8.32	31.55	21.25	1.81	2.50	<0.1	<0.01
WSR03	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:15:00 AM	8.29	8.12	32.41	21.34	1.46	5.00	<0.1	<0.01
WSR03	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:15:00 AM	8.32	8.11	32.34	21.38	1.47	2.50	<0.1	<0.01
WSR03	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.7	10:16:00 AM	8.31	8.12	32.42	21.35	1.47	2.50	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR03	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.7	10:16:00 AM	8.33	8.12	32.43	21.37	1.45	2.50	<0.1	<0.01
WSR03	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.4	10:17:00 AM	8.33	8.11	32.47	21.38	1.44	2.50	<0.1	<0.01
WSR03	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.4	10:17:00 AM	8.3	8.09	32.41	21.37	1.43	3.00	<0.1	<0.01
WSR04	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:00:00 AM	9.13	8.19	31.81	21.43	1.92	2.50	<0.1	<0.01
WSR04	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:00:00 AM	9.14	8.20	31.89	21.4	1.94	2.50	<0.1	<0.01
WSR04	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.35	10:01:00 AM	9.13	8.18	31.84	21.42	1.93	3.00	<0.1	<0.01
WSR04	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.35	10:01:00 AM	9.08	8.20	31.86	21.37	1.91	2.50	<0.1	<0.01
WSR04	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	5.7	10:02:00 AM	9.08	8.17	31.86	21.43	1.92	5.00	<0.1	<0.01
WSR04	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	5.7	10:02:00 AM	9.11	8.18	31.8	21.4	1.91	5.00	<0.1	<0.01
WSR16	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:25:00 AM	8.32	8.27	32.43	21.18	1.84	3.00	<0.1	<0.01
WSR16	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:25:00 AM	8.31	8.29	32.38	21.17	1.8	6.00	<0.1	<0.01
WSR16	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:26:00 AM	8.32	8.28	32.41	21.16	1.83	2.50	<0.1	<0.01
WSR16	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:26:00 AM	8.34	8.31	32.32	21.16	1.82	3.00	<0.1	<0.01
WSR16	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	15	8:27:00 AM	8.33	8.29	32.33	21.18	1.84	2.50	<0.1	<0.01
WSR16	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	15	8:27:00 AM	8.31	8.30	32.33	21.17	1.82	2.50	<0.1	<0.01
WSR33	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:43:00 AM	9.24	8.26	32.54	21.46	1.64	3.00	<0.1	<0.01
WSR33	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:43:00 AM	9.19	8.29	32.52	21.45	1.65	2.50	<0.1	<0.01
WSR33	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.6	9:44:00 AM	9.19	8.29	32.55	21.47	1.65	2.50	<0.1	<0.01
WSR33	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.6	9:44:00 AM	9.19	8.29	32.51	21.48	1.62	2.50	<0.1	<0.01
WSR33	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.2	9:45:00 AM	9.2	8.29	32.49	21.51	1.63	2.50	<0.1	<0.01
WSR33	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.2	9:45:00 AM	9.21	8.27	32.5	21.5	1.62	2.50	<0.1	<0.01
WSR36	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:27:00 AM	9	8.34	31.96	21.31	1.32	3.00	<0.1	<0.01
WSR36	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:27:00 AM	9.05	8.35	31.92	21.31	1.36	3.00	<0.1	<0.01
WSR36	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.45	9:28:00 AM	9.01	8.34	31.85	21.36	1.35	4.00	<0.1	<0.01
WSR36	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.45	9:28:00 AM	9.05	8.34	31.95	21.34	1.33	5.00	<0.1	<0.01
WSR36	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	5.9	9:28:00 AM	9.04	8.32	31.95	21.37	1.36	2.50	<0.1	<0.01
WSR36	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	5.9	9:28:00 AM	9.02	8.35	31.84	21.36	1.35	2.50	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR37	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:21:00 AM	8.16	8.11	32.65	21.49	1.95	2.50	<0.1	<0.01
WSR37	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:21:00 AM	8.16	8.11	32.57	21.5	1.92	2.50	<0.1	<0.01
WSR37	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.05	9:22:00 AM	8.19	8.10	32.69	21.52	1.92	2.50	<0.1	<0.01
WSR37	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.05	9:22:00 AM	8.22	8.11	32.68	21.47	1.95	3.00	<0.1	<0.01
WSR37	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	7.1	9:23:00 AM	8.18	8.11	32.69	21.46	1.92	4.00	<0.1	<0.01
WSR37	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	7.1	9:23:00 AM	8.16	8.13	32.56	21.46	1.95	4.00	<0.1	<0.01
NF1	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:49:00 AM	9.01	8.27	31.8	21.5	1.8	5.00	<0.1	<0.01
NF1	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:49:00 AM	8.99	8.29	31.85	21.49	1.78	2.50	<0.1	<0.01
NF1	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	6.9	8:50:00 AM	8.96	8.25	31.8	21.46	1.77	2.50	<0.1	<0.01
NF1	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	6.9	8:50:00 AM	8.96	8.25	31.84	21.46	1.79	2.50	<0.1	<0.01
NF1	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	12.8	8:51:00 AM	9.01	8.26	31.85	21.52	1.81	5.00	<0.1	<0.01
NF1	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	12.8	8:51:00 AM	8.97	8.28	31.89	21.49	1.79	6.00	<0.1	<0.01
NF2	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:06:00 AM	9.18	8.25	32.67	21.47	2.11	3.00	<0.1	<0.01
NF2	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:06:00 AM	9.19	8.26	32.67	21.5	2.07	5.00	<0.1	<0.01
NF2	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	5.25	9:07:00 AM	9.19	8.23	32.65	21.49	2.08	2.50	<0.1	<0.01
NF2	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	5.25	9:07:00 AM	9.18	8.24	32.57	21.44	2.1	4.00	<0.1	<0.01
NF2	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	9.5	9:08:00 AM	9.19	8.23	32.67	21.49	2.05	3.00	<0.1	<0.01
NF2	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	9.5	9:08:00 AM	9.18	8.27	32.6	21.49	2.1	3.00	<0.1	<0.01
NF3	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:14:00 AM	8.45	8.27	31.86	21.2	1.79	2.50	<0.1	<0.01
NF3	24/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:14:00 AM	8.47	8.28	31.85	21.22	1.81	2.50	<0.1	<0.01
NF3	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	6.1	9:15:00 AM	8.47	8.27	31.77	21.18	1.79	5.00	<0.1	<0.01
NF3	24/12/2024	Cloudy	Mid-Ebb	Moderate	M	6.1	9:15:00 AM	8.5	8.28	31.79	21.22	1.8	7.00	<0.1	<0.01
NF3	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	11.2	9:16:00 AM	8.46	8.28	31.78	21.2	1.81	4.00	<0.1	<0.01
NF3	24/12/2024	Cloudy	Mid-Ebb	Moderate	B	11.2	9:16:00 AM	8.49	8.25	31.8	21.2	1.79	2.50	<0.1	<0.01
CE	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:00:00 AM	8.36	8.31	32.2	20.9	2.48	2.50	<0.1	<0.01
CE	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:00:00 AM	8.42	8.32	32.15	20.96	2.41	2.50	<0.1	<0.01
CE	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	12.2	8:01:00 AM	8.36	8.33	32.28	20.91	2.36	2.50	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CE	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	12.2	8:01:00 AM	8.37	8.29	32.32	20.91	2.38	2.50	<0.1	<0.01
CE	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	23.4	8:02:00 AM	8.38	8.31	32.21	20.96	2.39	2.50	<0.1	<0.01
CE	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	23.4	8:02:00 AM	8.4	8.31	32.22	20.96	2.37	2.50	<0.1	<0.01
CF	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:08:00 AM	8.38	8.30	32.38	21	2.24	2.50	<0.1	<0.01
CF	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:08:00 AM	8.37	8.31	32.42	21.05	2.35	4.00	<0.1	<0.01
CF	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	9.85	11:09:00 AM	8.33	8.29	32.56	20.98	2.31	2.50	<0.1	<0.01
CF	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	9.85	11:09:00 AM	8.41	8.32	32.55	20.99	2.28	2.50	<0.1	<0.01
CF	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	18.7	11:10:00 AM	8.4	8.31	32.43	21	2.26	2.50	<0.1	<0.01
CF	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	18.7	11:10:00 AM	8.3	8.33	32.45	21.04	2.25	3.00	<0.1	<0.01
WSR01	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:46:00 AM	9.01	8.16	32.41	21.28	1.49	4.00	<0.1	<0.01
WSR01	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:46:00 AM	8.98	8.15	32.27	21.35	1.52	5.00	<0.1	<0.01
WSR01	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.65	10:47:00 AM	9.08	8.14	32.35	21.33	1.5	2.50	<0.1	<0.01
WSR01	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.65	10:47:00 AM	9.03	8.15	32.25	21.29	1.49	2.50	<0.1	<0.01
WSR01	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	8.3	10:48:00 AM	9.08	8.13	32.26	21.31	1.51	5.00	<0.1	<0.01
WSR01	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	8.3	10:48:00 AM	8.99	8.13	32.29	21.29	1.53	3.00	<0.1	<0.01
WSR02	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:29:00 AM	8.82	8.30	31.97	21.08	1.33	9.00	<0.1	<0.01
WSR02	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:29:00 AM	8.81	8.29	31.91	21.12	1.3	5.00	<0.1	<0.01
WSR02	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.5	10:30:00 AM	8.83	8.28	31.91	21.1	1.34	2.50	<0.1	<0.01
WSR02	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.5	10:30:00 AM	8.71	8.29	31.88	21.08	1.32	2.50	<0.1	<0.01
WSR02	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:31:00 AM	8.79	8.29	31.96	21.09	1.33	2.50	<0.1	<0.01
WSR02	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:31:00 AM	8.71	8.28	31.83	21.1	1.29	2.50	<0.1	<0.01
WSR03	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:11:00 AM	8.5	8.29	31.74	21.13	1.32	3.00	<0.1	<0.01
WSR03	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:11:00 AM	8.47	8.30	31.88	21.13	1.29	2.50	<0.1	<0.01
WSR03	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.75	10:12:00 AM	8.49	8.30	31.89	21.12	1.32	2.50	<0.1	<0.01
WSR03	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.75	10:12:00 AM	8.51	8.30	31.78	21.11	1.33	3.00	<0.1	<0.01
WSR03	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.5	10:13:00 AM	8.42	8.31	31.73	21.07	1.33	3.00	<0.1	<0.01
WSR03	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.5	10:13:00 AM	8.54	8.29	31.82	21.09	1.29	2.50	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR04	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:54:00 AM	8.71	8.31	32.53	21.23	1.48	2.50	<0.1	<0.01
WSR04	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:54:00 AM	8.65	8.30	32.56	21.17	1.42	3.00	<0.1	<0.01
WSR04	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.65	9:55:00 AM	8.68	8.27	32.53	21.24	1.39	4.00	<0.1	<0.01
WSR04	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.65	9:55:00 AM	8.7	8.29	32.62	21.19	1.38	2.50	<0.1	<0.01
WSR04	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.3	9:56:00 AM	8.65	8.29	32.62	21.23	1.42	5.00	<0.1	<0.01
WSR04	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.3	9:56:00 AM	8.63	8.29	32.68	21.21	1.45	4.00	<0.1	<0.01
WSR16	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:22:00 AM	8.74	8.17	31.59	21.3	1.72	2.50	<0.1	<0.01
WSR16	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:22:00 AM	8.71	8.17	31.57	21.29	1.74	4.00	<0.1	<0.01
WSR16	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:23:00 AM	8.79	8.18	31.6	21.26	1.74	2.50	<0.1	<0.01
WSR16	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:23:00 AM	8.76	8.14	31.43	21.28	1.71	2.50	<0.1	<0.01
WSR16	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	15	8:24:00 AM	8.74	8.15	31.45	21.3	1.74	2.50	<0.1	<0.01
WSR16	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	15	8:24:00 AM	8.73	8.14	31.6	21.23	1.69	2.50	<0.1	<0.01
WSR33	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:39:00 AM	9.28	8.15	31.24	21.14	1.69	3.00	<0.1	<0.01
WSR33	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:39:00 AM	9.21	8.14	31.19	21.21	1.75	5.00	<0.1	<0.01
WSR33	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.5	9:40:00 AM	9.26	8.14	31.26	21.21	1.76	4.00	<0.1	<0.01
WSR33	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.5	9:40:00 AM	9.3	8.15	31.22	21.16	1.75	2.50	<0.1	<0.01
WSR33	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:41:00 AM	9.32	8.13	31.18	21.17	1.77	3.00	<0.1	<0.01
WSR33	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:41:00 AM	9.27	8.12	31.31	21.17	1.76	3.00	<0.1	<0.01
WSR36	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:23:00 AM	8.8	8.12	32.18	21.28	1.44	3.00	<0.1	<0.01
WSR36	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:23:00 AM	8.8	8.15	32.02	21.32	1.45	3.00	<0.1	<0.01
WSR36	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.4	9:24:00 AM	8.82	8.13	32.13	21.29	1.52	2.50	<0.1	<0.01
WSR36	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.4	9:24:00 AM	8.73	8.15	32.21	21.34	1.48	2.50	<0.1	<0.01
WSR36	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	5.8	9:24:00 AM	8.76	8.15	32.19	21.29	1.47	3.00	<0.1	<0.01
WSR36	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	5.8	9:24:00 AM	8.78	8.15	32.13	21.32	1.45	2.50	<0.1	<0.01
WSR37	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:16:00 AM	8.81	8.20	31.39	21.07	1.44	4.00	<0.1	<0.01
WSR37	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:16:00 AM	8.75	8.19	31.49	21.07	1.42	2.50	<0.1	<0.01
WSR37	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.8	9:17:00 AM	8.83	8.19	31.43	21.07	1.39	4.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR37	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.8	9:17:00 AM	8.81	8.18	31.38	21.1	1.4	5.00	<0.1	<0.01
WSR37	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.6	9:18:00 AM	8.74	8.21	31.46	21.12	1.44	4.00	<0.1	<0.01
WSR37	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.6	9:18:00 AM	8.87	8.19	31.39	21.1	1.4	2.50	<0.1	<0.01
NF1	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:44:00 AM	8.57	8.18	31.24	21.1	1.46	4.00	<0.1	<0.01
NF1	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:44:00 AM	8.64	8.18	31.22	21.11	1.48	3.00	<0.1	<0.01
NF1	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	7.05	8:45:00 AM	8.56	8.20	31.32	21.08	1.49	2.50	<0.1	<0.01
NF1	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	7.05	8:45:00 AM	8.54	8.18	31.27	21.08	1.29	2.50	<0.1	<0.01
NF1	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	13.1	8:46:00 AM	8.67	8.18	31.3	21.08	1.55	5.00	<0.1	<0.01
NF1	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	13.1	8:46:00 AM	8.62	8.22	31.32	21.1	1.39	2.50	<0.1	<0.01
NF2	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:00:00 AM	7.9	8.16	32.34	21.17	1.58	3.00	<0.1	<0.01
NF2	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:00:00 AM	7.99	8.16	32.22	21.14	1.61	4.00	<0.1	<0.01
NF2	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	5.05	9:01:00 AM	7.91	8.15	32.18	21.18	1.61	3.00	<0.1	<0.01
NF2	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	5.05	9:01:00 AM	7.92	8.15	32.22	21.19	1.62	3.00	<0.1	<0.01
NF2	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	9.1	9:02:00 AM	7.89	8.18	32.36	21.18	1.63	5.00	<0.1	<0.01
NF2	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	9.1	9:02:00 AM	7.89	8.19	32.31	21.2	1.58	5.00	<0.1	<0.01
NF3	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:08:00 AM	8.97	8.07	31.48	20.88	1.58	5.00	<0.1	<0.01
NF3	26/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:08:00 AM	8.94	8.07	31.46	20.91	1.45	3.00	<0.1	<0.01
NF3	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	5.9	9:09:00 AM	9.03	8.09	31.53	20.84	1.33	2.50	<0.1	<0.01
NF3	26/12/2024	Cloudy	Mid-Ebb	Moderate	M	5.9	9:09:00 AM	8.96	8.06	31.63	20.91	1.31	5.00	<0.1	<0.01
NF3	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	10.8	9:10:00 AM	9.02	8.06	31.51	20.89	1.33	2.50	<0.1	<0.01
NF3	26/12/2024	Cloudy	Mid-Ebb	Moderate	B	10.8	9:10:00 AM	8.93	8.08	31.56	20.91	1.31	2.50	<0.1	<0.01
CE	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:25:00 AM	9.48	8.11	32.15	21.25	2.57	2.50	<0.1	<0.01
CE	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:25:00 AM	9.49	8.09	32.11	21.32	2.6	2.50	<0.1	<0.01
CE	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	12.1	9:26:00 AM	9.47	8.08	32.19	21.31	2.55	2.50	<0.1	<0.01
CE	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	12.1	9:26:00 AM	9.5	8.12	32.21	21.26	2.51	2.50	<0.1	<0.01
CE	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	23.2	9:27:00 AM	9.46	8.09	32.13	21.25	2.48	2.50	<0.1	<0.01
CE	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	23.2	9:27:00 AM	9.47	8.11	32.18	21.31	2.46	4.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CF	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:38:00 PM	9.15	8.26	31.6	21.16	2.38	3.00	<0.1	<0.01
CF	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:38:00 PM	9.18	8.25	31.63	21.18	2.41	3.00	<0.1	<0.01
CF	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	10.3	12:39:00 PM	9.17	8.26	31.55	21.17	2.42	3.00	<0.1	<0.01
CF	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	10.3	12:39:00 PM	9.18	8.25	31.59	21.17	2.43	4.00	<0.1	<0.01
CF	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	19.6	12:40:00 PM	9.18	8.25	31.6	21.14	2.44	2.50	<0.1	<0.01
CF	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	19.6	12:40:00 PM	9.14	8.24	31.51	21.16	2.45	2.50	<0.1	<0.01
WSR01	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:15:00 PM	8.29	8.07	31.94	21.32	1.91	3.00	<0.1	<0.01
WSR01	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:15:00 PM	8.31	8.08	31.97	21.34	1.92	4.00	<0.1	<0.01
WSR01	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.75	12:16:00 PM	8.31	8.05	31.99	21.33	1.94	3.00	<0.1	<0.01
WSR01	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.75	12:16:00 PM	8.33	8.06	32.05	21.39	1.92	2.50	<0.1	<0.01
WSR01	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	8.5	12:17:00 PM	8.33	8.06	31.95	21.36	1.99	2.50	<0.1	<0.01
WSR01	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	8.5	12:17:00 PM	8.32	8.09	32.03	21.39	1.95	3.00	<0.1	<0.01
WSR02	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:54:00 AM	8.65	8.36	32.55	21.44	2.07	4.00	<0.1	<0.01
WSR02	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:54:00 AM	8.67	8.33	32.53	21.42	2.09	7.00	<0.1	<0.01
WSR02	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.75	11:55:00 AM	8.67	8.35	32.61	21.43	2.07	2.50	<0.1	<0.01
WSR02	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.75	11:55:00 AM	8.64	8.32	32.55	21.42	2.09	2.50	<0.1	<0.01
WSR02	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	8.5	11:56:00 AM	8.64	8.35	32.63	21.43	2.08	2.50	<0.1	<0.01
WSR02	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	8.5	11:56:00 AM	8.62	8.32	32.55	21.49	2.09	3.00	<0.1	<0.01
WSR03	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:36:00 AM	8.66	8.15	31.75	21.26	2.08	2.50	<0.1	<0.01
WSR03	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:36:00 AM	8.68	8.11	31.72	21.27	2.09	2.50	<0.1	<0.01
WSR03	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.95	11:37:00 AM	8.68	8.15	31.68	21.26	2.08	2.50	<0.1	<0.01
WSR03	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.95	11:37:00 AM	8.68	8.14	31.68	21.28	2.09	2.50	<0.1	<0.01
WSR03	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.9	11:38:00 AM	8.68	8.13	31.72	21.23	2.11	2.50	<0.1	<0.01
WSR03	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.9	11:38:00 AM	8.7	8.15	31.79	21.29	2.09	2.50	<0.1	<0.01
WSR04	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:21:00 AM	8.73	8.23	32.35	21.43	2.03	4.00	<0.1	<0.01
WSR04	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:21:00 AM	8.72	8.23	32.34	21.45	2.04	2.50	<0.1	<0.01
WSR04	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.55	11:22:00 AM	8.73	8.24	32.35	21.42	2.1	4.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR04	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.55	11:22:00 AM	8.74	8.25	32.34	21.49	2.05	2.50	<0.1	<0.01
WSR04	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.1	11:23:00 AM	8.75	8.24	32.37	21.43	2.01	4.00	<0.1	<0.01
WSR04	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.1	11:23:00 AM	8.73	8.26	32.39	21.46	1.94	3.00	<0.1	<0.01
WSR16	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:50:00 AM	8.08	8.29	32.02	21.39	2.01	3.00	<0.1	<0.01
WSR16	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:50:00 AM	8.13	8.33	31.99	21.37	2.05	2.50	<0.1	<0.01
WSR16	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	8.2	9:51:00 AM	8.09	8.29	31.98	21.39	2.05	4.00	<0.1	<0.01
WSR16	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	8.2	9:51:00 AM	8.08	8.32	32.06	21.38	2.08	7.00	<0.1	<0.01
WSR16	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	15.4	9:52:00 AM	8.13	8.33	31.97	21.42	2.03	2.50	<0.1	<0.01
WSR16	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	15.4	9:52:00 AM	8.08	8.31	32.07	21.42	2.06	4.00	<0.1	<0.01
WSR33	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:06:00 AM	8.81	8.22	32.56	21.23	1.6	3.00	<0.1	<0.01
WSR33	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:06:00 AM	8.86	8.23	32.61	21.3	1.62	6.00	<0.1	<0.01
WSR33	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.7	11:07:00 AM	8.82	8.19	32.49	21.25	1.62	4.00	<0.1	<0.01
WSR33	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.7	11:07:00 AM	8.83	8.19	32.48	21.25	1.61	5.00	<0.1	<0.01
WSR33	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.4	11:08:00 AM	8.81	8.21	32.54	21.27	1.59	5.00	<0.1	<0.01
WSR33	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.4	11:08:00 AM	8.8	8.19	32.47	21.27	1.62	2.50	<0.1	<0.01
WSR36	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:50:00 AM	8.07	8.17	32.1	21.29	1.28	3.00	<0.1	<0.01
WSR36	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:50:00 AM	8.09	8.20	32.1	21.25	1.26	2.50	<0.1	<0.01
WSR36	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.7	10:51:00 AM	8.1	8.18	32.01	21.31	1.29	4.00	<0.1	<0.01
WSR36	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.7	10:51:00 AM	8.09	8.17	32.1	21.3	1.28	2.50	<0.1	<0.01
WSR36	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.4	10:51:00 AM	8.07	8.19	31.97	21.26	1.27	2.50	<0.1	<0.01
WSR36	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.4	10:51:00 AM	8.08	8.19	31.98	21.27	1.29	2.50	<0.1	<0.01
WSR37	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:44:00 AM	8.94	8.16	32.69	21.08	1.32	5.00	<0.1	<0.01
WSR37	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:44:00 AM	8.93	8.16	32.71	21.09	1.38	2.50	<0.1	<0.01
WSR37	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.05	10:45:00 AM	8.97	8.17	32.64	21.12	1.4	3.00	<0.1	<0.01
WSR37	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.05	10:45:00 AM	8.94	8.18	32.58	21.1	1.3	5.00	<0.1	<0.01
WSR37	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	7.1	10:46:00 AM	8.96	8.18	32.57	21.11	1.29	5.00	<0.1	<0.01
WSR37	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	7.1	10:46:00 AM	8.93	8.16	32.63	21.14	1.31	4.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF1	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:14:00 AM	9.07	8.15	32.47	21.33	1.33	2.50	<0.1	<0.01
NF1	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:14:00 AM	9.12	8.13	32.36	21.31	1.34	2.50	<0.1	<0.01
NF1	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	6.6	10:15:00 AM	9.11	8.13	32.39	21.35	1.32	3.00	<0.1	<0.01
NF1	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	6.6	10:15:00 AM	9.11	8.14	32.36	21.3	1.34	5.00	<0.1	<0.01
NF1	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	12.2	10:16:00 AM	9.08	8.12	32.43	21.31	1.34	2.50	<0.1	<0.01
NF1	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	12.2	10:16:00 AM	9.08	8.15	32.39	21.3	1.32	4.00	<0.1	<0.01
NF2	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:29:00 AM	8.95	8.08	31.95	21.23	1.47	2.50	<0.1	<0.01
NF2	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:29:00 AM	8.9	8.09	31.85	21.25	1.45	2.50	<0.1	<0.01
NF2	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	5.05	10:30:00 AM	8.9	8.11	31.83	21.27	1.46	2.50	<0.1	<0.01
NF2	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	5.05	10:30:00 AM	8.91	8.10	31.89	21.29	1.37	2.50	<0.1	<0.01
NF2	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	9.1	10:31:00 AM	8.9	8.12	31.85	21.3	1.33	2.50	<0.1	<0.01
NF2	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	9.1	10:31:00 AM	8.93	8.12	31.81	21.23	1.38	2.50	<0.1	<0.01
NF3	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:37:00 AM	8.64	8.34	32.97	21.25	2.05	3.00	<0.1	<0.01
NF3	28/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:37:00 AM	8.66	8.31	32.97	21.32	2.01	3.00	<0.1	<0.01
NF3	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	6.1	10:38:00 AM	8.68	8.30	32.93	21.27	1.99	2.50	<0.1	<0.01
NF3	28/12/2024	Cloudy	Mid-Ebb	Moderate	M	6.1	10:38:00 AM	8.64	8.31	32.95	21.31	2.02	2.50	<0.1	<0.01
NF3	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	11.2	10:39:00 AM	8.64	8.34	32.87	21.26	1.99	2.50	<0.1	<0.01
NF3	28/12/2024	Cloudy	Mid-Ebb	Moderate	B	11.2	10:39:00 AM	8.67	8.34	32.86	21.26	2.02	2.50	<0.1	<0.01
CE	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:05:00 AM	8.49	8.15	32.16	21.21	2.58	2.50	<0.1	<0.01
CE	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:05:00 AM	8.38	8.14	32.32	21.25	2.54	5.00	<0.1	<0.01
CE	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	11.65	8:06:00 AM	8.39	8.15	32.28	21.23	2.55	2.50	<0.1	<0.01
CE	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	11.65	8:06:00 AM	8.36	8.15	32.23	21.23	2.57	2.50	<0.1	<0.01
CE	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	22.3	8:07:00 AM	8.37	8.17	32.3	21.21	2.56	2.50	<0.1	<0.01
CE	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	22.3	8:07:00 AM	8.48	8.16	32.31	21.22	2.59	2.50	<0.1	<0.01
CF	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:02:00 AM	8.05	8.32	32.21	21.38	2.39	4.00	<0.1	<0.01
CF	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:02:00 AM	8.07	8.34	32.33	21.37	2.47	2.50	<0.1	<0.01
CF	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	9.5	11:03:00 AM	8.14	8.31	32.37	21.35	2.49	2.50	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CF	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	9.5	11:03:00 AM	8.21	8.34	32.15	21.37	2.47	2.50	<0.1	<0.01
CF	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	18	11:04:00 AM	8.06	8.32	32.29	21.34	2.45	2.50	<0.1	<0.01
CF	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	18	11:04:00 AM	8.17	8.32	32.23	21.37	2.43	5.00	<0.1	<0.01
WSR01	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:28:00 AM	8.93	8.31	32.82	21.27	2.01	2.50	<0.1	<0.01
WSR01	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:28:00 AM	9.04	8.34	32.69	21.27	2.07	2.50	<0.1	<0.01
WSR01	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.55	8:29:00 AM	8.96	8.31	32.85	21.27	2.08	3.00	<0.1	<0.01
WSR01	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.55	8:29:00 AM	9.1	8.33	32.7	21.24	2.06	2.50	<0.1	<0.01
WSR01	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	8.1	8:30:00 AM	9.09	8.31	32.76	21.27	1.96	5.00	<0.1	<0.01
WSR01	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	8.1	8:30:00 AM	9.14	8.33	32.73	21.24	1.99	2.50	<0.1	<0.01
WSR02	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:46:00 AM	8.43	8.16	32.11	21.31	2.06	4.00	<0.1	<0.01
WSR02	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:46:00 AM	8.53	8.19	31.9	21.3	2.02	2.50	<0.1	<0.01
WSR02	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.6	8:47:00 AM	8.38	8.18	32.02	21.27	2.06	2.50	<0.1	<0.01
WSR02	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.6	8:47:00 AM	8.49	8.18	31.91	21.28	2.02	4.00	<0.1	<0.01
WSR02	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	8.2	8:48:00 AM	8.42	8.19	32.12	21.31	2.04	3.00	<0.1	<0.01
WSR02	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	8.2	8:48:00 AM	8.51	8.16	32.02	21.27	2.03	3.00	<0.1	<0.01
WSR03	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:00:00 AM	8.6	8.36	32.87	21.43	2	2.50	<0.1	<0.01
WSR03	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:00:00 AM	8.45	8.36	32.74	21.4	2.04	4.00	<0.1	<0.01
WSR03	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.15	9:01:00 AM	8.43	8.36	32.81	21.44	2	2.50	<0.1	<0.01
WSR03	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.15	9:01:00 AM	8.58	8.36	32.85	21.42	2.02	3.00	<0.1	<0.01
WSR03	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	7.3	9:02:00 AM	8.54	8.36	32.79	21.44	2.03	6.00	<0.1	<0.01
WSR03	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	7.3	9:02:00 AM	8.42	8.33	32.87	21.41	1.99	4.00	<0.1	<0.01
WSR04	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:16:00 AM	9.07	8.33	32.11	21.16	1.65	5.00	<0.1	<0.01
WSR04	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:16:00 AM	9.18	8.34	32.24	21.16	1.63	2.50	<0.1	<0.01
WSR04	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.65	9:17:00 AM	9.17	8.35	32.26	21.17	1.62	5.00	<0.1	<0.01
WSR04	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.65	9:17:00 AM	9.07	8.35	32.05	21.17	1.64	4.00	<0.1	<0.01
WSR04	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.3	9:18:00 AM	9.08	8.35	32.24	21.15	1.62	2.50	<0.1	<0.01
WSR04	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.3	9:18:00 AM	9.12	8.36	32.16	21.14	1.64	2.50	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR16	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:41:00 AM	8.22	8.19	31.82	21.36	1.45	5.00	<0.1	<0.01
WSR16	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:41:00 AM	8.3	8.18	31.76	21.35	1.47	4.00	<0.1	<0.01
WSR16	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	8.3	10:42:00 AM	8.29	8.18	31.88	21.34	1.45	4.00	<0.1	<0.01
WSR16	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	8.3	10:42:00 AM	8.19	8.17	31.83	21.34	1.47	3.00	<0.1	<0.01
WSR16	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	15.6	10:43:00 AM	8.25	8.16	31.72	21.36	1.47	2.50	<0.1	<0.01
WSR16	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	15.6	10:43:00 AM	8.22	8.17	31.76	21.36	1.43	4.00	<0.1	<0.01
WSR33	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:31:00 AM	9.05	8.38	32.96	21.17	1.94	2.50	<0.1	<0.01
WSR33	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:31:00 AM	8.88	8.36	32.87	21.15	1.96	2.50	<0.1	<0.01
WSR33	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.85	9:32:00 AM	8.89	8.38	32.87	21.13	1.97	5.00	<0.1	<0.01
WSR33	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.85	9:32:00 AM	8.96	8.37	33	21.14	1.98	2.50	<0.1	<0.01
WSR33	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.7	9:33:00 AM	9.07	8.35	33.04	21.16	1.97	2.50	<0.1	<0.01
WSR33	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	6.7	9:33:00 AM	8.87	8.38	32.9	21.14	1.96	5.00	<0.1	<0.01
WSR36	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:48:00 AM	8.09	8.15	32.53	21.15	2.18	2.50	<0.1	<0.01
WSR36	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:48:00 AM	8.23	8.16	32.57	21.13	2.19	2.50	<0.1	<0.01
WSR36	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.4	9:49:00 AM	8.13	8.17	32.44	21.12	2.17	2.50	<0.1	<0.01
WSR36	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	3.4	9:49:00 AM	8.19	8.16	32.5	21.15	2.18	2.50	<0.1	<0.01
WSR36	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	5.8	9:49:00 AM	8.17	8.17	32.58	21.13	2.14	5.00	<0.1	<0.01
WSR36	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	5.8	9:49:00 AM	8.15	8.17	32.51	21.14	2.16	4.00	<0.1	<0.01
WSR37	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:05:00 AM	8.15	8.25	31.58	21.4	1.73	3.00	<0.1	<0.01
WSR37	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:05:00 AM	8.17	8.22	31.51	21.37	1.7	2.50	<0.1	<0.01
WSR37	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.25	10:06:00 AM	8.15	8.25	31.57	21.38	1.73	2.50	<0.1	<0.01
WSR37	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	4.25	10:06:00 AM	8.13	8.23	31.61	21.39	1.71	2.50	<0.1	<0.01
WSR37	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	7.5	10:07:00 AM	8.14	8.22	31.58	21.39	1.69	4.00	<0.1	<0.01
WSR37	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	7.5	10:07:00 AM	8.15	8.25	31.58	21.37	1.7	4.00	<0.1	<0.01
NF1	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:29:00 AM	8.74	8.29	32.3	21.14	1.75	3.00	<0.1	<0.01
NF1	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:29:00 AM	8.58	8.31	32.34	21.15	1.8	5.00	<0.1	<0.01
NF1	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	6.85	10:30:00 AM	8.73	8.30	32.39	21.14	1.75	3.00	<0.1	<0.01

Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp ((°C)	Turbidty (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF1	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	6.85	10:30:00 AM	8.77	8.29	32.35	21.14	1.76	5.00	<0.1	<0.01
NF1	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	12.7	10:31:00 AM	8.74	8.30	32.39	21.16	1.79	3.00	<0.1	<0.01
NF1	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	12.7	10:31:00 AM	8.62	8.31	32.35	21.14	1.81	2.50	<0.1	<0.01
NF2	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:21:00 AM	8.44	8.22	32.47	21.22	1.83	3.00	<0.1	<0.01
NF2	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:21:00 AM	8.36	8.19	32.5	21.2	1.85	3.00	<0.1	<0.01
NF2	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	5.25	10:22:00 AM	8.46	8.19	32.49	21.2	1.82	3.00	<0.1	<0.01
NF2	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	5.25	10:22:00 AM	8.38	8.20	32.44	21.19	1.84	4.00	<0.1	<0.01
NF2	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	9.5	10:23:00 AM	8.38	8.22	32.37	21.22	1.81	5.00	<0.1	<0.01
NF2	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	9.5	10:23:00 AM	8.36	8.21	32.29	21.21	1.82	2.50	<0.1	<0.01
NF3	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:14:00 AM	7.88	8.37	31.57	21.08	1.57	3.00	<0.1	<0.01
NF3	31/12/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:14:00 AM	7.77	8.38	31.68	21.11	1.6	5.00	<0.1	<0.01
NF3	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	6.25	10:15:00 AM	7.83	8.37	31.55	21.07	1.57	6.00	<0.1	<0.01
NF3	31/12/2024	Cloudy	Mid-Ebb	Moderate	M	6.25	10:15:00 AM	7.95	8.40	31.69	21.07	1.6	3.00	<0.1	<0.01
NF3	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	11.5	10:16:00 AM	7.91	8.38	31.56	21.08	1.62	4.00	<0.1	<0.01
NF3	31/12/2024	Cloudy	Mid-Ebb	Moderate	B	11.5	10:16:00 AM	7.83	8.37	31.62	21.07	1.57	3.00	<0.1	<0.01

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
12/01/2024 01:00 AM	No effluent discharge from TKODP due to the plant has stopped production.			
12/01/2024 03:00 AM				
12/01/2024 05:00 AM				
12/01/2024 07:00 AM				
12/01/2024 09:00 AM				
12/01/2024 11:00 AM				
12/01/2024 01:00 PM				
12/01/2024 03:00 PM				
12/01/2024 05:00 PM				
12/01/2024 07:00 PM				
12/01/2024 09:00 PM				
12/01/2024 11:00 PM				
12/02/2024 12:00 AM				
12/02/2024 02:00 AM				
12/02/2024 04:00 AM				
12/02/2024 06:00 AM				
12/02/2024 08:00 AM				
12/02/2024 10:00 AM				
12/02/2024 12:00 PM				
12/02/2024 02:00 PM				
12/02/2024 04:00 PM				
12/02/2024 06:00 PM				
12/02/2024 08:00 PM				
12/02/2024 10:00 PM				
12/03/2024 12:00 AM				
12/03/2024 02:00 AM				
12/03/2024 04:00 AM				
12/03/2024 06:00 AM				
12/03/2024 08:00 AM				
12/03/2024 10:00 AM				
12/03/2024 12:00 PM				
12/03/2024 02:00 PM				
12/03/2024 04:00 PM				
12/03/2024 06:00 PM				
12/03/2024 08:00 PM				
12/03/2024 10:00 PM				
12/04/2024 12:00 AM				
12/04/2024 02:00 AM				
12/04/2024 04:00 AM				
12/04/2024 06:00 AM				
12/04/2024 08:00 AM				
12/04/2024 10:00 AM				
12/04/2024 12:00 PM				
12/04/2024 02:00 PM				
12/04/2024 04:00 PM				
12/04/2024 06:00 PM				
12/04/2024 08:00 PM				
12/04/2024 10:00 PM				

Contract No. 13/WSD/17.
Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant
Continuous Effluent Monitoring (December 2024)

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
12/05/2024 12:00 AM				
12/05/2024 02:00 AM				
12/05/2024 04:00 AM				
12/05/2024 06:00 AM				
12/05/2024 08:00 AM				
12/05/2024 10:00 AM				
12/05/2024 12:00 PM	51.04	7.34	22.5	0.01
12/05/2024 02:00 PM	52.64	7.33	22.1	0.01
12/05/2024 04:00 PM	52.54	7.34	22.3	0.02
12/05/2024 06:00 PM	52.01	7.33	22.2	0.01
12/05/2024 08:00 PM	51.95	7.33	22.3	0.01
12/05/2024 10:00 PM	No effluent discharge from TKODP due to the plant has stopped production.			
12/06/2024 12:00 AM				
12/06/2024 02:00 AM				
12/06/2024 04:00 AM				
12/06/2024 06:00 AM				
12/06/2024 08:00 AM				
12/06/2024 10:00 AM				
12/06/2024 12:00 PM	49.52	7.34	23.5	0.01
12/06/2024 02:00 PM	48.62	7.34	23.0	0.01
12/06/2024 04:00 PM	50.14	7.28	23.1	0.01
12/06/2024 06:00 PM	50.00	7.34	23.0	0.01
12/06/2024 08:00 PM	50.36	6.95	23.7	0.02
12/06/2024 10:00 PM	49.85	6.85	23.0	0.01
12/07/2024 12:00 AM	49.74	7.00	23.0	0.02
12/07/2024 02:00 AM	50.01	7.01	23.1	0.00
12/07/2024 04:00 AM	50.85	7.35	23.3	0.01
12/07/2024 06:00 AM	50.13	7.20	23.6	0.01
12/07/2024 08:00 AM	48.54	6.84	23.8	0.01
12/07/2024 10:00 AM	49.99	6.98	23.0	0.02
12/07/2024 12:00 PM	51.06	6.94	22.6	0.00
12/07/2024 02:00 PM	52.54	7.01	23.1	0.01
12/07/2024 04:00 PM	50.01	7.03	22.5	0.02
12/07/2024 06:00 PM	49.84	7.00	22.6	0.00
12/07/2024 08:00 PM	49.35	7.05	23.6	0.01
12/07/2024 10:00 PM	49.05	6.98	23.8	0.01
12/08/2024 12:00 AM	49.74	7.00	23.5	0.01
12/08/2024 02:00 AM	48.99	7.01	22.9	0.01
12/08/2024 04:00 AM	49.64	6.84	22.8	0.01
12/08/2024 06:00 AM	49.35	6.98	23.1	0.00
12/08/2024 08:00 AM	50.31	7.03	22.8	0.00
12/08/2024 10:00 AM	50.20	6.84	23.3	0.01
12/08/2024 12:00 PM	49.87	7.04	23.0	0.00
12/08/2024 02:00 PM	50.84	6.84	22.9	0.01
12/08/2024 04:00 PM	49.25	7.05	23.1	0.01
12/08/2024 06:00 PM	50.64	7.10	23.3	0.00
12/08/2024 08:00 PM	49.84	7.20	23.5	0.00
12/08/2024 10:00 PM	50.31	6.99	23.0	0.02

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
12/09/2024 12:00 AM	50.20	7.32	23.4	0.00
12/09/2024 02:00 AM	50.05	7.20	23.5	0.01
12/09/2024 04:00 AM	50.04	6.88	22.8	0.01
12/09/2024 06:00 AM	49.84	7.10	23.1	0.01
12/09/2024 08:00 AM	49.88	6.84	22.6	0.01
12/09/2024 10:00 AM	48.99	7.06	23.1	0.01
12/09/2024 12:00 PM	49.34	7.05	23.1	0.01
12/09/2024 02:00 PM	50.34	7.10	23.2	0.01
12/09/2024 04:00 PM	50.20	7.34	23.8	0.01
12/09/2024 06:00 PM	49.88	6.84	22.9	0.01
12/09/2024 08:00 PM	50.04	7.00	23.0	0.02
12/09/2024 10:00 PM	No effluent discharge from TKODP due to the plant has stopped production.			
12/10/2024 12:00 AM				
12/10/2024 02:00 AM				
12/10/2024 04:00 AM				
12/10/2024 06:00 AM				
12/10/2024 08:00 AM				
12/10/2024 10:00 AM				
12/10/2024 12:00 PM	48.99	8.03	21.4	0.00
12/10/2024 02:00 PM	50.10	8.03	21.2	0.01
12/10/2024 04:00 PM	49.87	8.03	21.6	0.01
12/10/2024 06:00 PM	50.04	8.03	21.9	0.01
12/10/2024 08:00 PM	51.06	8.03	21.7	0.01
12/10/2024 10:00 PM	No effluent discharge from TKODP due to the plant has stopped production.			
12/11/2024 12:00 AM				
12/11/2024 02:00 AM				
12/11/2024 04:00 AM				
12/11/2024 06:00 AM				
12/11/2024 08:00 AM				
12/11/2024 10:00 AM				
12/11/2024 12:00 PM	49.84	8.01	22.8	0.01
12/11/2024 02:00 PM	42.62	8.05	22.6	0.01
12/11/2024 04:00 PM	44.54	8.08	22.6	0.01
12/11/2024 06:00 PM	44.31	8.02	22.7	0.01
12/11/2024 08:00 PM	44.18	8.08	22.7	0.01
12/11/2024 10:00 PM	43.95	8.08	22.7	0.01
12/12/2024 12:00 AM	43.75	8.03	22.4	0.01
12/12/2024 02:00 AM	43.68	8.05	21.9	0.01
12/12/2024 04:00 AM	43.68	8.05	21.1	0.01
12/12/2024 06:00 AM	43.68	8.04	20.8	0.01
12/12/2024 08:00 AM	43.69	8.05	20.5	0.02
12/12/2024 10:00 AM	43.68	8.05	20.3	0.01
12/12/2024 12:00 PM	43.68	8.06	20.3	0.01
12/12/2024 02:00 PM	43.70	8.05	20.3	0.01
12/12/2024 04:00 PM	43.81	8.00	20.3	0.02
12/12/2024 06:00 PM	43.81	8.05	20.3	0.01
12/12/2024 08:00 PM	43.69	8.01	20.3	0.01
12/12/2024 10:00 PM	43.59	8.03	20.3	0.01

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Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant
Continuous Effluent Monitoring (December 2024)

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
12/13/2024 12:00 AM	43.59	8.05	20.3	0.01
12/13/2024 02:00 AM	43.70	8.05	20.2	0.02
12/13/2024 04:00 AM	43.49	8.05	20.2	0.01
12/13/2024 06:00 AM	43.49	8.04	19.9	0.01
12/13/2024 08:00 AM	43.49	8.05	19.7	0.02
12/13/2024 10:00 AM	43.63	8.03	19.6	0.01
12/13/2024 12:00 PM	43.63	8.05	19.5	0.01
12/13/2024 02:00 PM	43.53	8.02	19.5	0.01
12/13/2024 04:00 PM	43.53	8.05	19.6	0.01
12/13/2024 06:00 PM	43.53	8.01	19.6	0.01
12/13/2024 08:00 PM	43.57	8.05	19.6	0.01
12/13/2024 10:00 PM	43.57	8.05	19.4	0.01
12/14/2024 12:00 AM	43.57	8.05	19.1	0.01
12/14/2024 02:00 AM	43.51	8.12	18.7	0.01
12/14/2024 04:00 AM	43.51	8.12	18.3	0.01
12/14/2024 06:00 AM	43.51	8.12	17.9	0.01
12/14/2024 08:00 AM	43.69	8.09	17.5	0.01
12/14/2024 10:00 AM	44.53	8.12	17.1	0.01
12/14/2024 12:00 PM	46.79	8.12	18.7	0.01
12/14/2024 02:00 PM	47.03	8.12	19.1	0.01
12/14/2024 04:00 PM	48.14	8.00	19.7	0.01
12/14/2024 06:00 PM	48.58	8.04	20.0	0.01
12/14/2024 08:00 PM	48.82	8.06	20.3	0.01
12/14/2024 10:00 PM	48.62	7.99	20.4	0.02
12/15/2024 12:00 AM	47.85	8.12	20.4	0.01
12/15/2024 02:00 AM	47.59	8.10	20.2	0.01
12/15/2024 04:00 AM	47.11	8.12	20.0	0.01
12/15/2024 06:00 AM	46.85	8.12	19.9	0.03
12/15/2024 08:00 AM	46.19	8.06	19.7	0.01
12/15/2024 10:00 AM	45.46	8.12	19.6	0.01
12/15/2024 12:00 PM	43.12	8.12	19.7	0.01
12/15/2024 02:00 PM	41.43	8.09	19.8	0.01
12/15/2024 04:00 PM	40.79	8.12	20.2	0.01
12/15/2024 06:00 PM	40.61	8.12	20.2	0.01
12/15/2024 08:00 PM	40.43	8.10	20.2	0.01
12/15/2024 10:00 PM	41.01	8.10	20.1	0.01
12/16/2024 12:00 AM	40.01	8.12	20.1	0.01
12/16/2024 02:00 AM	45.31	8.02	20.2	0.01
12/16/2024 04:00 AM	43.54	8.02	20.2	0.02
12/16/2024 06:00 AM	43.02	8.02	20.2	0.01
12/16/2024 08:00 AM	42.54	8.00	20.2	0.01
12/16/2024 10:00 AM	43.01	8.02	20.3	0.01
12/16/2024 12:00 PM	41.05	8.02	20.3	0.02
12/16/2024 02:00 PM	41.64	8.00	20.4	0.01
12/16/2024 04:00 PM	41.05	8.02	20.5	0.01
12/16/2024 06:00 PM	41.84	7.98	20.5	0.01
12/16/2024 08:00 PM	42.01	8.01	20.4	0.01
12/16/2024 10:00 PM				

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
12/17/2024 12:00 AM	No effluent discharge from TKODP due to the plant has stopped production.			
12/17/2024 02:00 AM				
12/17/2024 04:00 AM				
12/17/2024 06:00 AM				
12/17/2024 08:00 AM				
12/17/2024 10:00 AM				
12/17/2024 12:00 PM				
12/17/2024 02:00 PM				
12/17/2024 04:00 PM				
12/17/2024 06:00 PM				
12/17/2024 08:00 PM				
12/17/2024 10:00 PM				
12/18/2024 12:00 AM				
12/18/2024 02:00 AM				
12/18/2024 04:00 AM				
12/18/2024 06:00 AM				
12/18/2024 08:00 AM				
12/18/2024 10:00 AM				
12/18/2024 12:00 PM				
12/18/2024 02:00 PM				
12/18/2024 04:00 PM				
12/18/2024 06:00 PM				
12/18/2024 08:00 PM				
12/18/2024 10:00 PM				
12/19/2024 12:00 AM				
12/19/2024 02:00 AM				
12/19/2024 04:00 AM				
12/19/2024 06:00 AM				
12/19/2024 08:00 AM				
12/19/2024 10:00 AM				
12/19/2024 12:00 PM				
12/19/2024 02:00 PM				
12/19/2024 04:00 PM				
12/19/2024 06:00 PM				
12/19/2024 08:00 PM				
12/19/2024 10:00 PM				
12/20/2024 12:00 AM				
12/20/2024 02:00 AM				
12/20/2024 04:00 AM				
12/20/2024 06:00 AM				
12/20/2024 08:00 AM				
12/20/2024 10:00 AM				
12/20/2024 12:00 PM				
12/20/2024 02:00 PM				
12/20/2024 04:00 PM				
12/20/2024 06:00 PM				
12/20/2024 08:00 PM				
12/20/2024 10:00 PM				

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Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant
Continuous Effluent Monitoring (December 2024)

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
12/21/2024 12:00 AM	No effluent discharge from TKODP due to the plant has stopped production.			
12/21/2024 02:00 AM				
12/21/2024 04:00 AM				
12/21/2024 06:00 AM				
12/21/2024 08:00 AM				
12/21/2024 10:00 AM				
12/21/2024 12:00 PM				
12/21/2024 02:00 PM				
12/21/2024 04:00 PM				
12/21/2024 06:00 PM				
12/21/2024 08:00 PM				
12/21/2024 10:00 PM				
12/22/2024 12:00 AM				
12/22/2024 02:00 AM				
12/22/2024 04:00 AM				
12/22/2024 06:00 AM				
12/22/2024 08:00 AM				
12/22/2024 10:00 AM				
12/22/2024 12:00 PM				
12/22/2024 02:00 PM				
12/22/2024 04:00 PM				
12/22/2024 06:00 PM				
12/22/2024 08:00 PM				
12/22/2024 10:00 PM				
12/23/2024 12:00 AM				
12/23/2024 02:00 AM				
12/23/2024 04:00 AM				
12/23/2024 06:00 AM				
12/23/2024 08:00 AM				
12/23/2024 10:00 AM				
12/23/2024 12:00 PM	55.05	6.38	15.90	0.01
12/23/2024 02:00 PM	54.95	6.82	16.91	0.00
12/23/2024 04:00 PM	53.36	6.84	17.42	0.02
12/23/2024 06:00 PM	52.64	7.00	17.42	0.01
12/23/2024 08:00 PM	No effluent discharge from TKODP due to the plant has stopped production.			
12/23/2024 10:00 PM				
12/24/2024 12:00 AM				
12/24/2024 02:00 AM				
12/24/2024 04:00 AM				
12/24/2024 06:00 AM				
12/24/2024 08:00 AM				
12/24/2024 10:00 AM				
12/24/2024 12:00 PM				
12/24/2024 02:00 PM				
12/24/2024 04:00 PM				
12/24/2024 06:00 PM				
12/24/2024 08:00 PM				
12/24/2024 10:00 PM				

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
12/25/2024 12:00 AM	No effluent discharge from TKODP due to the plant has stopped production.			
12/25/2024 02:00 AM				
12/25/2024 04:00 AM				
12/25/2024 06:00 AM				
12/25/2024 08:00 AM				
12/25/2024 10:00 AM				
12/25/2024 12:00 PM				
12/25/2024 02:00 PM				
12/25/2024 04:00 PM				
12/25/2024 06:00 PM				
12/25/2024 08:00 PM				
12/25/2024 10:00 PM				
12/26/2024 12:00 AM				
12/26/2024 02:00 AM				
12/26/2024 04:00 AM				
12/26/2024 06:00 AM				
12/26/2024 08:00 AM				
12/26/2024 10:00 AM				
12/26/2024 12:00 PM				
12/26/2024 02:00 PM				
12/26/2024 04:00 PM				
12/26/2024 06:00 PM				
12/26/2024 08:00 PM				
12/26/2024 10:00 PM				
12/27/2024 12:00 AM				
12/27/2024 02:00 AM				
12/27/2024 04:00 AM				
12/27/2024 06:00 AM				
12/27/2024 08:00 AM				
12/27/2024 10:00 AM				
12/27/2024 12:00 PM				
12/27/2024 02:00 PM				
12/27/2024 04:00 PM	48.04	8.24	19.5	0.00
12/27/2024 06:00 PM	47.05	8.24	19.6	0.01
12/27/2024 08:00 PM	46.64	8.13	19.6	0.01
12/27/2024 10:00 PM	48.04	8.13	19.6	0.01
12/28/2024 12:00 AM	47.54	8.13	19.6	0.01
12/28/2024 02:00 AM	47.04	8.10	19.6	0.01
12/28/2024 04:00 AM	45.05	8.13	19.6	0.01
12/28/2024 06:00 AM	44.68	8.05	19.6	0.01
12/28/2024 08:00 AM	48.04	8.13	19.6	0.01
12/28/2024 10:00 AM	47.00	8.13	19.6	0.01
12/28/2024 12:00 PM	46.89	8.10	19.6	0.01
12/28/2024 02:00 PM	49.88	8.13	19.6	0.01
12/28/2024 04:00 PM	48.05	8.03	19.6	0.01
12/28/2024 06:00 PM	49.84	8.13	19.6	0.01
12/28/2024 08:00 PM	50.10	8.01	17.9	0.01
12/28/2024 10:00 PM	49.54	8.14	18.5	0.01

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Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant
Continuous Effluent Monitoring (December 2024)

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
12/29/2024 12:00 AM	47.01	8.00	18.2	0.01
12/29/2024 02:00 AM	39.58	8.14	17.9	0.01
12/29/2024 04:00 AM	39.58	7.99	17.0	0.01
12/29/2024 06:00 AM	39.07	7.04	16.6	0.01
12/29/2024 08:00 AM	38.66	7.05	16.3	0.01
12/29/2024 10:00 AM	38.35	8.14	16.2	0.01
12/29/2024 12:00 PM	38.35	8.10	16.4	0.01
12/29/2024 02:00 PM	40.69	8.14	17.2	0.01
12/29/2024 04:00 PM	42.24	8.14	17.5	0.01
12/29/2024 06:00 PM	42.35	8.14	17.6	0.01
12/29/2024 08:00 PM	42.24	8.14	17.5	0.01
12/29/2024 10:00 PM	42.24	7.88	17.4	0.01
12/30/2024 12:00 AM	42.45	8.00	17.3	0.01
12/30/2024 02:00 AM	42.66	7.80	17.5	0.01
12/30/2024 04:00 AM	42.66	8.14	17.4	0.01
12/30/2024 06:00 AM	42.56	7.99	17.2	0.01
12/30/2024 08:00 AM	42.56	8.14	17.1	0.01
12/30/2024 10:00 AM	43.00	8.14	17.2	0.01
12/30/2024 12:00 PM	43.83	7.84	17.5	0.01
12/30/2024 02:00 PM	41.05	8.14	18.4	0.01
12/30/2024 04:00 PM	42.36	8.10	18.6	0.01
12/30/2024 06:00 PM	41.98	7.50	18.4	0.01
12/30/2024 08:00 PM	42.05	8.14	18.0	0.01
12/30/2024 10:00 PM	42.00	7.94	17.8	0.01
12/31/2024 12:00 AM	41.64	7.94	17.8	0.01
12/31/2024 02:00 AM	42.31	7.84	17.9	0.01
12/31/2024 04:00 AM	41.84	7.63	18.7	0.01
12/31/2024 06:00 AM	40.48	7.53	18.6	0.01
12/31/2024 08:00 AM	41.64	7.42	18.5	0.01
12/31/2024 10:00 AM	42.31	7.10	19.5	0.01
12/31/2024 12:00 PM	42.05	8.12	19.9	0.01
12/31/2024 02:00 PM	41.98	8.12	20.7	0.01
12/31/2024 04:00 PM	49.54	8.00	20.3	0.01
12/31/2024 06:00 PM	49.87	8.12	20.3	0.01
12/31/2024 08:00 PM	49.88	7.77	20.3	0.01
12/31/2024 10:00 PM	50.14	7.64	20.3	0.01

Date & Time	Suspended Solids (mg/L)	Total Inorganic Nitrogen (mg/L)	Total Phosphorus (mg/L)	*Sodium Metabisulphite (mg/L)	Iron (mg/L)
1/12/2024	No effluent discharge from TKODP due to the plant has stopped production.				
2/12/2024					
3/12/2024					
4/12/2024					
5/12/2024	<2	0.07	0.03	<2	<0.1
6/12/2024	<2	0.10	0.03	<2	<0.1
7/12/2024	<2	0.14	<0.01	<2	<0.1
8/12/2024	<2	0.15	0.01	<2	<0.1
9/12/2024	<2	0.15	0.03	<2	<0.1
10/12/2024	<2	0.14	<0.01	<2	<0.1
11/12/2024	<2	0.16	<0.01	<2	<0.1
12/12/2024	<2	0.16	<0.01	<2	<0.1
13/12/2024	<2	0.13	<0.01	<2	<0.1
14/12/2024	<2	0.13	<0.01	<2	<0.1
15/12/2024	<2	0.17	<0.01	<2	<0.1
16/12/2024	<2	0.16	<0.01	<2	<0.1
17/12/2024	No effluent discharge from TKODP due to the plant has stopped production.				
18/12/2024					
19/12/2024					
20/12/2024					
21/12/2024					
22/12/2024					
23/12/2024	<2	0.13	<0.01	<2	<0.1
24/12/2024	No effluent discharge from TKODP due to the plant has stopped production.				
25/12/2024					
26/12/2024					
27/12/2024	<2	0.17	<0.01	<2	<0.1
28/12/2024	<2	0.19	<0.01	<2	<0.1
29/12/2024	<2	0.16	<0.01	<2	<0.1
30/12/2024	<2	0.12	0.01	<2	<0.1
31/12/2024	<2	0.17	<0.01	<2	<0.1

*Remark:

As confirmed by various laboratories in Hong Kong, the lowest detection limit for Sodium Metabisulphite is <2 mg/L.

Due to the limitation of the laboratory, the lowest result for Sodium Metabisulphite will only be shown as < 2 mg/L.

Contract No. 13/WSD/17
Tseung Kwan O Desalination Plant Phase 1

Landfill Gas Monitoring – Field Measurement Recording Sheet

AJC JOINT VENTURE

Name of site: Tseung Kwan O Desalination Plant Phase 1

Sampling equipment used:	Dates calibrated
~~Altair 5X, 221165~~	23/4/24
Altair 5X, 221165	

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp °C	Pressure mBar	Remark
MH1-Mid	10/12/24	0700	Sunny	0	0	0.01	20.3	19	1010	
MH1-Base	10/12/24	0730	Sunny	0	0	0.01	20.2	19	1010	
MH2-Mid	10/12/24	0908	Sunny	0	0	0.02	20.3	19	1010	
MH2-Base	10/12/24	0840	Sunny	0	0	0.01	20.8	19	1010	
MH3-Base	10/12/24	0918	Sunny	0	0	0.01	20.6	19	1010	
MH3-Mid	10/12/24	0948	Sunny	0	0	0.01	20.4	19	1010	
MH4-Mid	10/12/24	1030	Sunny	0	0	0.01	20.3	19	1010	
MH4-Base	10/12/24	1108	Sunny	0	0	0.01	20.4	19	1010	
MH5-Base	10/12/24	1140	Sunny	0	0	0.01	20.4	19	1010	
MH5-Mid	10/12/24	1218	Sunny	0	0	0.01	20.3	19	1010	
MH6-Mid	10/12/24	1250	Sunny	0	0	0.01	20.4	19	1010	

	Name & Designation	Signature	Date
Prepared by field operator:	Nonny, operator		11/MM
Checked by:	Tony Lo / Env		11/MM/24

Contract No. 13/WSD/17
Tseung Kwan O Desalination Plant Phase 1

AJC JOINT VENTURE

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of site: Tseung Kwan O Desalination Plant Phase 1

Sampling equipment used:	Dates calibrated

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp °C	Pressure mBar	Remark
MW6 - Base	10/12/24	13:28	Sunny	0	0	0.01	20.6	19	1010	
MW7 - Base	10/12/24	14:00	Sunny	0	0	0.01	20.6	19	1010	
MW7 - Mid	10/12/24	14:35	Sunny	0	0	0.01	20.7	19	1010	
MW8 - Mid	10/12/24	15:05	Sunny	0	0	0.01	20.6	19	1010	
MW8 - Base	10/12/24	15:40	Sunny	0	0	0.01	20.6	19	1010	
MW9 - Base	10/12/24	16:00	Sunny	0	0	0.01	20.6	19	1010	
MW9 - Mid	10/12/24	16:40	Sunny	0	0	0.01	20.6	19	1010	
MW10 - Mid	10/12/24	17:10	Sunny	0	0	0.01	20.6	19	1010	
MW10 - Base	10/12/24	17:50	Sunny	0	0	0.01	20.6	19	1010	
MW11 - Mid	10/12/24	18:15	Sunny	0	0	0.01	20.6	19	1010	
MW11 - Base	10/12/24	18:40	Sunny	0	0	0.01	20.6	19	1010	

	Name & Designation	Signature	Date
Prepared by field operator:	Norman, operator		11/12/24
Checked by:	Tommy Lui/Tsun		11/12/24

Contract No. 13/WSD/17
Tseung Kwan O Desalination Plant Phase 1

AJC JOINT VENTURE

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of site: Tseung Kwan O Desalination Plant Phase 1

Sampling equipment used:	Dates calibrated

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp °C	Pressure mBar	Remark
MH12 Buc	11/12/24	0700	Sunny	0	0	0.01	20.7	18	1009	
MH12-Mid	11/12/24	0730	Sunny	0	0	0.01	20.7	18	1009	
MH13-Mid	11/12/24	0808	Sunny	0	0	0.01	20.7	18	1006	
MH13-Buc	11/12/24	0840	Sunny	0	0	0.01	20.7	18	1009	
MH14-Buc	11/12/24	0915	Sunny	0	0	0.01	20.6	18	1009	
MH14-Mid	11/12/24	0948	Sunny	0	0	0.01	20.7	18	1009	
MH15-Buc	11/12/24	1030	Sunny	0	0	0.01	20.6	18	1009	
MH15-Mid	11/12/24	1105	Sunny	0	0	0.01	20.6	18	1009	
MH16-Mid	11/12/24	1140	Sunny	0	0	0.01	20.7	18	1009	
MH16-Buc	11/12/24	1218	Sunny	0	0	0.01	20.7	18	1009	
MH17-Buc	11/12/24	1250	Sunny	0	0	0.01	20.7	18	1009	

	Name & Designation	Signature	Date
Prepared by field operator:	Norman, operator.		11/12/24
Checked by:	Tommy Law / EM		11/12/24

Contract No. 13/WSD/17
Tseung Kwan O Desalination Plant Phase 1

AJC JOINT VENTURE

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of site: Tseung Kwan O Desalination Plant Phase 1

Sampling equipment used:	Dates calibrated

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp °C	Pressure mBar	Remark
MH17-Mid	11/12/24	13:40	Sunny	0	0	0.01	20.8	18	1009	
132 Substation	11/12/24	14:20	Sunny	0	0	0.01	20.8	18	1009	
Treated water Pumping station	11/12/24	15:30	Sunny	0	0	0.01	20.8	18	1009	
Treated water tank	11/12/24	16:07	Sunny	0	0	0.01	20.8	18	1009	
chlorine water tank	11/12/24	16:45	Sunny	0	0	0.01	20.8	18	1009	
Switch Room	11/12/24	17:30	Sunny	0	0	0.01	20.8	18	1009	
Stand By generator & Switch Room	11/12/24.	17:~~00~~57	Sunny	0	0	0.01	20.8	18	1009.	

	Name & Designation	Signature	Date
Prepared by field operator:	Norman, Operator	Norman	11/12/24
Checked by:	Tommy Law IEM	Tommy	11/12/24.

Appendix G

Waste Flow Table

Contract No. 13/WSD/17
Environmental Management Plan for Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Appendix F - Monthly Summary Waste Flow Table

Name of Department: WSD Contract No.: 13/WSD/17

Monthly Summary Waste Flow Table for 2024 (year)

w

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)
Jan	4978.345	0.000	0.000	4667.745	310.600	0.000	0.000	0.000	0.000	0.000	77.800
Feb	22561.796	0.000	0.000	21883.006	678.790	0.000	0.000	0.000	0.000	0.000	53.480
Mar	81.140	0.000	0.000	0.000	81.140	0.000	0.000	0.000	0.000	0.000	52.260
Apr	57.130	0.000	0.000	0.000	57.130	0.000	0.000	0.000	0.000	0.000	47.390
May	91.370	0.000	0.000	0.000	91.370	0.000	0.000	0.000	0.000	0.000	77.260
Jun	61.590	0.000	0.000	0.000	61.590	0.000	0.000	0.000	0.002	0.000	59.320
Sub-total	27831.371	0.000	0.000	26550.751	1280.620	0.000	0.000	0.000	0.002	0.000	367.510
Jul	60378.440	0.000	0.000	0.000	60378.440	0.000	0.000	0.000	0.000	0.000	66.800
Aug	163.330	0.000	0.000	0.000	163.330	0.000	0.000	0.000	0.000	2.460	42.260
Sep	834.890	0.000	0.000	0.000	834.890	0.000	0.000	0.000	0.000	0.805	27.020
Oct	78.140	0.000	0.000	0.000	78.140	0.000	0.000	0.000	0.000	0.000	71.810
Nov	237.790	0.000	0.000	0.000	237.790	0.000	0.000	0.000	0.000	0.000	62.300
Dec	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	31.470
Total	89523.961	0.000	0.000	26550.751	62973.210	0.000	0.000	0.000	0.002	4.265	669.170

Notes:

(1) The performance targets are given in Section 1.69 of Specification B

(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(3) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging material

Appendix H

Ecology (Coral) Survey Report

1 INTRODUCTION

1.1 Background

1.1.1 The Project, Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant (TKODP), is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO) and is currently governed by a Further Environmental Permit (EP No. FEP – 01/503/2015/B) for the construction and operation of the Project.

1.1.2 The Jardine Engineering Corporation, Limited, China State Construction Engineering (Hong Kong) Limited and Acciona Agua, S.A. Trading As AJC Joint Venture (AJCJV) is contracted to carry out the Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant (TKODP) under Contract No. 13/WSD/17 (the Project).

1.1.3 Acuity Sustainability Consulting Limited (ASCL) is commissioned by AJCJV to undertake the Environmental Team (ET) services as required and/or implied, both explicitly and implicitly, in the Environmental Permit (EP), Environmental Impact Assessment Report (EIA Report) (Register No. AEIAR-192/2015) and Environmental Monitoring and Audit Manual (EM&A Manual) for the Project; and to carry out the Environmental Monitoring and Audit (EM&A) programme in fulfillment of the EIA Report's EM&A requirements and Contract No. 13/WSD/17 Specification requirements.

1.1.4 The proposed Desalination Plant at Tseung Kwan O (TKODP) will produce potable water with an initial capacity of 135 million litres per day (MLD), expandable to an ultimate capacity of 270 MLD in the future to provide a secure and alternative fresh water resource complying with the World Health Organization (WHO) standards. The plant will adopt the Seawater Reverse Osmosis (SWRO) technology, which dominates the market due to its reliability and progressive reduction in cost as the technology advances.

1.1.5 A baseline coral survey was conducted in October 2023 to verify the validity of the pervious EIA findings as well as to provide updated coral data for impact monitoring during the construction and operation phases. Two indirect impact sites and one control site were identified during the baseline coral survey for impact monitoring.

2 Methodology

2.1 All tagged coral colonies in C2, C3 and C8 will be monitored monthly during the first year of Project operation. The monitoring team will record the following parameters (using the same methodology adopted during the pre-construction phase survey): size, presence, survival, health conditions (percentage of mortality) and percentage of sediment of each tagged coral colonies. The general environmental conditions during the survey date will also be monitored.

2.2 Photographic records of the tagged coral colonies will be taken as far as possible maintaining the same aspect and orientation as photographs taken for the pre-translocation surveys. All the tags for marking coral colonies will be removed / retrieved once the monitoring programme is completed.

2.3 The results of the operation phase monitoring surveys should be reviewed with reference to findings of the baseline survey.

2.4 If, during the operation phase monitoring, observations of any die-off / abnormal conditions of the tagged corals are made, the ET will inform the Contractor, Independent Environmental Checker (IEC)/ Environmental Project Office (ENPO), Agriculture, Fisheries and Conservation Department (AFCD) and in liaison with AFCD investigate any measures needed.

2.5 Monitoring result will be reviewed and be compared against the Action Level and Limit Level (AL/LL) as set out in Table 2-1. Actions specified on Table 2-2 will be taken by ET, IEC, SOR and Contractor shall there be exceedance of AL/LL

Table 2-1 Action and Limit Levels for Operation Phase Coral Monitoring

Parameter	Action Level Definition	Limit Level Definition
Mortality	If during Impact Monitoring a 15% increase in the percentage of partial mortality on the corals occurs at more than 20% of the tagged indirect impact site coral colonies that is not recorded on the tagged corals at the control site, then the Action Level is exceeded	If during Impact Monitoring a 25% increase in the percentage of partial mortality on the corals occurs at more than 20% of the tagged indirect impact site coral colonies that is not recorded on the tagged corals at the control site, then the Limit Level is exceeded

Note: If the defined Action Level or Limit Level for coral monitoring is exceeded, the actions as set out in Table 5-4 will be implemented.

Table 2-2 Event and Action Plan for Operation Phase Monitoring

Event	Action			
	ET Leader	**IEC**	**SOR**	**Contractor**
Action Level Exceedance	1. Check monitoring data 2. Inform the IEC, SOR and Contractor of the findings; 3. Increase the monitoring to at least once a month to confirm findings; 4. Propose mitigation measures for consideration	1. Discuss monitoring with the ET and the Contractor; 2. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise the SOR accordingly.	1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET; 2. Make agreement on the measures to be implemented.	1. Inform the SOR and confirm notification of the non-compliance in writing; 2. Discuss with the ET and the IEC and propose measures to the IEC and the SOR; 3. Implement the agreed measures.

Remark: ** The "SOR" is equivalent to the "ER" as defined in the EM&A Manual of the Project

3. Result

3.1 The December 2024 operation phase monitoring were performed on 18th December 2024 for both Indirect Impact Sites and Control Site (Figure 1 and 2); and the weather conditions were summarized in Table 3.1.

Table 3.1 Weather Condition for the December 2024 Operation Phase Monitoring

Date	Condition	Average Underwater Visibility
18th December 2024	- Northeast force 5, - Sunny period	Less than 0.5

3.2 Ten (10) hard coral colonies in C2, C3 and C8 were monitored at each site of Control and Indirect Impact sites as suggested in the Operation Phase Monitoring Plan. The general health conditions (size, mortality, bleaching and sediment) were recorded and summarized in Table 3.2, Table 3.3 and Table 3.4 Photos of each tagged coral colonies were taken during the monitoring activities and shown in Appendix A (Photo Plate A, B and C).

3.3 All tagged coral colonies showed good health condition during the December 2024 Monitoring survey. There was not increased level of mortality, bleaching and sediment in other tagged coral colonies when compared with the baseline results.

Table 3.2 Sizes, Condition, Mortality, Bleaching and Sediment of 10 Natural Coral Colonies at Control Site C8 during December 2024 Coral Monitoring Survey

Tag #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline	18-Dec	Baseline	18-Dec	Baseline	18-Dec
1	*Favites pentagona*	66	Good	0	0	0	0	0	0
2	*Porites lutea*	58	Good	0	0	0	0	0	0
3	*Plesiastrea versipora*	31	Good	0	0	0	0	0	0
4	*Platygyra carnosus*	30	Good	0	0	0	0	0	0
5	*Acropora solitaryensis*	32	Good	0	0	0	0	0	0
6	*Plesiastrea versipora*	27	Good	0	0	0	0	0	0
7	*Porites lutea*	39	Good	0	0	0	0	0	0
8	*Favites pentagona*	20	Good	0	0	0	0	0	0
9	*Platygyra carnosus*	26	Good	0	0	0	0	0	0
10	*Acropora solitaryensis*	28	Good	0	0	0	0	0	0

Table 3.3 Sizes, Condition, Mortality, Bleaching and Sediment of 10 Natural Coral Colonies at Indirect Impact Site C2 during December 2024 Coral Monitoring Survey

Tag #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline	18-Dec	Baseline	18-Dec	Baseline	18-Dec
1	*Porites lutea*	21	Good	0	0	0	0	0	0
2	*Favites abdita*	43	Good	0	0	0	0	0	0
3	*Duncanopsammia peltata*	45	Good	0	0	0	0	0	0
4	*Dipsastraea veroni*	20	Good	0	0	0	0	0	0
5	*Favites pentagona*	19	Good	0	0	0	0	0	0
6	*Plesiastrea versipora*	21	Good	0	0	0	0	0	0
7	*Dipsastraea rotumana*	21	Good	0	0	0	0	0	0
8	*Dipsastraea speciosa*	20	Good	0	0	0	0	0	0
9	*Porites lutea*	37	Good	0	0	0	0	0	0
10	*Porites lutea*	38	Good	0	0	0	0	0	0

Table 3.4 Sizes, Condition, Mortality, Bleaching and Sediment of 10 Natural Coral Colonies at Indirect Impact Site C3 during December 2024 Coral Monitoring Survey

Tag #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline	18-Dec	Baseline	18-Dec	Baseline	18-Dec
11	*Acropora solitaryensis*	37	Good	0	0	0	0	0	0
12	*Platygyra carnosa*	30	Good	0	0	0	0	0	0
13	*Favites pentagona*	33	Good	0	0	0	0	0	0
14	*Platygyra carnosa*	22	Good	0	0	0	0	0	0
15	*Dipsastraea veroni*	20	Fair	0	0	0	0	0	0
16#	*Favites flexuosa*	20	Good	0	0	0	0	0	0
17	*Favites chinensis*	51	Good	0	0	0	0	0	0

18	*Plesiastrea versipora*	22	Good	0	0	0	0	0	0
19	*Duncanopsammia peltata*	29	Good	0	0	0	0	0	0
20	*Platygyra carnosus*	23	Good	0	0	0	0	0	0

#newly tagged coral colony

4. Discussion and Conclusion

4.1 The December 2024 coral monitoring survey were carried out in the indirect impact area (C2 and C3) and control site (C8) on 18th December 2024. A total of 30 tagged coral colonies (10 at control site and 20 and two indirect impact sites) were monitored. All coral colonies were good in general.

4.2 No sediment, bleaching or increased mortality in the general condition of all other tagged coral colonies were observed during the monthly operation phase monitoring period. No deterioration of the coral community was observed in the ecological monitoring results when compared with the baseline ecological monitoring results. There is no AL/LL exceedance during the monitoring period. Photos of each tagged corals colonies were taken and shown in Appendix A (Photo Plates A, B and C).

Figure 1 Two Proposed Indirect Impact Sites (C2 and C3) during Operation Phase

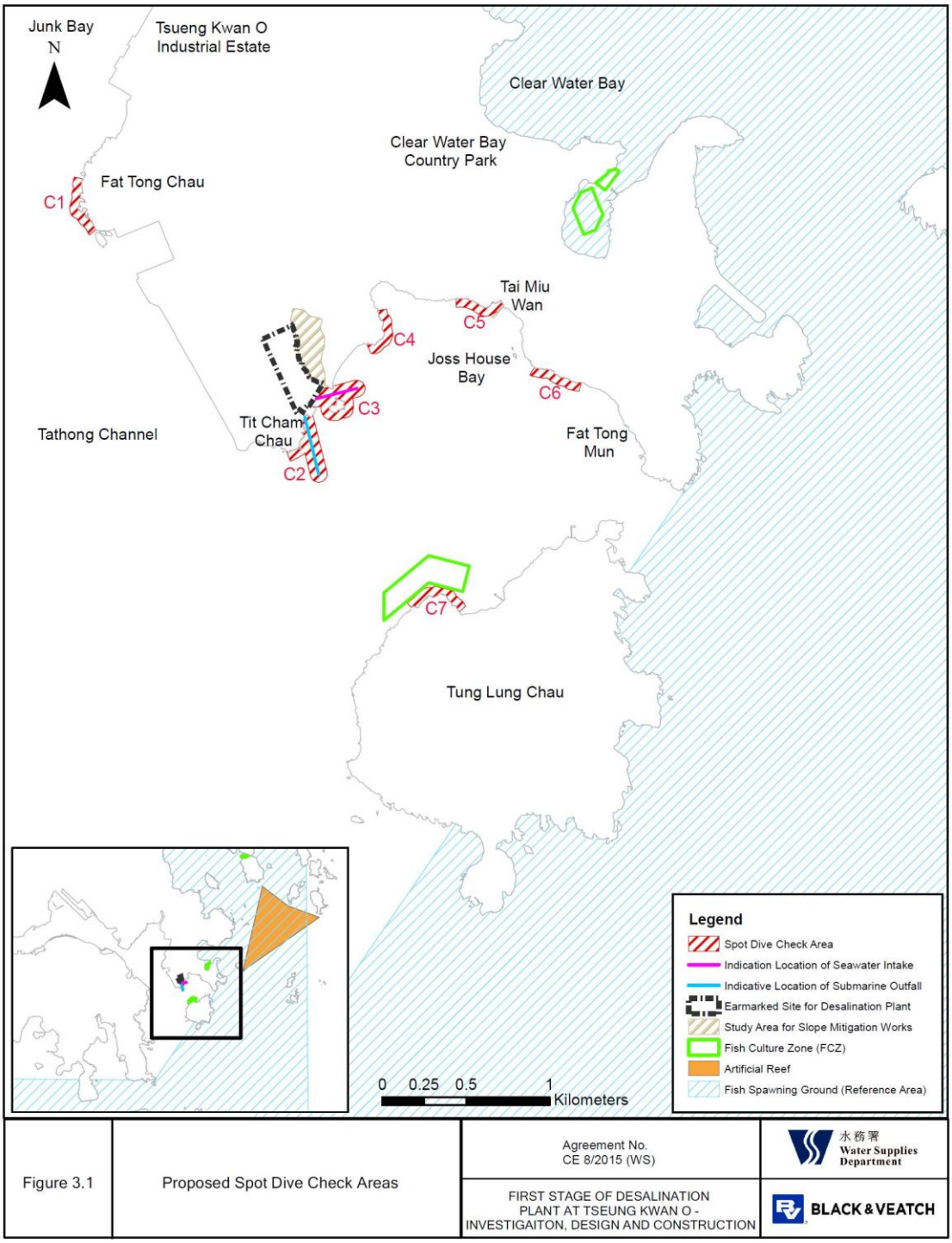
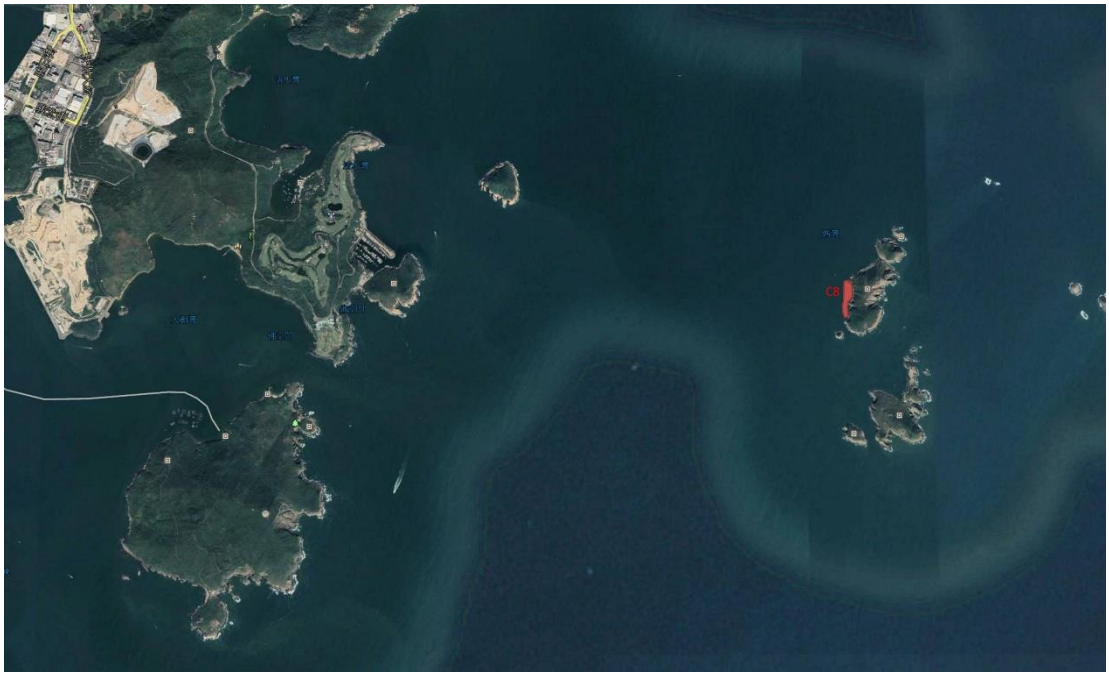
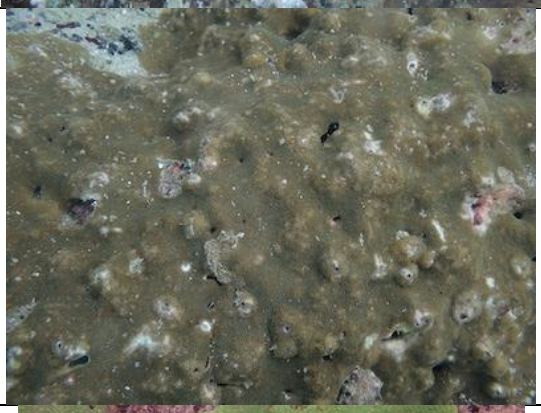


Figure 2 Proposed Control Site (C8) during Operation Phase



APPENDIX A
TAGGED CORAL PHOTO

Photo Plate A Tagged Corals at Control Site C8

Tag #	18th December 2024
#1	
#2	
#3	
#4	

#5		
#6		
#7		
#8		

#9			
#10			

Photo Plate B Tagged Corals at Indirect Impact Site C2

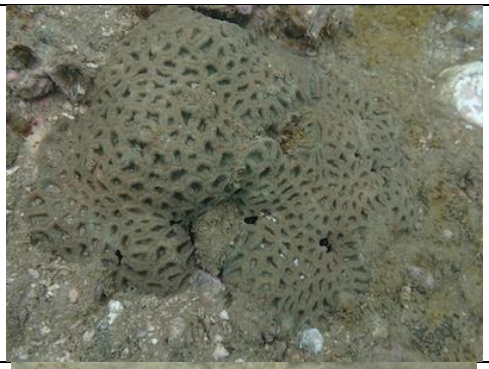
Tag #	18th December 2024
#1	
#2	
#3	
#4	

#5			
#6			
#7			
#8			
#9			

#10			

Photo Plate C Tagged Corals at Indirect Impact Site C3

Tag #	18th December 2024
#11	
#12	
#13	
#14	

#15		
#16		
#17		
#18		
#19		

#20			

THE END

Appendix I

Site Inspection Proforma

Member of the Aurecon Group

Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 03/12/2024 **Inspected by:** ET: Toby Wan SO: Derek Lai WSD: _____

Contractor: Tommy Law IEC: _____

Inspection Time: 14:30

Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Drizzle ☐ Rain ☐ Storm ☐ Hazy

Temperature 22 °C **Humidity** ☑ High ☐ Moderate ☐ Low

Wind ☐ Calm ☑ Light ☐ Breeze ☐ Strong

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
0.00	**General**					
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	☐	☑	☐	
0.02		Is ET Leader's log-book kept readily available for inspections?	☐	☑	☐	
1.00	**Air Quality**					
1.01	S4.8.2	Is the the treatment and storage of the chemical sludge enclosed inside building structure?	☐	☑	☐	
1.02	S4.8.2	Is the sludge treatment equipped Forced ventilation system with sufficient air change rate?	☑	☐	☐	
1.03	S4.8.2	Is the exhaust discharge directed away from ASRs as far as practicable?	☐	☑	☐	
1.04	S4.8.2	Is the chemical sludge produced at the desalination plant removed off-site regularly to avoid accumulation of potentially odourous materials on site?	☐	☑	☐	
1.05	S4.8.2	Is dewatered sludge to landfill handled and transported properly to minimise odour nuisance to nearby ASRs?	☐	☑	☐	
1.06	S4.8.2	Are the trucks fully enclosed during transporting the dewatered sludge to the landfill to minimise any off-site odour impact during the transportation process?	☐	☑	☐	
2.00	**Waste Management**					
2.02	S8.5.2	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	☐	☑	☐	
2.03	S8.5.2	Is a trip-ticket system implemented to monitor the disposal of solid wastes at public filling facilities and landfills?	☑	☐	☐	
2.04	S8.5.2	Is the Contractor registered as a chemical waste producer?	☐	☑	☐	
2.05	S8.5.2	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	☐	☑	☐	
2.06	S8.5.2	Are trip tickets for chemical waste disposal available for inspection?	☑	☐	☐	
2.07	S8.5.2	Is drip tray provided for chemical storage?	☐	☑	☐	
2.08	S8.5.2	Are all containers for chemical waste properly labelled?	☐	☑	☐	
2.09	S8.5.2	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	☐	☑	☐	

Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
2.10	S8.5.2	Are incompatible chemical wastes stored in different areas?	☐	✓	☐	
2.11	S8.5.2	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	☐	✓	☐	
2.12	S8.5.2	Is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or of 20% by volume of the chemical waste stored in that area, whichever is the greatest, provide?	☐	✓	☐	
2.13	S8.5.2	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	☐	✓	☐	
2.14	S8.5.2	Are sufficient general refuse disposal/collection points provided on site?	☐	✓	☐	
2.15	S8.5.2	Is general refuse disposed of properly and regularly?	☐	✓	☐	
2.16	S8.5.2	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	☐	✓	☐	
2.17	S8.5.2	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	☐	✓	☐	
2.18	S8.5.2	Is the dewatered sludge met the minimum dry solid content (30%) in the to be disposed of at landfills?	☐	✓	☐	
2.19	S8.5.2	Is a dumping license obtained to deliver public fill to public filling areas?	✓	☐	☐	
3.00	**Landscape and Visual**					
3.01	S11.10 & 11.11	Are Is site hoarding provided?	✓	☐	☐	
3.02	S11.10 & 11.11	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	☐	✓	☐	
3.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	☐	✓	☐	
3.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	☐	✓	☐	
3.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	✓	☐	☐	
3.06	S11.10 & 11.11	Are excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	✓	☐	☐	
3.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	☐	✓	☐	
3.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	✓	☐	☐	
4.00		**Landfill Gas Hazard**				
4.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	☐	✓	☐	
4.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	✓	☐	☐	
4.03	S12.7	Are the training with regard to the awareness of potential hazards of working in confined spaces provided from the Contractor to the workers?	☐	✓	☐	

Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
4.04	S12.7	Are the safety officers trained with regard to landfill gas and leachate related hazards and presented on the site throughout the works undertaken below grade?	☐	✓	☐	
4.05	S12.7	Are the all personnel working on site and all visitor made aware of the possibility of ignition of gas, the possible presence of contaminated water and the need to avoid physical contact?	☐	✓	☐	
4.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	✓	☐	☐	
4.07	S12.7	Are the monitoring frequency and areas being specified by the safety officers or appropriately qualified person? Are the all measurements being recorded and documented?	✓	☐	☐	
4.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	☐	✓	☐	
4.09	S12.7	Is the method statement covering all normal and emergency procedures provided by the drilling contractor prior to the commencement of the site works?	✓	☐	☐	
4.10	S12.7	Are the below ground services entries being sealed to prevent gas entry? Are the grilled metal covers being used for below grade cable trenches?	☐	✓	☐	
4.11	S12.7	Is each manhole or utility pit monitored with two measurements (at mid-depth and base) for minimum of 10 minutes? Is the steady reading and peak reading recorded at each manhole or utility pit?	✓	☐	☐	
4.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	☐	✓	☐	
5.00		**Overall**				
5.01		Is the EM&A properly implemented in general?	☐	✓	☐	

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Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Remark / Follow up of Observation(s) and Non-compliance(s) of Last Weekly Site Inspection:

Site Inspection Date : 3 Dec 2024

No major observation was found during site inspection

Signatures:

ET Representative	Contractor's Representative	Supervising Officer's Representative	IEC's Representative	WSD's Representative
(Name: Toby Wan)	(Name:)	(Name: Jade Lau)	(Name:)	(Name:)

Member of the Aurecon Group

Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 10/12/2024 **Inspected by:** ET: Toby Wan SO: Derek Lai WSD: _____

Contractor: Tommy Law IEC: _____

Inspection Time: 14:30

Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Drizzle ☐ Rain ☐ Storm ☐ Hazy

Temperature 21 °C **Humidity** ☑ High ☐ Moderate ☐ Low

Wind ☐ Calm ☑ Light ☐ Breeze ☐ Strong

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
0.00	**General**					
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	☐	☑	☐	
0.02		Is ET Leader's log-book kept readily available for inspections?	☐	☑	☐	
1.00	**Air Quality**					
1.01	S4.8.2	Is the the treatment and storage of the chemical sludge enclosed inside building structure?	☐	☑	☐	
1.02	S4.8.2	Is the sludge treatment equipped Forced ventilation system with sufficient air change rate?	☑	☐	☐	
1.03	S4.8.2	Is the exhaust discharge directed away from ASRs as far as practicable?	☐	☑	☐	
1.04	S4.8.2	Is the chemical sludge produced at the desalination plant removed off-site regularly to avoid accumulation of potentially odourous materials on site?	☐	☑	☐	
1.05	S4.8.2	Is dewatered sludge to landfill handled and transported properly to minimise odour nuisance to nearby ASRs?	☐	☑	☐	
1.06	S4.8.2	Are the trucks fully enclosed during transporting the dewatered sludge to the landfill to minimise any off-site odour impact during the transportation process?	☐	☑	☐	
2.00	**Waste Management**					
2.02	S8.5.2	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	☐	☑	☐	
2.03	S8.5.2	Is a trip-ticket system implemented to monitor the disposal of solid wastes at public filling facilities and landfills?	☑	☐	☐	
2.04	S8.5.2	Is the Contractor registered as a chemical waste producer?	☐	☑	☐	
2.05	S8.5.2	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	☐	☑	☐	
2.06	S8.5.2	Are trip tickets for chemical waste disposal available for inspection?	☑	☐	☐	
2.07	S8.5.2	Is drip tray provided for chemical storage?	☐	☑	☐	
2.08	S8.5.2	Are all containers for chemical waste properly labelled?	☐	☑	☐	
2.09	S8.5.2	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	☐	☑	☐	

Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
2.10	S8.5.2	Are incompatible chemical wastes stored in different areas?	☐	✓	☐	
2.11	S8.5.2	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	☐	✓	☐	
2.12	S8.5.2	Is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or of 20% by volume of the chemical waste stored in that area, whichever is the greatest, provide?	☐	✓	☐	
2.13	S8.5.2	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	☐	✓	☐	
2.14	S8.5.2	Are sufficient general refuse disposal/collection points provided on site?	☐	✓	☐	
2.15	S8.5.2	Is general refuse disposed of properly and regularly?	☐	✓	☐	
2.16	S8.5.2	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	☐	✓	☐	
2.17	S8.5.2	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	☐	✓	☐	
2.18	S8.5.2	Is the dewatered sludge met the minimum dry solid content (30%) in the to be disposed of at landfills?	☐	✓	☐	
2.19	S8.5.2	Is a dumping license obtained to deliver public fill to public filling areas?	✓	☐	☐	
3.00	**Landscape and Visual**					
3.01	S11.10 & 11.11	Are Is site hoarding provided?	✓	☐	☐	
3.02	S11.10 & 11.11	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	☐	✓	☐	
3.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	☐	✓	☐	
3.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	☐	✓	☐	
3.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	✓	☐	☐	
3.06	S11.10 & 11.11	Are excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	✓	☐	☐	
3.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	☐	✓	☐	
3.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	✓	☐	☐	
4.00		**Landfill Gas Hazard**				
4.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	☐	✓	☐	
4.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	✓	☐	☐	
4.03	S12.7	Are the training with regard to the awareness of potential hazards of working in confined spaces provided from the Contractor to the workers?	☐	✓	☐	

Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
4.04	S12.7	Are the safety officers trained with regard to landfill gas and leachate related hazards and presented on the site throughout the works undertaken below grade?	☐	✓	☐	
4.05	S12.7	Are the all personnel working on site and all visitor made aware of the possibility of ignition of gas, the possible presence of contaminated water and the need to avoid physical contact?	☐	✓	☐	
4.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	✓	☐	☐	
4.07	S12.7	Are the monitoring frequency and areas being specified by the safety officers or appropriately qualified person? Are the all measurements being recorded and documented?	✓	☐	☐	
4.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	☐	✓	☐	
4.09	S12.7	Is the method statement covering all normal and emergency procedures provided by the drilling contractor prior to the commencement of the site works?	✓	☐	☐	
4.10	S12.7	Are the below ground services entries being sealed to prevent gas entry? Are the grilled metal covers being used for below grade cable trenches?	☐	✓	☐	
4.11	S12.7	Is each manhole or utility pit monitored with two measurements (at mid-depth and base) for minimum of 10 minutes? Is the steady reading and peak reading recorded at each manhole or utility pit?	✓	☐	☐	
4.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	☐	✓	☐	
5.00		**Overall**				
5.01		Is the EM&A properly implemented in general?	☐	✓	☐	

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Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Remark / Follow up of Observation(s) and Non-compliance(s) of Last Weekly Site Inspection:

Site Inspection Date: 10 Dec 2024

No major observation was found dung site inspection.

Signatures:

ET Representative	Contractor's Representative	Supervising Officer's Representative	IEC's Representative	WSD's Representative
(Name: Toby Wan)	(Name:)	(Name: Derek Lai)	(Name:)	(Name:)

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Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 18/12/2024 **Inspected by:** ET: Toby Wan SO: Derek Lai WSD: David Ling
Contractor: Tommy Law IEC: Serena Shek
Inspection Time: 09:15

Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Drizzle ☐ Rain ☐ Storm ☐ Hazy

Temperature 20 °C **Humidity** ☑ High ☐ Moderate ☐ Low

Wind ☐ Calm ☑ Light ☐ Breeze ☐ Strong

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
0.00	**General**					
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	☐	☑	☐	
0.02		Is ET Leader's log-book kept readily available for inspections?	☐	☑	☐	
1.00	**Air Quality**					
1.01	S4.8.2	Is the the treatment and storage of the chemical sludge enclosed inside building structure?	☐	☑	☐	
1.02	S4.8.2	Is the sludge treatment equipped Forced ventilation system with sufficient air change rate?	☑	☐	☐	
1.03	S4.8.2	Is the exhaust discharge directed away from ASRs as far as practicable?	☐	☑	☐	
1.04	S4.8.2	Is the chemical sludge produced at the desalination plant removed off-site regularly to avoid accumulation of potentially odourous materials on site?	☐	☑	☐	
1.05	S4.8.2	Is dewatered sludge to landfill handled and transported properly to minimise odour nuisance to nearby ASRs?	☐	☑	☐	
1.06	S4.8.2	Are the trucks fully enclosed during transporting the dewatered sludge to the landfill to minimise any off-site odour impact during the transportation process?	☐	☑	☐	
2.00	**Waste Management**					
2.02	S8.5.2	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	☐	☑	☐	
2.03	S8.5.2	Is a trip-ticket system implemented to monitor the disposal of solid wastes at public filling facilities and landfills?	☑	☐	☐	
2.04	S8.5.2	Is the Contractor registered as a chemical waste producer?	☐	☑	☐	
2.05	S8.5.2	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	☐	☑	☐	
2.06	S8.5.2	Are trip tickets for chemical waste disposal available for inspection?	☑	☐	☐	
2.07	S8.5.2	Is drip tray provided for chemical storage?	☐	☑	☐	
2.08	S8.5.2	Are all containers for chemical waste properly labelled?	☐	☑	☐	
2.09	S8.5.2	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	☐	☑	☐	

Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
2.10	S8.5.2	Are incompatible chemical wastes stored in different areas?	☐	✓	☐	
2.11	S8.5.2	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	☐	✓	☐	
2.12	S8.5.2	Is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or of 20% by volume of the chemical waste stored in that area, whichever is the greatest, provide?	☐	✓	☐	
2.13	S8.5.2	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	☐	✓	☐	
2.14	S8.5.2	Are sufficient general refuse disposal/collection points provided on site?	☐	✓	☐	
2.15	S8.5.2	Is general refuse disposed of properly and regularly?	☐	✓	☐	
2.16	S8.5.2	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	☐	✓	☐	
2.17	S8.5.2	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	☐	✓	☐	
2.18	S8.5.2	Is the dewatered sludge met the minimum dry solid content (30%) in the to be disposed of at landfills?	☐	✓	☐	
2.19	S8.5.2	Is a dumping license obtained to deliver public fill to public filling areas?	✓	☐	☐	
3.00	**Landscape and Visual**					
3.01	S11.10 & 11.11	Are Is site hoarding provided?	✓	☐	☐	
3.02	S11.10 & 11.11	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	☐	✓	☐	
3.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	☐	✓	☐	
3.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	☐	✓	☐	
3.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	✓	☐	☐	
3.06	S11.10 & 11.11	Are excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	✓	☐	☐	
3.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	☐	✓	☐	
3.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	✓	☐	☐	
4.00		**Landfill Gas Hazard**				
4.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	☐	✓	☐	
4.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	✓	☐	☐	
4.03	S12.7	Are the training with regard to the awareness of potential hazards of working in confined spaces provided from the Contractor to the workers?	☐	✓	☐	

Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
4.04	S12.7	Are the safety officers trained with regard to landfill gas and leachate related hazards and presented on the site throughout the works undertaken below grade?	☐	✓	☐	
4.05	S12.7	Are the all personnel working on site and all visitor made aware of the possibility of ignition of gas, the possible presence of contaminated water and the need to avoid physical contact?	☐	✓	☐	
4.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	✓	☐	☐	
4.07	S12.7	Are the monitoring frequency and areas being specified by the safety officers or appropriately qualified person? Are the all measurements being recorded and documented?	✓	☐	☐	
4.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	☐	✓	☐	
4.09	S12.7	Is the method statement covering all normal and emergency procedures provided by the drilling contractor prior to the commencement of the site works?	✓	☐	☐	
4.10	S12.7	Are the below ground services entries being sealed to prevent gas entry? Are the grilled metal covers being used for below grade cable trenches?	☐	✓	☐	
4.11	S12.7	Is each manhole or utility pit monitored with two measurements (at mid-depth and base) for minimum of 10 minutes? Is the steady reading and peak reading recorded at each manhole or utility pit?	✓	☐	☐	
4.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	☐	✓	☐	
5.00		**Overall**				
5.01		Is the EM&A properly implemented in general?	☐	✓	☐	

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Member of the Aurecon Group

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Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Remark / Follow up of Observation(s) and Non-compliance(s) of Last Weekly Site Inspection:

Site Inspection Date : 18 Dec 2024

No major observation was found during site inspection.

Signatures:

ET Representative	Contractor's Representative	Supervising Officer's Representative	IEC's Representative	WSD's Representative
(Name: Toby Wan)	(Name:)	(Name:)	(Name: Serena Shek)	(Name:)

ACUITY sustainability
Member of the Aurecon Group

aurecon

Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 23/12/2024 **Inspected by:** ET: Toby Wan SO: Derek Lai WSD: _____
Contractor: Tommy Law IEC: _____
Inspection Time: 14:30

Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Drizzle ☐ Rain ☐ Storm ☐ Hazy

Temperature 17 °C **Humidity** ☑ High ☐ Moderate ☐ Low

Wind ☐ Calm ☑ Light ☐ Breeze ☐ Strong

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
0.00	**General**					
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	☐	☑	☐	
0.02		Is ET Leader's log-book kept readily available for inspections?	☐	☑	☐	
1.00	**Air Quality**					
1.01	S4.8.2	Is the the treatment and storage of the chemical sludge enclosed inside building structure?	☐	☑	☐	
1.02	S4.8.2	Is the sludge treatment equipped Forced ventilation system with sufficient air change rate?	☑	☐	☐	
1.03	S4.8.2	Is the exhaust discharge directed away from ASRs as far as practicable?	☐	☑	☐	
1.04	S4.8.2	Is the chemical sludge produced at the desalination plant removed off-site regularly to avoid accumulation of potentially odourous materials on site?	☐	☑	☐	
1.05	S4.8.2	Is dewatered sludge to landfill handled and transported properly to minimise odour nuisance to nearby ASRs?	☐	☑	☐	
1.06	S4.8.2	Are the trucks fully enclosed during transporting the dewatered sludge to the landfill to minimise any off-site odour impact during the transportation process?	☐	☑	☐	
2.00	**Waste Management**					
2.02	S8.5.2	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	☐	☑	☐	
2.03	S8.5.2	Is a trip-ticket system implemented to monitor the disposal of solid wastes at public filling facilities and landfills?	☑	☐	☐	
2.04	S8.5.2	Is the Contractor registered as a chemical waste producer?	☐	☑	☐	
2.05	S8.5.2	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	☐	☑	☐	
2.06	S8.5.2	Are trip tickets for chemical waste disposal available for inspection?	☑	☐	☐	
2.07	S8.5.2	Is drip tray provided for chemical storage?	☐	☑	☐	
2.08	S8.5.2	Are all containers for chemical waste properly labelled?	☐	☑	☐	
2.09	S8.5.2	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	☐	☑	☐	

Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
2.10	S8.5.2	Are incompatible chemical wastes stored in different areas?	☐	✓	☐	
2.11	S8.5.2	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	☐	✓	☐	
2.12	S8.5.2	Is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or of 20% by volume of the chemical waste stored in that area, whichever is the greatest, provide?	☐	✓	☐	
2.13	S8.5.2	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	☐	✓	☐	
2.14	S8.5.2	Are sufficient general refuse disposal/collection points provided on site?	☐	✓	☐	
2.15	S8.5.2	Is general refuse disposed of properly and regularly?	☐	✓	☐	
2.16	S8.5.2	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	☐	✓	☐	
2.17	S8.5.2	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	☐	✓	☐	
2.18	S8.5.2	Is the dewatered sludge met the minimum dry solid content (30%) in the to be disposed of at landfills?	☐	✓	☐	
2.19	S8.5.2	Is a dumping license obtained to deliver public fill to public filling areas?	✓	☐	☐	
3.00	**Landscape and Visual**					
3.01	S11.10 & 11.11	Are Is site hoarding provided?	✓	☐	☐	
3.02	S11.10 & 11.11	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	☐	✓	☐	
3.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	☐	✓	☐	
3.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	☐	✓	☐	
3.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	✓	☐	☐	
3.06	S11.10 & 11.11	Are excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	✓	☐	☐	
3.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	☐	✓	☐	
3.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	✓	☐	☐	
4.00		**Landfill Gas Hazard**				
4.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	☐	✓	☐	
4.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	✓	☐	☐	
4.03	S12.7	Are the training with regard to the awareness of potential hazards of working in confined spaces provided from the Contractor to the workers?	☐	✓	☐	

Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
4.04	S12.7	Are the safety officers trained with regard to landfill gas and leachate related hazards and presented on the site throughout the works undertaken below grade?	☐	✓	☐	
4.05	S12.7	Are the all personnel working on site and all visitor made aware of the possibility of ignition of gas, the possible presence of contaminated water and the need to avoid physical contact?	☐	✓	☐	
4.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	✓	☐	☐	
4.07	S12.7	Are the monitoring frequency and areas being specified by the safety officers or appropriately qualified person? Are the all measurements being recorded and documented?	✓	☐	☐	
4.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	☐	✓	☐	
4.09	S12.7	Is the method statement covering all normal and emergency procedures provided by the drilling contractor prior to the commencement of the site works?	✓	☐	☐	
4.10	S12.7	Are the below ground services entries being sealed to prevent gas entry? Are the grilled metal covers being used for below grade cable trenches?	☐	✓	☐	
4.11	S12.7	Is each manhole or utility pit monitored with two measurements (at mid-depth and base) for minimum of 10 minutes? Is the steady reading and peak reading recorded at each manhole or utility pit?	✓	☐	☐	
4.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	☐	✓	☐	
5.00		**Overall**				
5.01		Is the EM&A properly implemented in general?	☐	✓	☐	

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Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Remark / Follow up of Observation(s) and Non-compliance(s) of Last Weekly Site Inspection:

Site Inspection Date : 23 Dec 2024

No major site inspection was found during site inspection

Signatures:

ET Representative	Contractor's Representative	Supervising Officer's Representative	IEC's Representative	WSD's Representative
(Name: Toby Wan)	(Name:)	(Name:)	(Name:)	(Name:)

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Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 31/12/2024 **Inspected by:** ET: Toby Wan SO: Derek Lai WSD: _____
Contractor: Tommy Law IEC: _____
Inspection Time: 14:30

Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Drizzle ☐ Rain ☐ Storm ☐ Hazy

Temperature 20 °C **Humidity** ☑ High ☐ Moderate ☐ Low

Wind ☐ Calm ☑ Light ☐ Breeze ☐ Strong

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
0.00	**General**					
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	☐	☑	☐	
0.02		Is ET Leader's log-book kept readily available for inspections?	☐	☑	☐	
1.00	**Air Quality**					
1.01	S4.8.2	Is the the treatment and storage of the chemical sludge enclosed inside building structure?	☐	☑	☐	
1.02	S4.8.2	Is the sludge treatment equipped Forced ventilation system with sufficient air change rate?	☑	☐	☐	
1.03	S4.8.2	Is the exhaust discharge directed away from ASRs as far as practicable?	☐	☑	☐	
1.04	S4.8.2	Is the chemical sludge produced at the desalination plant removed off-site regularly to avoid accumulation of potentially odourous materials on site?	☐	☑	☐	
1.05	S4.8.2	Is dewatered sludge to landfill handled and transported properly to minimise odour nuisance to nearby ASRs?	☐	☑	☐	
1.06	S4.8.2	Are the trucks fully enclosed during transporting the dewatered sludge to the landfill to minimise any off-site odour impact during the transportation process?	☐	☑	☐	
2.00	**Waste Management**					
2.02	S8.5.2	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	☐	☑	☐	
2.03	S8.5.2	Is a trip-ticket system implemented to monitor the disposal of solid wastes at public filling facilities and landfills?	☑	☐	☐	
2.04	S8.5.2	Is the Contractor registered as a chemical waste producer?	☐	☑	☐	
2.05	S8.5.2	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	☐	☑	☐	
2.06	S8.5.2	Are trip tickets for chemical waste disposal available for inspection?	☑	☐	☐	
2.07	S8.5.2	Is drip tray provided for chemical storage?	☐	☑	☐	
2.08	S8.5.2	Are all containers for chemical waste properly labelled?	☐	☑	☐	
2.09	S8.5.2	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	☐	☑	☐	

Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
2.10	S8.5.2	Are incompatible chemical wastes stored in different areas?	☐	✓	☐	
2.11	S8.5.2	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	☐	✓	☐	
2.12	S8.5.2	Is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or of 20% by volume of the chemical waste stored in that area, whichever is the greatest, provide?	☐	✓	☐	
2.13	S8.5.2	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	☐	✓	☐	
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2.17	S8.5.2	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	☐	✓	☐	
2.18	S8.5.2	Is the dewatered sludge met the minimum dry solid content (30%) in the to be disposed of at landfills?	☐	✓	☐	
2.19	S8.5.2	Is a dumping license obtained to deliver public fill to public filling areas?	✓	☐	☐	
3.00	**Landscape and Visual**					
3.01	S11.10 & 11.11	Are Is site hoarding provided?	✓	☐	☐	
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3.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	☐	✓	☐	
3.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	✓	☐	☐	
3.06	S11.10 & 11.11	Are excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	✓	☐	☐	
3.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	☐	✓	☐	
3.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	✓	☐	☐	
4.00		**Landfill Gas Hazard**				
4.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	☐	✓	☐	
4.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	✓	☐	☐	
4.03	S12.7	Are the training with regard to the awareness of potential hazards of working in confined spaces provided from the Contractor to the workers?	☐	✓	☐	

Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
4.04	S12.7	Are the safety officers trained with regard to landfill gas and leachate related hazards and presented on the site throughout the works undertaken below grade?	☐	✓	☐	
4.05	S12.7	Are the all personnel working on site and all visitor made aware of the possibility of ignition of gas, the possible presence of contaminated water and the need to avoid physical contact?	☐	✓	☐	
4.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	✓	☐	☐	
4.07	S12.7	Are the monitoring frequency and areas being specified by the safety officers or appropriately qualified person? Are the all measurements being recorded and documented?	✓	☐	☐	
4.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	☐	✓	☐	
4.09	S12.7	Is the method statement covering all normal and emergency procedures provided by the drilling contractor prior to the commencement of the site works?	✓	☐	☐	
4.10	S12.7	Are the below ground services entries being sealed to prevent gas entry? Are the grilled metal covers being used for below grade cable trenches?	☐	✓	☐	
4.11	S12.7	Is each manhole or utility pit monitored with two measurements (at mid-depth and base) for minimum of 10 minutes? Is the steady reading and peak reading recorded at each manhole or utility pit?	✓	☐	☐	
4.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	☐	✓	☐	
5.00		**Overall**				
5.01		Is the EM&A properly implemented in general?	☐	✓	☐	

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Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Remark / Follow up of Observation(s) and Non-compliance(s) of Last Weekly Site Inspection:

Site Inspection Date : 31 Dec 2024.

No major observation was found during site inspection.

Signatures:

ET Representative	Contractor's Representative	Supervising Officer's Representative	IEC's Representative	WSD's Representative
(Name: Toby Wan)	(Name: Tony Lu)	(Name: Eddie Lai)	(Name:)	(Name:)

Appendix J

Complaint Log

Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 31 Dec 2024	0	2	N/A

Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
1 – 31 Dec 2024	0	0	N/A

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 – 31 Dec 2024	0	0	N/A

Appendix K

Exceedance Report (s)

Bi-Weekly Incident Report on Action Level or Limit Level Non-Compliance

Date of exceedance	Monitoring Station	Tide	Parameter	Measurement Result (mg/L)	Sampling depth	Depth Average Result (mg/L)	Action Level (mg/L)		Limit Level (mg/L)		Exceedance	Marine construction activities with contact with water (Y/N)	Exceedance related to Project (Y/N)	Reasons of non-project related exceedance						
							95%-ile	Control 120%	99%-ile	Control 130%				(1)	(2)	(3)	(4)	(5)	(6)	(7)
03/12/2024	WSR1	Flood	Suspended Solid (SS)	--	--	5.17	5.00	5.70	6.00	6.18	Action Level	N	N		✓			✓	✓	
	WSR2	Flood	Suspended Solid (SS)	--	--	6.17	5.00	5.70	6.00	6.18	Action Level	N	N		✓			✓	✓	
	WSR3	Flood	Suspended Solid (SS)	--	--	5.17	5.00	5.70	6.00	6.18	Action Level	N	N		✓			✓	✓	
	WSR4	Flood	Suspended Solid (SS)	--	--	5.17	5.00	5.70	6.00	6.18	Action Level	N	N		✓			✓	✓	
	WSR36	Flood	Suspended Solid (SS)	--	--	6.00	5.00	5.70	6.00	6.18	Action Level	N	N		✓			✓	✓	
	WSR37	Flood	Suspended Solid (SS)	--	--	7.33	5.00	5.70	6.00	6.18	Limit Level	N	N		✓			✓	✓	
05/12/2024	WSR16	Flood	Suspended Solid (SS)	--	--	5.83	5.00	5.20	6.00	5.63	Limit Level	N	N		✓			✓	✓	✓
	WSR33	Flood	Suspended Solid (SS)	--	--	6.00	5.00	5.20	6.00	5.63	Limit Level	N	N		✓			✓	✓	✓
	WSR37	Flood	Suspended Solid (SS)	--	--	5.50	5.00	5.20	6.00	5.63	Action Level	N	N		✓			✓	✓	✓
10/12/2024	WSR2	Ebb	Suspended Solid (SS)	--	--	6.00	5.00	5.00	6.00	5.42	Limit Level	N	N		✓			✓	✓	✓
	WSR33	Ebb	Suspended Solid (SS)	--	--	5.83	5.00	5.00	6.00	5.42	Limit Level	N	N		✓			✓	✓	✓
	WSR37	Ebb	Suspended Solid (SS)	--	--	5.17	5.00	5.00	6.00	5.42	Limit Level	N	N		✓			✓	✓	✓
	NF2	Ebb	Suspended Solid (SS)	--	--	6.17	5.00	5.00	6.00	5.42	Limit Level	N	N		✓			✓	✓	✓

1) Control station value already exceed either the Action or Limit Level.
2) No silt plume or pollution discharge from site area was observed.
3) Rainfall was recorded at Tseung Kwan O during the monitoring period, rainfall may lead to release of SS content form the soil of the nearby lands (e.g., Country Park, fill bank).
4) No action and limit level exceedance observed at WSR37 (Outfall Shaft).
5) Marine construction activity was completed.
6) No operation activities related to the release of SS in the reporting period.
7) No exceedances of SS at S.P.1 in the daily continuous effluent monitoring.

Conclusion:

During water quality monitoring on 3, 5, 7, 10 and 14 December 2024, six (6) Action Level and three (3) Limit Level exceedances were recorded during mid-flood tide and four (4) Limit Level exceedances were recorded during mid-ebb. Total six (6) Action Level and seven(7) Limit Level exceedances for SS of impact water quality monitoring were recorded between 1 December to 15 December 2024.

The marine construction works were completed on 1 September 2023. The commissioning activities were shown in the table below.

The desalination plant and the outfall shaft work normally.

After investigation, all exceedances were considered non-project related.

Operation Activities:

3 December 2024	5 December 2024
• The plant stopped operation	• Production of desalinated water • Water sampling and analysis
10 December 2024	

• Production of desalinated water • Water sampling and analysis	

Supporting Photo:

<table>
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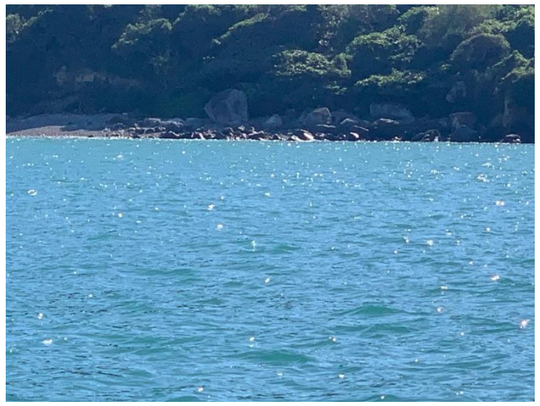
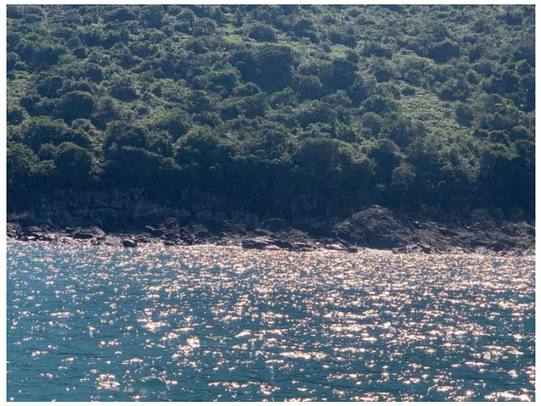
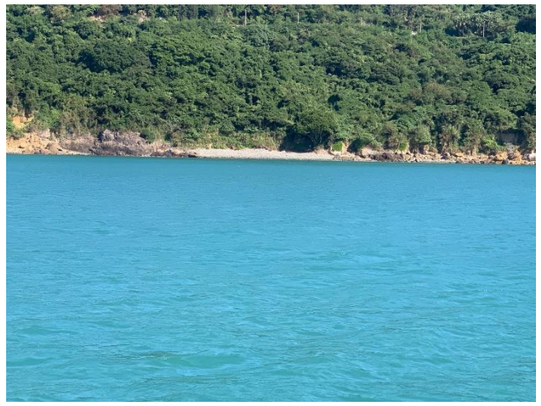
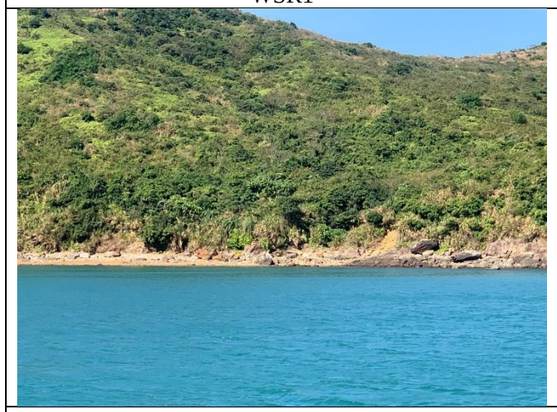
<tr><td rowspan="4">03/12/2024</td><td>  </td><td>  </td><td>  </td><td>  </td></tr>
<tr><td>WSR1</td><td>WSR2</td><td>WSR3</td><td>WSR4</td></tr>
<tr><td>  </td><td>  </td><td></td><td></td></tr>
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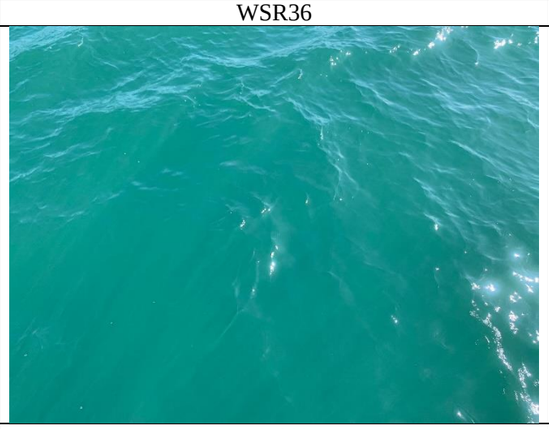
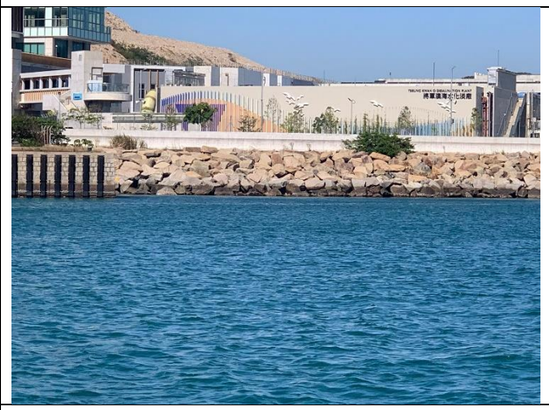
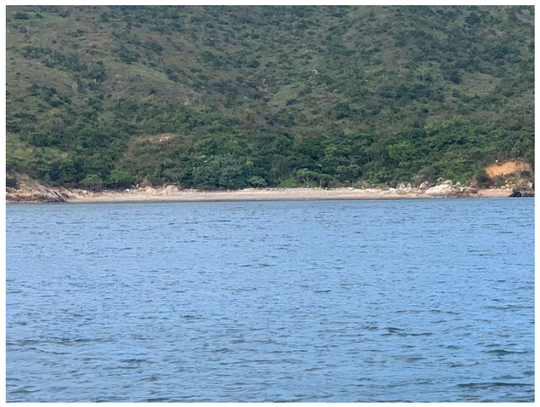
<tr><td rowspan="2">05/12/2024</td><td>  </td><td>  </td><td>  </td><td></td></tr>
<tr><td>WSR16</td><td>WSR33</td><td>WSR37</td><td></td></tr>
</table>

Date of exceedance	Monitoring station(s)			
10/12/2024				
	WSR2	WSR33	WSR37	NF2

Bi-Weekly Incident Report on Action Level or Limit Level Non-Compliance

Date of exceedance	Monitoring Station	Tide	Parameter	Measurement Result (mg/L)	Sampling depth	Depth Average Result (mg/L)	Action Level (mg/L)		Limit Level (mg/L)		Exceedance	Marine construction activities with contact with water (Y/N)	Exceedance related to Project (Y/N)	Reasons of non-project related exceedance						
							95%-ile	Control 120%	99%-ile	Control 130%				(1)	(2)	(3)	(4)	(5)	(6)	(7)
17/12/2024	NF1	Ebb	Suspended Solid (SS)	--	--	6.83	5.00	6.6	6.00	7.15	Action Level	N	N		✓		✓	✓	✓	
19/12/2024	WSR1	Ebb	Suspended Solid (SS)	--	--	5.83	5.00	5.30	6.00	5.74	Limit Level	N	N		✓		✓	✓	✓	
	WSR2	Ebb	Suspended Solid (SS)	--	--	5.33	5.00	5.30	6.00	5.74	Limit Level	N	N		✓		✓	✓	✓	
	NF2	Ebb	Suspended Solid (SS)	--	--	5.67	5.00	5.30	6.00	5.74	Limit Level	N	N		✓		✓	✓	✓	
	NF3	Ebb	Suspended Solid (SS)	--	--	5.33	5.00	5.30	6.00	5.74	Limit Level	N	N		✓		✓	✓	✓	
21/12/2024	WSR2	Flood	Suspended Solid (SS)	--	--	5.50	5.00	4.4	6.00	4.77	Limit Level	N	N		✓		✓	✓	✓	
	WSR4	Flood	Suspended Solid (SS)	--	--	5.50	5.00	4.4	6.00	4.77	Limit Level	N	N		✓		✓	✓	✓	
	WSR33	Flood	Suspended Solid (SS)	--	--	5.50	5.00	4.4	6.00	4.77	Limit Level	N	N		✓		✓	✓	✓	
	NF1	Flood	Suspended Solid (SS)	--	--	4.58	5.00	4.4	6.00	4.77	Action Level	N	N		✓			✓	✓	
26/12/2024	WSR1	Flood	Suspended Solid (SS)	--	--	3.67	5.00	3.00	6.00	3.25	Limit Level	N	N		✓			✓	✓	
	WSR2	Flood	Suspended Solid (SS)	--	--	4.00	5.00	3.00	6.00	3.25	Limit Level	N	N		✓			✓	✓	
	WSR4	Flood	Suspended Solid (SS)	--	--	3.50	5.00	3.00	6.00	3.25	Limit Level	N	N		✓			✓	✓	
	WSR33	Flood	Suspended Solid (SS)	--	--	3.42	5.00	3.00	6.00	3.25	Limit Level	N	N		✓			✓	✓	
	WSR37	Flood	Suspended Solid (SS)	--	--	3.67	5.00	3.00	6.00	3.25	Limit Level	N	N		✓			✓	✓	
	NF1	Flood	Suspended Solid (SS)	--	--	3.25	5.00	3.00	6.00	3.25	Limit Level	N	N		✓			✓	✓	
	NF2	Flood	Suspended Solid (SS)	--	--	3.83	5.00	3.00	6.00	3.25	Limit Level	N	N		✓			✓	✓	
	NF3	Flood	Suspended Solid (SS)	--	--	3.42	5.00	3.00	6.00	3.25	Limit Level	N	N		✓			✓	✓	
28/12/2024	WSR2	Flood	Suspended Solid (SS)	--	--	3.58	5.00	3.3	6.00	3.58	Limit Level	N	N		✓			✓	✓	✓
	WSR4	Flood	Suspended Solid (SS)	--	--	3.33	5.00	3.3	6.00	3.58	Action Level	N	N		✓			✓	✓	✓
	WSR16	Flood	Suspended Solid (SS)	--	--	3.83	5.00	3.3	6.00	3.58	Limit Level	N	N		✓			✓	✓	✓
	WSR33	Flood	Suspended Solid (SS)	--	--	4.25	5.00	3.3	6.00	3.58	Limit Level	N	N		✓			✓	✓	✓
	WSR37	Flood	Suspended Solid (SS)	--	--	4.08	5.00	3.3	6.00	3.58	Limit Level	N	N		✓			✓	✓	✓
31/12/2024	WSR3	Ebb	Suspended Solid (SS)	--	--	3.67	5.00	3.5	6.00	3.79	Action Level	N	N		✓		✓	✓	✓	✓
	WSR4	Ebb	Suspended Solid (SS)	--	--	3.58	5.00	3.5	6.00	3.79	Action Level	N	N		✓		✓	✓	✓	✓
	WSR16	Ebb	Suspended Solid (SS)	--	--	3.75	5.00	3.5	6.00	3.79	Action Level	N	N		✓		✓	✓	✓	✓
	NF1	Ebb	Suspended Solid (SS)	--	--	3.58	5.00	3.5	6.00	3.79	Action Level	N	N		✓		✓	✓	✓	✓
	NF3	Ebb	Suspended Solid (SS)	--	--	4.00	5.00	3.5	6.00	3.79	Limit Level	N	N		✓		✓	✓	✓	✓

1) Control station value already exceed either the Action or Limit Level.
2) No silt plume or pollution discharge from site area was observed.
3) Rainfall was recorded at Tseung Kwan O during the monitoring period, rainfall may lead to release of SS content form the soil of the nearby lands (e.g., Country Park, fill bank).

4) No action and limit level exceedance observed at WSR37 (Outfall Shaft).
5) Marine construction activity was completed.
6) No operation activities related to the release of SS in the reporting period.
7) No exceedances of SS at S.P.1 in the daily continuous effluent monitoring.

Conclusion:

During water quality monitoring on 17, 19, 21, 26, 28 and 31 December 2024, two (2) Action Level and fifteen (15) Limit Level exceedances were recorded during mid-flood tide, five (5) Action and five (5) Limit Level exceedances were recorded during mid-ebb. Total seven (7) Action Level and twenty (20) Limit Level exceedances for SS of impact water quality monitoring were recorded between 16 December to 31 December 2024.

The marine construction works were completed on 1 September 2023. The commissioning activities were shown in the table below.

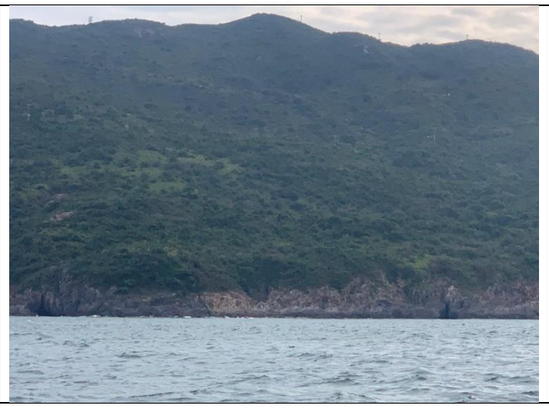
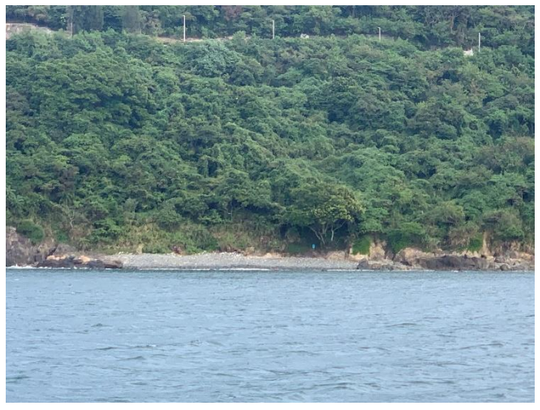
The desalination plant and the outfall shaft work normally.

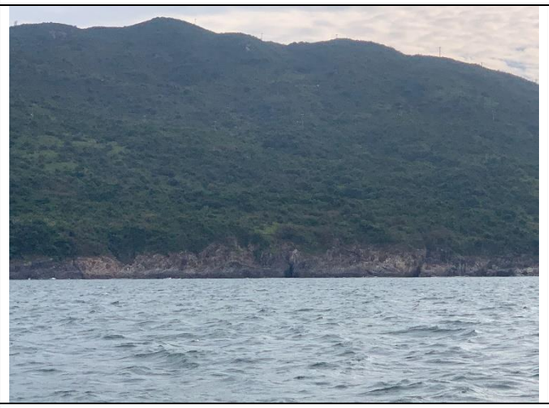
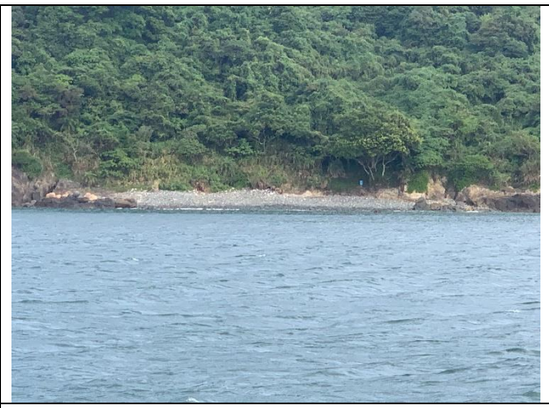
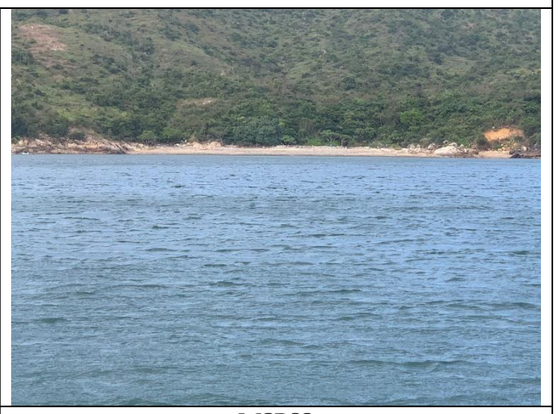
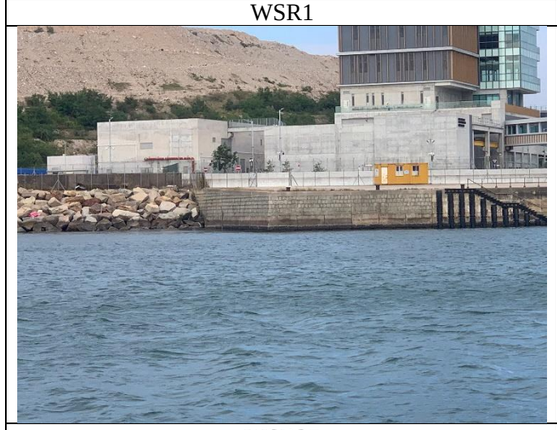
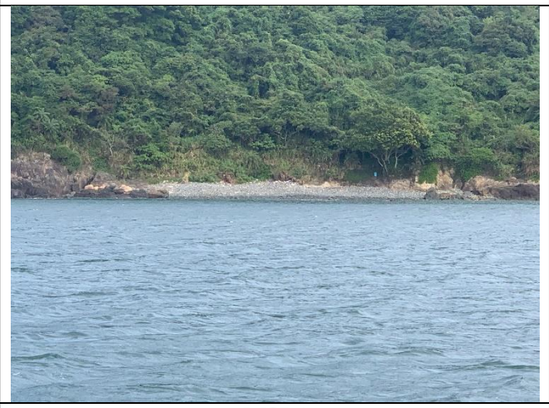
After investigation, all exceedances were considered non-project related.

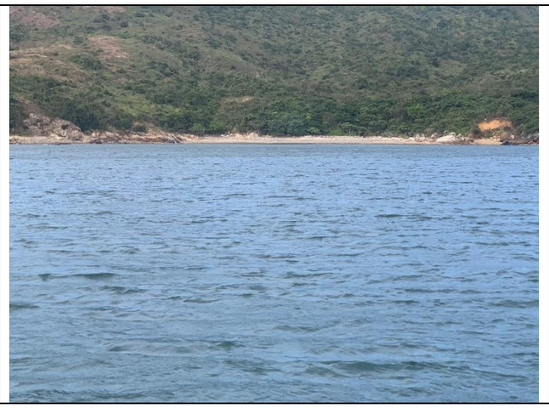
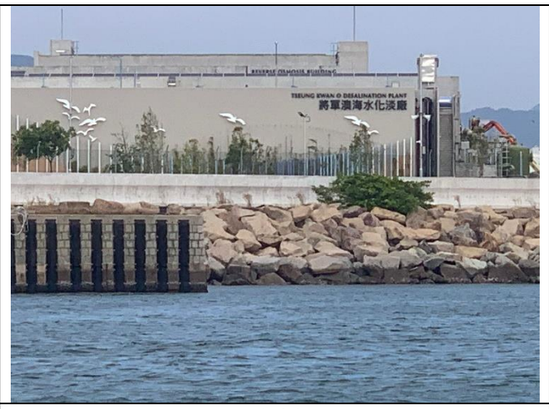
Operation Activities:

17 December 2024	19 December 2024
• The plant stopped operation	• The plant stopped operation
21 December 2024	26 December 2024
• The plant stopped operation	• The plant stopped operation
28 December 2024	31 December 2024
• Water sampling and analysis • Production of desalinated water	• Water sampling and analysis • Production of desalinated water

Supporting Photo:

Date of exceedance	Monitoring station(s)			
17/12/2024				
	NF1			
19/12/2024				
	WSR1	WSR2	NF2	NF3
21/12/2024				
	WSR2	WSR4	WSR33	NF1

Date of exceedance	Monitoring station(s)			
26/12/2024				
	WSR1	WSR2	WSR4	WSR33
				
	WSR37	NF1	NF2	NF3
28/12/2024				
	WSR2	WSR4	WSR16	

Date of exceedance	Monitoring station(s)			
31/12/2024				
	WSR33	WSR37		
				
	WSR3	WSR4	WSR16	NF1
				
	NF3			