




**Contract No. 13/WSD/17**

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

**Monthly EM&A Report No.53  
(Period from 1 July to 31 July 2024)**

Document No.

ASCL	/	200168078	/	MEMAR53	/	3
Publisher		Project Code		Sequential No.		Revision Index

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Position	Environmental Team Leader
Signature	
Date:	14 August 2024



Our ref.: LES/J2024-01/CS/L030  
Date : 14 Aug 2024

**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 Monthly Environmental Monitoring and Audit (EM&A) Report for July  
2024**

Referring to the Monthly Environmental Monitoring and Audit Report (July 2024) Rev.3.0 as submitted by the Environmental Team on 14 July 2024, 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](mailto:serenashek@lamenviro.com).

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

Serena Shek  
Independent Environmental Checker

Binnies (Attn.: Derek Lai)  
Aurecon (Attn.: Toby Wan)

By E-mail  
By E-mail



## REVISION HISTORY

REV.	DESCRIPTION OF MODIFICATION	DATE
1.	First Issue for Comments	06/08/2024
2.	Revised According to Comments	13/08/2024
3.	Revised According to Comments	14/08/2024

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## 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 construction and operation 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, noise, waste management and ecology should be carried out by Environmental Team (ET), Acuity Sustainability Consulting Limited (ASCL), during the construction phase of the Contract.
- A3. This is the 53<sup>rd</sup> Monthly EM&A Report, prepared by ASCL, 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 the reporting period from 1 July to 31 July 2024.
- A4. The EM&A programme for this contract has covered environmental monitoring on construction noise level at selected NSRs and Contractor's environmental performance auditing in the aspects of construction dust, construction noise, water quality, waste management, Landscape and Visual and Ecology.

### SUMMARY OF MAIN WORKS UNDERTAKEN & KEY MITIGATION MEASURES IMPLEMENTED

- A5. Key activities carried out in this reporting period for the Contract included the followings:

Administration Building
<ul style="list-style-type: none"> <li>• Installation of false ceiling</li> <li>• Installation of aluminum fins at external wall</li> <li>• Installation of aluminum cladding at glass wall</li> <li>• Installation of wood decking</li> <li>• Installation of wall feature</li> <li>• Installation of floor finishing</li> <li>• Minor Installation of building services, cable laying and termination, T&amp;C</li> </ul>
Chemical building
<ul style="list-style-type: none"> <li>• Defect rectification</li> </ul>
Main Electrical & Central Chiller Plant Building
<ul style="list-style-type: none"> <li>• Minor Installation of building services, electrical switchboard, cable laying, pressure test</li> </ul>
ActiDAFF
<ul style="list-style-type: none"> <li>• Installation of security gates</li> </ul>

<ul style="list-style-type: none"> <li>Minor Installation of mechanical equipment, building services, minor cable laying and termination, Installation of Fibre Reinforced Polymer Cover, Testing &amp; Commissioning</li> </ul>
<p>Product Water Storage Tank Building</p> <ul style="list-style-type: none"> <li>Tiling work at Roof Slab on Tank</li> <li>Minor Installation of building services, cable laying and termination, Testing &amp; Commissioning</li> </ul>
<p>OSCG Building</p> <ul style="list-style-type: none"> <li>Installation of Cat ladder on Brine Maker Tank</li> <li>Installation of Railing on Brine Maker Tank</li> <li>Opening Seal Up</li> <li>Minor Installation of building services and pipework, cable laying and termination, T&amp;C</li> </ul>
<p>Reverse Osmosis Building</p> <ul style="list-style-type: none"> <li>Sanitary Ware Installation in Toilet</li> <li>Opening Seal Up</li> <li>Minor Installation of building services, cable laying and termination, T&amp;C, PV Panel Installation</li> </ul>
<p>Post Treatment Building</p> <ul style="list-style-type: none"> <li>Installation of Cover on Sludge Thickener Pit</li> <li>Green Roof</li> <li>Minor Installation of building services, Minor Installation of pipework, Cable laying and termination</li> </ul>
<p>Inspection corridor</p> <ul style="list-style-type: none"> <li>Interior fitting out works</li> <li>Installation of cat ladder on roof of inspection corridor</li> </ul>
<p>Combined Shaft and Pump room</p> <ul style="list-style-type: none"> <li>T&amp;C</li> <li>Installation of outfall grating and defect rectification</li> </ul> <p>Guard House</p> <ul style="list-style-type: none"> <li>Defect rectification</li> <li>Minor cable laying and termination</li> </ul> <p>Other</p> <ul style="list-style-type: none"> <li>Watermain installation works at CLP 132 Kv Substation</li> <li>Underground utility rectification work for Manhole and Draw pit</li> <li>Underground utility Construction Work for Watermain water</li> <li>Underground utility repair Work for sampling pipe</li> <li>Underground utility repair Work for watermain work</li> <li>Light Pole installation work</li> <li>Road Construction</li> </ul>

- Footpath Construction
- Landscape Construction
- Irrigation System installation
- Landscape planting work
- Traffic signage pole installation
- Cladding installation for elevated walkway
- Workshop construction

A6. The major environmental impacts brought by the above construction works include:

- Construction dust and noise generation from construction works and excavation works;
- Waste generation from the construction activities

A7. The key environmental mitigation measures implemented for the Contract in this reporting period associated with the above construction works include:

- Dust suppression by regular wetting and water spraying for construction works;
- Reduction of noise from equipment and machinery on-site and regular inspection to machinery and plants/vehicles on-site to ensure proper functioning;
- Deployment of silt curtain at the inshore water outflow;
- Sorting and storage of general refuse and construction waste; and
- Deployment protective fencing for trees

#### SUMMARY OF EXCEEDANCE & INVESTIGATION & FOLLOW-UP

A8. No noise monitoring was conducted during the reporting period since there are no Contract -related construction activities undertaken within a radius of 300m from the monitoring locations. No exceedance of the action Level was recorded during the reporting period.

A9. The construction phase marine water quality programme was ceased from 1 September 2023 due to the completion of marine-related construction works.

A10. Water quality monitoring of the discharge of dechlorinated effluent in disinfection procedure is completed in December 2023. The hourly dechlorinated effluent monitoring during the discharge is finished.

A11. In this reporting period, 45 times of landfill gas monitoring were periodically conducted at TKO Area 137 (Ch1+120 – Ch1+800) until 31 July 2024. No exceedances of action level and limit level was observed.

A12. Joint site inspections of the construction work by ET and IEC were carried out on 29 July 2024 to audit the mitigation measures implementation status.

### COMPLAINT HANDLING AND PROSECUTION

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

### REPORTING CHANGE

- A14. According to the contractor's information, the TKODP commenced operation phase on 1 July 2024. The outstanding construction works would still be carried out.

### SUMMARY OF UPCOMING KEY ISSUES AND KEY MITIGATION MEASURES

- A15. Key activities anticipated in the next reporting period for the Contract will include the followings:

Administration Building
<ul style="list-style-type: none"> <li>• Installation of false ceiling</li> <li>• Installation of aluminum fins at external wall</li> <li>• Installation of aluminum cladding at glass wall</li> <li>• Installation of wood decking</li> <li>• Installation of wall feature</li> <li>• Installation of floor finishing</li> <li>• Minor Installation of building services, cable laying and termination, T&amp;C</li> </ul>
Chemical building
<ul style="list-style-type: none"> <li>• Defect rectification</li> </ul>
Main Electrical & Central Chiller Plant Building
<ul style="list-style-type: none"> <li>• Minor Installation of building services, electrical switchboard, cable laying, pressure test</li> </ul>
ActiDAFF
<ul style="list-style-type: none"> <li>• Installation of security gates</li> <li>• Minor Installation of mechanical equipment, building services, minor cable laying and termination, Installation of Fibre Reinforced Polymer Cover, Testing &amp; Commissioning</li> </ul>
Product Water Storage Tank Building
<ul style="list-style-type: none"> <li>• Tiling work at Roof Slab on Tank</li> <li>• Minor Installation of building services, cable laying and termination, Testing &amp; Commissioning</li> </ul>
OSCG Building
<ul style="list-style-type: none"> <li>• Installation of Cat ladder on Brine Maker Tank</li> <li>• Installation of Railing on Brine Maker Tank</li> <li>• Opening Seal Up</li> </ul>

<ul style="list-style-type: none"> <li>Minor Installation of building services and pipework, cable laying and termination, T&amp;C</li> </ul>
<p>Reverse Osmosis Building</p> <ul style="list-style-type: none"> <li>Sanitary Ware Installation in Toilet</li> <li>Opening Seal Up</li> <li>Minor Installation of building services, cable laying and termination, T&amp;C, PV Panel Installation</li> </ul>
<p>Post Treatment Building</p> <ul style="list-style-type: none"> <li>Installation of Cover on Sludge Thickener Pit</li> <li>Green Roof</li> <li>Minor Installation of building services, Minor Installation of pipework, Cable laying and termination</li> </ul>
<p>Inspection corridor</p> <ul style="list-style-type: none"> <li>Interior fitting out works</li> <li>Installation of cat ladder on roof of inspection corridor</li> </ul>
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A16. The major environmental impacts brought by the above construction works will include:

- Construction dust and noise generation from excavation and construction works;
- Waste generation from construction activities.

A17. The key environmental mitigation measures for the Contract in the coming reporting period associated with the above construction works will include:

- Reduction of noise from equipment and machinery on-site;
- Dust suppression by regular wetting and water spraying for construction works and at main haul road;
- Sorting and storage of general refuse and construction waste;
- Deployment of silt curtain at the inshore water outflow; and
- Deployment protective fencing for trees.



## 1. BASIC CONTRACT INFORMATION

### BACKGROUND

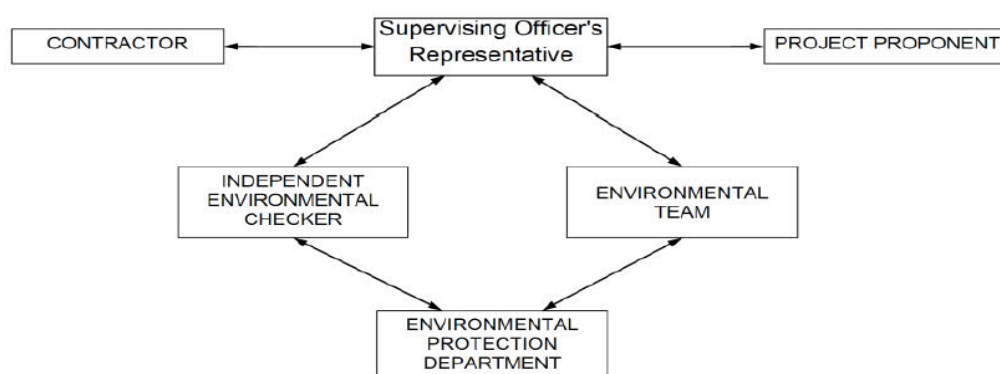
- 1.1. The Acciona Agua, S.A. Trading, Jardine Engineering Corporation, Limited and China State Construction Engineering (Hong Kong) Limited as AJC Joint Venture (AJCJV) is contracted to carry out the Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant (DPTKO) under Contract No. 13/WSD/17 (the Contract).
- 1.2. 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 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-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.
- 1.4. According to the contractor's information, the TKODP commenced operation phase on 1 July 2024. The outstanding construction works would still be carried out.

### THE REPORTING SCOPE

- 1.5. This is the 53<sup>rd</sup> Monthly EM&A Report for the Contract which summarizes the key findings of the EM&A programme during the reporting period from 1 July to 31 July 2024.

### CONTRACT ORGANIZATION

- 1.6. The Contract Organization structure for Construction Phase is presented in **Figure 1.1**.



**Figure 1.1 Contract Organization Chart**

1.7. 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	Christina Ko	2608-7302
	Chief Resident Engineer	Roger Wu	6343-1002
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
	Environmental Monitoring Manager	Tommy Law	6468-1782
Acuity Sustainability Consulting Limited	Environmental Team Leader	Toby Wan	9719-5422
Lam Environmental Services Limited	Independent Environmental Checker (IEC)	Serena Shek	6149-6683

#### SUMMARY OF CONSTRUCTION WORKS

1.8. Details of the major construction activities undertaken in this reporting period are shown below. The master programme is presented in **Appendix A**.

1.9. Key activities carried out in this reporting period for the Contract included the followings:

##### Administration Building

- Installation of false ceiling
- Installation of aluminum fins at external wall
- Installation of aluminum cladding at glass wall
- Installation of wood decking
- Installation of wall feature
- Installation of floor finishing
- Minor Installation of building services, cable laying and termination, T&C

Chemical building
<ul style="list-style-type: none"> <li>Defect rectification</li> </ul>
<ul style="list-style-type: none"> <li>Main Electrical &amp; Central Chiller Plant Building</li> <li>Minor Installation of building services, electrical switchboard, cable laying, pressure test</li> </ul>
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Inspection corridor
<ul style="list-style-type: none"> <li>Interior fitting out works</li> <li>Installation of cat ladder on roof of inspection corridor</li> </ul>

Combined Shaft and Pump room

- T&C
- Installation of outfall grating and defect rectification

Guard House

- Defect rectification
- Minor cable laying and termination

Other

- Watermain installation works at CLP 132 Kv Substation
- Underground utility rectification work for Manhole and Draw pit
- Underground utility Construction Work for Watermain water
- Underground utility repair Work for sampling pipe
- Underground utility repair Work for watermain work
- Light Pole installation work
- Road Construction
- Footpath Construction
- Landscape Construction
- Irrigation System installation
- Landscape planting work
- Traffic signage pole installation
- Cladding installation for elevated walkway
- Workshop construction

1.10. A 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
Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation (Form NA)				
451539	Throughout the Contract		Valid	-
Billing Account for Disposal of Construction Waste				
7036276	Throughout the Contract		Valid	-
Sludge (Special Waste) Disposal (Admission Ticket)				

Permit/ Licences	Valid Period		Status	Remark
	From	To		
17913	01/07/2024	31/12/2024	Valid	-
Chemical Waste Producer Registration				
5213-839-A2987-01	Throughout the Contract		Valid	-
Wastewater Discharge Licence (Land and Marine works)				
WT00035775-2020	23/08/2021	31/07/2025	Valid	-
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/D1358/462 874).
Construction Noise Permit				
GW-RE0667-24	22/06/2024	20/12/2024	Valid	-

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
<b>Water Quality</b>	
Baseline Monitoring under EM&A Manual	The baseline water quality monitoring was conducted between 12 May 2020 to 6 Jun 2020.
Construction Phase Impact Monitoring	Ceased from 1 September 2023
Operation phase Marine Impact Monitoring	On-going
Impact Monitoring of Effluent Discharge from Main Disinfection	Completed
<b>Noise</b>	
Baseline Monitoring	The baseline noise monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4
Impact Monitoring	Completed
<b>Waste Management</b>	

Parameters	Status
Mitigation Measures in Waste Management Plan	On-going
<b>Landfill Gas</b>	
Regular Monitoring when construction works are within the 250 m Consultation Zone	On-going
<b>Ecology (Coral)</b>	
Operation phase Regular Coral Monitoring (Monthly)	On-going
<b>Ecology (Fishery)</b>	
Operation phase Regular Fishery Monitoring (Seasonally)	On-going
<b>Ecology (Landscape)</b>	
Operation phase Landscape and Visual Site Inspection	On-going
<b>Environmental Audit</b>	
Site Inspection covering Measures of Air Quality, Noise Impact, 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 construction phase of the Contract during the reporting period is provided in **Appendix C**.

## 2. NOISE

### MONITORING REQUIREMENTS

- 2.1. To ensure no adverse noise impact, noise monitoring is recommended to be carried out within 300m radius from the nearby noise sensitive receivers (NSRs), during construction phase. The NSRs selected as monitoring station are (i) NSR4 – Creative Secondary School, (ii) NSR24 – PLK Laws Foundation College, and (iii) NSR31 – School of Continuing and Professional Studies – CUHK respectively.
- 2.2. Construction noise level were measured in terms of the A-weighted equivalent continuous sound pressure level (LAeq). Leq 30min was used as the monitoring parameter for the time period between 0700 and 1900 on normal weekdays. Construction works would follow stipulations of the valid Construction Noise Permits if works had to be conducted during restricted hours or public holidays. **Table 2.1** summarizes the monitoring parameters, frequency, and duration of the impact noise monitoring.

**Table 2.1 Noise Monitoring Parameters, Time, Frequency and Duration**

Time	Duration	Interval	Parameters
Daytime: 0700-1900	Day time: 0700-1900 (during normal weekdays)	Continuously in Leq 5min/Leq 30min (average of 6 consecutive Leq 5min)	Leq 30min L10 30min & L90 30min

### MONITORING LOCATIONS

- 2.3. The monitoring locations were normally made at a point 1m from the exterior of the NSRs building façade and be at a position 1.2m above the ground. A correction of +3dB(A) should be made to the free-field measurements.
- 2.4. According to the environmental findings detailed in the EIA report and Baseline Monitoring Report, the designated locations for the construction noise monitoring are listed in **Table 2.2** below.

**Table 2.2 Noise Sensitive Receivers**

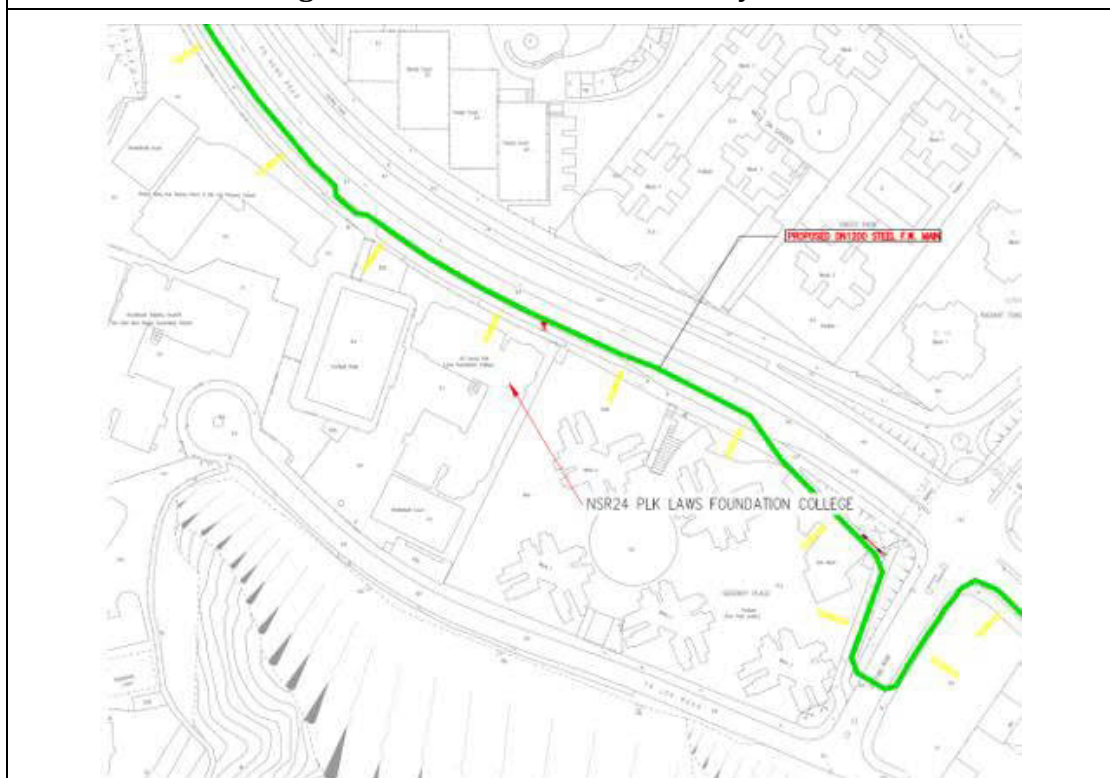
NSR ID	Noise Sensitive Receivers	Monitoring Location	Position
NSR 4	Creative Secondary School	Roof Floor	1 m from facade
NSR 24	PLK Laws Foundation College	Pedestrian Road on Ground Floor	Free-field
NSR 31	School of Continuing and Professional Studies - CUHK	Roof Floor	1 m from facade

- 2.5. Three noise monitoring locations for impact monitoring at the nearby sensitive receivers are shown in **Figure 2.1-2.3**.





**Figure 2.1 NSR4 Creative Secondary School**



**Figure 2.2 NSR24 PLK Laws Foundation College**





**Figure 2.3 NSR31 School of Continuing and Professional Studies - CUHK**

#### **IMPACT MONITORING METHODOLOGY**

- 2.6. Integrated sound level meter will be used for the noise monitoring. The meter will be in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications. Immediately prior to and following each noise measurement the accuracy of the sound level meter will be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements will be accepted as valid only if the calibration levels before and after the noise measurements agree to within 1.0 dB(A).
- 2.7. Noise measurements were not made in the presence of fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

#### **ACTION AND LIMIT LEVELS**

- 2.8. The Action/Limit Levels are in line with the criteria of Practice Note for Professional Persons (ProPECC PN 2/93) "Noise from Construction Activities – Non-statutory Controls" and Technical Memorandum on Environmental Impact Assessment Process issued by HKSAR Environmental Protection Department ["EPD"] under the Environmental Impact Assessment Ordinance, Cap 499, S.16 are presented in **Table 2.3**.

**Table 2.3 Action and Limit Levels for Noise per EM&A Manual**

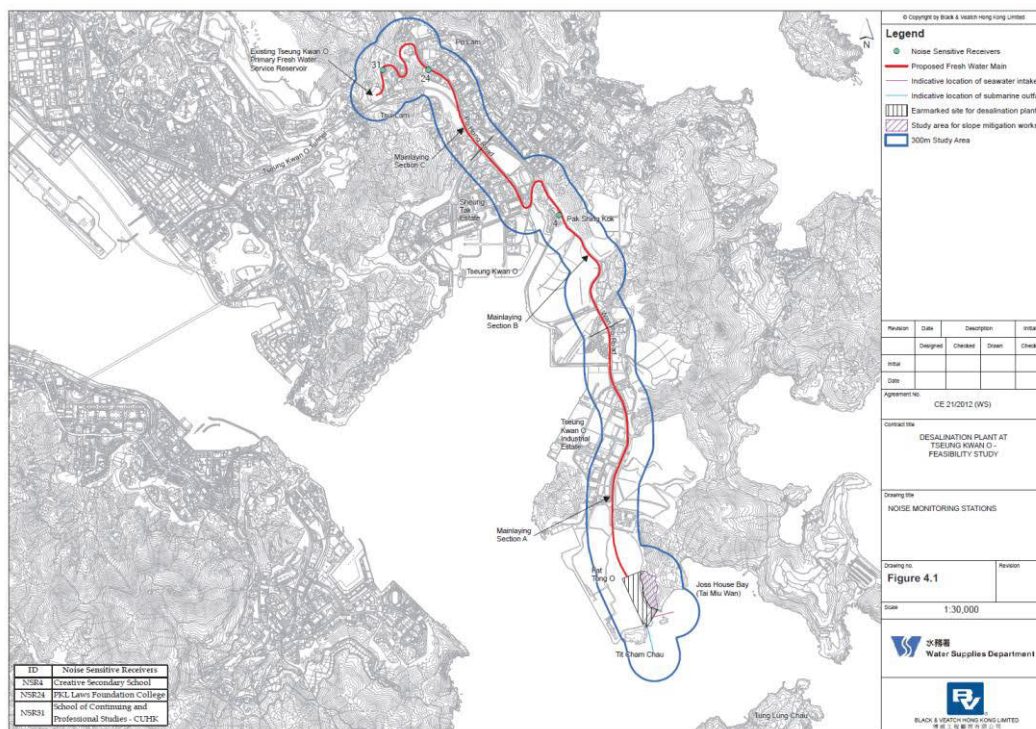
Time Period	Action	Limit (dB(A))
0700-1900 on normal weekdays	When one documented complaint is received from any one of the noise sensitive receivers	<ul style="list-style-type: none"> <li>70 dB(A) for school and</li> <li>65 dB(A) during examination period</li> </ul>

Note: Limits specified in the GW-TM and IND-TM for construction and operation noise, respectively.

- 2.9. If exceedances were found during noise monitoring, the actions in accordance with the Event and Action Plan shall be carried out according to **Appendix D**.

### MONITORING RESULTS AND OBSERVATIONS

- 2.10. Referring to EM&A Manual Section 4.1.2, the impact noise monitoring should be carried out when there are Contract-related construction activities undertaken within a radius of 300m from the monitoring stations. As no Contract-related construction activities were undertaken in the reporting month within a radius of 300m from the monitoring stations as shown in **Figure 2.4**, no impact noise monitoring was conducted in the reporting period.



**Figure 2.4 Site Layout Plan with Noise Sensitive Receivers and Desalination Plant**

### 3. WATER QUALITY

- 3.1. In accordance with the recommendations of the EIA, water quality monitoring is required during dredging for the submarine pipelines and, 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.
- 3.2. The water quality monitoring programme was be carried out to allow any deteriorating water quality to be readily detected and timely action taken to rectify the situation.
- 3.3. Water quality monitoring for the Contract can be divided into the following stages:
- Dredging activities during construction phase;
  - Discharge of effluent from main disinfection during construction phase; and
  - Operation activities during operation phase.

#### WATER QUALITY PARAMETERS

- 3.4. The parameters that have been selected for measurement in situ and in the laboratory are those that were either determined in the EIA to be those with the most potential to be affected by the construction works or are a standard check on water quality conditions. Parameters to be measured in the impact monitoring are listed in **Table 3.1**.

**Table 3.1 Parameters measured in the Impact Marine Water Quality Monitoring**

Parameters	Unit	Abbreviation
<b>In-situ measurements</b>		
Dissolved oxygen	mg/L	DO
Temperature	°C	-
pH	-	-
Turbidity	NTU	-
Salinity	0/00	-
Total Residual Chlorine NOTE1	mg/L	TRC
<b>Laboratory measurements</b>		
Suspended Solids	mg/L	SS
Iron-Soluble	mg/L	Fe
Anti-scalant as Reactive Phosphorus	mg/L	PO4 as P-

NOTE 1: Monitoring of Total Residual Chlorine will be conducted when cleaning and sterilization of the new freshwater main is carried out.

- 3.5. In addition to the 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

- 3.6. 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.

### **SAMPLING / TESTING PROTOCOLS**

- 3.7. 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.



- 3.8. 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

- 3.9. 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.
- 3.10. Parameters for laboratory measurements, standard methods and detection limits are presented in **Table 3.2**.

**Table 3.2 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 23 <sup>rd</sup> Ed 2540D	1.0	2.5	±17%
Iron	APHA 3111 B	0.2	-	±25%
Total residual chlorine	Test Kit (Lovibond MD200)	Lowest limit = 0.01mg/L; Upper limit = 6 mg/L	-	±25%

#### MONITORING LOCATION

##### Construction Phase

- 3.11. The Impact water quality monitoring was ceased from 1 September 2023 due to the completion of marine-related construction works.

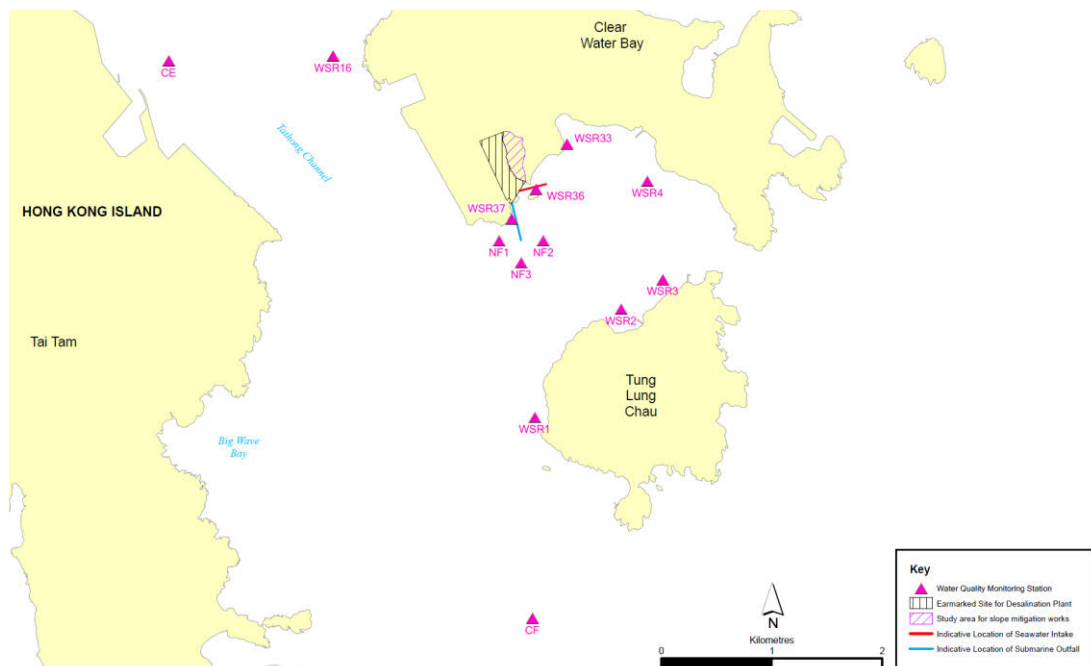
Operation phase

- 3.12. The operation phase impact water quality monitoring locations are in accordance with the EM&A Manual and detailed in **Table 3.3** 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 3.3 Location of Impact 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

- 3.13. 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 3.1 Impact water quality monitoring locations under EM&A Manual**

### **SAMPLING FREQUENCY**

#### Operation phase

- 3.14. Impact water quality monitoring were carried out three days per week during the commission 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.

### **SAMPLING DEPTHS & REPLICATION**

- 3.15. During impact 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.

### **ACTION AND LIMIT LEVELS**

#### Operation phase

- 3.16. 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 3.4**.

**Table 3.4 Derived Action and Limit Levels for Water Quality**

Parameters	Action	Limit
<b>Operation phase Impact Monitoring</b>		
DO in mg/L	<u>Surface and Middle</u> 7.30 mg L <sup>-1</sup> <u>Bottom</u> 7.31 mg L <sup>-1</sup> <u>Tung Lung Chau Fish Culture Zone</u> 5.1 mgL <sup>-1</sup> or level at control station (Whichever the lower)	<u>Surface and Middle</u> 4 mg L <sup>-1</sup> <u>Bottom</u> 2 mg L <sup>-1</sup> <u>Tung Lung Chau Fish Culture Zone</u> 5.0 mgL <sup>-1</sup> or level at control station (Whichever the lower)
SS in mg/L (Depth-averaged)	5.00 mg L <sup>-1</sup> or 20% exceedance of value at any impact station compared with corresponding data from control station	6.00 mg L <sup>-1</sup> 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

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. Monitoring of Total Residual Chlorine (Disinfection) will be conducted when cleaning and sterilization of the new freshwater main is carried out.



## **MONITORING RESULTS AND OBSERVATIONS**

### **Construction Phase**

- 3.17. Referring to EM&A Manual, the general water quality monitoring should be carried out when there are marine-related construction activities undertaken. General water quality monitoring at the ten monitoring stations (CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36 and WSR37) was ceased from 1 September 2023 due to the completion of marine-related construction works.

### **Operation phase**

- 3.18. According to the contractor's information, the operation phase of TKODP commenced on 1 July 2024. Details of the operation phase water quality monitoring will be presented in the Operation Monthly EM&A Report.

## 4. WASTE

4.1. 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 4.1**. Details of cumulative waste management data are presented as a waste flow table in **Appendix G**.

**Table 4.1 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 <sup>(1)</sup>	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)
Jul 2024	60378.440	0.000	0.000	0.000	60378.440	0.000	0.000	0.000	0.000	0.000	42.820

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

## 5. LANDFILL GAS MONITORING

### MONITORING REQUIREMENT

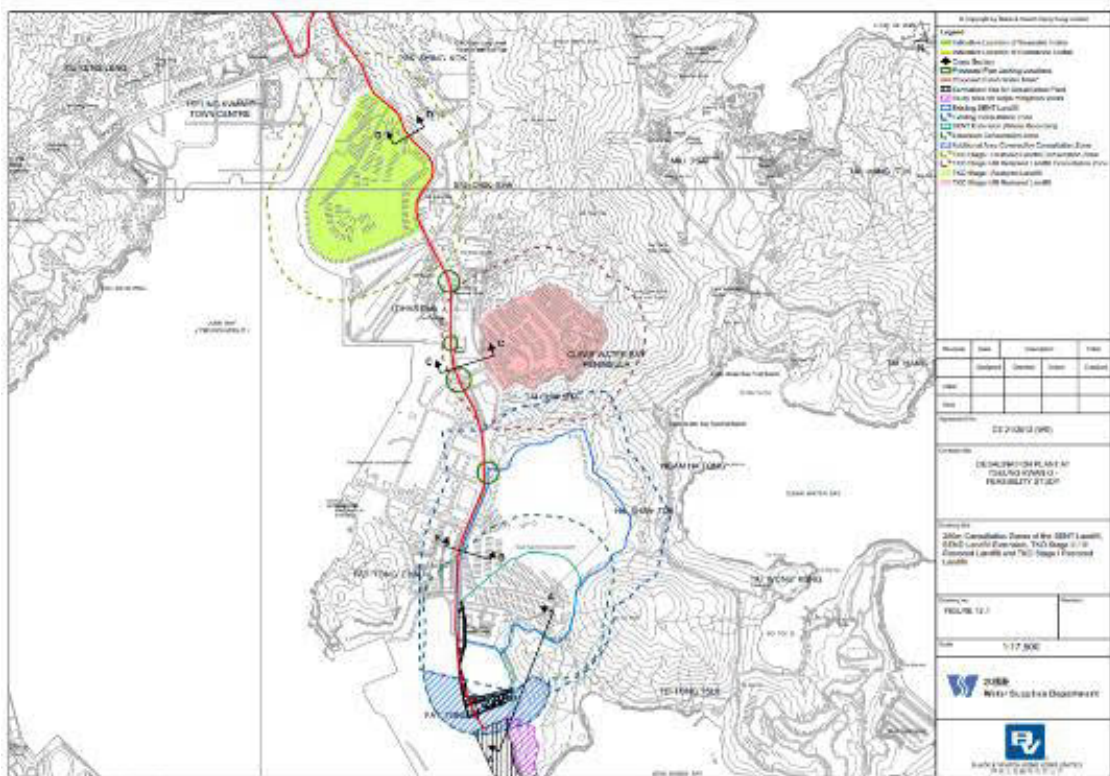
- 5.1. In accordance with Section 11 of the EM&A Manual, monitoring of landfill gas is required for construction works within the 250m Consultation Zone. Part of the desalination plant and the indicative area of natural slope mitigation works fall within the SENT Landfill Extension Consultation Zone; and part of the 1,200 mm diameter fresh water 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.

### MONITORING PROGRAMME

- 5.2. Since part of the desalination plant (Wan Po Road and MIC compound/Basketball Court) and the indicative area of natural slope mitigation works fall within the SENT Landfill Extension Consultation Zone in this contract (**Figure 5.1**), landfill gas monitoring would be required for Wan Po Road and MIC compound/Basketball Court (**Figure 5.2**) if excavations were conducted at more than 300mm deep. Although SENT Landfill Extension has commenced operation since November 2021, no excavation works were conducted at MIC compound/Basketball Court. Hence no landfill gas monitoring would be scheduled for MIC compound/Basketball Court at the current stage.

### MONITORING LOCATION

- 5.3. Monitoring of oxygen, methane, carbon dioxide and barometric pressure would be performed for excavations at 1m depth or more within the consultation Zone.
- 5.4. During construction of works within the consultation zones, excavations of 1m depth or more was monitored:
- At the ground surface before excavation commences;
  - Immediately before any worker enters the excavation;
  - At the beginning of each working day for the entire period the excavation remains open; and
  - Periodically through the working day whilst workers are in the excavation.
- 5.5. For excavations between 300mm and 1m deep, measurements were carried out:
- Directly after the excavation has been completed; and
  - Periodically whilst the excavation remains open.
- 5.6. The area required to be monitored for landfill gas in the reporting period is shown in **Figure 5.1**.



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)

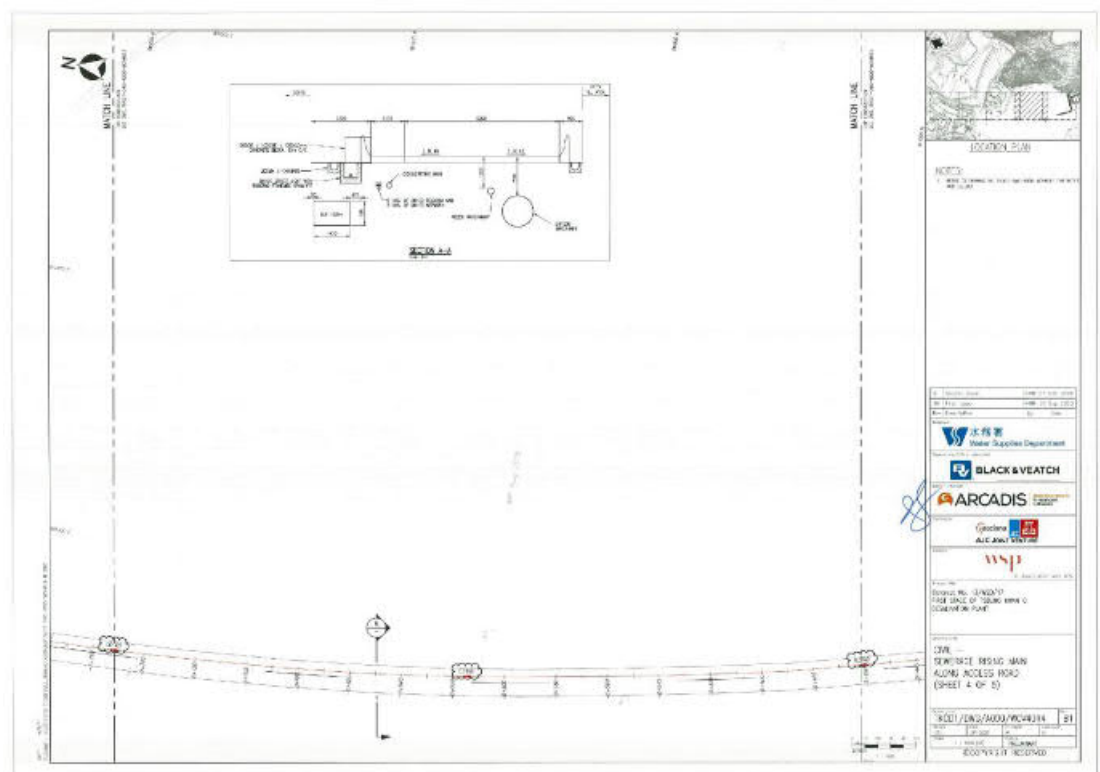
- alarm (both audibly and visually) in the event that the concentrations of the following are exceeded:

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

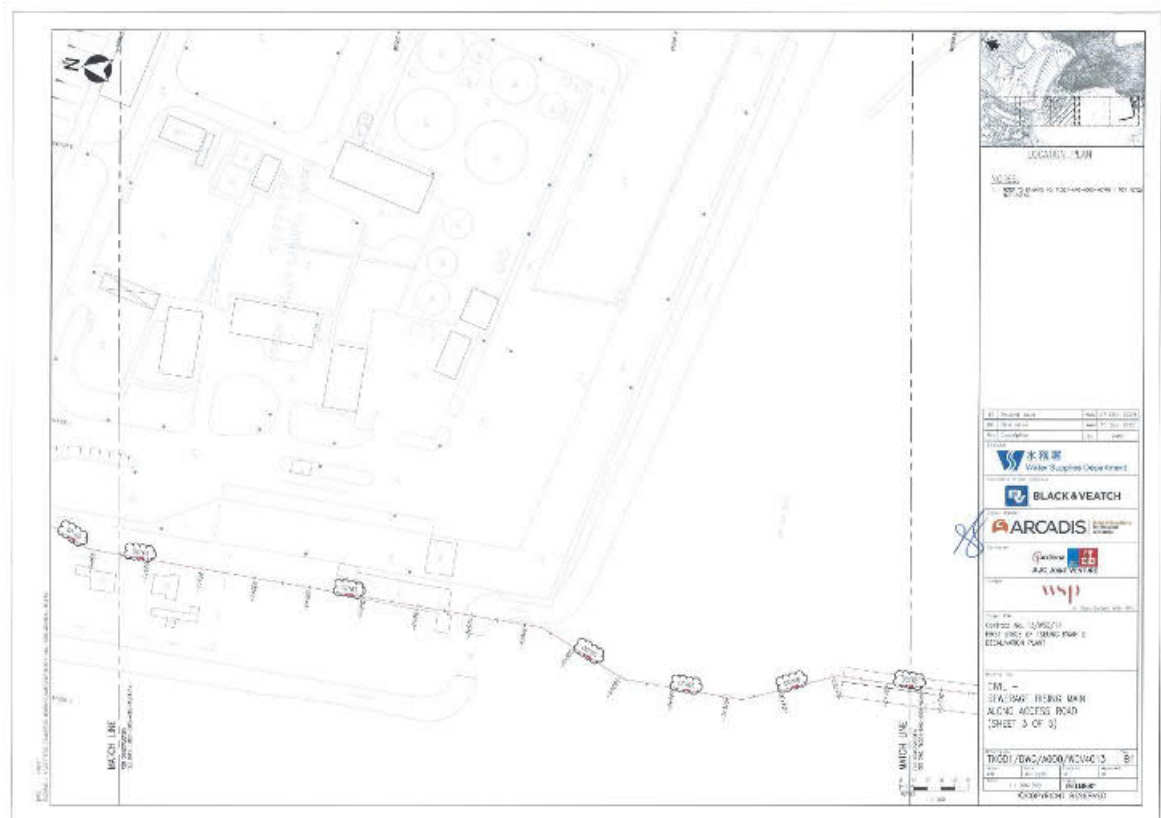
5.9. Monitoring equipment used in the reporting period are summarized in **Table 5.2**. The Landfill Gas monitoring equipment calibration certificate is presented in **Appendix E**.

**Table 5.2 Landfill Gas Monitoring Equipment**

Equipment	Brand and Model	Calibration Expiry Date
Portable Gas Detector	GMI PS500 – 25492809/21	21 August 2024



**Figure 5.2 Location Map for Landfill Gas Monitoring at TKO Area 137 (-0+440 – -0+760)**



**Figure 5.3 Location Map for Landfill Gas Monitoring at TKO Area 137 (-0+740 – -1+060)**

#### MONITORING RESULTS AND OBSERVATIONS

- 5.10. In this reporting period, **45 times** of landfill gas monitoring were periodically conducted during excavations at 300mm to 1m depth within the consultation zone and whenever workers entered the excavation on the day at TKO Area 137 (Ch1+120 – Ch1+800) until 31 July 2024. No exceedances of action level and limit level was observed.

## 6. ECOLOGY(LANDSCAPE)

### MONITORING REQUIREMENTS

- 6.1. 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

- 6.2. 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. Retained trees was properly protected during the construction works, no unacceptable construction works was observed.
- 6.3. If non-compliance were found during the construction works, the actions in accordance with the Event and Action Plan will be carried out according to **Appendix D**.

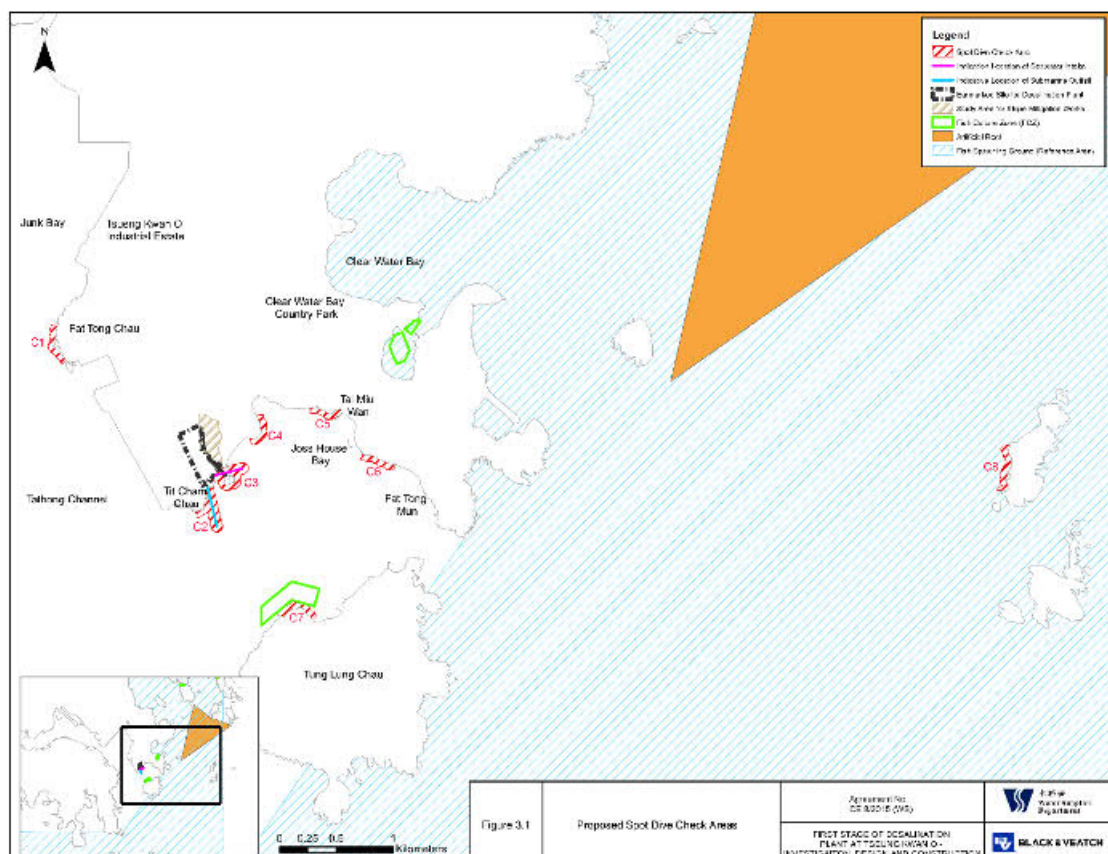


## 7. ECOLOGY (CORAL MONITORING)

- 7.1. 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 Pre-Operation Baseline Coral Monitoring and Regular Coral Monitoring Methodology.

### MONITORING LOCATION

- 7.2. 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 7.1** should be monitored during the operation Phase. Pre-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 pre-operation phase and operation phase.



**Figure 7.1 Spot Dive Check Areas Two Proposed Indirect Impact Sites (C2 and C3) and one control site (C8) during operation Phase**



#### ACTION AND LIMIT LEVELS

- 7.3. 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 7.1**.

**Table 7.1 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 of Appendix D** will be implemented.

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

#### MONITORING FREQUENCY

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

#### MONITORING RESULT AND OBSERVATION

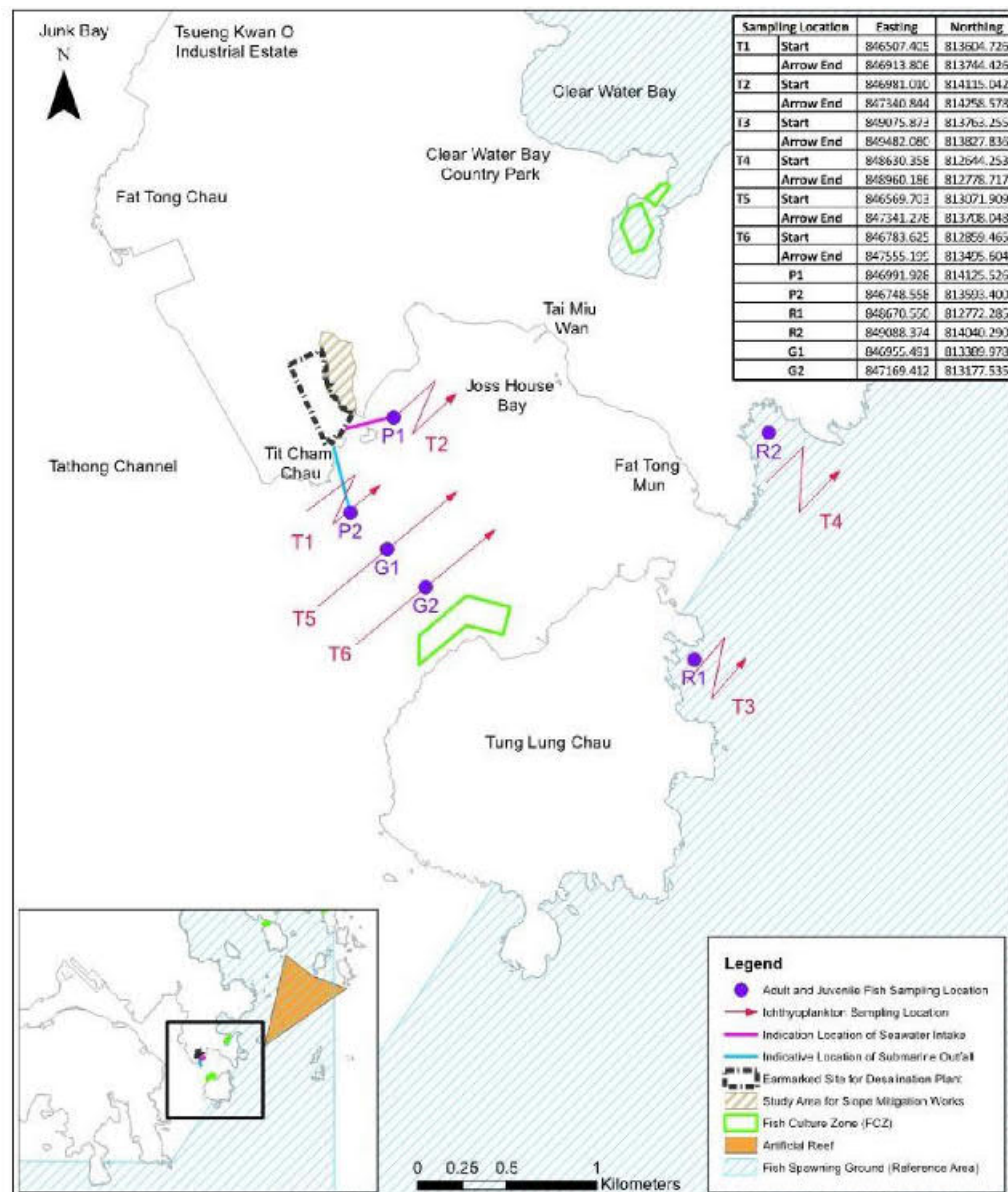
- 7.6. According to the contractor's information, the operation phase of TKODP commenced on 1 July 2024. Details of the operation phase coral monitoring will be presented in the Operation Monthly EM&A Report.

## 8. ECOLOGY (FISHERY MONITORING)

- 8.1. 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

- 8.2. 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.
- 8.3. 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).
- 8.4. 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.
- 8.5. 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.
- 8.6. The coordinates of the proposed monitoring locations are shown in **Figure 8.1**.



**Figure 8.1 Monitoring location of regular fishery monitoring during pre-operation Phase**

### MONITORING FREQUENCY

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

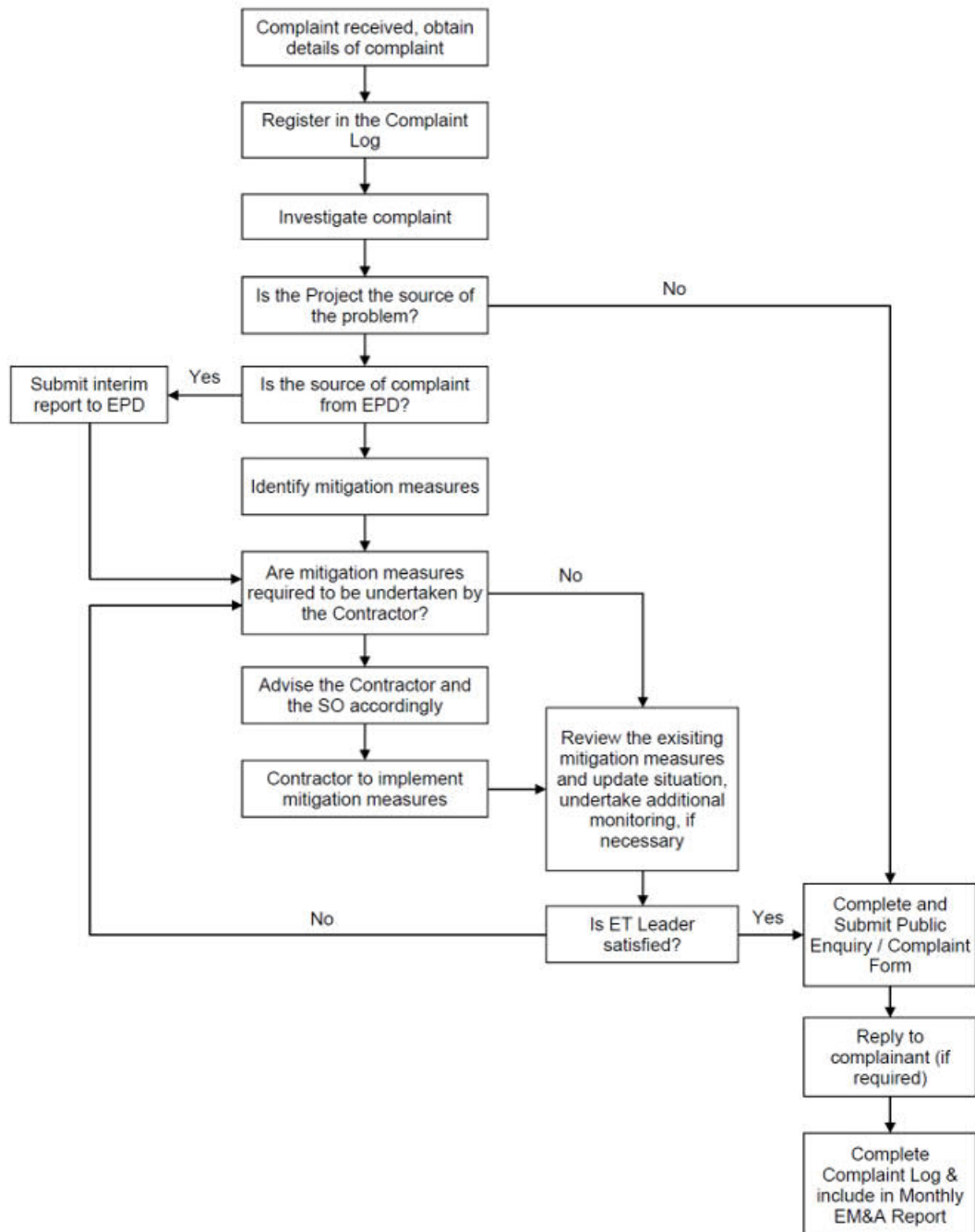
- Fish species composition;
- Abundance: number of fish captured;
- Diversity of fish resources: species diversity and evenness;
- Size: range of total length; Biomass in weight; and
- Values of catches of commercial species: catch per unit effort (CPUE) and yield per unit effort (YPUE).

**MONITORING RESULT AND OBSERVATION**

- 8.8. Pre-operation phase fishery monitoring for dry season 2024 was carried out on [17 and 24 February 2024](#). The detail of the monitoring was presented in the 50<sup>th</sup> EM&A Monthly Report.

## 9. SUMMARY OF EXCEEDANCE, COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTIONS

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



**Figure 9.1 Environmental Complaint Handling Procedures**

- 9.2. No noise monitoring was conducted during the reporting period since there are no Contract-related construction activities undertaken within a radius of 300m from the monitoring locations. No action Level exceedance for construction noise monitoring was recorded in the reporting month.
- 9.3. Construction phase general water quality monitoring at the ten monitoring stations (CE, CF, WSR1, WSR2, WSR3, WSR4, WSR16, WSR33, WSR36 and WSR37) are ceased from 1 September 2023 due to the completion of marine-related construction works.
- 9.4. The operation phase of TKODP commenced on 1 July 2024. Details of the operation phase water quality monitoring and coral monitoring will be presented in the Operation Monthly EM&A Report.
- 9.5. Pre-operation phase fishery monitoring for dry season 2024 was carried out on [17 and 24 February 2024](#). The detailed of the monitoring was presented in the 50<sup>th</sup> EM&A Monthly Report.
- 9.6. In this reporting period, [45 times](#) of landfill gas monitoring were periodically conducted at TKO Area 137 (Ch1+120 – Ch1+800) until 20 April 2024. No exceedances of action level and limit level was observed.
- 9.7. [No](#) environmental complaint, notification of summons and prosecution Statistics on complaint and notification of summons and prosecution are summarized in **Appendix I**.

## 10. EM&A SITE INSPECTION

- 10.1. 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 [2, 9, 16, 23 and 29 July 2024](#) at the site portions listed in **Table 10.1** below.

**Table 10.1 Summaries of Site Inspection Record**

Date	Inspected Site Portion	Time
<a href="#">2 July 2024</a>	TKO Area 137	14:30 – 15:30
<a href="#">9 July 2024</a>	TKO Area 137	14:30 – 15:30
<a href="#">16 July 2024</a>	TKO Area 137	14:30 – 15:30
<a href="#">23 July 2024</a>	TKO Area 137	14:30 – 15:30
<a href="#">29 July 2024</a>	TKO Area 137	09:15 – 12:30

- 10.2. Joint site inspection with IEC was carried out on [29 July 2024](#).
- 10.3. 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
<a href="#">2 July 2024</a>	No major environmental deficiency was observed.	N/A
<a href="#">9 July 2024</a>	No major environmental deficiency was observed.	N/A
<a href="#">16 July 2024</a>	No major environmental deficiency was observed.	N/A
<a href="#">23 July 2024</a>	No major environmental deficiency was observed.	N/A
<a href="#">29 July 2024</a>	No major environmental deficiency was observed.	N/A

- 10.4. 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 C**. Site inspection proforma of the reporting period is provided in **Appendix H**.



## 11. FUTURE KEY ISSUES

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

<p>Administration Building</p> <ul style="list-style-type: none"> <li>• Installation of false ceiling</li> <li>• Installation of aluminum fins at external wall</li> <li>• Installation of aluminum cladding at glass wall</li> <li>• Installation of wood decking</li> <li>• Installation of wall feature</li> <li>• Installation of floor finishing</li> <li>• Minor Installation of building services, cable laying and termination, T&amp;C</li> </ul>
<p>Chemical building</p> <ul style="list-style-type: none"> <li>• Defect rectification</li> </ul>
<p>Main Electrical &amp; Central Chiller Plant Building</p> <ul style="list-style-type: none"> <li>• Minor Installation of building services, electrical switchboard, cable laying, pressure test</li> </ul>
<p>ActiDAFF</p> <ul style="list-style-type: none"> <li>• Installation of security gates</li> <li>• Minor Installation of mechanical equipment, building services, minor cable laying and termination, Installation of Fibre Reinforced Polymer Cover, Testing &amp; Commissioning</li> </ul>
<p>Product Water Storage Tank Building</p> <ul style="list-style-type: none"> <li>• Tiling work at Roof Slab on Tank</li> <li>• Minor Installation of building services, cable laying and termination, Testing &amp; Commissioning</li> </ul>
<p>OSCG Building</p> <ul style="list-style-type: none"> <li>• Installation of Cat ladder on Brine Maker Tank</li> <li>• Installation of Railing on Brine Maker Tank</li> <li>• Opening Seal Up</li> <li>• Minor Installation of building services and pipework, cable laying and termination, T&amp;C</li> </ul>
<p>Reverse Osmosis Building</p> <ul style="list-style-type: none"> <li>• Sanitary Ware Installation in Toilet</li> <li>• Opening Seal Up</li> <li>• Minor Installation of building services, cable laying and termination, T&amp;C, PV Panel Installation</li> </ul>
<p>Post Treatment Building</p> <ul style="list-style-type: none"> <li>• Installation of Cover on Sludge Thickener Pit</li> <li>• Green Roof</li> <li>• Minor Installation of building services, Minor Installation of pipework, Cable laying and termination</li> </ul>



<p>Inspection corridor</p> <ul style="list-style-type: none"> <li>• Interior fitting out works</li> <li>• Installation of cat ladder on roof of inspection corridor</li> </ul>
<p>Combined Shaft and Pump room</p> <ul style="list-style-type: none"> <li>• T&amp;C</li> <li>• Installation of outfall grating and defect rectification</li> </ul> <p>Guard House</p> <ul style="list-style-type: none"> <li>• Defect rectification</li> <li>• Minor cable laying and termination</li> </ul> <p>Other</p> <ul style="list-style-type: none"> <li>• Watermain installation works at CLP 132 Kv Substation</li> <li>• Underground utility rectification work for Manhole and Draw pit</li> <li>• Underground utility Construction Work for Watermain water</li> <li>• Underground utility repair Work for sampling pipe</li> <li>• Underground utility repair Work for watermain work</li> <li>• Light Pole installation work</li> <li>• Road Construction</li> <li>• Footpath Construction</li> <li>• Landscape Construction</li> <li>• Irrigation System installation</li> <li>• Landscape planting work</li> <li>• Traffic signage pole installation</li> <li>• Cladding installation for elevated walkway</li> <li>• Workshop construction</li> </ul>

11.2. The major environmental impacts brought by the above construction works will include:

- Construction dust and noise generation from excavation and construction works;
- Waste generation from construction activities.

11.3. The key environmental mitigation measures for the Project in the coming reporting period associated with the above construction works will include:

- Dust suppression by regular wetting and water spraying for construction works;
- Reduction of noise from equipment and machinery on-site by regular checking of on-site plant/vehicle to ensure proper functioning;
- Sorting and storage of general refuse and construction waste;
- Deployment of silt curtain at the inshore water outflow; and
- Deployment protective fencing for trees

## 12. CONCLUSIONS AND RECOMMENDATIONS

- 12.1. This is the 53<sup>rd</sup> Monthly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 1 July to 31 July 2024, in accordance with the EM&A Manual and the requirement under FEP-01/503/2015/B.
- 12.2. No noise monitoring was conducted in the reporting period due to the construction activities not being undertaken within a radius of 300m from the monitoring locations.
- 12.3. The construction phase marine water quality programme was ceased from 1 September 2023 due to the completion of marine-related construction works.
- 12.4. The operation phase of TKODP commenced on 1 July 2024. Details of the operation phase water quality monitoring and coral monitoring will be presented in the Operation Monthly EM&A Report.
- 12.5. Pre-operation phase fishery monitoring for dry season 2024 was carried out on 17 and 24 February 2024. The detailed result of the monitoring was presented in the 50<sup>th</sup> Monthly EM&A Report.
- 12.6. In this reporting period, 45 times of landfill gas monitoring were periodically conducted at TKO Area 137 (Ch1+120 – Ch1+800) until 20 April 2024. No exceedances of action level and limit level was observed.
- 12.7. 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.
- 12.8. According to the environmental site inspections performed in the reporting month, the Contractor is reminded to pay attention on chemical storage, site hygiene and dust suppression mitigation measures.
- 12.9. No environmental complaint, notification of summons and prosecution was received in the reporting period.
- 12.10. The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

# Appendix A

## Master Programme

[illegible]



[illegible]

[illegible]



13/WSD/17

Activity ID

Activity Name

Baseline Duration

Baseline Start

Baseline Finish

Remaining Duration

Actual / Planned Start

Actual / Planned Finish

Actual % Complete

Variance Finish Date

Total Float

Design, Build and Operate Stage 1 of Tesung Kwan O Desalination Plant

2020

2021

2022

2023

2024

ES0001530

Construction of Guard House near Pier

147

29-May-21

22-Oct-21

0

10-Jun-23 A

10-Oct-23 A

100%

-718

ES0001540

Architectural Finishes for Guard House near Pier

74

23-Oct-21

04-Jan-22

0

05-Oct-23 A

23-Mar-24 A

100%

-809

CO2 Tanks Areas

ES0001370

Filling to Formation for CO2 Tanks Area

29

22-Jun-21

20-Jul-21

0

14-Dec-21 A

17-Dec-21 A

100%

-150

ES0001380

Construction of CO2 Tanks Area

116

21-Jul-21

13-Nov-21

0

21-Dec-21 A

10-Mar-22 A

100%

-117

ES0002170

M&E Installation of CO2 Tanks Area

84

27-Jan-22

20-Apr-22

0

11-Mar-22 A

03-Oct-23 A

100%

-531

Diesel Emergency Generator

ES0002250

M&E Diesel Emergency Generator

57

25-Feb-22

22-Apr-22

0

18-Jan-23 A

28-Jul-23 A

100%

-462

Switch Room and Transformer Installation

ES0002300

M&E Installation of HV/LV Switchroom and Transformer (Admin)

242

16-Nov-21

15-Jul-22

0

27-Jul-22 A

20-Apr-23 A

100%

-279

Miscellaneous

ES0001630

Remaining Architectural Finishes for All Buildings

322

11-Jan-22

28-Nov-22

0

09-Dec-22 A

29-Jun-24 A

100%

-579

ES0001640

External Process and Non Process Pipe

655

18-Dec-20

03-Oct-22

0

27-May-21 A

23-Nov-23 A

100%

-416

ES0001650

Drainage and Cable Duct

518

04-Jun-21

03-Nov-22

0

25-Apr-22 A

18-Jul-23 A

100%

-257

ES0001660

Slope Mitigation Works

684

23-Nov-20

07-Oct-22

76

28-Sep-21 A

15-Oct-24

50%

-739

-258

ES0001670

Landscaping Works

469

28-Oct-21

08-Feb-23

0

01-Mar-23 A

18-May-24 A

100%

-465

ES0002290

M&E PV Panels

215

23-Nov-21

25-Jun-22

0

05-Jan-23 A

29-Jul-24 A

100%

-764

ES0002310

M&E Chiller & Irrigation System Installation

298

27-Oct-21

20-Aug-22

0

25-Aug-23 A

30-May-24 A

100%

-648

ES0002350

M&E Installation of Surge Vessel

70

24-Feb-22

04-May-22

0

15-Sep-23 A

30-Oct-23 A

100%

-544

ES0002390

M&E Installation of Thickened Sludge Holding Tank

42

09-Dec-21

19-Jan-22

0

27-Mar-23 A

31-Jan-24 A

100%

-742

Statutory Submission & Inspection

ES0002330

Statutory Submission & Inspection

1148

11-Jan-20

03-Mar-23

2

03-Dec-19 A

02-Aug-24

100%

-518

-184

Testing and Commissioning

ES0002400

M&E Precommissioning

229

12-Jun-22

26-Jan-23

0

22-Apr-23 A

29-Mar-24 A

100%

-428

ES0002410

M&E Commissioning

213

04-Jul-22

01-Feb-23

0

02-Jun-23 A

30-Jul-24 A

100%

-544

ES0002420

M&E Performance Test

40

02-Feb-23

13-Mar-23

0

28-Nov-23 A

26-Apr-24 A

100%

-409

Procurement of Major Plant & Equipment Schedule

Pipes, Fittings and Valves

Pressure Relief Valves

P-PV-A511K-0

NR Receipt - Pressure relief valves

0

08-Sep-21

0

02-Oct-20 A

100%

341

P-PV-A511K-0

Receipt of offers - Pressure relief valves

30

09-Sep-21

08-Oct-21

0

03-Oct-20 A

27-Oct-20 A

100%

346

P-PV-A511K-0

Technical Validation - Pressure relief valves

30

09-Oct-21

07-Nov-21

0

28-Oct-20 A

05-Mar-21 A

100%

248

P-PV-A511K-0

Negotiation and Award / Client Approval - Pressure relief valves

60

08-Nov-21

06-Jan-22

0

06-Mar-21 A

19-Nov-21 A

100%

49

P-PV-A511K-0

Manufacture and FAT - Pressure relief valves

187

07-Jan-22

12-Jul-22

0

20-Nov-21 A

22-Jul-22 A

100%

-9

P-PV-A511K-0

Transport & Customs - Pressure relief valves

50

13-Jul-22

31-Aug-22

0

23-Jul-22 A

31-Jul-22 A

100%

32

P-PV-A511K-0

1st delivery date to site - Pressure relief valves

0

31-Aug-22

0

31-Jul-22 A

100%

32

Instrumentation, Control & Automation

Bypass Level Indicators

P-IC-A08FK2-

NR Receipt - Bypass Level Indicators

0

12-Apr-21

0

16-Sep-20 A

100%

208

P-IC-A08FK2-

Receipt of offers - Bypass Level Indicators

30

13-Apr-21

12-May-21

0

17-Sep-20 A

20-Oct-20 A

100%

205

P-IC-A08FK2-

Technical Validation - Bypass Level Indicators

30

13-May-21

11-Jun-21

0

21-Oct-20 A

25-Nov-20 A

100%

199

P-IC-A08FK2-

Negotiation and Award / Client Approval - Bypass Level Indicators

60

12-Jun-21

10-Aug-21

0

26-Nov-20 A

30-Jun-21 A

100%

42

P-IC-A08FK2-

Manufacture and FAT - Bypass Level Indicators

90

11-Aug-21

08-Nov-21

0

01-Jul-21 A

22-Jul-22 A

100%

-255

P-IC-A08FK2-

Transport & Customs - Bypass Level Indicators

50

09-Nov-21

28-Dec-21

0

18-Sep-22 A

26-Oct-22 A

100%

-301

Summary Bar

Actual Work

Actual Level of Effort

Target Bar

Milestone

Target Milestone

Early Bar

Critical Bar

Page 4 of 5

Appendix D - Critical Path

acciona

JEC

CSDEC

AJC JOINT VENTURE

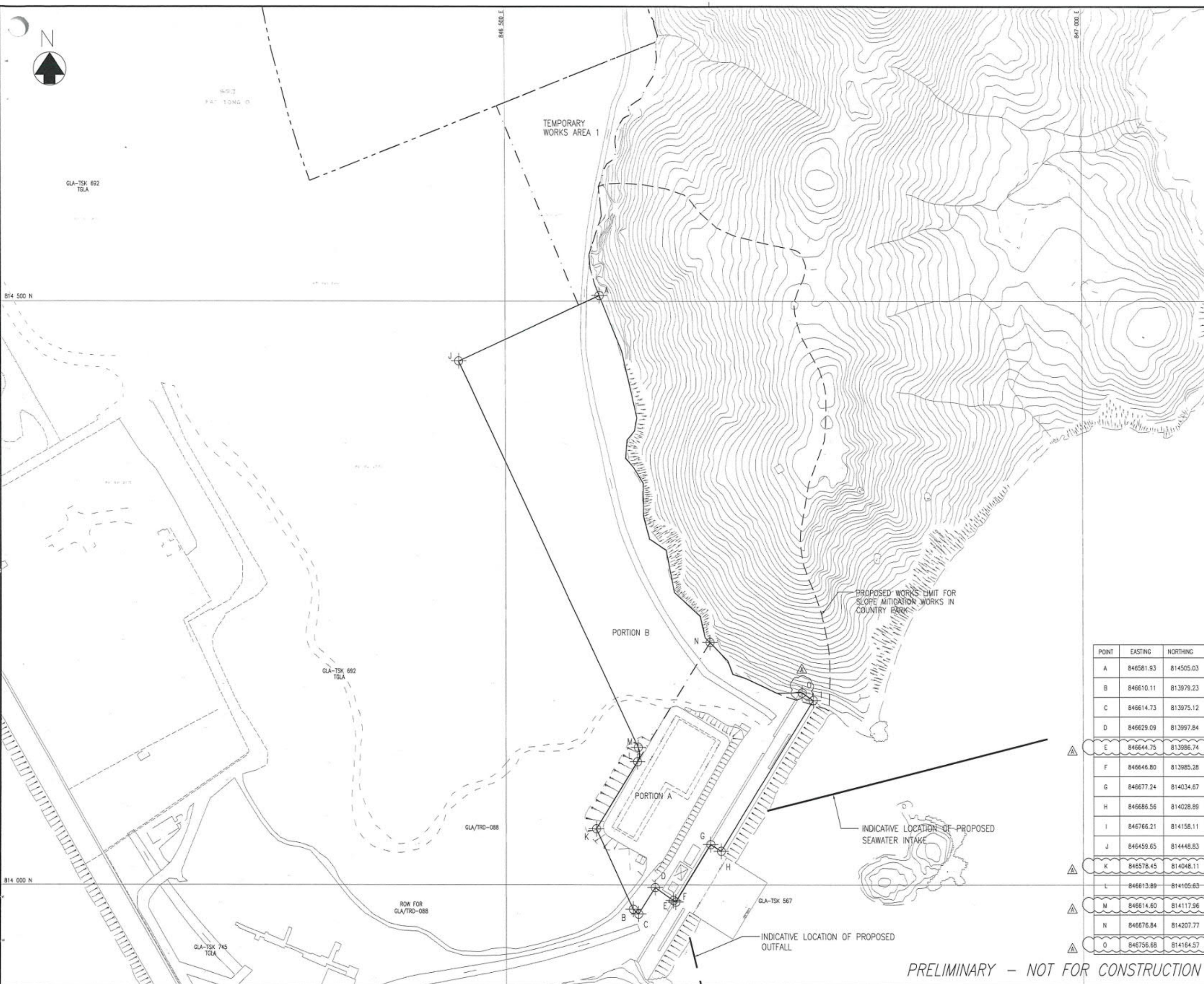
file: MPR202407\_c



## Appendix B

# Overview of Desalination Plant in Tseung Kwan O





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**LEGEND:**

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

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

B	10/03	UPDATE NOTES	YLC
A	07/18	UPDATE COORDINATES	YLC

Revision	Date	Description	Initial
	Designed	Checked	Drawn
Initial	YLC	CKH	SZ
Date	02/18	02/18	02/18

Approved

*Christina Go*

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.	Revision
190495/K/TEND/10/0003	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

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	846613.89	814105.63
M	846614.60	814117.96
N	846676.84	814207.77
O	846756.68	814164.57

PRELIMINARY – NOT FOR CONSTRUCTION



BUILDINGS IN FIRST STAGE

CODE	NAME OF BUILDING	TOTAL G.F.A. (m <sup>2</sup> )	SITE COVERAGE (m <sup>2</sup> )
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	2933,980
K	SLUDGE TREATMENT BUILDING, TANK AND PUMP ROOM	2531,044	1228,361
M	ADMINISTRATION BUILDING & ELECTRICAL BUILDING C	2450,713	1114,062
N	MAIN ELECTRICAL AND CENTRAL CHILLER PLANT BUILDING	-	409,893
R1	ELECTROCHLORINATION BUILDING & ELECTRICAL BUILDING A	657,992	825,776
S	132 KV SUBSTATION	-	943,590
T	IRRIGATION WATER TANK AND PUMP ROOM	-	156,148
R2	CHEMICAL BUILDING	813,056	613,056
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	21490,023

LEGEND / ABBREVIATION

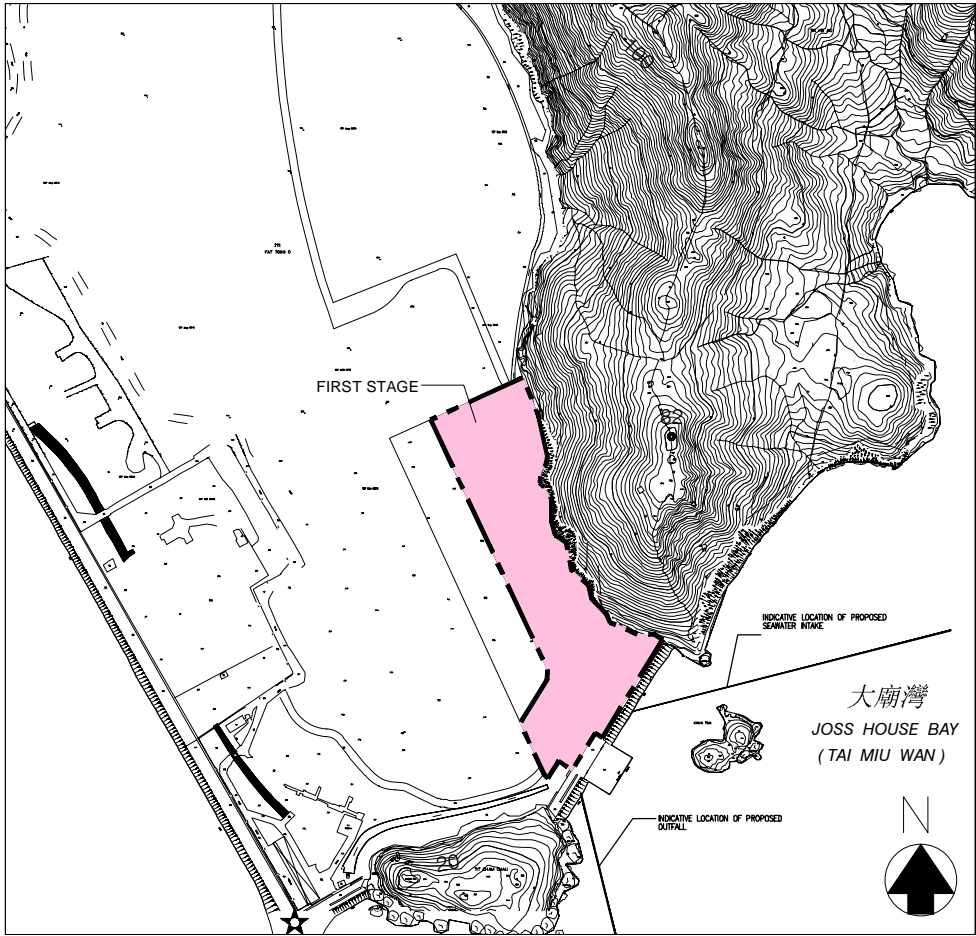
H/L WINDOW	HIGH LEVEL WINDOW
M.L.	METAL LOUVRES
C.L.	CAT LADDER
A.U.T.	ACCESSIBLE UNISEX TOILET
⊕	PROPOSED FINISH FLOOR LEVEL IN METER ABOVE P.D.
⊕	STRUCTURAL FLOOR LEVEL IN METER ABOVE P.D.
M.V.A.L.	MECHANICAL VENTILATION & ARTIFICIAL LIGHTING
F.E.	4.5kg CO <sub>2</sub> FIRE EXTINGUISHER
H.R.	HOSE REEL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

PLOT RATIO & SITE COVERAGE CALCULATION:

SITE AREA OF THE FIRST STAGE	= 56108 m <sup>2</sup>
TOTAL G.F.A.	= 25175.323
TOTAL SITE COVERAGE	= 21490.023
PLOT RATIO	= 25092.141 / 56108
	= 0.447 < PERMITTED
SITE COVERAGE	= 21414.841 / 56108 x 100
	= 38.167%

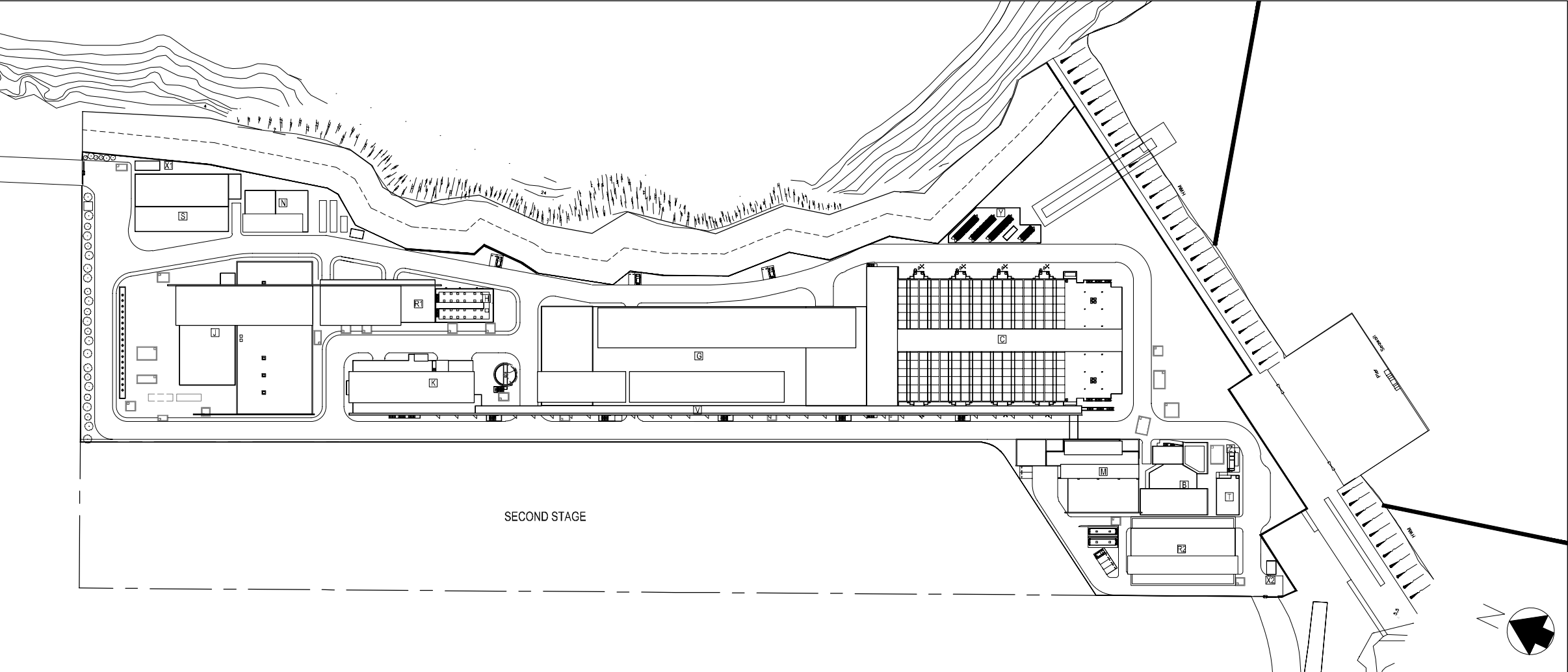
SITE LOCATION PLAN

1 : 5000



FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT

1 : 1000



0	TENDER SUBMISSION	CAD	JAN 19
Rev	Description	By	Date
Employer			
			
Employer's Consultant			
			
Tenderer			
			
Designer			
			
Project title			
CONTRACT NO. 13/WS/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
OKAL	JAN 19	S.C.	T.C.
Scale	N.T.S.	Status	—

# Appendix C

## 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	Impervious dust screen or sheeting will be provided to enclose scaffolding from the ground floor level of building for construction of superstructure of the new buildings.	Land site/ During Construction	Contractor(s)		✓		Implemented	Air Pollution Control (Construction Dust)
S4.8.1	Impervious sheet will be provided for skip hoist for material transport.	Land site/ During Construction, particularly dry season	Contractor(s)		✓		NA	-
S4.8.1	The area where dusty work takes place should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after dusty activities as far as practicable.	Land site/ During Construction	Contractor(s)		✓		Implemented after observation	-
S4.8.1	All dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation.	Land site/ During Construction	Contractor(s)		✓		Implemented	-
S4.8.1	Dropping heights for excavated materials should be controlled to a practical height to minimize the fugitive dust arising from unloading.	Land site/ During Construction	Contractor(s)		✓		Implemented	-
S4.8.1	During transportation by truck, materials should not be loaded to a level higher than the side and tail boards and should be dampened or covered before transport.	Land site/ During Construction	Contractor(s)		✓		Implemented	-
S4.8.1	Wheel washing device should be provided at the exits of the work sites. Immediately before leaving a construction site, every vehicle shall be washed to remove any dusty material from its body and wheels as far as practicable.	Land site/ During Construction	Contractor(s)		✓		Implemented	-
S4.8.1	Road sections between vehicle-wash areas and vehicular entrance will be paved.	Land site/ During Construction	Contractor(s)		✓		Implemented	-
S4.8.1	Hoarding of not less than 2.4m high from ground level will be provided along the length of the Project Site boundary.	Land site/ During construction	Contractor(s)	✓	✓		N/A	-
S4.8.1	Haul roads will be kept clear of dusty materials and will be sprayed with water so as to maintain the entire road surface wet at all times.	Land site/ During construction	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		
S4.8.1	Temporary stockpiles of dusty materials will be either covered entirely by impervious sheets or sprayed with water to maintain the entire surface wet all the time.	Land site/ During construction	Contractor(s)		✓		Implemented	-
S4.8.1	Stockpiles of more than 20 bags of cement, dry pulverised fuel ash and dusty construction materials will be covered entirely by impervious sheeting sheltered on top and 3-sides.	Land site/ During construction	Contractor(s)		✓		Implemented	-
S4.8.1	All exposed areas will be kept wet always to minimise dust emission.	Land site/ During construction	Contractor(s)		✓		Implemented	-
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
S4.8.1	The engine of the construction equipment during idling will be switched off.	Land site/ During construction	Contractor(s)		✓		Implemented	-
S4.8.1	Concrete batching plant will be required on site. control measures recommended in the Guidance Note on a Best Practicable Means for Cement Works (Concrete Batching Plant) (BPM 3/2 (93)) will be implemented. The control measures recommended in the Guidance Note on a Best Practicable Means for Cement Works (Concrete Batching Plant) (BPM 3/2 (93)) will be implemented.	Land site/ During construction	Contractor(s)		✓		N/A	-
S4.8.1	Regular maintenance of construction equipment deployed on-site will be conducted to prevent black smoke emission.	Land site/ During construction	Contractor(s)		✓		Implemented	-
S4.10	To ensure proper implementation of the recommended dust mitigation measures and good construction site practices during the construction phase, environmental site audits on weekly basis is recommended throughout the construction period.	Land site/ During construction	Contractor(s)/ Environmental Team (ET) & Independent Environmental Checker (IEC)		✓		Implemented	-

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

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		
Noise								
S5.7	Only well-maintained plant will be operated on-site and plant will be serviced regularly during the construction phase.	All area/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Silencers or mufflers on construction equipment will be utilised and will be properly maintained during the construction phase.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Mobile plant, if any, will be sited as far away from NSRs as possible.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Machines and plant (such as trucks) that may be in intermittent use will be shut down between work periods or will be throttled down to a minimum.	Noise control/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Plants known to emit noise strongly in one direction will, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Material stockpiles and other structures will be effectively utilised, wherever practicable, in screening noise from on-site construction activities.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Use of Quite Powered Mechanical Equipment (QPME).	Noise control/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Movable noise barriers of 3m in height with skid footing should be used and located within a few metres of stationary plant and mobile plant such that the line of sight to the NSR is blocked by the barriers. The length of the barrier should be at least five times greater than its height. The noise barrier material should have a superficial surface density of at least 7 kg m-2 and have no o or gappenings.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	The noise insulating sheet should be deployed such that there would be no opening or gaps on the joints.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Construction activities (e.g. excavation/shoring, reinstatement (asphalt), and pipe jacking) will be planned and carried out in sequence, such that items of PME proposed for these activities will not be operated simultaneously.	Noise control/ During construction	Contractor(s)	✓	✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	PMEs will not be used at the works areas near educational institutions with residual impact (ie the “influence area” within a	Noise control / During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from

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		
	radius of 40m) during school hours in order to reduce impact to the educational institutions.							Construction Works
S5.7	Noise enclosures or acoustic sheds would be used to cover stationary PME such as generators. Portable/Movable noise enclosure made of material with superficial surface density of at least 7 kg m-2 may be used for screening the noise from operation of the saw/groover, concrete.	Noise control/ Pre-construction/ During construction	Contractor(s)	✓	✓		N/A	-
S5.9	Sawcutting pavement, breaking up of pavement, excavation /shoring, pipe laying, backfilling, reinstatement (concrete) and pipe jacking shall be scheduled outside the examination period.	Noise control/ Pre-construction/ During construction	Contractor(s)	✓	✓		N/A	-
S5.9	In view the duration of noise exceedance at Creative Secondary School, PLK Laws Foundation College, TKO Kei Tak Primary School and School of Continuing and Professional Studies-CUHK is limited to 8 weeks, the construction work in the influence areas near the four schools shall be scheduled during long school holidays (eg summer holiday, Easter holiday or Christmas holiday, etc) as far as practicable. Scheduling the construction work for the four schools.	Noise control/ Pre-construction/ During construction	Contractor(s)	✓	✓		N/A	-
S5.10	A noise monitoring programme shall be implemented for the construction phase.	Designated monitoring stations as defined in EM&A Manual/During construction phase	Environmental Team		✓		N/A	-
S5.10	The effectiveness of on-site control measures could also be evaluated through the regular site audits.	All facilities/ During construction	Contractor(s)/ ET & Independent Environmental Checker (IEC)		✓		Implemented	-

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

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		
Water Quality								
S6.9	Dredged marine sediment will be disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO).	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	Dumping at Sea Ordinance (DASO)
S6.9	Disposal vessels will be fitted with tight bottom seals in order to prevent leakage of material during transport.	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	-
S6.9	Barges will be filled to a level, which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action.	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	-
S6.9	After dredging, any excess materials will be cleaned from decks and exposed fittings before the vessel is moved from the dredging area.	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	-
S6.9	All vessels should be well maintained and inspected before use to limit any potential discharges to the marine environment.	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	-
S6.9	All vessels must have a clean ballast system.	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	-
S6.9	No discharge of sewage/grey wastewater should be allowed. Wastewater from potentially contaminated area on working vessels should be minimized and collected. These kinds of wastewater should be brought back to port and discharged at appropriate collection and treatment system.	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	-
S6.9	No soil waste is allowed to be disposed overboard.	Marine Dredging/ During construction	Contractor(s)		✓		N/A	-
S6.9	Silt removal facilities such as silt traps or sedimentation facilities will be provided to remove silt particles from runoff to meet the requirements of the TM standard under the WPCO. The design of silt removal facilities will be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures will be inspected on a regular basis and maintained to confirm proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit will be removed regularly.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	ProPECC PN 1/94 TM Standard under the WPCO
S6.9	Earthworks to form the final surfaces will be followed up with surface protection and drainage works to prevent erosion caused by rainstorms.	Land site & drainage/ During construction	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		
S6.9	Appropriate surface drainage will be designed and provided where necessary.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
S6.9	The precautions to be taken at any time of year when rainstorms are likely together with the actions to be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC PN 1/94.	Land site & drainage/ During construction	Contractor(s)	✓	✓		Implemented	ProPECC PN 1/94
S6.9	Oil interceptors will be provided in the drainage system where necessary and regularly emptied to prevent the release of oil and grease into the storm water drainage system after accidental spillages.	Land site & drainage/ During construction	Contractor(s)		✓		N/A	-
S6.9	Temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge, if any, will be adequately designed for the controlled release of storm flows.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
S6.9	The temporary diverted drainage, if any, will be reinstated to the original condition when the construction work has finished or when the temporary diversion is no longer required.	Land site & drainage/ During construction	Contractor(s)		✓		N/A	-
S6.9	Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers over the construction site to prevent direct disposal of sewage into the water environment.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
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	-
S6.12	Regular site inspections will be carried out in order to confirm that regulatory requirements are being met and that contractors are implementing the standard site practice and mitigation measures as proposed to reduce potential impacts to water quality.	During construction	Contractor(s)/ ET & IEC		✓		Implemented	-

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



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		
Waste Management								
S8.5	Nomination of approved personnel to be responsible for standard site practices, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site.	Contract mobilization/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Training of site personnel in proper waste management and chemical handling procedures. Training will be provided to workers on the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse, and recycling at the beginning of the construction works.	Contract mobilization/ During construction	Contractor(s)		✓		Implemented	-
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	Appropriate measures to reduce windblown litter and dust transportation of waste by either covering trucks or by transporting wastes in enclosed containers.	All area/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness.
S8.5	A waste management plan (WMP) as stated in the “ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites” for the amount of waste generated, recycled and disposed of (including the disposal sites) will be established and implemented during the construction phase as part of the Environmental Management Plan (EMP). The Contractor will be required to prepare the EMP and submits it to the Architect/ Engineer under the Contract for approval prior to implementation.	All area/ During construction	Contractor(s)		✓		Implemented	ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites
S8.5	Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre at Tsing Yi.	All area/ During construction	Contractor(s)		✓		Implemented	Chapters 2 & 3 Code of Practice on the Packaging, Labelling & Storage of Chemical Wastes published under the Waste Disposal Ordinance (Cap 354), Section 35
S8.5	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.	Land site/ During construction	Contractor(s)		✓		Implemented	Waste Disposal Ordinance (Cap 354)

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
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S8.5	A recording system for the amount of wastes generated/ recycled and disposal sites. The trip- ticket system will be included as one of the contractual requirements and implemented by the contractor(s).	Land site/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of material and their proper disposal.	Land site/ During construction/ During operation	Contractor(s)		✓		Implemented	WBTC 32/92, The Use of Tropical Hard Wood on Construction Site
S8.5	Encourage collection of aluminium cans and wastepaper by individual collectors during construction with separate labelled bins provided to segregate these wastes from other general refuse by the workforce.	Land site/ During construction	Contractor(s)		✓		Implemented	ETWB TCW No. 33/2002, Management of Construction and Demolition Material Including Rock
S8.5	Any unused chemicals and those with remaining functional capacity will be recycled as far as possible.	Land site/ During construction	Contractor(s)		✓		N/A	-
S8.5	Use of reusable non-timber formwork to reduce the amount of C&D materials.	All areas/ During construction	Contractor(s)		✓		Implemented	WBTC 32/92, The Use of Tropical Hard Wood on Construction Site
S8.5	Prior to disposal of construction waste, wood, steel, and other metals will be separated to the extent practical, for re-use and/or recycling to reduce the quantity of waste to be disposed of to landfill.	All areas/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	Proper storage and site practices to reduce the potential for damage or contamination of construction materials.	All areas/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Plan and stock construction materials carefully to reduce amount of waste generated and avoid unnecessary generation of waste.	All areas/ During construction	Contractor(s)		✓		Implemented	-
S8.5	A Sediment Quality Report (SQR) for sampling and chemical testing of the sediment will be prepared and submitted to the EPD for approval. The approved detailed sampling and chemical testing will be carried out prior to the commencement of the dredging activities to confirm the sediment disposal method.	Marine works/ During construction	Contractor(s)		✓		N/A	ETWB TC(W) No. 34/2002 and Dumping at Sea Ordinance (DASO)

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	The management of dredged/ excavated sediment management requirement from ETWB TC(W) No. 34/2002 will be incorporated in the Specification of the Contract Documents.	Marine works/ During construction	WSD/ Contractor(s)		✓		Implemented	ETWB TC(W) No. 34/2002 and Dumping at Sea Ordinance (DASO)
S8.5	The contractor will open a billing account with EPD in accordance with the Waste Disposal (Charges for Disposal of Construction Waste) Regulation for the payment of disposal charges.	Contract mobilization/ During construction	Contractor(s)		✓		Implemented	Cap 354N Waste Disposal (Charges for Disposal of Construction Waste) Regulation
S8.5	A trip-ticket system will be established in accordance with DEVB TC(W) No. 6/2010 to monitor the reuse of surplus excavated materials off-site and disposal of construction waste and general refuse at transfer facilities/ landfills, and to control fly-tipping.	Contract mobilization/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	The project proponent will also conduct regular inspection of the waste management measures implemented on site as described in the Waste Management Plan.	All area/ During construction	Contractor(s)/ Environmental Team (ET) & Independent Environmental Checker (IEC)		✓		Implemented	ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites
S8.5	A recording system (similar to summary table as shown in Annex 5 and Annex 6 of Appendix G of ETWB TC(W) No. 19/2005) for the amount of waste generated, recycled and disposed of (including the disposal sites) will be established during the construction phase.	All area/ During construction	Contractor(s)		✓		Implemented	Annex 5 and Annex 6 of Appendix G of ETWB TC(W) No. 19/2005
S8.5	Inert C&D materials (public fill) will be reused within the Project as far as practicable.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Public fill and construction waste shall be segregated and stored in different containers or skips to facilitate reuse or recycling of materials and their proper disposal.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Specific areas of the work site will be designated for such segregation and storage if immediate use is not practicable.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	To reduce the potential dust and water quality impacts of site formation works, C&D materials will be wetted as quickly as possible to the extent practice after filling.	All area/ During construction	Contractor(s)		✓		Implemented	Air Pollution Control (Construction Dust) Regulation (Cap 311R); WPCO (Cap 358)

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
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S8.5	Open stockpiles of excavated/ fill materials or construction wastes on-site should be covered with tarpaulin or similar fabric.	Land site/ During Construction, particularly dry season	Contractor(s)		✓		Implemented	Air Pollution Control (Construction Dust) Regulation (Cap 311R)
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	
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	DEVB TC(W) No. 8/2010 Enhanced Specification for Site Cleanliness and Tidiness.
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	

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
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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	-
S8.5	To avoid any odour and litter impact, accurate number of portable toilets will be provided for workers on-site.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	The burning of refuse on construction sites is prohibited by law.	All area/ During construction	Contractor(s)		✓		Implemented	Air Pollution Control Ordinance (Cap 311)
S8.7	To facilitate monitoring and control over the contractors' performance on waste management, a waste inspection and audit programme will be implemented throughout the construction phase.	All facilities/ During construction	ET/ IEC		✓		Implemented	-

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

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		
Ecology								
S9.7	For slope mitigation works within the Clear Water Bay Country Park, to avoid tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels can be adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical. A detailed specification describing the exact locations of the flexible barrier foundation plates, soil nails and rock dowels will be prepared to illustrate how the setback distance from existing trees would be implemented for tree avoidance.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	✓	✓		Implemented	-
S9.7	Pruning of tree canopies along the alignment of the flexible barriers shall be limited to a minimum.	Slope mitigation works area/ During construction	Contractor(s)		✓		Implemented	
S9.7	The alignment of flexible barriers shall be optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable. All individuals of <i>Marsdenia lachnostoma</i> within the slope mitigation areas shall be retained <i>in-situ</i> , by positioning the alignment of flexible barrier at a minimum 1.5m in a radius away from these individuals.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	✓	✓		Implemented	-
S9.7 and 9.10	At the detailed design stage prior to the commencement of the slope mitigation works, a vegetation survey shall be carried out at the slope mitigation areas within the Clear Water Bay Country Park to assess the condition and identify the location of each individual of <i>Marsdenia lachnostoma</i> and other flora species of conservation interest that may be directly affected by the construction works.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	✓			Implemented	-
S9.7	Temporary fencing will be installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction. A sign identifying the site shall be attached to the fence and flagging tape shall be attached to the individuals to visualize their locations.	Slope mitigation works area/ During construction	Contractor(s)		✓		Implemented	-
S9.7 and S9.10	A specification for fencing and demarcating individuals of <i>Marsdenai lachnostoma</i> (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers will be prepared to protect the species.	Slope mitigation works area/ During construction	Contractor(s)		✓		Implemented	-
S9.7	Induction training shall also be provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance.	Slope mitigation works area/ During construction	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		
S9.7	The resident site supervisory staff will closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity.	Slope mitigation works area/ During construction	Contractor(s)		✓		Implemented	-
S9.7	Erect fences along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas.	All area/ During construction	Contractor(s)		✓		Implemented	-
S9.7	Regularly check the work site boundaries to ensure that they are not breached, and that damage does not occur to surrounding areas.	All area/ During construction	Contractor(s)/ ET		✓		Implemented	-
S9.7	Avoid any damage and disturbance, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal.	All area/ During construction	Contractor(s)		✓		Implemented	-
S9.7	Reinstate temporarily affected areas, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting. The tree/shrub species will be chosen with reference to those in the surrounding area.	All area/ During construction	Contractor(s)		✓		To be implemented	-
S9.7	Affected habitats within the Clear Water Bay Country Bay shall be reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works.	All area/ During construction	Contractor(s)		✓		To be implemented	-

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



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		
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	-
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	

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
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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 installation. (MM7)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	
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	-

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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		
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	
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	

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	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, <i>supervisors</i> responsibilities, storage and use of safety equipment, safety procedures and signs, barriers and guarding). The site <i>supervisor</i> 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 D

## Event / Action Plan

Table E1 Event and Action Plan for Construction Noise Monitoring

Event	Action							
	ET		IEC		ER		Contractor	
Action Level	1.	Carry out investigation to identify the source and cause of the complaint/ exceedance(s)	1.	Review the analyzed results submitted by the ET	1.	Confirm receipt of Notification of Exceedance in writing	1.	Submit noise mitigation proposals, if required, to the IEC and ER
	2.	Notify IEC, ER, and Contractor and report the results of investigation to the Contractor, ER and the IEC	2.	Review the proposed remedial measures by the Contractor and advise the ER accordingly	2.	Require Contractor to propose remedial measures for the analysed noise problem	2.	Implement noise mitigation proposals.
	3.	Discuss with the Contractor and IEC for remedial measures required	3.	Supervise the implementation of remedial measures	3.	Ensure remedial measures are properly implemented		
	4.	If the complaint is related to the Project, conduct additional monitoring for checking mitigation effectiveness and report the findings and results to the IEC, ER and the Contractor						
Limit Level	1.	Carry out investigation to identify the source and cause of the exceedance	1.	Review the analyzed results submitted by the ET	1.	Confirm receipt of Notification of Exceedance in writing	1.	Take immediate action to avoid further exceedance
	2.	Notify IEC, ER, Project Proponent, EPD and Contractor	2.	Discuss the potential remedial measures with ER, ET Leader and Contractor	2.	Require the Contractor to propose remedial measures for the analysed noise problem	2.	Submit proposals for remedial actions to IEC and ER within 3 working days of notification
	3.	Repeat measurements to confirm findings	3.	Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly	3.	Ensure remedial measures are properly implemented	3.	Implement the agreed proposals
	4.	Provide investigation report to IEC, ER, EPD and Contractor he causes of the exceedances	4.	Supervise the implementation of remedial measures	4.	If exceedance continues, consider what activity of the work is responsible and instruct the Contractor, in agreement with the Project Proponent, to stop that activity of work until the exceedance is abated	4.	Resubmit proposals if problem still not under control
	5.	If the exceedance is related to the Project, assess effectiveness by additional monitoring.					5.	Stop the relevant activity of works as determined by the Project Proponent until the exceedance is abated
	6.	Report the remedial action implemented and the additional monitoring results to IEC, EPD, ER and Contractor						
	7.	If exceedance stops, cease additional monitoring						

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



Table E2 Event and Action Plan for Water Quality Monitoring

Event	Action ET	IEC	Contractor(s)	ER
Action Level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>1. Repeat <i>in situ</i> measurement on the next day of exceedance to confirm findings;</li> <li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>3. Identify source(s) of impact and record in notification of exceedance;</li> <li>4. Inform IEC, Contractor(s) and ER.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>2. Inform EPD.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Check plant and equipment and rectify unacceptable practice</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing.</li> </ol>
Action Level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> <li>1. Repeat <i>in situ</i> measurement on the next day of exceedance to confirm findings;</li> <li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>3. Identify source(s) of impact and record in notification of exceedance;</li> <li>4. Inform IEC, Contractor(s) and ER;</li> <li>5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>2. Inform EPD;</li> <li>3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Check plant and equipment and rectify unacceptable practice;</li> <li>3. Consider changes of working methods;</li> <li>4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li> <li>5. Implement the agreed mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li> <li>3. Ensure additional mitigation measures are properly implemented.</li> </ol>
Limit Level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>1. Repeat <i>in situ</i> measurement on the next day of exceedance to confirm findings;</li> <li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>3. Identify source(s) of impact and record in notification of exceedance;</li> <li>4. Inform IEC, Contractor(s) and ER;</li> <li>5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>2. Inform EPD;</li> <li>3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Check plant and equipment and rectify unacceptable practice;</li> <li>3. Critically review the need to change working methods;</li> <li>4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li> <li>5. Implement the agreed mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li> <li>3. Ensure additional mitigation measures are properly implemented.</li> <li>4. Request Contractor(s) to critically review the working methods.</li> </ol>
Limit Level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> <li>1. Repeat <i>in situ</i> measurement on the next day of exceedance to confirm findings;</li> <li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>3. Identify source(s) of impact and record in notification of exceedance;</li> <li>4. Inform IEC, Contractor(s) and ER;</li> <li>5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>2. Inform EPD;</li> <li>3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Check plant and equipment and rectify unacceptable practice;</li> <li>3. Critically review the need to change working methods;</li> <li>4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li> <li>5. Implement the agreed mitigation measures.</li> <li>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.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li> <li>3. Ensure additional mitigation measures are properly implemented.</li> <li>4. Request Contractor(s) to critically review the working methods;</li> <li>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.</li> </ol>

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 E3 Event and Action Plan for Ecology during Construction Phase

Event	Action					
	ET	IEC	Contractor(s)		ER	
Non-conformity on one occasion	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-conformity	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 Contractor 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 E4 Event and Action Plan for Pre-Operation Phase Coral Monitoring

Event	Action			
	ET Leader	IEC	SOR **	Contractor
Action Level Exceedance	<ol style="list-style-type: none"> <li>1. Check monitoring data</li> <li>2. Inform the IEC, SOR and Contractor of the findings;</li> <li>3. Increase the monitoring to at least once a month to confirm findings;</li> <li>4. Propose mitigation measures for consideration</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss monitoring with the ET and the Contractor;</li> <li>2. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise the SOR accordingly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET;</li> <li>2. Make agreement on the measures to be implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the SOR and confirm notification of the non-compliance in writing;</li> <li>2. Discuss with the ET and the IEC and propose measures to the IEC and the SOR;</li> <li>3. Implement the agreed measures.</li> </ol>
Limit Level Exceedance	<ol style="list-style-type: none"> <li>1. Undertake Steps 1-4 as in the Action Level Exceedance. If further exceedance of Limit Level, propose enhancement measures for consideration.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss monitoring with the ET and the Contractor;</li> <li>2. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise the SOR accordingly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET;</li> <li>2. Make agreement on the measures to be implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the SOR and confirm notification of the non-compliance in writing;</li> <li>2. Discuss with the ET and the IEC and propose measures to the IEC and the SOR;</li> <li>3. Implement the agreed measures.</li> </ol>

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

# Appendix E

## Landfill Gas Equipment Calibration Certification



# YSF

## Corporation Ltd.

5A, Blk1 Kin Ho Ind. Bldg., 20-24 Au Pui Wan St., Fo Tan, Sha Tin, N.T., HK.  
Tel: (852) 8109 8368 Fax: (852) 3007 4857 E-mail: sales@ysftool.com  
www.sokkia.com.hk www.ysf.com.hk  
Supply, Repair, Rental, Scanning and Calibration Service of Surveying Instruments and Accessories



Certificate No. : CAL230351

Page 1 of 1

### CALIBRATION CERTIFICATE OF MULTI GAS DETECTOR

Client : China State Construction Engineering (Hong Kong) Ltd.  
Address : 29/F., China Overseas Bldg., 139 Hennessy Road, Hong Kong

#### Unit-Under-Test (UUT) Information

Description : Multi gas detector  
Manufacturer : GMI  
Model No. : PS500  
Serial No. : 25492809/21

#### Calibrator Information

Description : (1) 4 in 1 Standard gases (H<sub>2</sub>S, LEL, CO, O<sub>2</sub>) (2) Std CO<sub>2</sub> gas (0.30%)  
Serial No. : (1) C-048-07 (2) C-087-04  
Cylinder No. : (1) 21025003 (2) M123850  
Expired date : (1) 30 Nov., 2024 (2) 12/2025


Received date : 18 Aug., 2023  
Date of calibration : 22 Aug., 2023  
Next calibration date : 21 Aug., 2024  
Calibration location : YSF Calibration Laboratory  
Environmental conditions : 20.5-21.3°C / 54-63%RH  
Method used : By direct comparison

#### Calibration Results :

Parameters	Measured value
(1) Methane (50% LEL)	45% LEL
(2) Oxygen (18.1%)	18.3%
(3) Hydrogen Sulphide (25.5ppm)	26ppm
(4) Carbon monoxide (101ppm)	94ppm
(5) Carbon Dioxide (0.30%)	0.24%

#### Remark :

1. The equipment used in this calibration is traceable to recognized National Standards.

Tested by : Lam Man Kwong Date : 22 Aug., 2023 Certified by :  Date : 22 Aug., 2023  
So Chi Kuen (Lab Manager)

**\*\* End of Certificate \*\***



# Appendix F

## Landfill Gas Monitoring Data

# Landfill Gas Monitoring - Field Measurement Recording Sheet

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

Serial No.	Monitoring Equipment	Last Calibration
254938	GMI-PS500	22/8/2023

Monitoring Location	Working trench/ Pit	Date (dd/mm/yyyy)	Time (hh:mm)	Weather Condition	Landfill Gas Parameters				Physical Parameters	Trench/ Pit Depth (m)	Measured by	
				Sunny/ Fine/ Overcast/ Drizzle/ Rain/ Storm/ Hazy	Methane (%LEL)	Oxygen (%)	Carbon Dioxide (%)	Balance Gas (%) (e.g. H2S)	Temp (°C) / Pressure mBar		Name	Signature
Road L-0+210	U-Channel	1/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	33.0 / 1005	<1	San Hei Tung	8301
			13:30	Sunny	0	20.8	0.03	0	32.1 / 1005	<1	San Hei Tung	8301
			15:30	Sunny	0	20.9	0.03	0	32.0 / 1005	<1	San Hei Tung	8301
Road L-0+210	U-Channel	2/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	30.2 / 1007	<1	San Hei Tung	8301
			13:30	Sunny	0	20.9	0.03	0	32.1 / 1007	<1	San Hei Tung	8301
			15:30	Sunny	0	20.9	0.03	0	32.3 / 1007	<1	San Hei Tung	8301
Road L-0+210	U-Channel	3/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	29.8 / 1011	<1	San Hei Tung	8301
			13:30	Sunny	0	20.9	0.03	0	32.3 / 1011	<1	San Hei Tung	8301
			15:30	Sunny	0	20.9	0.03	0	32.7 / 1012	<1	San Hei Tung	8301
Road L-0+210	U-Channel	4/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	29.3 / 1012	<1	San Hei Tung	8301
			13:30	Sunny	0	20.9	0.03	0	32.1 / 1012	<1	San Hei Tung	8301
			15:30	Sunny	0	20.9	0.03	0	32.0 / 1011	<1	San Hei Tung	8301
Road L-0+210	U-Channel	5/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	31.5 / 1009	<1	San Hei Tung	8301
			13:30	Sunny	0	20.9	0.03	0	33.6 / 1008	<1	San Hei Tung	8301
			15:30	Sunny	0	20.9	0.03	0	33.4 / 1008	<1	San Hei Tung	8301
Road L-0+210	U-Channel	6/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	30.5 / 1008	<1	San Hei Tung	8301
			13:30	Sunny	0	20.9	0.03	0	33.8 / 1008	<1	San Hei Tung	8301
			15:30	Sunny	0	20.9	0.03	0	33.6 / 1008	<1	San Hei Tung	8301
Road L-0+210	U-Channel	8/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	31.3 / 1008	<1	San Hei Tung	8301
			13:30	Sunny	0	20.9	0.03	0	34.2 / 1008	<1	San Hei Tung	8301
			15:30	Sunny	0	20.9	0.03	0	34.1 / 1008	<1	San Hei Tung	8301
Road L-0+210	U-Channel	9/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	30.5 / 1009	<1	San Hei Tung	8301
			13:30	Sunny	0	20.9	0.03	0	33.9 / 1008	<1	San Hei Tung	8301
			15:30	Sunny	0	20.9	0.03	0	34.2 / 1008	<1	San Hei Tung	8301






















Checked by : Yan Hin Fung Alan  
Date : 9-7-2024



# Landfill Gas Monitoring - Field Measurement Recording Sheet

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

Serial No.	Monitoring Equipment	Last Calibration
254938	GMI-PS500	22/8/2023

Monitoring Location	Working trench/ Pit	Date (dd/mm/yyyy)	Time (hh:mm)	Weather Condition	Landfill Gas Parameters				Physical Parameters	Trench/ Pit Depth (m)	Measured by	
				Sunny/ Fine/ Overcast/ Drizzle/ Rain/ Storm/ Hazy	Methane (%LEL)	Oxygen (%)	Carbon Dioxide (%)	Balance Gas (%) (e.g. H2S)	Temp (°C) / Pressure mBar		Name	Signature
Road L-0+210	U-Channel	10/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	29.8 / 1009	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	33.5 / 1009	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	32.9 / 1008	<1	San Hei Tung	
Road L-0+210	U-Channel	11/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	29.7 / 1009	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	31.8 / 1066	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	31.6 / 1066	<1	San Hei Tung	
Road L-0+210	U-Channel	12/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	28.9 / 1005	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	31.2 / 1004	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	31.0 / 1005	<1	San Hei Tung	
Road L-0+210	U-Channel	13/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	30.5 / 1005	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	33.7 / 1005	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	33.8 / 1005	<1	San Hei Tung	
Road L-0+210	U-Channel	15/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	29.6 / 1008	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	32.7 / 1008	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	32.8 / 1008	<1	San Hei Tung	
Road L-0+210	U-Channel	16/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	28.5 / 1008	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	29.7 / 1008	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	29.5 / 1009	<1	San Hei Tung	
Road L-0+210	U-Channel	17/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	29.3 / 1009	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	32.7 / 1009	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	32.6 / 1009	<1	San Hei Tung	
Road L-0+210	U-Channel	1 / 2024	08:30 (before work)						/	<1	San Hei Tung	
			13:30						/	<1	San Hei Tung	
			15:30						/	<1	San Hei Tung	

























Checked by : Yan Hui Fung ASOW  
Date : 17-7-2024



# Landfill Gas Monitoring - Field Measurement Recording Sheet

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

Serial No.	Monitoring Equipment	Last Calibration
254938	GMI-PS500	22/8/2023

Monitoring Location	Working trench/ Pit	Date (dd/mm/yyyy)	Time (hh:mm)	Weather Condition	Landfill Gas Parameters				Physical Parameters	Trench/ Pit Depth (m)	Measured by	
				Sunny/ Fine/ Overcast/ Drizzle/ Rain/ Storm/ Hazy	Methane (%LEL)	Oxygen (%)	Carbon Dioxide (%)	Balance Gas (%) (e.g. H2S)	Temp (°C) / Pressure mBar		Name	Signature
Road L-0+210	U-Channel	18/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	27.3 / 1009	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	29.8 / 1009	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	28.5 / 1008	<1	San Hei Tung	
Road L-0+210	U-Channel	19/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	27.6 / 1007	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	29.3 / 1007	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	28.9 / 1007	<1	San Hei Tung	
Road L-0+210	U-Channel	20/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	31.3 / 1007	<1	San Hei Tung	
			13:30	Sunny	0	20.9	0.03	0	33.2 / 1007	<1	San Hei Tung	
			15:30	Sunny	0	20.9	0.03	0	33.1 / 1007	<1	San Hei Tung	
Road L-0+210	U-Channel	22/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	31.4 / 1005	<1	San Hei Tung	
			13:30	Sunny	0	20.9	0.03	0	33.4 / 1005	<1	San Hei Tung	
			15:30	Sunny	0	20.9	0.03	0	33.0 / 1005	<1	San Hei Tung	
Road L-0+210	U-Channel	23/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	29.3 / 1002	<1	San Hei Tung	
			13:30	Sunny	0	20.9	0.03	0	33.1 / 1001	<1	San Hei Tung	
			15:30	Sunny	0	20.9	0.03	0	32.9 / 1001	<1	San Hei Tung	
Road L-0+210	U-Channel	24/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	29.7 / 997	<1	San Hei Tung	
			13:30	Sunny	0	20.9	0.03	0	32.5 / 996	<1	San Hei Tung	
			15:30	Sunny	0	20.9	0.03	0	32.2 / 996	<1	San Hei Tung	
Road L-0+210	U-Channel	25/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	30.5 / 992	<1	San Hei Tung	
			13:30	Sunny	0	20.9	0.03	0	32.9 / 992	<1	San Hei Tung	
			15:30	Sunny	0	20.9	0.03	0	32.8 / 992	<1	San Hei Tung	
Road L-0+210	U-Channel	26/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	29.1 / 995	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	30.3 / 995	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	30.2 / 995	<1	San Hei Tung	

Checked by : Yau Hui Fung  
Date : 26-7-2024

# Landfill Gas Monitoring - Field Measurement Recording Sheet

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

Serial No.	Monitoring Equipment	Last Calibration
254938	GMI-PS500	22/8/2023

Monitoring Location	Working trench/ Pit	Date (dd/mm/yyyy)	Time (hh:mm)	Weather Condition	Landfill Gas Parameters				Physical Parameters	Trench/ Pit Depth (m)	Measured by	
				Sunny/ Fine/ Overcast/ Drizzle/ Rain/ Storm/ Hazy	Methane (%LEL)	Oxygen (%)	Carbon Dioxide (%)	Balance Gas (%) (e.g. H2S)	Temp (°C) / Pressure mBar		Name	Signature
Road L-0+210	U-Channel	27/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	28.3 / 1003	<1	San Hei Tung	8281
			13:30	Rain	0	20.9	0.03	0	29.8 / 1002	<1	San Hei Tung	8281
			15:30	Rain	0	20.9	0.03	0	29.9 / 1003	<1	San Hei Tung	8281
Road L-0+210	U-Channel	29/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	26.8 / 1005	<1	San Hei Tung	8281
			13:30	Rain	0	20.9	0.03	0	28.2 / 1006	<1	San Hei Tung	8281
			15:30	Rain	0	20.9	0.03	0	28.1 / 1006	<1	San Hei Tung	8281
Road L-0+210	U-Channel	30/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	28.3 / 1006	<1	San Hei Tung	8281
			13:30	Rain	0	20.9	0.03	0	30.1 / 1006	<1	San Hei Tung	8281
			15:30	Rain	0	20.9	0.03	0	30.0 / 1006	<1	San Hei Tung	8281
Road L-0+210	U-Channel	31/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	27.9 / 1006	<1	San Hei Tung	8281
			13:30	Rain	0	20.9	0.03	0	29.9 / 1006	<1	San Hei Tung	8281
			15:30	Rain	0	20.9	0.03	0	30.0 / 1006	<1	San Hei Tung	8281
Road L-0+210	U-Channel	/ /2024	08:30 (before work)						/	<1	San Hei Tung	
			13:30						/	<1	San Hei Tung	
			15:30						/	<1	San Hei Tung	
Road L-0+210	U-Channel	/ /2024	08:30 (before work)						/	<1	San Hei Tung	
			13:30						/	<1	San Hei Tung	
			15:30						/	<1	San Hei Tung	
Road L-0+210	U-Channel	/ /2024	08:30 (before work)						/	<1	San Hei Tung	
			13:30						/	<1	San Hei Tung	
			15:30						/	<1	San Hei Tung	
Road L-0+210	U-Channel	/ /2024	08:30 (before work)						/	<1	San Hei Tung	
			13:30						/	<1	San Hei Tung	
			15:30						/	<1	San Hei Tung	

Checked by : Yan Hin Fung ALOW  
Date : 31-7-2024



# 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

W

Monthly Summary Waste Flow Table for 2024 (year)

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	49.190	0.000	0.000	0.000	49.190	0.000	0.000	0.000	0.002	0.000	60.780
Sub-total	27818.971	0.000	0.000	26550.751	1268.220	0.000	0.000	0.000	0.002	0.000	368.970
Jul	60378.440	0.000	0.000	0.000	60378.440	0.000	0.000	0.000	0.000	0.000	42.820
Aug											
Sep											
Oct											
Nov											
Dec											
Total	88197.411	0.000	0.000	26550.751	61646.660	0.000	0.000	0.000	0.002	0.000	411.790

- 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

## Site Inspection Proforma



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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 2 July 2024 Inspected by: ET: Toby Wan SO: Derek Lai WSD: \_\_\_\_\_  
Contractor: Tiffany Tsang IEC: \_\_\_\_\_

Inspection Time: 14:30

<b>Weather</b>							
<b>Condition</b>	<input checked="" type="checkbox"/> Sunny	<input type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
<b>Temperature</b>	<input type="text" value="31"/> °C	<b>Humidity</b>		<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low	
<b>Wind</b>	<input checked="" type="checkbox"/> Calm	<input type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong			

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
<b>0.00</b>		<b>General</b>				
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0.02		Is ET Leader's log-book kept readily available for inspections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>1.00</b>		<b>Construction Dust</b>				
S4.8.1		Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.01						
1.02	S4.8.1	Are screenings, enclosures, water spraying, or vacuum cleaning devices provided to dusty construction works for dust suppression?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.03	S4.8.1	Are fumes or smoke emitting plants or construction activities shielded by a screen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	S4.8.1	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.05	S4.8.1	Is wheel-washing provided to all vehicles leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.06	S4.8.1	Are road section near the site exit free from dusty material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.07	S4.8.1	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.08	S4.8.1	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.09	S4.8.1	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.10	S4.8.1	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.11	S4.8.1	Is exposed earth properly treated within six months after the last construction activity on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	S4.8.1	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.13	S4.8.1	Are vehicles travelling at speed not exceeding 15km/hr within the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.14	S4.8.1	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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
		and 3 sides?				
1.15	S4.8.1	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	S4.8.1	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	S4.8.1	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>2.00</b>		<b>Construction Noise (Airborne)</b>				
2.01	S5.7	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	S5.7	Are the PME's operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.03	S5.7	Are plants throttled down or turned off when not in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	S5.7	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	S5.7	Are moveable barriers provided to screen NSRs from plant or noisy operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	S5.7	Are silencers, mufflers and enclosures provided to plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.07	S5.7	Are the hoods, cover panels and inspection hatches of PME's closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.08	S5.7	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	S5.7	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	S5.7	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	S5.7	Are valid noise emission label(s) affixed to all air compressors operating on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.12	S5.7	Are all construction noise permit(s) applied for percussive piling work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	S5.7	Are construction noise permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S5.7	Are valid construction noise permit(s) displayed at all vehicular exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Water Quality</b>				
3.01	S6.9	Is effluent discharge license obtained for wastewater discharge from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S6.9	Is effluent discharged according to the effluent discharge license?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S6.9	Is wastewater discharge from site properly treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S6.9	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S6.9	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**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
		to remove sand/silt particles from runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S6.9	Is surface runoff diverted to sedimentation facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.07	S6.9	Is the drainage system properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S6.9	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	S6.9	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.10	S6.9	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.11	S6.9	Are exposed slope surface properly protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.12	S6.9	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.13	S6.9	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.14	S6.9	Is runoff from wheel-washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.15	S6.9	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.16	S6.9	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.17	S6.9	Are the oil interceptors/ grease traps properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.18	S6.9	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.19	S6.9	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.20	S6.9	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.21	S6.9	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	S6.9	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.23	S6.9	Is concrete washing water properly collected and treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.24	S6.9	Is suitable type of silt curtains deployed during dredging to reduce the elevation of suspended solids to nearby sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.25	S6.9	Is closed grab dredger used to reduce the potential leakage of sediments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.26	S6.9	Is closed grab dredger of 3 to 6 m <sup>3</sup> used for dredging at seawater intake?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.27	S6.9	Is specific work staff assigned the responsibility for monitoring the number of grab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**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
		dredged per hour? Is number of cycle limited to 20-21 grab per hour for 3m <sup>3</sup> closed grab, 10-11 grab per hour for 6m <sup>3</sup> closed grab?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.28	S6.9	Is the grab operated in slow and controlled manner such that the impact to seabed by the grab when being lowered could be minimized? Is the operator ensured the grab be properly closed before lifting the grab?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.29	S6.9	Is the maximum allowed dredging rate at the seawater intake limited to 750 m <sup>3</sup> /day while the maximum allowed dredging rate at the submarine outfall is 3,500 m <sup>3</sup> /day?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.30	S6.9	Is dredged marine sediment disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.31	S6.9	Are disposal vessels fitted with tight bottom seals in order to prevent leakage of material during transport?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.32	S6.9	Are barges filled to a level which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.33	S6.9	Are excess materials cleaned from decks and exposed fittings before the vessel is moved from the dredging area after dredging?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.34	S6.9	Are the contractor(s) confirmed that the works cause no visible foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the dredging site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.35	S6.9	When the dredged material has been unloaded at the disposal areas, is any material accumulated on the deck or other exposed parts of the vessel removed and placed in the hold or a hopper?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.36	S6.9	Is dredger maintained adequate clearance between vessels and the seabed at all states of the tide and reduce operations speed to ensure that excessive turbidity is not generated by turbulence from vessel movement or propeller wash?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.37	S6.9	Is the contractor shall regularly inspect the silt curtains and check that they are moored and marked to avoid danger to marine traffic? Is regular inspection on the integrity of the silt curtain carried out by the contractor and any damage to the silt curtain shall be repaired by the contractor promptly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.38	S6.9	Are all vessels have a clean ballast system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.39	S6.9	Are all vessels well maintained and inspected before use to limit any potential discharges to the marine environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.40	S6.9	Is any discharge of sewage/grey wastewater? Is wastewater from potentially contaminated area on working vessels should be minimized and collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.41	S6.9	Is any soil waste disposed overboard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Waste Management</b>				
4.01	S8.5	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S8.5	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	S8.5	Is the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	S8.5	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.05	S8.5	Are trip tickets for chemical waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S8.5	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.07	S8.5	Are all containers for chemical waste properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.08	S8.5	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.09	S8.5	Are incompatible chemical wastes stored in different areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.10	S8.5	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.11	S8.5	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.12	S8.5	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.13	S8.5	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.14	S8.5	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.15	S8.5	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.16	S8.5	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.17	S8.5	Are C&D wastes sorted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.18	S8.5	Are C&D waste disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.19	S8.5	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.20	S8.5	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.21	S8.5	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.22	S8.5	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>	<b>S11.10</b>	<b>Landscape and Visual</b>				
5.01	& 11.11	Are Is site hoarding provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.02	S11.10 &	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
	11.11					
5.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.06	S11.10 & 11.11	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.00	S9.7	<b>Ecology</b>				
6.01		Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.02	S9.7	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03	S9.7	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.04	S9.7	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.05	S9.7	For slope mitigation works within the Clear Water Bay Country Park, are tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.06	S9.7	Are pruning of tree canopies along the alignment of the flexible barriers limited to a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.07	S9.7	Is the alignment of flexible barriers optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable? Are the alignment of flexible barriers positioned at minimum 1.5 m in a radius away from these individuals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.08	S9.7	Is temporary fencing installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction? Is a sign identifying the site attached to the fence and flagging tape shall be attached to the individuals to visualize their locations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.09	S9.7	Is a specification for fencing and demarcating individuals of Marsdenia lachnostoma (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers prepared to protect the species?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.10	S9.7	Is any induction training provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.11	S9.7	Is the resident site supervisory staff closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.12	S9.7	Are fences erected along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.13	S9.7	Is regular check of the work site boundaries performed to ensure that they are not				



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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
		breached and that damage does not occur to surrounding areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.14	S9.7	Is any damage and disturbance avoided, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.15	S9.7	Are temporarily affected areas reinstated, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.16	S9.7	Are affected habitats within the Clear Water Bay Country Bay reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>7.00</b>		<b>Landfill Gas Hazard</b>				
7.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.03	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.04	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.05	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.07	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.09	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.10	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.11	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>8.00</b>		<b>Overall</b>				
8.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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 : 2 July 2024

No major observation was found during site inspection.

**Signatures:**

ET  
Representative

(Name: Toby Wan)

Contractor's  
Representative

(Name: Philip Tong)

Supervising Officer's  
Representative

(Name: Raymond  
Lau)

IEC's  
Representative

(Name: )

WSD's  
Representative

(Name: )

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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 9 July 2024 Inspected by: ET: Toby Wan SO: Derek Lai WSD: \_\_\_\_\_  
Contractor: Tiffany Tsang IEC: \_\_\_\_\_

Inspection Time: 14:30

<b>Weather</b>							
<b>Condition</b>	<input checked="" type="checkbox"/> Sunny	<input type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
<b>Temperature</b>	<input type="text" value="30"/> °C	<b>Humidity</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low		
<b>Wind</b>	<input checked="" type="checkbox"/> Calm	<input type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong			

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
<b>0.00</b>		<b>General</b>				
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0.02		Is ET Leader's log-book kept readily available for inspections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>1.00</b>		<b>Construction Dust</b>				
S4.8.1		Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.01						
1.02	S4.8.1	Are screenings, enclosures, water spraying, or vacuum cleaning devices provided to dusty construction works for dust suppression?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.03	S4.8.1	Are fumes or smoke emitting plants or construction activities shielded by a screen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	S4.8.1	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.05	S4.8.1	Is wheel-washing provided to all vehicles leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.06	S4.8.1	Are road section near the site exit free from dusty material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.07	S4.8.1	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.08	S4.8.1	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.09	S4.8.1	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.10	S4.8.1	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.11	S4.8.1	Is exposed earth properly treated within six months after the last construction activity on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	S4.8.1	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.13	S4.8.1	Are vehicles travelling at speed not exceeding 15km/hr within the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.14	S4.8.1	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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
		and 3 sides?				
1.15	S4.8.1	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	S4.8.1	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	S4.8.1	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>2.00</b>		<b>Construction Noise (Airborne)</b>				
2.01	S5.7	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	S5.7	Are the PME's operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.03	S5.7	Are plants throttled down or turned off when not in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	S5.7	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	S5.7	Are moveable barriers provided to screen NSRs from plant or noisy operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	S5.7	Are silencers, mufflers and enclosures provided to plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.07	S5.7	Are the hoods, cover panels and inspection hatches of PME's closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.08	S5.7	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	S5.7	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	S5.7	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	S5.7	Are valid noise emission label(s) affixed to all air compressors operating on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.12	S5.7	Are all construction noise permit(s) applied for percussive piling work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	S5.7	Are construction noise permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S5.7	Are valid construction noise permit(s) displayed at all vehicular exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Water Quality</b>				
3.01	S6.9	Is effluent discharge license obtained for wastewater discharge from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S6.9	Is effluent discharged according to the effluent discharge license?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S6.9	Is wastewater discharge from site properly treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S6.9	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S6.9	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided				

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
		to remove sand/silt particles from runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S6.9	Is surface runoff diverted to sedimentation facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.07	S6.9	Is the drainage system properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S6.9	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	S6.9	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.10	S6.9	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.11	S6.9	Are exposed slope surface properly protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.12	S6.9	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.13	S6.9	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.14	S6.9	Is runoff from wheel-washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.15	S6.9	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.16	S6.9	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.17	S6.9	Are the oil interceptors/ grease traps properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.18	S6.9	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.19	S6.9	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.20	S6.9	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.21	S6.9	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	S6.9	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.23	S6.9	Is concrete washing water properly collected and treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.24	S6.9	Is suitable type of silt curtains deployed during dredging to reduce the elevation of suspended solids to nearby sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.25	S6.9	Is closed grab dredger used to reduce the potential leakage of sediments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.26	S6.9	Is closed grab dredger of 3 to 6 m <sup>3</sup> used for dredging at seawater intake?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.27	S6.9	Is specific work staff assigned the responsibility for monitoring the number of grab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**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
		dredged per hour? Is number of cycle limited to 20-21 grab per hour for 3m <sup>3</sup> closed grab, 10-11 grab per hour for 6m <sup>3</sup> closed grab?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.28	S6.9	Is the grab operated in slow and controlled manner such that the impact to seabed by the grab when being lowered could be minimized? Is the operator ensured the grab be properly closed before lifting the grab?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.29	S6.9	Is the maximum allowed dredging rate at the seawater intake limited to 750 m <sup>3</sup> /day while the maximum allowed dredging rate at the submarine outfall is 3,500 m <sup>3</sup> /day?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.30	S6.9	Is dredged marine sediment disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.31	S6.9	Are disposal vessels fitted with tight bottom seals in order to prevent leakage of material during transport?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.32	S6.9	Are barges filled to a level which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.33	S6.9	Are excess materials cleaned from decks and exposed fittings before the vessel is moved from the dredging area after dredging?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.34	S6.9	Are the contractor(s) confirmed that the works cause no visible foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the dredging site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.35	S6.9	When the dredged material has been unloaded at the disposal areas, is any material accumulated on the deck or other exposed parts of the vessel removed and placed in the hold or a hopper?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.36	S6.9	Is dredger maintained adequate clearance between vessels and the seabed at all states of the tide and reduce operations speed to ensure that excessive turbidity is not generated by turbulence from vessel movement or propeller wash?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.37	S6.9	Is the contractor shall regularly inspect the silt curtains and check that they are moored and marked to avoid danger to marine traffic? Is regular inspection on the integrity of the silt curtain carried out by the contractor and any damage to the silt curtain shall be repaired by the contractor promptly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.38	S6.9	Are all vessels have a clean ballast system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.39	S6.9	Are all vessels well maintained and inspected before use to limit any potential discharges to the marine environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.40	S6.9	Is any discharge of sewage/grey wastewater? Is wastewater from potentially contaminated area on working vessels should be minimized and collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.41	S6.9	Is any soil waste disposed overboard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Waste Management</b>				
4.01	S8.5	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S8.5	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	S8.5	Is the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



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			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	S8.5	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.05	S8.5	Are trip tickets for chemical waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S8.5	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.07	S8.5	Are all containers for chemical waste properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.08	S8.5	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.09	S8.5	Are incompatible chemical wastes stored in different areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.10	S8.5	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.11	S8.5	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.12	S8.5	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.13	S8.5	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.14	S8.5	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.15	S8.5	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.16	S8.5	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.17	S8.5	Are C&D wastes sorted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.18	S8.5	Are C&D waste disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.19	S8.5	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.20	S8.5	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.21	S8.5	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.22	S8.5	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>	<b>S11.10</b>	<b>Landscape and Visual</b>				
5.01	& 11.11	Are Is site hoarding provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.02	S11.10 &	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
	11.11					
5.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.06	S11.10 & 11.11	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.00	S9.7	<b>Ecology</b>				
6.01		Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.02	S9.7	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03	S9.7	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.04	S9.7	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.05	S9.7	For slope mitigation works within the Clear Water Bay Country Park, are tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.06	S9.7	Are pruning of tree canopies along the alignment of the flexible barriers limited to a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.07	S9.7	Is the alignment of flexible barriers optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable? Are the alignment of flexible barriers positioned at minimum 1.5 m in a radius away from these individuals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.08	S9.7	Is temporary fencing installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction? Is a sign identifying the site attached to the fence and flagging tape shall be attached to the individuals to visualize their locations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.09	S9.7	Is a specification for fencing and demarcating individuals of Marsdenia lachnostoma (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers prepared to protect the species?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.10	S9.7	Is any induction training provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.11	S9.7	Is the resident site supervisory staff closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.12	S9.7	Are fences erected along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.13	S9.7	Is regular check of the work site boundaries performed to ensure that they are not				

**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
		breached and that damage does not occur to surrounding areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.14	S9.7	Is any damage and disturbance avoided, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.15	S9.7	Are temporarily affected areas reinstated, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.16	S9.7	Are affected habitats within the Clear Water Bay Country Bay reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>7.00</b>		<b>Landfill Gas Hazard</b>				
7.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.03	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.04	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.05	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.07	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.09	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.10	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.11	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>8.00</b>		<b>Overall</b>				
8.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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: 8 July 2024

No major observation was found during site inspection.

**Signatures:**

ET  
Representative

(Name: Toby Wan )

Contractor's  
Representative

(Name: Andy Tsang)

Supervising Officer's  
Representative

(Name: Peter Lee)

IEC's  
Representative

(Name: )

WSD's  
Representative

(Name: )

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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 16 July 2024 Inspected by: ET: Toby Wan SO: Alan Lung WSD: \_\_\_\_\_  
Contractor: Tiffany Tsang IEC: \_\_\_\_\_

Inspection Time: 14:30

<b>Weather</b>							
<b>Condition</b>	<input checked="" type="checkbox"/> Sunny	<input type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
<b>Temperature</b>	<input type="text" value="29"/> °C		<b>Humidity</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low	
<b>Wind</b>	<input checked="" type="checkbox"/> Calm	<input type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong			

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
<b>0.00</b>		<b>General</b>				
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0.02		Is ET Leader's log-book kept readily available for inspections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>1.00</b>		<b>Construction Dust</b>				
S4.8.1		Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.01						
1.02	S4.8.1	Are screenings, enclosures, water spraying, or vacuum cleaning devices provided to dusty construction works for dust suppression?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.03	S4.8.1	Are fumes or smoke emitting plants or construction activities shielded by a screen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	S4.8.1	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.05	S4.8.1	Is wheel-washing provided to all vehicles leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.06	S4.8.1	Are road section near the site exit free from dusty material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.07	S4.8.1	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.08	S4.8.1	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.09	S4.8.1	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.10	S4.8.1	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.11	S4.8.1	Is exposed earth properly treated within six months after the last construction activity on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	S4.8.1	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.13	S4.8.1	Are vehicles travelling at speed not exceeding 15km/hr within the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.14	S4.8.1	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



**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
		and 3 sides?				
1.15	S4.8.1	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	S4.8.1	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	S4.8.1	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>2.00</b>		<b>Construction Noise (Airborne)</b>				
2.01	S5.7	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	S5.7	Are the PME's operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.03	S5.7	Are plants throttled down or turned off when not in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	S5.7	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	S5.7	Are moveable barriers provided to screen NSRs from plant or noisy operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	S5.7	Are silencers, mufflers and enclosures provided to plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.07	S5.7	Are the hoods, cover panels and inspection hatches of PME's closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.08	S5.7	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	S5.7	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	S5.7	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	S5.7	Are valid noise emission label(s) affixed to all air compressors operating on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.12	S5.7	Are all construction noise permit(s) applied for percussive piling work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	S5.7	Are construction noise permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S5.7	Are valid construction noise permit(s) displayed at all vehicular exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Water Quality</b>				
3.01	S6.9	Is effluent discharge license obtained for wastewater discharge from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S6.9	Is effluent discharged according to the effluent discharge license?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S6.9	Is wastewater discharge from site properly treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S6.9	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S6.9	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided				

**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
		to remove sand/silt particles from runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S6.9	Is surface runoff diverted to sedimentation facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.07	S6.9	Is the drainage system properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S6.9	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	S6.9	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.10	S6.9	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.11	S6.9	Are exposed slope surface properly protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.12	S6.9	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.13	S6.9	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.14	S6.9	Is runoff from wheel-washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.15	S6.9	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.16	S6.9	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.17	S6.9	Are the oil interceptors/ grease traps properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.18	S6.9	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.19	S6.9	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.20	S6.9	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.21	S6.9	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	S6.9	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.23	S6.9	Is concrete washing water properly collected and treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.24	S6.9	Is suitable type of silt curtains deployed during dredging to reduce the elevation of suspended solids to nearby sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.25	S6.9	Is closed grab dredger used to reduce the potential leakage of sediments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.26	S6.9	Is closed grab dredger of 3 to 6 m <sup>3</sup> used for dredging at seawater intake?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.27	S6.9	Is specific work staff assigned the responsibility for monitoring the number of grab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
		dredged per hour? Is number of cycle limited to 20-21 grab per hour for 3m <sup>3</sup> closed grab, 10-11 grab per hour for 6m <sup>3</sup> closed grab?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.28	S6.9	Is the grab operated in slow and controlled manner such that the impact to seabed by the grab when being lowered could be minimized? Is the operator ensured the grab be properly closed before lifting the grab?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.29	S6.9	Is the maximum allowed dredging rate at the seawater intake limited to 750 m <sup>3</sup> /day while the maximum allowed dredging rate at the submarine outfall is 3,500 m <sup>3</sup> /day?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.30	S6.9	Is dredged marine sediment disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.31	S6.9	Are disposal vessels fitted with tight bottom seals in order to prevent leakage of material during transport?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.32	S6.9	Are barges filled to a level which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.33	S6.9	Are excess materials cleaned from decks and exposed fittings before the vessel is moved from the dredging area after dredging?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.34	S6.9	Are the contractor(s) confirmed that the works cause no visible foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the dredging site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.35	S6.9	When the dredged material has been unloaded at the disposal areas, is any material accumulated on the deck or other exposed parts of the vessel removed and placed in the hold or a hopper?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.36	S6.9	Is dredger maintained adequate clearance between vessels and the seabed at all states of the tide and reduce operations speed to ensure that excessive turbidity is not generated by turbulence from vessel movement or propeller wash?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.37	S6.9	Is the contractor shall regularly inspect the silt curtains and check that they are moored and marked to avoid danger to marine traffic? Is regular inspection on the integrity of the silt curtain carried out by the contractor and any damage to the silt curtain shall be repaired by the contractor promptly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.38	S6.9	Are all vessels have a clean ballast system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.39	S6.9	Are all vessels well maintained and inspected before use to limit any potential discharges to the marine environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.40	S6.9	Is any discharge of sewage/grey wastewater? Is wastewater from potentially contaminated area on working vessels should be minimized and collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.41	S6.9	Is any soil waste disposed overboard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Waste Management</b>				
4.01	S8.5	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S8.5	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	S8.5	Is the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	S8.5	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.05	S8.5	Are trip tickets for chemical waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S8.5	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.07	S8.5	Are all containers for chemical waste properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.08	S8.5	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.09	S8.5	Are incompatible chemical wastes stored in different areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.10	S8.5	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.11	S8.5	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.12	S8.5	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.13	S8.5	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.14	S8.5	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.15	S8.5	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.16	S8.5	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.17	S8.5	Are C&D wastes sorted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.18	S8.5	Are C&D waste disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.19	S8.5	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.20	S8.5	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.21	S8.5	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.22	S8.5	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>	<b>S11.10</b>	<b>Landscape and Visual</b>				
5.01	& 11.11	Are Is site hoarding provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.02	S11.10 &	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
	11.11					
5.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.06	S11.10 & 11.11	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.00	S9.7	<b>Ecology</b>				
6.01		Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.02	S9.7	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03	S9.7	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.04	S9.7	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.05	S9.7	For slope mitigation works within the Clear Water Bay Country Park, are tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.06	S9.7	Are pruning of tree canopies along the alignment of the flexible barriers limited to a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.07	S9.7	Is the alignment of flexible barriers optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable? Are the alignment of flexible barriers positioned at minimum 1.5 m in a radius away from these individuals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.08	S9.7	Is temporary fencing installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction? Is a sign identifying the site attached to the fence and flagging tape shall be attached to the individuals to visualize their locations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.09	S9.7	Is a specification for fencing and demarcating individuals of Marsdenia lachnostoma (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers prepared to protect the species?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.10	S9.7	Is any induction training provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.11	S9.7	Is the resident site supervisory staff closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.12	S9.7	Are fences erected along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.13	S9.7	Is regular check of the work site boundaries performed to ensure that they are not				



**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
		breached and that damage does not occur to surrounding areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.14	S9.7	Is any damage and disturbance avoided, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.15	S9.7	Are temporarily affected areas reinstated, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.16	S9.7	Are affected habitats within the Clear Water Bay Country Bay reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>7.00</b>		<b>Landfill Gas Hazard</b>				
7.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.03	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.04	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.05	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.07	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.09	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.10	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.11	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>8.00</b>		<b>Overall</b>				
8.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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: 16 July 2024

No major observation was found during site inspection.

**Signatures:**

ET  
Representative

(Name: Toby Wan )

Contractor's  
Representative

(Name: Tony Tang )

Supervising Officer's  
Representative

(Name: Lucy Wai Lam )

IEC's  
Representative

(Name: )

WSD's  
Representative

(Name: )

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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 23 July 2024 Inspected by: ET: Toby Wan SO: Derek Lai WSD: \_\_\_\_\_  
Contractor: Tiffany Tsang IEC: \_\_\_\_\_

Inspection Time: 14:30

<b>Weather</b>							
<b>Condition</b>	<input checked="" type="checkbox"/> Sunny	<input type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
<b>Temperature</b>	<input type="text" value="31"/> °C	<b>Humidity</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low		
<b>Wind</b>	<input checked="" type="checkbox"/> Calm	<input type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong			

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
<b>0.00</b>		<b>General</b>				
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0.02		Is ET Leader's log-book kept readily available for inspections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>1.00</b>		<b>Construction Dust</b>				
S4.8.1		Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.01						
1.02	S4.8.1	Are screenings, enclosures, water spraying, or vacuum cleaning devices provided to dusty construction works for dust suppression?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.03	S4.8.1	Are fumes or smoke emitting plants or construction activities shielded by a screen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	S4.8.1	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.05	S4.8.1	Is wheel-washing provided to all vehicles leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.06	S4.8.1	Are road section near the site exit free from dusty material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.07	S4.8.1	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.08	S4.8.1	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.09	S4.8.1	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.10	S4.8.1	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.11	S4.8.1	Is exposed earth properly treated within six months after the last construction activity on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	S4.8.1	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.13	S4.8.1	Are vehicles travelling at speed not exceeding 15km/hr within the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.14	S4.8.1	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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
		and 3 sides?				
1.15	S4.8.1	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	S4.8.1	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	S4.8.1	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>2.00</b>		<b>Construction Noise (Airborne)</b>				
2.01	S5.7	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	S5.7	Are the PME's operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.03	S5.7	Are plants throttled down or turned off when not in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	S5.7	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	S5.7	Are moveable barriers provided to screen NSRs from plant or noisy operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	S5.7	Are silencers, mufflers and enclosures provided to plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.07	S5.7	Are the hoods, cover panels and inspection hatches of PME's closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.08	S5.7	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	S5.7	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	S5.7	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	S5.7	Are valid noise emission label(s) affixed to all air compressors operating on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.12	S5.7	Are all construction noise permit(s) applied for percussive piling work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	S5.7	Are construction noise permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S5.7	Are valid construction noise permit(s) displayed at all vehicular exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Water Quality</b>				
3.01	S6.9	Is effluent discharge license obtained for wastewater discharge from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S6.9	Is effluent discharged according to the effluent discharge license?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S6.9	Is wastewater discharge from site properly treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S6.9	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S6.9	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided				

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
		to remove sand/silt particles from runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S6.9	Is surface runoff diverted to sedimentation facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.07	S6.9	Is the drainage system properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S6.9	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	S6.9	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.10	S6.9	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.11	S6.9	Are exposed slope surface properly protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.12	S6.9	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.13	S6.9	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.14	S6.9	Is runoff from wheel-washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.15	S6.9	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.16	S6.9	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.17	S6.9	Are the oil interceptors/ grease traps properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.18	S6.9	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.19	S6.9	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.20	S6.9	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.21	S6.9	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	S6.9	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.23	S6.9	Is concrete washing water properly collected and treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.24	S6.9	Is suitable type of silt curtains deployed during dredging to reduce the elevation of suspended solids to nearby sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.25	S6.9	Is closed grab dredger used to reduce the potential leakage of sediments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.26	S6.9	Is closed grab dredger of 3 to 6 m <sup>3</sup> used for dredging at seawater intake?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.27	S6.9	Is specific work staff assigned the responsibility for monitoring the number of grab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



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		dredged per hour? Is number of cycle limited to 20-21 grab per hour for 3m <sup>3</sup> closed grab, 10-11 grab per hour for 6m <sup>3</sup> closed grab?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.28	S6.9	Is the grab operated in slow and controlled manner such that the impact to seabed by the grab when being lowered could be minimized? Is the operator ensured the grab be properly closed before lifting the grab?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.29	S6.9	Is the maximum allowed dredging rate at the seawater intake limited to 750 m <sup>3</sup> /day while the maximum allowed dredging rate at the submarine outfall is 3,500 m <sup>3</sup> /day?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.30	S6.9	Is dredged marine sediment disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.31	S6.9	Are disposal vessels fitted with tight bottom seals in order to prevent leakage of material during transport?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.32	S6.9	Are barges filled to a level which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.33	S6.9	Are excess materials cleaned from decks and exposed fittings before the vessel is moved from the dredging area after dredging?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.34	S6.9	Are the contractor(s) confirmed that the works cause no visible foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the dredging site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.35	S6.9	When the dredged material has been unloaded at the disposal areas, is any material accumulated on the deck or other exposed parts of the vessel removed and placed in the hold or a hopper?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.36	S6.9	Is dredger maintained adequate clearance between vessels and the seabed at all states of the tide and reduce operations speed to ensure that excessive turbidity is not generated by turbulence from vessel movement or propeller wash?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.37	S6.9	Is the contractor shall regularly inspect the silt curtains and check that they are moored and marked to avoid danger to marine traffic? Is regular inspection on the integrity of the silt curtain carried out by the contractor and any damage to the silt curtain shall be repaired by the contractor promptly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.38	S6.9	Are all vessels have a clean ballast system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.39	S6.9	Are all vessels well maintained and inspected before use to limit any potential discharges to the marine environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.40	S6.9	Is any discharge of sewage/grey wastewater? Is wastewater from potentially contaminated area on working vessels should be minimized and collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.41	S6.9	Is any soil waste disposed overboard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Waste Management</b>				
4.01	S8.5	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S8.5	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	S8.5	Is the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	S8.5	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.05	S8.5	Are trip tickets for chemical waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S8.5	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.07	S8.5	Are all containers for chemical waste properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.08	S8.5	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.09	S8.5	Are incompatible chemical wastes stored in different areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.10	S8.5	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.11	S8.5	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.12	S8.5	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.13	S8.5	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.14	S8.5	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.15	S8.5	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.16	S8.5	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.17	S8.5	Are C&D wastes sorted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.18	S8.5	Are C&D waste disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.19	S8.5	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.20	S8.5	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.21	S8.5	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.22	S8.5	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>	<b>S11.10</b>	<b>Landscape and Visual</b>				
5.01	& 11.11	Are Is site hoarding provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.02	S11.10 &	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
	11.11					
5.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.06	S11.10 & 11.11	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.00	S9.7	<b>Ecology</b>				
6.01		Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.02	S9.7	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03	S9.7	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.04	S9.7	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.05	S9.7	For slope mitigation works within the Clear Water Bay Country Park, are tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.06	S9.7	Are pruning of tree canopies along the alignment of the flexible barriers limited to a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.07	S9.7	Is the alignment of flexible barriers optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable? Are the alignment of flexible barriers positioned at minimum 1.5 m in a radius away from these individuals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.08	S9.7	Is temporary fencing installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction? Is a sign identifying the site attached to the fence and flagging tape shall be attached to the individuals to visualize their locations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.09	S9.7	Is a specification for fencing and demarcating individuals of Marsdenia lachnostoma (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers prepared to protect the species?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.10	S9.7	Is any induction training provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.11	S9.7	Is the resident site supervisory staff closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.12	S9.7	Are fences erected along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.13	S9.7	Is regular check of the work site boundaries performed to ensure that they are not				

**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
		breached and that damage does not occur to surrounding areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.14	S9.7	Is any damage and disturbance avoided, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.15	S9.7	Are temporarily affected areas reinstated, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.16	S9.7	Are affected habitats within the Clear Water Bay Country Bay reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>7.00</b>		<b>Landfill Gas Hazard</b>				
7.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.03	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.04	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.05	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.07	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.09	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.10	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.11	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>8.00</b>		<b>Overall</b>				
8.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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 July 2024

No major observation was found during site inspection.

**Signatures:**

ET  
Representative

(Name: *Toby Wan*)

Contractor's  
Representative

(Name: *Tiffany Tsang*)

Supervising Officer's  
Representative

(Name: *David Lai*)

IEC's  
Representative

(Name: )

WSD's  
Representative

(Name: )

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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 29 July 2024 Inspected by: ET: Toby Wan SO: David Wong WSD: W.P. Ho  
Contractor: Tiffany Tsang IEC: Serena Shek

Inspection Time: 9:30

<b>Weather</b>							
<b>Condition</b>	<input checked="" type="checkbox"/> Sunny	<input type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
<b>Temperature</b>	<input type="text" value="27"/> °C		<b>Humidity</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low	
<b>Wind</b>	<input checked="" type="checkbox"/> Calm	<input type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong			

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
<b>0.00</b>		<b>General</b>				
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0.02		Is ET Leader's log-book kept readily available for inspections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>1.00</b>		<b>Construction Dust</b>				
S4.8.1		Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.01						
1.02	S4.8.1	Are screenings, enclosures, water spraying, or vacuum cleaning devices provided to dusty construction works for dust suppression?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.03	S4.8.1	Are fumes or smoke emitting plants or construction activities shielded by a screen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	S4.8.1	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.05	S4.8.1	Is wheel-washing provided to all vehicles leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.06	S4.8.1	Are road section near the site exit free from dusty material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.07	S4.8.1	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.08	S4.8.1	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.09	S4.8.1	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.10	S4.8.1	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.11	S4.8.1	Is exposed earth properly treated within six months after the last construction activity on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	S4.8.1	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.13	S4.8.1	Are vehicles travelling at speed not exceeding 15km/hr within the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.14	S4.8.1	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



**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
		and 3 sides?				
1.15	S4.8.1	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	S4.8.1	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	S4.8.1	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>2.00</b>		<b>Construction Noise (Airborne)</b>				
2.01	S5.7	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	S5.7	Are the PME's operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.03	S5.7	Are plants throttled down or turned off when not in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	S5.7	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	S5.7	Are moveable barriers provided to screen NSRs from plant or noisy operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	S5.7	Are silencers, mufflers and enclosures provided to plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.07	S5.7	Are the hoods, cover panels and inspection hatches of PME's closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.08	S5.7	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	S5.7	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	S5.7	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	S5.7	Are valid noise emission label(s) affixed to all air compressors operating on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.12	S5.7	Are all construction noise permit(s) applied for percussive piling work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	S5.7	Are construction noise permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S5.7	Are valid construction noise permit(s) displayed at all vehicular exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Water Quality</b>				
3.01	S6.9	Is effluent discharge license obtained for wastewater discharge from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S6.9	Is effluent discharged according to the effluent discharge license?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S6.9	Is wastewater discharge from site properly treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S6.9	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S6.9	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided				

**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
		to remove sand/silt particles from runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S6.9	Is surface runoff diverted to sedimentation facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.07	S6.9	Is the drainage system properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S6.9	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	S6.9	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.10	S6.9	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.11	S6.9	Are exposed slope surface properly protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.12	S6.9	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.13	S6.9	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.14	S6.9	Is runoff from wheel-washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.15	S6.9	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.16	S6.9	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.17	S6.9	Are the oil interceptors/ grease traps properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.18	S6.9	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.19	S6.9	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.20	S6.9	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.21	S6.9	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	S6.9	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.23	S6.9	Is concrete washing water properly collected and treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.24	S6.9	Is suitable type of silt curtains deployed during dredging to reduce the elevation of suspended solids to nearby sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.25	S6.9	Is closed grab dredger used to reduce the potential leakage of sediments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.26	S6.9	Is closed grab dredger of 3 to 6 m <sup>3</sup> used for dredging at seawater intake?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.27	S6.9	Is specific work staff assigned the responsibility for monitoring the number of grab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**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
		dredged per hour? Is number of cycle limited to 20-21 grab per hour for 3m <sup>3</sup> closed grab, 10-11 grab per hour for 6m <sup>3</sup> closed grab?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.28	S6.9	Is the grab operated in slow and controlled manner such that the impact to seabed by the grab when being lowered could be minimized? Is the operator ensured the grab be properly closed before lifting the grab?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.29	S6.9	Is the maximum allowed dredging rate at the seawater intake limited to 750 m <sup>3</sup> /day while the maximum allowed dredging rate at the submarine outfall is 3,500 m <sup>3</sup> /day?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.30	S6.9	Is dredged marine sediment disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.31	S6.9	Are disposal vessels fitted with tight bottom seals in order to prevent leakage of material during transport?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.32	S6.9	Are barges filled to a level which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.33	S6.9	Are excess materials cleaned from decks and exposed fittings before the vessel is moved from the dredging area after dredging?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.34	S6.9	Are the contractor(s) confirmed that the works cause no visible foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the dredging site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.35	S6.9	When the dredged material has been unloaded at the disposal areas, is any material accumulated on the deck or other exposed parts of the vessel removed and placed in the hold or a hopper?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.36	S6.9	Is dredger maintained adequate clearance between vessels and the seabed at all states of the tide and reduce operations speed to ensure that excessive turbidity is not generated by turbulence from vessel movement or propeller wash?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.37	S6.9	Is the contractor shall regularly inspect the silt curtains and check that they are moored and marked to avoid danger to marine traffic? Is regular inspection on the integrity of the silt curtain carried out by the contractor and any damage to the silt curtain shall be repaired by the contractor promptly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.38	S6.9	Are all vessels have a clean ballast system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.39	S6.9	Are all vessels well maintained and inspected before use to limit any potential discharges to the marine environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.40	S6.9	Is any discharge of sewage/grey wastewater? Is wastewater from potentially contaminated area on working vessels should be minimized and collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.41	S6.9	Is any soil waste disposed overboard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Waste Management</b>				
4.01	S8.5	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S8.5	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	S8.5	Is the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**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
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	S8.5	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.05	S8.5	Are trip tickets for chemical waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S8.5	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.07	S8.5	Are all containers for chemical waste properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.08	S8.5	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.09	S8.5	Are incompatible chemical wastes stored in different areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.10	S8.5	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.11	S8.5	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.12	S8.5	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.13	S8.5	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.14	S8.5	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.15	S8.5	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.16	S8.5	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.17	S8.5	Are C&D wastes sorted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.18	S8.5	Are C&D waste disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.19	S8.5	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.20	S8.5	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.21	S8.5	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.22	S8.5	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>	<b>S11.10</b>	<b>Landscape and Visual</b>				
5.01	& 11.11	Are Is site hoarding provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.02	S11.10 &	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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
	11.11					
5.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.06	S11.10 & 11.11	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.00	S9.7	<b>Ecology</b>				
6.01		Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.02	S9.7	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03	S9.7	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.04	S9.7	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.05	S9.7	For slope mitigation works within the Clear Water Bay Country Park, are tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.06	S9.7	Are pruning of tree canopies along the alignment of the flexible barriers limited to a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.07	S9.7	Is the alignment of flexible barriers optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable? Are the alignment of flexible barriers positioned at minimum 1.5 m in a radius away from these individuals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.08	S9.7	Is temporary fencing installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction? Is a sign identifying the site attached to the fence and flagging tape shall be attached to the individuals to visualize their locations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.09	S9.7	Is a specification for fencing and demarcating individuals of Marsdenia lachnostoma (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers prepared to protect the species?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.10	S9.7	Is any induction training provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.11	S9.7	Is the resident site supervisory staff closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.12	S9.7	Are fences erected along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.13	S9.7	Is regular check of the work site boundaries performed to ensure that they are not				

**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
		breached and that damage does not occur to surrounding areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.14	S9.7	Is any damage and disturbance avoided, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.15	S9.7	Are temporarily affected areas reinstated, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.16	S9.7	Are affected habitats within the Clear Water Bay Country Bay reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>7.00</b>		<b>Landfill Gas Hazard</b>				
7.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.03	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.04	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.05	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.07	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.09	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.10	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.11	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>8.00</b>		<b>Overall</b>				
8.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



**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 29 July 2024

No major observation was found during site inspection.

**Signatures:**

ET  
Representative

(Name: Toby Wan)

Contractor's  
Representative

(Name: Brian Kam)

Supervising Officer's  
Representative

(Name: David Wong)

IEC's  
Representative

(Name: Serena Shek)

WSD's  
Representative

(Name: Adam Pui)

# Appendix I

## Complaint Log

Statistical Summary of Environmental Complaints

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

Statistical Summary of Environmental Summons

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

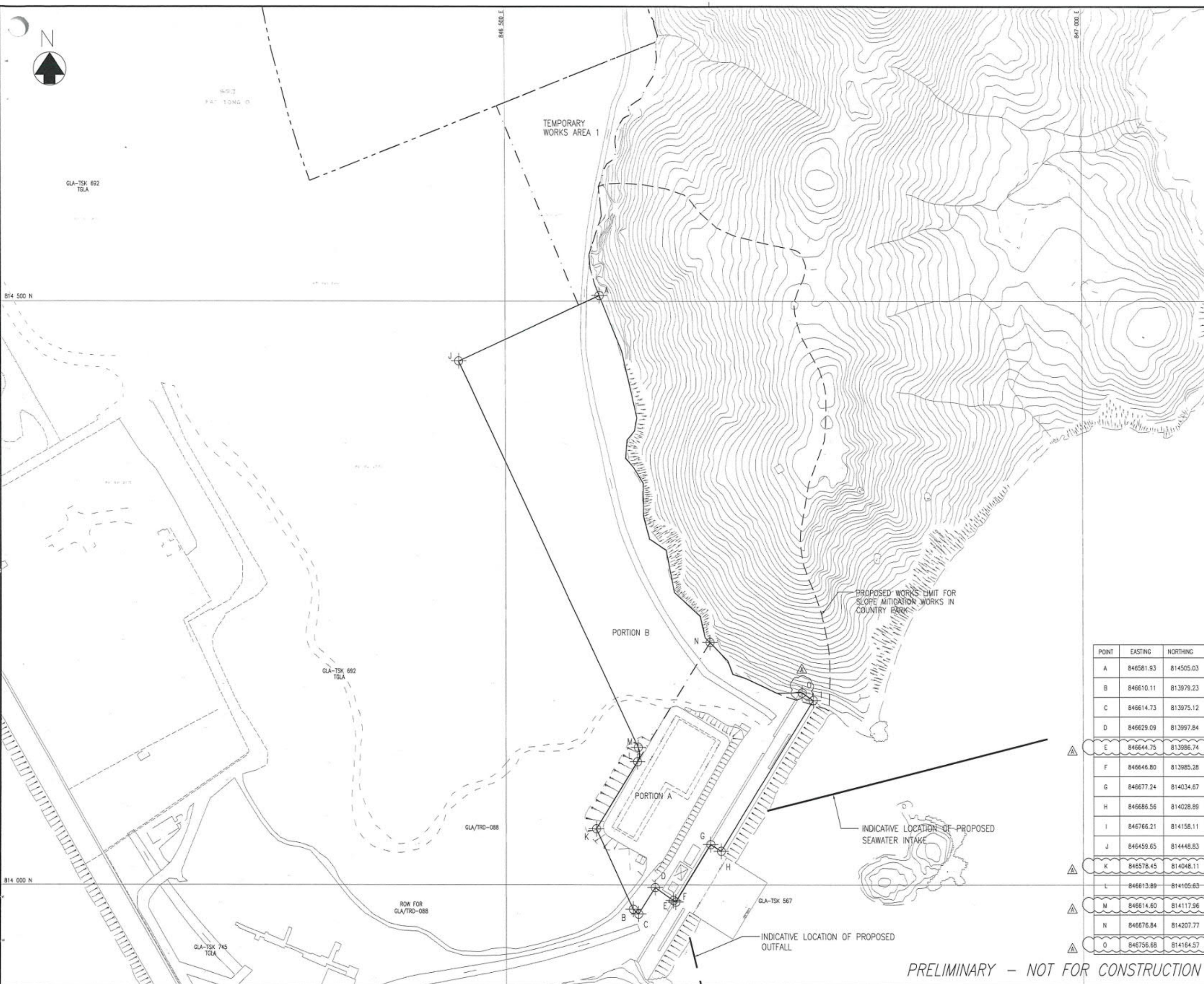
Statistical Summary of Environmental Prosecution

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

# Appendix A

## Overview of Desalination Plant in Tseung Kwan O






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**LEGEND:**

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

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

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

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	846613.89	814105.63
M	846614.60	814117.96
N	846676.84	814207.77
O	846756.68	814164.57

PRELIMINARY – NOT FOR CONSTRUCTION



BUILDINGS IN FIRST STAGE

CODE	NAME OF BUILDING	TOTAL G.F.A. (m <sup>2</sup> )	SITE COVERAGE (m <sup>2</sup> )
B	COMBINE SHAFT	759,876	759,876
C	ACT/DIAFF	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	2933,980
K	SLUDGE TREATMENT BUILDING, TANK AND PUMP ROOM	2531,044	1228,361
M	ADMINISTRATION BUILDING & ELECTRICAL BUILDING C	2450,713	1114,062
N	MAIN ELECTRICAL AND CENTRAL CHILLER PLANT BUILDING	-	409,893
R1	ELECTROCHLORINATION BUILDING & ELECTRICAL BUILDING A	657,992	825,776
S	132 KV SUBSTATION	-	943,590
T	IRRIGATION WATER TANK AND PUMP ROOM	-	156,148
R2	CHEMICAL BUILDING	813,056	613,056
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	21490,023

LEGEND / ABBREVIATION

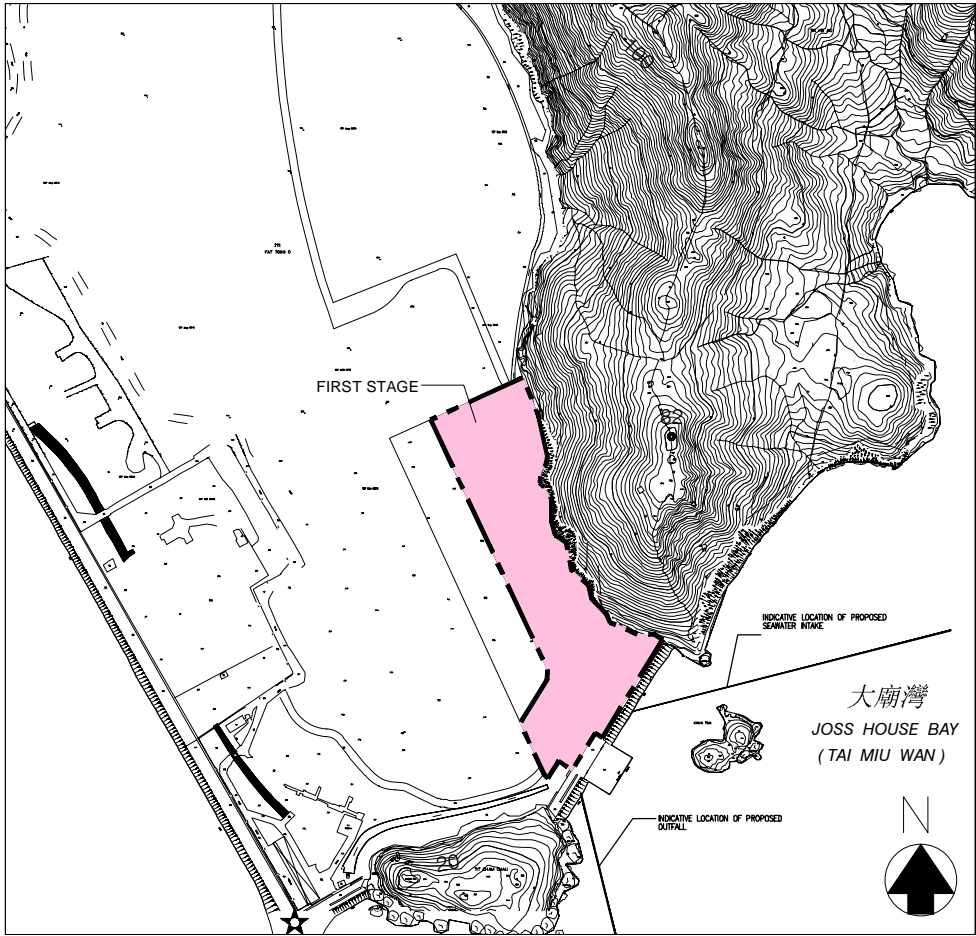
H/L WINDOW	HIGH LEVEL WINDOW
M.L.	METAL LOUVRES
C.L.	CAT LADDER
A.U.T.	ACCESSIBLE UNISEX TOILET
⊕	PROPOSED FINISH FLOOR LEVEL IN METER ABOVE P.D.
⊕	STRUCTURAL FLOOR LEVEL IN METER ABOVE P.D.
M.V.A.L.	MECHANICAL VENTILATION & ARTIFICIAL LIGHTING
F.E.	4.5kg CO <sub>2</sub> FIRE EXTINGUISHER
H.R.	HOSE REEL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

PLOT RATIO & SITE COVERAGE CALCULATION:

SITE AREA OF THE FIRST STAGE	= 56108 m <sup>2</sup>
TOTAL G.F.A.	= 25175.323
TOTAL SITE COVERAGE	= 21490.023
PLOT RATIO	= 25092.141 / 56108 = 0.447 < PERMITTED
SITE COVERAGE	= 21414.841 / 56108 x 100 = 38.167%

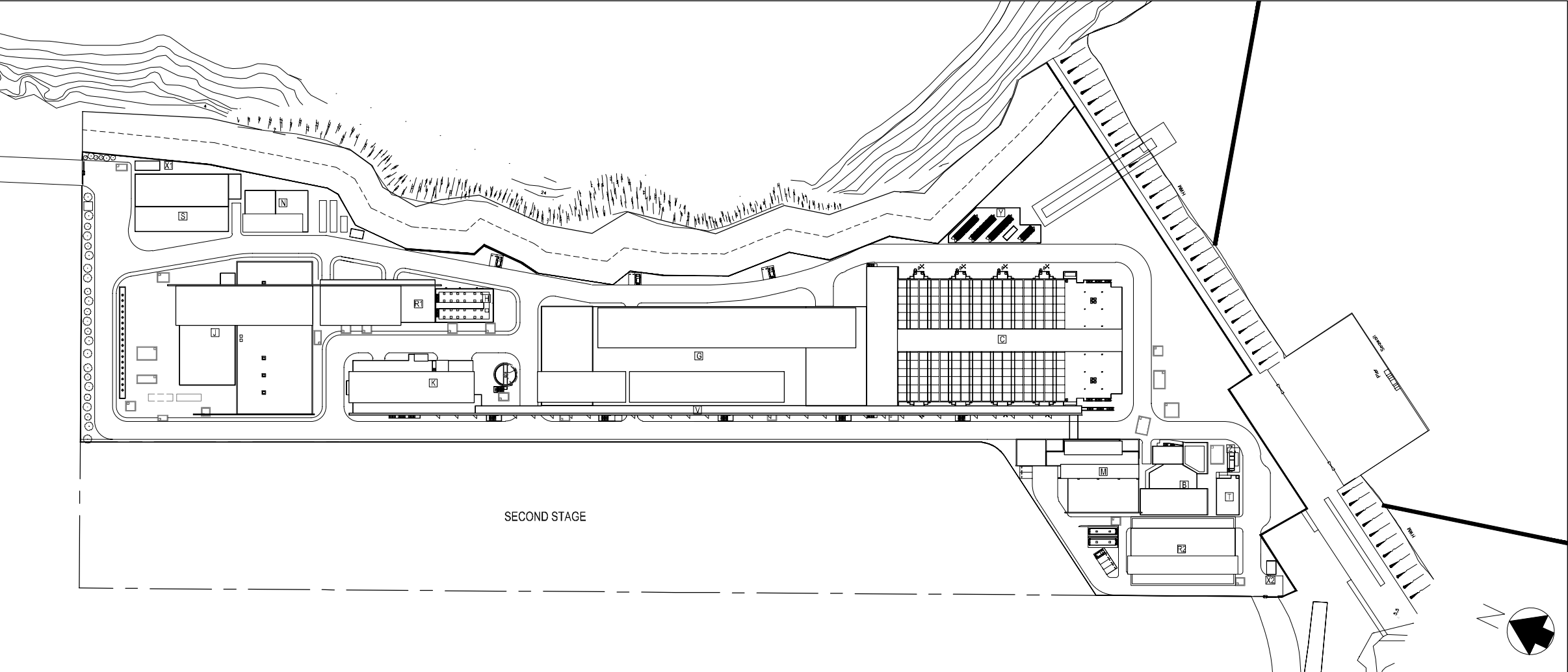
SITE LOCATION PLAN

1 : 5000



FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT

1 : 1000



0	TENDER SUBMISSION	CAD	JAN 19
Rev	Description	By	Date
Employer			
			
Employer's Consultant			
			
Tenderer			
			
Designer			
			
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. TKO/AJC/W/A000/AR/001			Rev. 0
Drawn OKAL	Date JAN 19	Checked S.C.	Approved 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	Impervious dust screen or sheeting will be provided to enclose scaffolding from the ground floor level of building for construction of superstructure of the new buildings.	Land site/ During Construction	Contractor(s)		✓		Implemented	Air Pollution Control (Construction Dust)
S4.8.1	Impervious sheet will be provided for skip hoist for material transport.	Land site/ During Construction, particularly dry season	Contractor(s)		✓		NA	-
S4.8.1	The area where dusty work takes place should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after dusty activities as far as practicable.	Land site/ During Construction	Contractor(s)		✓		Implemented after observation	-
S4.8.1	All dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation.	Land site/ During Construction	Contractor(s)		✓		Implemented	-
S4.8.1	Dropping heights for excavated materials should be controlled to a practical height to minimize the fugitive dust arising from unloading.	Land site/ During Construction	Contractor(s)		✓		Implemented	-
S4.8.1	During transportation by truck, materials should not be loaded to a level higher than the side and tail boards and should be dampened or covered before transport.	Land site/ During Construction	Contractor(s)		✓		Implemented	-
S4.8.1	Wheel washing device should be provided at the exits of the work sites. Immediately before leaving a construction site, every vehicle shall be washed to remove any dusty material from its body and wheels as far as practicable.	Land site/ During Construction	Contractor(s)		✓		Implemented	-
S4.8.1	Road sections between vehicle-wash areas and vehicular entrance will be paved.	Land site/ During Construction	Contractor(s)		✓		Implemented	-
S4.8.1	Hoarding of not less than 2.4m high from ground level will be provided along the length of the Project Site boundary.	Land site/ During construction	Contractor(s)	✓	✓		N/A	-
S4.8.1	Haul roads will be kept clear of dusty materials and will be sprayed with water so as to maintain the entire road surface wet at all times.	Land site/ During construction	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		
S4.8.1	Temporary stockpiles of dusty materials will be either covered entirely by impervious sheets or sprayed with water to maintain the entire surface wet all the time.	Land site/ During construction	Contractor(s)		✓		Implemented	-
S4.8.1	Stockpiles of more than 20 bags of cement, dry pulverised fuel ash and dusty construction materials will be covered entirely by impervious sheeting sheltered on top and 3-sides.	Land site/ During construction	Contractor(s)		✓		Implemented	-
S4.8.1	All exposed areas will be kept wet always to minimise dust emission.	Land site/ During construction	Contractor(s)		✓		Implemented	-
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
S4.8.1	The engine of the construction equipment during idling will be switched off.	Land site/ During construction	Contractor(s)		✓		Implemented	-
S4.8.1	Concrete batching plant will be required on site. control measures recommended in the Guidance Note on a Best Practicable Means for Cement Works (Concrete Batching Plant) (BPM 3/2 (93)) will be implemented. The control measures recommended in the Guidance Note on a Best Practicable Means for Cement Works (Concrete Batching Plant) (BPM 3/2 (93)) will be implemented.	Land site/ During construction	Contractor(s)		✓		N/A	-
S4.8.1	Regular maintenance of construction equipment deployed on-site will be conducted to prevent black smoke emission.	Land site/ During construction	Contractor(s)		✓		Implemented	-
S4.10	To ensure proper implementation of the recommended dust mitigation measures and good construction site practices during the construction phase, environmental site audits on weekly basis is recommended throughout the construction period.	Land site/ During construction	Contractor(s)/ Environmental Team (ET) & Independent Environmental Checker (IEC)		✓		Implemented	-

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

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		
Noise								
S5.7	Only well-maintained plant will be operated on-site and plant will be serviced regularly during the construction phase.	All area/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Silencers or mufflers on construction equipment will be utilised and will be properly maintained during the construction phase.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Mobile plant, if any, will be sited as far away from NSRs as possible.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Machines and plant (such as trucks) that may be in intermittent use will be shut down between work periods or will be throttled down to a minimum.	Noise control/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Plants known to emit noise strongly in one direction will, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Material stockpiles and other structures will be effectively utilised, wherever practicable, in screening noise from on-site construction activities.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Use of Quite Powered Mechanical Equipment (QPME).	Noise control/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Movable noise barriers of 3m in height with skid footing should be used and located within a few metres of stationary plant and mobile plant such that the line of sight to the NSR is blocked by the barriers. The length of the barrier should be at least five times greater than its height. The noise barrier material should have a superficial surface density of at least 7 kg m-2 and have no o or gappenings.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	The noise insulating sheet should be deployed such that there would be no opening or gaps on the joints.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Construction activities (e.g. excavation/shoring, reinstatement (asphalt), and pipe jacking) will be planned and carried out in sequence, such that items of PME proposed for these activities will not be operated simultaneously.	Noise control/ During construction	Contractor(s)	✓	✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	PMEs will not be used at the works areas near educational institutions with residual impact (ie the “influence area” within a	Noise control / During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from

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		
	radius of 40m) during school hours in order to reduce impact to the educational institutions.							Construction Works
S5.7	Noise enclosures or acoustic sheds would be used to cover stationary PME such as generators. Portable/Movable noise enclosure made of material with superficial surface density of at least 7 kg m-2 may be used for screening the noise from operation of the saw/groover, concrete.	Noise control/ Pre-construction/ During construction	Contractor(s)	✓	✓		N/A	-
S5.9	Sawcutting pavement, breaking up of pavement, excavation /shoring, pipe laying, backfilling, reinstatement (concrete) and pipe jacking shall be scheduled outside the examination period.	Noise control/ Pre-construction/ During construction	Contractor(s)	✓	✓		N/A	-
S5.9	In view the duration of noise exceedance at Creative Secondary School, PLK Laws Foundation College, TKO Kei Tak Primary School and School of Continuing and Professional Studies-CUHK is limited to 8 weeks, the construction work in the influence areas near the four schools shall be scheduled during long school holidays (eg summer holiday, Easter holiday or Christmas holiday, etc) as far as practicable. Scheduling the construction work for the four schools.	Noise control/ Pre-construction/ During construction	Contractor(s)	✓	✓		N/A	-
S5.10	A noise monitoring programme shall be implemented for the construction phase.	Designated monitoring stations as defined in EM&A Manual/During construction phase	Environmental Team		✓		N/A	-
S5.10	The effectiveness of on-site control measures could also be evaluated through the regular site audits.	All facilities/ During construction	Contractor(s)/ ET & Independent Environmental Checker (IEC)		✓		Implemented	-

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

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		
Water Quality								
S6.9	Dredged marine sediment will be disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO).	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	Dumping at Sea Ordinance (DASO)
S6.9	Disposal vessels will be fitted with tight bottom seals in order to prevent leakage of material during transport.	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	-
S6.9	Barges will be filled to a level, which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action.	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	-
S6.9	After dredging, any excess materials will be cleaned from decks and exposed fittings before the vessel is moved from the dredging area.	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	-
S6.9	All vessels should be well maintained and inspected before use to limit any potential discharges to the marine environment.	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	-
S6.9	All vessels must have a clean ballast system.	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	-
S6.9	No discharge of sewage/grey wastewater should be allowed. Wastewater from potentially contaminated area on working vessels should be minimized and collected. These kinds of wastewater should be brought back to port and discharged at appropriate collection and treatment system.	Marine Dredging/ During construction	Contractor(s)		✓		Implemented	-
S6.9	No soil waste is allowed to be disposed overboard.	Marine Dredging/ During construction	Contractor(s)		✓		N/A	-
S6.9	Silt removal facilities such as silt traps or sedimentation facilities will be provided to remove silt particles from runoff to meet the requirements of the TM standard under the WPCO. The design of silt removal facilities will be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures will be inspected on a regular basis and maintained to confirm proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit will be removed regularly.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	ProPECC PN 1/94 TM Standard under the WPCO
S6.9	Earthworks to form the final surfaces will be followed up with surface protection and drainage works to prevent erosion caused by rainstorms.	Land site & drainage/ During construction	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		
S6.9	Appropriate surface drainage will be designed and provided where necessary.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
S6.9	The precautions to be taken at any time of year when rainstorms are likely together with the actions to be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC PN 1/94.	Land site & drainage/ During construction	Contractor(s)	✓	✓		Implemented	ProPECC PN 1/94
S6.9	Oil interceptors will be provided in the drainage system where necessary and regularly emptied to prevent the release of oil and grease into the storm water drainage system after accidental spillages.	Land site & drainage/ During construction	Contractor(s)		✓		N/A	-
S6.9	Temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge, if any, will be adequately designed for the controlled release of storm flows.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
S6.9	The temporary diverted drainage, if any, will be reinstated to the original condition when the construction work has finished or when the temporary diversion is no longer required.	Land site & drainage/ During construction	Contractor(s)		✓		N/A	-
S6.9	Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers over the construction site to prevent direct disposal of sewage into the water environment.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
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	-
S6.12	Regular site inspections will be carried out in order to confirm that regulatory requirements are being met and that contractors are implementing the standard site practice and mitigation measures as proposed to reduce potential impacts to water quality.	During construction	Contractor(s)/ ET & IEC		✓		Implemented	-

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

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		
Waste Management								
S8.5	Nomination of approved personnel to be responsible for standard site practices, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site.	Contract mobilization/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Training of site personnel in proper waste management and chemical handling procedures. Training will be provided to workers on the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse, and recycling at the beginning of the construction works.	Contract mobilization/ During construction	Contractor(s)		✓		Implemented	-
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	Appropriate measures to reduce windblown litter and dust transportation of waste by either covering trucks or by transporting wastes in enclosed containers.	All area/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness.
S8.5	A waste management plan (WMP) as stated in the “ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites” for the amount of waste generated, recycled and disposed of (including the disposal sites) will be established and implemented during the construction phase as part of the Environmental Management Plan (EMP). The Contractor will be required to prepare the EMP and submits it to the Architect/ Engineer under the Contract for approval prior to implementation.	All area/ During construction	Contractor(s)		✓		Implemented	ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites
S8.5	Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre at Tsing Yi.	All area/ During construction	Contractor(s)		✓		Implemented	Chapters 2 & 3 Code of Practice on the Packaging, Labelling & Storage of Chemical Wastes published under the Waste Disposal Ordinance (Cap 354), Section 35
S8.5	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.	Land site/ During construction	Contractor(s)		✓		Implemented	Waste Disposal Ordinance (Cap 354)

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	A recording system for the amount of wastes generated/ recycled and disposal sites. The trip- ticket system will be included as one of the contractual requirements and implemented by the contractor(s).	Land site/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of material and their proper disposal.	Land site/ During construction/ During operation	Contractor(s)		✓		Implemented	WBTC 32/92, The Use of Tropical Hard Wood on Construction Site
S8.5	Encourage collection of aluminium cans and wastepaper by individual collectors during construction with separate labelled bins provided to segregate these wastes from other general refuse by the workforce.	Land site/ During construction	Contractor(s)		✓		Implemented	ETWB TCW No. 33/2002, Management of Construction and Demolition Material Including Rock
S8.5	Any unused chemicals and those with remaining functional capacity will be recycled as far as possible.	Land site/ During construction	Contractor(s)		✓		N/A	-
S8.5	Use of reusable non-timber formwork to reduce the amount of C&D materials.	All areas/ During construction	Contractor(s)		✓		Implemented	WBTC 32/92, The Use of Tropical Hard Wood on Construction Site
S8.5	Prior to disposal of construction waste, wood, steel, and other metals will be separated to the extent practical, for re-use and/or recycling to reduce the quantity of waste to be disposed of to landfill.	All areas/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	Proper storage and site practices to reduce the potential for damage or contamination of construction materials.	All areas/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Plan and stock construction materials carefully to reduce amount of waste generated and avoid unnecessary generation of waste.	All areas/ During construction	Contractor(s)		✓		Implemented	-
S8.5	A Sediment Quality Report (SQR) for sampling and chemical testing of the sediment will be prepared and submitted to the EPD for approval. The approved detailed sampling and chemical testing will be carried out prior to the commencement of the dredging activities to confirm the sediment disposal method.	Marine works/ During construction	Contractor(s)		✓		N/A	ETWB TC(W) No. 34/2002 and Dumping at Sea Ordinance (DASO)

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	The management of dredged/ excavated sediment management requirement from ETWB TC(W) No. 34/2002 will be incorporated in the Specification of the Contract Documents.	Marine works/ During construction	WSD/ Contractor(s)		✓		Implemented	ETWB TC(W) No. 34/2002 and Dumping at Sea Ordinance (DASO)
S8.5	The contractor will open a billing account with EPD in accordance with the Waste Disposal (Charges for Disposal of Construction Waste) Regulation for the payment of disposal charges.	Contract mobilization/ During construction	Contractor(s)		✓		Implemented	Cap 354N Waste Disposal (Charges for Disposal of Construction Waste) Regulation
S8.5	A trip-ticket system will be established in accordance with DEVB TC(W) No. 6/2010 to monitor the reuse of surplus excavated materials off-site and disposal of construction waste and general refuse at transfer facilities/ landfills, and to control fly-tipping.	Contract mobilization/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	The project proponent will also conduct regular inspection of the waste management measures implemented on site as described in the Waste Management Plan.	All area/ During construction	Contractor(s)/ Environmental Team (ET) & Independent Environmental Checker (IEC)		✓		Implemented	ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites
S8.5	A recording system (similar to summary table as shown in Annex 5 and Annex 6 of Appendix G of ETWB TC(W) No. 19/2005) for the amount of waste generated, recycled and disposed of (including the disposal sites) will be established during the construction phase.	All area/ During construction	Contractor(s)		✓		Implemented	Annex 5 and Annex 6 of Appendix G of ETWB TC(W) No. 19/2005
S8.5	Inert C&D materials (public fill) will be reused within the Project as far as practicable.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Public fill and construction waste shall be segregated and stored in different containers or skips to facilitate reuse or recycling of materials and their proper disposal.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Specific areas of the work site will be designated for such segregation and storage if immediate use is not practicable.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	To reduce the potential dust and water quality impacts of site formation works, C&D materials will be wetted as quickly as possible to the extent practice after filling.	All area/ During construction	Contractor(s)		✓		Implemented	Air Pollution Control (Construction Dust) Regulation (Cap 311R); WPCO (Cap 358)

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	Open stockpiles of excavated/ fill materials or construction wastes on-site should be covered with tarpaulin or similar fabric.	Land site/ During Construction, particularly dry season	Contractor(s)		✓		Implemented	Air Pollution Control (Construction Dust) Regulation (Cap 311R)
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	
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	DEVB TC(W) No. 8/2010 Enhanced Specification for Site Cleanliness and Tidiness.
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	

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	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	-
S8.5	To avoid any odour and litter impact, accurate number of portable toilets will be provided for workers on-site.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	The burning of refuse on construction sites is prohibited by law.	All area/ During construction	Contractor(s)		✓		Implemented	Air Pollution Control Ordinance (Cap 311)
S8.7	To facilitate monitoring and control over the contractors' performance on waste management, a waste inspection and audit programme will be implemented throughout the construction phase.	All facilities/ During construction	ET/ IEC		✓		Implemented	-

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



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		
Ecology								
S9.7	For slope mitigation works within the Clear Water Bay Country Park, to avoid tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels can be adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical. A detailed specification describing the exact locations of the flexible barrier foundation plates, soil nails and rock dowels will be prepared to illustrate how the setback distance from existing trees would be implemented for tree avoidance.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	✓	✓		Implemented	-
S9.7	Pruning of tree canopies along the alignment of the flexible barriers shall be limited to a minimum.	Slope mitigation works area/ During construction	Contractor(s)		✓		Implemented	
S9.7	The alignment of flexible barriers shall be optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable. All individuals of <i>Marsdenia lachnostoma</i> within the slope mitigation areas shall be retained <i>in-situ</i> , by positioning the alignment of flexible barrier at a minimum 1.5m in a radius away from these individuals.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	✓	✓		Implemented	-
S9.7 and 9.10	At the detailed design stage prior to the commencement of the slope mitigation works, a vegetation survey shall be carried out at the slope mitigation areas within the Clear Water Bay Country Park to assess the condition and identify the location of each individual of <i>Marsdenia lachnostoma</i> and other flora species of conservation interest that may be directly affected by the construction works.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	✓			Implemented	-
S9.7	Temporary fencing will be installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction. A sign identifying the site shall be attached to the fence and flagging tape shall be attached to the individuals to visualize their locations.	Slope mitigation works area/ During construction	Contractor(s)		✓		Implemented	-
S9.7 and S9.10	A specification for fencing and demarcating individuals of <i>Marsdenai lachnostoma</i> (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers will be prepared to protect the species.	Slope mitigation works area/ During construction	Contractor(s)		✓		Implemented	-
S9.7	Induction training shall also be provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance.	Slope mitigation works area/ During construction	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		
S9.7	The resident site supervisory staff will closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity.	Slope mitigation works area/ During construction	Contractor(s)		✓		Implemented	-
S9.7	Erect fences along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas.	All area/ During construction	Contractor(s)		✓		Implemented	-
S9.7	Regularly check the work site boundaries to ensure that they are not breached, and that damage does not occur to surrounding areas.	All area/ During construction	Contractor(s)/ ET		✓		Implemented	-
S9.7	Avoid any damage and disturbance, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal.	All area/ During construction	Contractor(s)		✓		Implemented	-
S9.7	Reinstate temporarily affected areas, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting. The tree/shrub species will be chosen with reference to those in the surrounding area.	All area/ During construction	Contractor(s)		✓		To be implemented	-
S9.7	Affected habitats within the Clear Water Bay Country Bay shall be reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works.	All area/ During construction	Contractor(s)		✓		To be implemented	-

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

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		
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	-
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	

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	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 installation. (MM7)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	
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	-

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

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		
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	
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	

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	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, <i>supervisors</i> responsibilities, storage and use of safety equipment, safety procedures and signs, barriers and guarding). The site <i>supervisor</i> 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 (July 2024)

[illegible]

[illegible]

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

Jul-24	
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31

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	19	20
			Regular Operation Phase Coral Monitoring			
21	22	23	24	25	26	27
28	29	30	31			

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

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

Aug-24						
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	19	20	21	22	23	24
25	26	27	28	29	30	31

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

# Appendix D

## Event / Action Plan



# Appendix E

## Water Quality Monitoring Equipment and Landfill Gas Equipment Calibration Certification



# YSF

## Corporation Ltd.

5A, Blk1 Kin Ho Ind. Bldg., 20-24 Au Pui Wan St., Fo Tan, Sha Tin, N.T., HK.  
Tel: (852) 8109 8368 Fax: (852) 3007 4857 E-mail: sales@ysftool.com  
www.sokkia.com.hk www.ysf.com.hk  
Supply, Repair, Rental, Scanning and Calibration Service of Surveying Instruments and Accessories



Certificate No. : CAL230351

Page 1 of 1

### CALIBRATION CERTIFICATE OF MULTI GAS DETECTOR

Client : China State Construction Engineering (Hong Kong) Ltd.  
Address : 29/F., China Overseas Bldg., 139 Hennessy Road, Hong Kong

#### Unit-Under-Test (UUT) Information

Description : Multi gas detector  
Manufacturer : GMI  
Model No. : PS500  
Serial No. : 25492809/21

#### Calibrator Information

Description : (1) 4 in 1 Standard gases (H<sub>2</sub>S, LEL, CO, O<sub>2</sub>) (2) Std CO<sub>2</sub> gas (0.30%)  
Serial No. : (1) C-048-07 (2) C-087-04  
Cylinder No. : (1) 21025003 (2) M123850  
Expired date : (1) 30 Nov., 2024 (2) 12/2025


Received date : 18 Aug., 2023  
Date of calibration : 22 Aug., 2023  
Next calibration date : 21 Aug., 2024  
Calibration location : YSF Calibration Laboratory  
Environmental conditions : 20.5-21.3°C / 54-63%RH  
Method used : By direct comparison

#### Calibration Results :

Parameters	Measured value
(1) Methane (50% LEL)	45% LEL
(2) Oxygen (18.1%)	18.3%
(3) Hydrogen Sulphide (25.5ppm)	26ppm
(4) Carbon monoxide (101ppm)	94ppm
(5) Carbon Dioxide (0.30%)	0.24%

#### Remark :

1. The equipment used in this calibration is traceable to recognized National Standards.

Tested by : Lam Man Kwong Date : 22 Aug., 2023 Certified by :  Date : 22 Aug. 2023  
So Chi Kuen (Lab Manager)

**\*\* End of Certificate \*\***



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-BD060107  
Date of Issue : 03 July 2024  
Page No. : 1 of 2

### 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 : 15M101091  
Date of Received : 26 June 2024  
Date of Calibration : 03 July 2024  
Date of Next Calibration : 02 October 2024  
Request No. : D-BD060107

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

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

### PART D - CALIBRATION RESULT

#### (1) pH value

Target ( pH unit )	Display Reading ( pH unit )	Tolerance	Result
4.00	4.10	0.10	Satisfactory
7.42	7.40	-0.02	Satisfactory
10.01	9.90	-0.11	Satisfactory

Tolerance of pH value should be less than  $\pm 0.2$  ( pH unit )

#### (2) Temperature

Reading of Ref. thermometer ( °C )	Display Reading ( °C )	Tolerance	Result
20.0	19.0	-1.0	Satisfactory
27.5	26.8	-0.7	Satisfactory
36.0	35.5	-0.5	Satisfactory

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

#### (3) Salinity

Expected Reading ( g/L )	Display Reading ( g/L )	Tolerance ( % )	Result
10	9.90	-1.00	Satisfactory
20	20.24	1.20	Satisfactory
30	30.62	2.07	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED  
SIGNATORY:

  
LEE Chun-ning  
Assistant Manager



專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD060107

Date of Issue : 03 July 2024

Page No. : 2 of 2

### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
8.55	8.34	-0.21	Satisfactory
5.80	5.60	-0.20	Satisfactory
3.40	3.40	0.00	Satisfactory
0.43	0.42	-0.01	Satisfactory

Tolerance of Dissolved oxygen should be less than  $\pm 0.5$  ( mg/L )

### (5) Turbidity

Expected Reading ( NTU )	Display Reading ( NTU )	Tolerance ( % )	Result
0	2.58	--	--
10	9.62	-3.8	Satisfactory
20	19.67	-1.6	Satisfactory
100	104.41	4.4	Satisfactory
800	778.88	-2.6	Satisfactory

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

### Remark(s)

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

--- END OF REPORT ---





專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD070022

Date of Issue : 15 July 2024

Page No. : 1 of 2

### 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 : 11 July 2024

Date of Calibration : 12 July 2024

Date of Next Calibration : 11 October 2024

Request No. : D-BD070022

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

#### Test Parameter

pH value

Temperature

Salinity

Dissolved oxygen

Turbidity

#### Reference Method

APHA 21e 4500-H<sup>+</sup> B

Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure

APHA 21e 2520 B

APHA 23e 4500-O G (Membrane Electrode Method)

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	7.46	0.04	Satisfactory
10.01	10.05	0.04	Satisfactory

Tolerance of pH value should be less than  $\pm 0.2$  ( pH unit )

#### (2) Temperature

Reading of Ref. thermometer ( °C )	Display Reading ( °C )	Tolerance	Result
16.0	14.7	-1.3	Satisfactory
25.5	24.1	-1.4	Satisfactory
32.0	30.8	-1.2	Satisfactory

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

#### (3) Salinity

Expected Reading ( g/L )	Display Reading ( g/L )	Tolerance ( % )	Result
10	10.01	0.10	Satisfactory
20	20.21	1.05	Satisfactory
30	30.90	3.00	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED  
SIGNATORY:

  
LEE Chun-ning  
Assistant Manager



專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

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### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
8.50	8.56	0.06	Satisfactory
7.11	6.66	-0.45	Satisfactory
4.31	4.13	-0.18	Satisfactory
0.69	0.30	-0.39	Satisfactory

Tolerance of Dissolved oxygen should be less than  $\pm 0.5$  ( mg/L )

### (5) Turbidity

Expected Reading ( NTU )	Display Reading ( NTU )	Tolerance ( % )	Result
0	-0.12	--	--
10	9.88	-1.2	Satisfactory
20	19.42	-2.9	Satisfactory
100	97.08	-2.9	Satisfactory
800	743.03	-7.1	Satisfactory

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

### Remark(s)

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

--- END OF REPORT ---





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## **REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION**

**CONTACT:** JOE HO  
**CLIENT:** AURECON HONG KONG LIMITED  
**ADDRESS:** UNIT E, 12/F, FORD GLORY PLAZA,  
NO. 37-39 WING HONG STREET,  
LAI CHI KOK

**WORK ORDER:** HK2452185

**SUB-BATCH:** 0  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 09-Jul-2024  
**DATE OF ISSUE:** 18-Jul-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: Chlorine Meter

Service Nature: Performance Check

Scope: Free Chlorine and Total Residual Chlorine

Brand Name/ Model No.: [LOVIBOND]/ [MD200]

Serial No./ Equipment No.: [19/79699]/ [N/A]

Date of Calibration: 09-Jul-2024

Mr Chan Siu Ming, Vico  
Assistant Laboratory Manager  
Environmental

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2452185  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 18-Jul-2024  
**CLIENT:** AURECON HONG KONG LIMITED

Equipment Type: Chlorine Meter  
Brand Name/ Model No.: [LOVIBOND]/ [MD200]  
Serial No.: [19/79699]/ [N/A]  
Equipment No.:  
Date of Calibration: 09-Jul-2024

Date of Next Calibration: 09-October-2024

## PARAMETERS:

### Free Chlorine

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (%)
0.2	0.23	+5.0
1.0	1.01	+1.0
2.0	1.97	-5.0
	Tolerance Limit (%)	±10.0

### Total Residual Chlorine

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (%)
0.2	0.21	+5.0
1.0	0.98	-2.0
2.0	2.00	+0.0
	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

# 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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CE	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	11:04:00 AM	8.74	8.15	31.58	27.19	2.37	5.00	<0.1	<0.01
CE	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	11:04:00 AM	8.74	8.17	31.48	27.16	2.42	4.00	<0.1	<0.01
CE	2/07/2024	Cloudy	Mid-Flood	Moderate	M	12	11:05:00 AM	8.76	8.14	31.39	27.12	2.35	4.00	<0.1	<0.01
CE	2/07/2024	Cloudy	Mid-Flood	Moderate	M	12	11:05:00 AM	8.81	8.14	31.56	27.16	2.41	5.00	<0.1	<0.01
CE	2/07/2024	Cloudy	Mid-Flood	Moderate	B	23	11:06:00 AM	8.74	8.12	31.43	27.19	2.36	8.00	<0.1	<0.01
CE	2/07/2024	Cloudy	Mid-Flood	Moderate	B	23	11:06:00 AM	8.72	8.16	31.54	27.19	2.35	7.00	<0.1	<0.01
CF	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:00:00 AM	8.71	8.23	31.66	27.40	2.43	4.00	<0.1	<0.01
CF	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:00:00 AM	8.72	8.18	31.70	27.46	2.59	8.00	<0.1	<0.01
CF	2/07/2024	Cloudy	Mid-Flood	Moderate	M	10	8:01:00 AM	8.72	8.20	31.77	27.45	2.48	6.00	<0.1	<0.01
CF	2/07/2024	Cloudy	Mid-Flood	Moderate	M	10	8:01:00 AM	8.73	8.23	31.70	27.47	2.54	7.00	<0.1	<0.01
CF	2/07/2024	Cloudy	Mid-Flood	Moderate	B	19	8:02:00 AM	8.64	8.20	31.74	27.43	2.55	7.00	<0.1	<0.01
CF	2/07/2024	Cloudy	Mid-Flood	Moderate	B	19	8:02:00 AM	8.66	8.21	31.74	27.46	2.62	8.00	<0.1	<0.01
WSR01	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:24:00 AM	7.86	8.08	31.03	27.44	2.10	4.00	<0.1	<0.01
WSR01	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:24:00 AM	7.84	8.08	30.90	27.43	2.11	5.00	<0.1	<0.01
WSR01	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	8:25:00 AM	7.78	8.10	31.06	27.46	2.11	5.00	<0.1	<0.01
WSR01	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	8:25:00 AM	7.89	8.09	31.03	27.40	2.02	5.00	<0.1	<0.01
WSR01	2/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:26:00 AM	7.82	8.10	30.89	27.45	2.01	4.00	<0.1	<0.01
WSR01	2/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:26:00 AM	7.85	8.07	31.01	27.43	2.08	4.00	<0.1	<0.01
WSR02	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:43:00 AM	8.95	8.19	31.66	27.47	1.86	5.00	<0.1	<0.01
WSR02	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:43:00 AM	8.88	8.22	31.61	27.44	1.86	4.00	<0.1	<0.01
WSR02	2/07/2024	Cloudy	Mid-Flood	Moderate	M	5	8:44:00 AM	8.94	8.21	31.70	27.43	1.82	4.00	<0.1	<0.01
WSR02	2/07/2024	Cloudy	Mid-Flood	Moderate	M	5	8:44:00 AM	8.84	8.21	31.81	27.45	1.81	4.00	<0.1	<0.01
WSR02	2/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:45:00 AM	8.88	8.21	31.80	27.50	1.85	5.00	<0.1	<0.01
WSR02	2/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:45:00 AM	8.93	8.20	31.62	27.47	1.84	4.00	<0.1	<0.01
WSR03	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:56:00 AM	8.39	8.11	31.74	27.21	2.12	4.00	<0.1	<0.01
WSR03	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:56:00 AM	8.37	8.11	31.73	27.17	2.07	6.00	<0.1	<0.01
WSR03	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	8:57:00 AM	8.39	8.14	31.78	27.17	1.99	4.00	<0.1	<0.01
WSR03	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	8:57:00 AM	8.34	8.09	31.64	27.19	2.02	5.00	<0.1	<0.01
WSR03	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	8:58:00 AM	8.35	8.09	31.82	27.22	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR03	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	8:58:00 AM	8.40	8.09	31.76	27.22	1.92	5.00	<0.1	<0.01
WSR04	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:11:00 AM	8.35	8.01	31.29	27.38	1.99	3.00	<0.1	<0.01
WSR04	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:11:00 AM	8.31	7.98	31.19	27.40	1.94	5.00	<0.1	<0.01
WSR04	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:12:00 AM	8.35	7.99	31.36	27.42	1.95	5.00	<0.1	<0.01
WSR04	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:12:00 AM	8.27	8.01	31.20	27.41	1.99	5.00	<0.1	<0.01
WSR04	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:13:00 AM	8.31	7.99	31.21	27.39	1.93	5.00	<0.1	<0.01
WSR04	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:13:00 AM	8.31	7.99	31.23	27.40	1.98	4.00	<0.1	<0.01
WSR16	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:41:00 AM	8.34	8.14	32.19	27.27	1.47	4.00	<0.1	<0.01
WSR16	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:41:00 AM	8.37	8.14	31.99	27.29	1.52	5.00	<0.1	<0.01
WSR16	2/07/2024	Cloudy	Mid-Flood	Moderate	M	8	10:42:00 AM	8.35	8.16	32.00	27.27	1.54	4.00	<0.1	<0.01
WSR16	2/07/2024	Cloudy	Mid-Flood	Moderate	M	8	10:42:00 AM	8.26	8.12	32.08	27.29	1.50	5.00	<0.1	<0.01
WSR16	2/07/2024	Cloudy	Mid-Flood	Moderate	B	14	10:43:00 AM	8.36	8.13	32.11	27.25	1.55	4.00	<0.1	<0.01
WSR16	2/07/2024	Cloudy	Mid-Flood	Moderate	B	14	10:43:00 AM	8.26	8.13	32.16	27.25	1.56	5.00	<0.1	<0.01
WSR33	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:28:00 AM	7.87	8.15	31.93	27.48	1.69	5.00	<0.1	<0.01
WSR33	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:28:00 AM	7.76	8.15	31.75	27.50	1.69	4.00	<0.1	<0.01
WSR33	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:29:00 AM	7.77	8.15	31.83	27.46	1.71	6.00	<0.1	<0.01
WSR33	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:29:00 AM	7.76	8.13	31.93	27.43	1.79	5.00	<0.1	<0.01
WSR33	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:30:00 AM	7.87	8.16	31.86	27.48	1.69	5.00	<0.1	<0.01
WSR33	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:30:00 AM	7.86	8.14	31.75	27.44	1.78	4.00	<0.1	<0.01
WSR36	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:45:00 AM	8.48	7.95	31.66	27.13	1.51	5.00	<0.1	<0.01
WSR36	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:45:00 AM	8.53	7.94	31.44	27.17	1.51	5.00	<0.1	<0.01
WSR36	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:46:00 AM	8.45	7.94	31.60	27.18	1.52	5.00	<0.1	<0.01
WSR36	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:46:00 AM	8.53	7.97	31.66	27.12	1.53	5.00	<0.1	<0.01
WSR36	2/07/2024	Cloudy	Mid-Flood	Moderate	B	6	9:46:00 AM	8.44	7.94	31.57	27.19	1.53	4.00	<0.1	<0.01
WSR36	2/07/2024	Cloudy	Mid-Flood	Moderate	B	6	9:46:00 AM	8.53	7.95	31.58	27.13	1.48	5.00	<0.1	<0.01
WSR37	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:02:00 AM	8.70	8.20	30.74	27.66	1.70	3.00	<0.1	<0.01
WSR37	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:02:00 AM	8.78	8.19	30.56	27.68	1.65	5.00	<0.1	<0.01
WSR37	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	10:03:00 AM	8.78	8.21	30.72	27.66	1.62	3.00	<0.1	<0.01
WSR37	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	10:03:00 AM	8.78	8.21	30.74	27.68	1.59	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR37	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	10:04:00 AM	8.80	8.17	30.60	27.69	1.60	5.00	<0.1	<0.01
WSR37	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	10:04:00 AM	8.80	8.20	30.68	27.72	1.62	4.00	<0.1	<0.01
NF1	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:26:00 AM	8.75	8.12	31.13	27.41	1.46	5.00	<0.1	<0.01
NF1	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:26:00 AM	8.68	8.09	31.10	27.42	1.53	8.00	<0.1	<0.01
NF1	2/07/2024	Cloudy	Mid-Flood	Moderate	M	7	10:27:00 AM	8.69	8.09	31.06	27.39	1.52	5.00	<0.1	<0.01
NF1	2/07/2024	Cloudy	Mid-Flood	Moderate	M	7	10:27:00 AM	8.70	8.12	31.04	27.39	1.52	6.00	<0.1	<0.01
NF1	2/07/2024	Cloudy	Mid-Flood	Moderate	B	12	10:28:00 AM	8.74	8.10	31.13	27.39	1.53	4.00	<0.1	<0.01
NF1	2/07/2024	Cloudy	Mid-Flood	Moderate	B	12	10:28:00 AM	8.71	8.09	31.09	27.40	1.46	7.00	<0.1	<0.01
NF2	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:18:00 AM	8.19	8.12	31.36	27.55	1.94	6.00	<0.1	<0.01
NF2	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:18:00 AM	8.25	8.13	31.23	27.51	1.88	5.00	<0.1	<0.01
NF2	2/07/2024	Cloudy	Mid-Flood	Moderate	M	5	10:19:00 AM	8.22	8.10	31.34	27.51	2.13	5.00	<0.1	<0.01
NF2	2/07/2024	Cloudy	Mid-Flood	Moderate	M	5	10:19:00 AM	8.27	8.14	31.32	27.56	2.04	6.00	<0.1	<0.01
NF2	2/07/2024	Cloudy	Mid-Flood	Moderate	B	10	10:20:00 AM	8.21	8.14	31.20	27.55	2.03	5.00	<0.1	<0.01
NF2	2/07/2024	Cloudy	Mid-Flood	Moderate	B	10	10:20:00 AM	8.31	8.09	31.30	27.51	2.09	5.00	<0.1	<0.01
NF3	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:11:00 AM	8.68	8.16	32.17	27.53	1.84	6.00	<0.1	<0.01
NF3	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:11:00 AM	8.69	8.18	32.05	27.49	1.84	6.00	<0.1	<0.01
NF3	2/07/2024	Cloudy	Mid-Flood	Moderate	M	6	10:12:00 AM	8.66	8.17	32.19	27.54	1.86	6.00	<0.1	<0.01
NF3	2/07/2024	Cloudy	Mid-Flood	Moderate	M	6	10:12:00 AM	8.69	8.16	31.96	27.54	1.81	7.00	<0.1	<0.01
NF3	2/07/2024	Cloudy	Mid-Flood	Moderate	B	11	10:13:00 AM	8.74	8.21	32.09	27.56	1.87	5.00	<0.1	<0.01
NF3	2/07/2024	Cloudy	Mid-Flood	Moderate	B	11	10:13:00 AM	8.64	8.21	31.98	27.49	1.79	5.00	<0.1	<0.01
CE	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:23:00 AM	7.89	8.07	31.29	27.34	2.67	3.00	<0.1	<0.01
CE	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:23:00 AM	7.86	8.06	31.29	27.31	2.63	3.00	<0.1	<0.01
CE	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	12	9:24:00 AM	7.88	8.10	31.06	27.34	2.63	4.00	<0.1	<0.01
CE	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	12	9:24:00 AM	7.88	8.07	31.09	27.37	2.51	4.00	<0.1	<0.01
CE	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	22	9:25:00 AM	7.84	8.06	31.17	27.30	2.46	6.00	<0.1	<0.01
CE	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	22	9:25:00 AM	7.81	8.10	31.17	27.33	2.51	7.00	<0.1	<0.01
CF	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:33:00 PM	7.85	8.04	31.87	27.46	2.29	10.00	<0.1	<0.01
CF	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:33:00 PM	7.82	8.06	31.73	27.53	2.25	8.00	<0.1	<0.01
CF	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	12:34:00 PM	7.81	8.04	31.86	27.43	2.24	10.00	<0.1	<0.01



Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp (°C)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CF	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	12:34:00 PM	7.75	8.06	31.75	27.46	2.18	6.00	<0.1	<0.01
CF	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	20	12:35:00 PM	7.72	8.06	31.72	27.55	2.20	3.00	<0.1	<0.01
CF	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	20	12:35:00 PM	7.79	8.03	31.84	27.49	2.21	6.00	<0.1	<0.01
WSR01	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:09:00 PM	7.84	8.00	31.11	27.38	1.90	11.00	<0.1	<0.01
WSR01	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:09:00 PM	7.89	8.03	31.05	27.36	1.87	7.00	<0.1	<0.01
WSR01	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:10:00 PM	7.89	8.03	31.19	27.36	1.86	7.00	<0.1	<0.01
WSR01	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:10:00 PM	7.96	8.02	31.27	27.38	1.81	10.00	<0.1	<0.01
WSR01	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	12:11:00 PM	7.79	8.02	31.04	27.38	1.86	10.00	<0.1	<0.01
WSR01	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	12:11:00 PM	7.87	8.02	31.20	27.32	1.91	11.00	<0.1	<0.01
WSR02	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:48:00 AM	7.92	8.11	32.13	27.39	1.53	7.00	<0.1	<0.01
WSR02	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:48:00 AM	7.78	8.11	32.02	27.35	1.51	9.00	<0.1	<0.01
WSR02	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	11:49:00 AM	7.87	8.09	32.20	27.32	1.61	5.00	<0.1	<0.01
WSR02	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	11:49:00 AM	7.80	8.12	32.25	27.43	1.55	5.00	<0.1	<0.01
WSR02	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	11:50:00 AM	7.78	8.10	32.04	27.35	1.59	11.00	<0.1	<0.01
WSR02	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	11:50:00 AM	7.87	8.10	32.01	27.44	1.61	10.00	<0.1	<0.01
WSR03	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:32:00 AM	8.62	8.18	31.20	27.17	1.53	9.00	<0.1	<0.01
WSR03	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:32:00 AM	8.51	8.20	31.22	27.18	1.46	7.00	<0.1	<0.01
WSR03	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:33:00 AM	8.62	8.19	31.30	27.09	1.44	8.00	<0.1	<0.01
WSR03	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:33:00 AM	8.52	8.21	31.21	27.08	1.41	8.00	<0.1	<0.01
WSR03	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:34:00 AM	8.63	8.20	31.32	27.20	1.40	8.00	<0.1	<0.01
WSR03	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:34:00 AM	8.65	8.21	31.30	27.08	1.41	7.00	<0.1	<0.01
WSR04	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:19:00 AM	7.76	8.07	31.82	27.29	1.73	6.00	<0.1	<0.01
WSR04	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:19:00 AM	7.83	8.07	31.87	27.28	1.77	7.00	<0.1	<0.01
WSR04	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:20:00 AM	7.76	8.07	31.76	27.33	1.84	6.00	<0.1	<0.01
WSR04	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:20:00 AM	7.76	8.06	31.93	27.20	1.73	8.00	<0.1	<0.01
WSR04	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	11:21:00 AM	7.84	8.06	31.89	27.31	1.78	6.00	<0.1	<0.01
WSR04	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	11:21:00 AM	7.87	8.04	31.71	27.20	1.75	6.00	<0.1	<0.01
WSR16	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:46:00 AM	8.51	8.08	32.08	27.38	1.59	6.00	<0.1	<0.01
WSR16	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:46:00 AM	8.40	8.09	32.02	27.32	1.63	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR16	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	9:47:00 AM	8.41	8.10	31.99	27.29	1.63	11.00	<0.1	<0.01
WSR16	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	9:47:00 AM	8.49	8.10	31.94	27.32	1.57	10.00	<0.1	<0.01
WSR16	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	16	9:48:00 AM	8.46	8.12	31.97	27.36	1.57	6.00	<0.1	<0.01
WSR16	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	16	9:48:00 AM	8.37	8.12	31.92	27.27	1.61	10.00	<0.1	<0.01
WSR33	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:02:00 AM	8.63	8.18	31.26	27.25	2.05	9.00	<0.1	<0.01
WSR33	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:02:00 AM	8.55	8.17	31.24	27.34	2.14	6.00	<0.1	<0.01
WSR33	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:03:00 AM	8.57	8.16	31.24	27.36	2.11	7.00	<0.1	<0.01
WSR33	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:03:00 AM	8.64	8.17	31.08	27.34	2.13	10.00	<0.1	<0.01
WSR33	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:04:00 AM	8.63	8.15	31.19	27.37	2.15	11.00	<0.1	<0.01
WSR33	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:04:00 AM	8.66	8.19	31.19	27.24	2.12	7.00	<0.1	<0.01
WSR36	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:46:00 AM	8.25	8.07	30.75	27.28	2.04	8.00	<0.1	<0.01
WSR36	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:46:00 AM	8.34	8.09	30.80	27.30	2.13	11.00	<0.1	<0.01
WSR36	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:47:00 AM	8.23	8.08	30.68	27.28	2.08	8.00	<0.1	<0.01
WSR36	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:47:00 AM	8.29	8.07	30.80	27.32	2.03	11.00	<0.1	<0.01
WSR36	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:47:00 AM	8.24	8.09	30.70	27.23	2.13	6.00	<0.1	<0.01
WSR36	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:47:00 AM	8.32	8.09	30.60	27.30	2.04	6.00	<0.1	<0.01
WSR37	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:40:00 AM	7.76	8.04	31.13	27.28	1.46	9.00	<0.1	<0.01
WSR37	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:40:00 AM	7.83	8.04	31.01	27.36	1.43	10.00	<0.1	<0.01
WSR37	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:41:00 AM	7.86	8.02	31.13	27.33	1.46	8.00	<0.1	<0.01
WSR37	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:41:00 AM	7.87	8.02	31.24	27.32	1.50	7.00	<0.1	<0.01
WSR37	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:42:00 AM	7.73	8.03	31.20	27.30	1.48	7.00	<0.1	<0.01
WSR37	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:42:00 AM	7.79	8.01	31.16	27.23	1.52	10.00	<0.1	<0.01
NF1	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:08:00 AM	8.52	8.18	31.99	27.48	1.68	9.00	<0.1	<0.01
NF1	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:08:00 AM	8.56	8.21	32.04	27.38	1.71	8.00	<0.1	<0.01
NF1	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	10:09:00 AM	8.59	8.22	32.01	27.43	1.76	11.00	<0.1	<0.01
NF1	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	10:09:00 AM	8.60	8.19	32.16	27.44	1.70	11.00	<0.1	<0.01
NF1	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	12	10:10:00 AM	8.59	8.18	32.11	27.37	1.66	10.00	<0.1	<0.01
NF1	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	12	10:10:00 AM	8.51	8.18	32.18	27.49	1.75	10.00	<0.1	<0.01
NF2	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:22:00 AM	8.54	8.02	31.02	27.17	2.03	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF2	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:22:00 AM	8.50	8.05	31.08	27.14	2.03	6.00	<0.1	<0.01
NF2	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:23:00 AM	8.58	8.03	30.96	27.14	2.04	9.00	<0.1	<0.01
NF2	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:23:00 AM	8.46	8.02	30.96	27.08	1.98	6.00	<0.1	<0.01
NF2	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	10:24:00 AM	8.62	8.01	30.99	27.19	2.01	6.00	<0.1	<0.01
NF2	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	10:24:00 AM	8.63	8.04	30.94	27.16	2.00	9.00	<0.1	<0.01
NF3	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:32:00 AM	7.83	7.97	31.30	27.45	1.56	6.00	<0.1	<0.01
NF3	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:32:00 AM	7.74	7.99	31.44	27.39	1.58	8.00	<0.1	<0.01
NF3	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	10:33:00 AM	7.70	7.98	31.29	27.40	1.57	7.00	<0.1	<0.01
NF3	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	10:33:00 AM	7.85	8.01	31.46	27.49	1.53	8.00	<0.1	<0.01
NF3	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	10:34:00 AM	7.73	7.99	31.48	27.51	1.56	11.00	<0.1	<0.01
NF3	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	10:34:00 AM	7.83	7.99	31.33	27.41	1.56	7.00	<0.1	<0.01
CE	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:51:00 AM	7.94	8.24	32.52	26.86	2.49	2.50	<0.1	<0.01
CE	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:51:00 AM	8.07	8.22	32.47	26.89	2.52	2.50	<0.1	<0.01
CE	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	10:52:00 AM	7.94	8.21	32.45	26.87	2.48	2.50	<0.1	<0.01
CE	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	10:52:00 AM	8.01	8.21	32.46	26.90	2.39	3.00	<0.1	<0.01
CE	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	22	10:53:00 AM	7.98	8.23	32.44	26.84	2.35	3.00	<0.1	<0.01
CE	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	22	10:53:00 AM	7.94	8.21	32.53	26.90	2.49	2.50	<0.1	<0.01
CF	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	2:05:00 PM	8.34	8.10	31.62	26.79	2.24	2.50	<0.1	<0.01
CF	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	2:05:00 PM	8.38	8.09	31.71	26.81	2.22	3.00	<0.1	<0.01
CF	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	2:06:00 PM	8.35	8.12	31.71	26.79	2.30	3.00	<0.1	<0.01
CF	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	2:06:00 PM	8.31	8.12	31.67	26.85	2.18	2.50	<0.1	<0.01
CF	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	2:07:00 PM	8.37	8.08	31.69	26.79	2.14	2.50	<0.1	<0.01
CF	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	2:07:00 PM	8.40	8.09	31.61	26.80	2.13	4.00	<0.1	<0.01
WSR01	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:39:00 PM	8.51	8.12	32.06	26.93	1.65	2.50	<0.1	<0.01
WSR01	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:39:00 PM	8.53	8.14	32.04	26.91	1.66	2.50	<0.1	<0.01
WSR01	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:40:00 PM	8.44	8.14	32.05	26.92	1.69	3.00	<0.1	<0.01
WSR01	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:40:00 PM	8.52	8.13	32.12	26.88	1.66	2.50	<0.1	<0.01
WSR01	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	1:41:00 PM	8.51	8.14	32.08	26.92	1.68	2.50	<0.1	<0.01
WSR01	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	1:41:00 PM	8.53	8.14	32.06	26.89	1.65	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR02	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:20:00 PM	7.71	8.17	31.06	27.15	1.42	2.50	<0.1	<0.01
WSR02	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:20:00 PM	7.74	8.18	31.17	27.09	1.39	4.00	<0.1	<0.01
WSR02	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	1:21:00 PM	7.73	8.18	31.17	27.10	1.39	2.50	<0.1	<0.01
WSR02	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	1:21:00 PM	7.70	8.19	31.10	27.13	1.42	2.50	<0.1	<0.01
WSR02	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	1:22:00 PM	7.64	8.18	31.09	27.13	1.41	4.00	<0.1	<0.01
WSR02	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	1:22:00 PM	7.63	8.17	31.07	27.10	1.44	2.50	<0.1	<0.01
WSR03	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:02:00 PM	8.65	8.13	31.93	26.96	2.06	2.50	<0.1	<0.01
WSR03	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:02:00 PM	8.64	8.15	31.94	26.91	2.06	2.50	<0.1	<0.01
WSR03	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:03:00 PM	8.58	8.13	31.97	26.95	2.04	2.50	<0.1	<0.01
WSR03	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:03:00 PM	8.67	8.16	31.88	26.92	2.04	2.50	<0.1	<0.01
WSR03	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	1:04:00 PM	8.62	8.14	31.90	26.92	2.04	4.00	<0.1	<0.01
WSR03	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	1:04:00 PM	8.67	8.14	31.92	26.96	2.02	2.50	<0.1	<0.01
WSR04	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:49:00 PM	8.52	8.18	32.36	26.98	1.41	7.00	<0.1	<0.01
WSR04	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:49:00 PM	8.43	8.18	32.39	26.99	1.42	10.00	<0.1	<0.01
WSR04	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	12:50:00 PM	8.41	8.18	32.35	27.03	1.43	3.00	<0.1	<0.01
WSR04	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	12:50:00 PM	8.52	8.17	32.48	26.98	1.47	2.50	<0.1	<0.01
WSR04	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:51:00 PM	8.53	8.14	32.44	26.99	1.47	4.00	<0.1	<0.01
WSR04	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:51:00 PM	8.42	8.14	32.41	26.99	1.41	2.50	<0.1	<0.01
WSR16	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	8.80	8.21	31.11	27.09	1.59	2.50	<0.1	<0.01
WSR16	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	8.82	8.23	31.17	27.10	1.62	4.00	<0.1	<0.01
WSR16	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	11:15:00 AM	8.81	8.21	31.12	27.09	1.64	2.50	<0.1	<0.01
WSR16	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	11:15:00 AM	8.87	8.21	31.14	27.05	1.61	3.00	<0.1	<0.01
WSR16	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	14	11:16:00 AM	8.91	8.20	31.09	27.07	1.59	2.50	<0.1	<0.01
WSR16	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	14	11:16:00 AM	8.80	8.22	31.11	27.06	1.60	2.50	<0.1	<0.01
WSR33	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:32:00 PM	7.86	8.15	32.03	26.98	1.41	2.50	<0.1	<0.01
WSR33	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:32:00 PM	7.96	8.13	32.02	26.99	1.39	2.50	<0.1	<0.01
WSR33	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:33:00 PM	7.97	8.15	32.01	27.00	1.46	2.50	<0.1	<0.01
WSR33	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:33:00 PM	7.87	8.12	32.01	27.04	1.48	3.00	<0.1	<0.01
WSR33	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:34:00 PM	7.89	8.15	31.99	27.02	1.46	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR33	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:34:00 PM	7.87	8.13	31.96	27.04	1.39	3.00	<0.1	<0.01
WSR36	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:16:00 PM	8.55	8.06	31.46	27.16	1.83	5.00	<0.1	<0.01
WSR36	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:16:00 PM	8.52	8.06	31.47	27.15	1.80	3.00	<0.1	<0.01
WSR36	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	12:17:00 PM	8.62	8.09	31.47	27.18	1.79	4.00	<0.1	<0.01
WSR36	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	12:17:00 PM	8.62	8.08	31.48	27.19	1.82	3.00	<0.1	<0.01
WSR36	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:17:00 PM	8.53	8.08	31.49	27.20	1.76	4.00	<0.1	<0.01
WSR36	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:17:00 PM	8.58	8.05	31.43	27.21	1.83	2.50	<0.1	<0.01
WSR37	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:08:00 PM	8.42	8.09	32.03	27.13	2.03	3.00	<0.1	<0.01
WSR37	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:08:00 PM	8.33	8.09	31.94	27.11	2.03	2.50	<0.1	<0.01
WSR37	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:09:00 PM	8.46	8.11	31.99	27.06	2.09	3.00	<0.1	<0.01
WSR37	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:09:00 PM	8.33	8.10	31.94	27.06	2.03	4.00	<0.1	<0.01
WSR37	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:10:00 PM	8.41	8.11	32.00	27.11	2.10	2.50	<0.1	<0.01
WSR37	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:10:00 PM	8.46	8.09	31.94	27.12	2.07	2.50	<0.1	<0.01
NF1	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:36:00 AM	8.40	8.21	32.37	27.03	2.16	3.00	<0.1	<0.01
NF1	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:36:00 AM	8.46	8.22	32.32	27.05	2.16	2.50	<0.1	<0.01
NF1	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	11:37:00 AM	8.39	8.22	32.30	27.04	2.17	4.00	<0.1	<0.01
NF1	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	11:37:00 AM	8.42	8.18	32.36	27.02	2.16	3.00	<0.1	<0.01
NF1	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	11:38:00 AM	8.43	8.21	32.32	27.02	2.14	2.50	<0.1	<0.01
NF1	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	11:38:00 AM	8.37	8.22	32.42	27.05	2.17	2.50	<0.1	<0.01
NF2	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:50:00 AM	8.64	8.14	32.32	26.92	1.86	2.50	<0.1	<0.01
NF2	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:50:00 AM	8.65	8.12	32.39	26.85	1.83	2.50	<0.1	<0.01
NF2	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	11:51:00 AM	8.55	8.10	32.39	26.90	1.85	2.50	<0.1	<0.01
NF2	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	11:51:00 AM	8.54	8.13	32.42	26.86	1.83	2.50	<0.1	<0.01
NF2	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	11:52:00 AM	8.64	8.13	32.44	26.89	1.87	2.50	<0.1	<0.01
NF2	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	11:52:00 AM	8.52	8.10	32.33	26.87	1.86	3.00	<0.1	<0.01
NF3	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:58:00 AM	8.83	8.09	31.99	27.00	1.57	3.00	<0.1	<0.01
NF3	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:58:00 AM	8.92	8.09	31.95	27.02	1.54	2.50	<0.1	<0.01
NF3	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	11:59:00 AM	8.87	8.11	31.96	27.01	1.58	3.00	<0.1	<0.01
NF3	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	11:59:00 AM	8.83	8.09	32.05	27.02	1.60	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF3	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	12:00:00 PM	8.81	8.10	32.00	27.04	1.54	2.50	<0.1	<0.01
NF3	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	12:00:00 PM	8.81	8.12	31.96	26.98	1.55	3.00	<0.1	<0.01
CE	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	11:18:00 AM	8.01	7.99	31.15	27.18	2.28	5.00	<0.1	<0.01
CE	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	11:18:00 AM	8.00	8.04	31.21	27.13	2.37	5.00	<0.1	<0.01
CE	8/07/2024	Sunny	Mid-Flood	Moderate	M	10	11:19:00 AM	8.04	8.03	31.19	27.14	2.18	9.00	<0.1	<0.01
CE	8/07/2024	Sunny	Mid-Flood	Moderate	M	10	11:19:00 AM	8.03	8.03	31.23	27.16	2.15	8.00	<0.1	<0.01
CE	8/07/2024	Sunny	Mid-Flood	Moderate	B	20	11:20:00 AM	8.04	7.99	31.18	27.14	2.05	8.00	<0.1	<0.01
CE	8/07/2024	Sunny	Mid-Flood	Moderate	B	20	11:20:00 AM	8.04	7.99	31.17	27.13	2.10	9.00	<0.1	<0.01
CF	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:08:00 AM	8.18	7.94	31.66	26.97	2.68	10.00	<0.1	<0.01
CF	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:08:00 AM	8.14	7.99	31.65	26.99	2.68	9.00	<0.1	<0.01
CF	8/07/2024	Sunny	Mid-Flood	Moderate	M	10	8:09:00 AM	8.16	7.99	31.63	26.98	2.64	6.00	<0.1	<0.01
CF	8/07/2024	Sunny	Mid-Flood	Moderate	M	10	8:09:00 AM	8.18	7.98	31.70	26.97	2.70	7.00	<0.1	<0.01
CF	8/07/2024	Sunny	Mid-Flood	Moderate	B	18	8:10:00 AM	8.15	7.94	31.63	26.96	2.69	9.00	<0.1	<0.01
CF	8/07/2024	Sunny	Mid-Flood	Moderate	B	18	8:10:00 AM	8.15	7.95	31.71	26.97	2.68	8.00	<0.1	<0.01
WSR01	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:32:00 AM	8.52	8.01	31.24	27.17	1.87	7.00	<0.1	<0.01
WSR01	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:32:00 AM	8.49	8.01	31.23	27.17	1.91	8.00	<0.1	<0.01
WSR01	8/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:33:00 AM	8.50	8.06	31.24	27.18	1.90	4.00	<0.1	<0.01
WSR01	8/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:33:00 AM	8.50	8.05	31.23	27.14	1.88	3.00	<0.1	<0.01
WSR01	8/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:34:00 AM	8.48	8.07	31.28	27.19	1.84	5.00	<0.1	<0.01
WSR01	8/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:34:00 AM	8.50	8.01	31.25	27.14	1.84	6.00	<0.1	<0.01
WSR02	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:53:00 AM	8.60	8.00	31.34	27.30	1.48	4.00	<0.1	<0.01
WSR02	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:53:00 AM	8.60	8.00	31.35	27.28	1.48	3.00	<0.1	<0.01
WSR02	8/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:54:00 AM	8.58	7.98	31.31	27.29	1.47	2.50	<0.1	<0.01
WSR02	8/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:54:00 AM	8.59	8.01	31.33	27.26	1.44	4.00	<0.1	<0.01
WSR02	8/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:55:00 AM	8.59	7.97	31.37	27.28	1.45	3.00	<0.1	<0.01
WSR02	8/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:55:00 AM	8.58	7.96	31.30	27.27	1.50	3.00	<0.1	<0.01
WSR03	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:09:00 AM	8.27	8.07	32.07	27.18	1.76	2.50	<0.1	<0.01
WSR03	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:09:00 AM	8.25	8.08	32.06	27.21	1.76	3.00	<0.1	<0.01
WSR03	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:10:00 AM	8.23	8.07	32.07	27.19	1.75	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR03	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:10:00 AM	8.24	8.09	32.14	27.21	1.75	3.00	<0.1	<0.01
WSR03	8/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:11:00 AM	8.24	8.10	32.07	27.16	1.71	3.00	<0.1	<0.01
WSR03	8/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:11:00 AM	8.26	8.11	32.03	27.16	1.71	2.50	<0.1	<0.01
WSR04	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:25:00 AM	8.59	8.11	30.95	27.21	1.52	3.00	<0.1	<0.01
WSR04	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:25:00 AM	8.56	8.13	30.97	27.20	1.51	4.00	<0.1	<0.01
WSR04	8/07/2024	Sunny	Mid-Flood	Moderate	M	3	9:26:00 AM	8.59	8.11	30.98	27.21	1.50	7.00	<0.1	<0.01
WSR04	8/07/2024	Sunny	Mid-Flood	Moderate	M	3	9:26:00 AM	8.55	8.12	31.00	27.20	1.54	4.00	<0.1	<0.01
WSR04	8/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:27:00 AM	8.56	8.15	30.92	27.18	1.50	2.50	<0.1	<0.01
WSR04	8/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:27:00 AM	8.57	8.13	30.96	27.21	1.49	4.00	<0.1	<0.01
WSR16	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:55:00 AM	8.88	8.19	31.96	27.18	1.81	10.00	<0.1	<0.01
WSR16	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:55:00 AM	8.90	8.17	31.99	27.17	1.84	7.00	<0.1	<0.01
WSR16	8/07/2024	Sunny	Mid-Flood	Moderate	M	8	10:56:00 AM	8.90	8.21	32.03	27.13	1.86	6.00	<0.1	<0.01
WSR16	8/07/2024	Sunny	Mid-Flood	Moderate	M	8	10:56:00 AM	8.89	8.22	32.02	27.17	1.84	8.00	<0.1	<0.01
WSR16	8/07/2024	Sunny	Mid-Flood	Moderate	B	16	10:57:00 AM	8.90	8.18	32.05	27.16	1.84	6.00	<0.1	<0.01
WSR16	8/07/2024	Sunny	Mid-Flood	Moderate	B	16	10:57:00 AM	8.88	8.17	32.02	27.17	1.84	4.00	<0.1	<0.01
WSR33	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:42:00 AM	8.53	7.99	31.53	27.23	1.94	10.00	<0.1	<0.01
WSR33	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:42:00 AM	8.53	7.98	31.54	27.22	1.92	7.00	<0.1	<0.01
WSR33	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:43:00 AM	8.52	7.94	31.53	27.23	1.91	7.00	<0.1	<0.01
WSR33	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:43:00 AM	8.49	7.94	31.48	27.21	1.96	10.00	<0.1	<0.01
WSR33	8/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:44:00 AM	8.51	8.00	31.52	27.23	1.92	9.00	<0.1	<0.01
WSR33	8/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:44:00 AM	8.49	7.95	31.54	27.22	1.92	6.00	<0.1	<0.01
WSR36	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:59:00 AM	8.46	8.15	32.48	27.32	1.90	7.00	<0.1	<0.01
WSR36	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:59:00 AM	8.44	8.13	32.45	27.32	1.96	8.00	<0.1	<0.01
WSR36	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:00:00 AM	8.46	8.12	32.43	27.34	1.93	3.00	<0.1	<0.01
WSR36	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:00:00 AM	8.45	8.14	32.52	27.32	1.97	5.00	<0.1	<0.01
WSR36	8/07/2024	Sunny	Mid-Flood	Moderate	B	6	10:00:00 AM	8.47	8.16	32.43	27.37	1.90	6.00	<0.1	<0.01
WSR36	8/07/2024	Sunny	Mid-Flood	Moderate	B	6	10:00:00 AM	8.47	8.16	32.41	27.34	1.91	9.00	<0.1	<0.01
WSR37	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:16:00 AM	8.61	8.16	31.28	27.25	1.93	5.00	<0.1	<0.01
WSR37	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:16:00 AM	8.61	8.18	31.33	27.23	1.86	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR37	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:17:00 AM	8.61	8.15	31.32	27.26	1.88	2.50	<0.1	<0.01
WSR37	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:17:00 AM	8.65	8.12	31.35	27.23	1.86	4.00	<0.1	<0.01
WSR37	8/07/2024	Sunny	Mid-Flood	Moderate	B	8	10:18:00 AM	8.64	8.15	31.33	27.24	1.88	2.50	<0.1	<0.01
WSR37	8/07/2024	Sunny	Mid-Flood	Moderate	B	8	10:18:00 AM	8.63	8.13	31.32	27.23	1.89	2.50	<0.1	<0.01
NF1	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:40:00 AM	8.52	8.07	31.44	27.16	1.41	10.00	<0.1	<0.01
NF1	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:40:00 AM	8.53	8.05	31.39	27.20	1.47	9.00	<0.1	<0.01
NF1	8/07/2024	Sunny	Mid-Flood	Moderate	M	7	10:41:00 AM	8.53	8.05	31.41	27.18	1.44	9.00	<0.1	<0.01
NF1	8/07/2024	Sunny	Mid-Flood	Moderate	M	7	10:41:00 AM	8.56	8.06	31.44	27.21	1.47	9.00	<0.1	<0.01
NF1	8/07/2024	Sunny	Mid-Flood	Moderate	B	13	10:42:00 AM	8.54	8.05	31.43	27.21	1.44	6.00	<0.1	<0.01
NF1	8/07/2024	Sunny	Mid-Flood	Moderate	B	13	10:42:00 AM	8.55	8.08	31.39	27.19	1.46	4.00	<0.1	<0.01
NF2	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:32:00 AM	7.81	8.14	31.84	27.11	1.57	9.00	<0.1	<0.01
NF2	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:32:00 AM	7.84	8.17	31.87	27.09	1.55	11.00	<0.1	<0.01
NF2	8/07/2024	Sunny	Mid-Flood	Moderate	M	5	10:33:00 AM	7.83	8.13	31.80	27.08	1.58	8.00	<0.1	<0.01
NF2	8/07/2024	Sunny	Mid-Flood	Moderate	M	5	10:33:00 AM	7.84	8.15	31.82	27.07	1.52	7.00	<0.1	<0.01
NF2	8/07/2024	Sunny	Mid-Flood	Moderate	B	9	10:34:00 AM	7.84	8.15	31.78	27.08	1.59	5.00	<0.1	<0.01
NF2	8/07/2024	Sunny	Mid-Flood	Moderate	B	9	10:34:00 AM	7.85	8.17	31.81	27.09	1.56	7.00	<0.1	<0.01
NF3	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:25:00 AM	8.05	8.08	31.79	27.38	1.98	7.00	<0.1	<0.01
NF3	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:25:00 AM	8.05	8.11	31.75	27.35	2.01	8.00	<0.1	<0.01
NF3	8/07/2024	Sunny	Mid-Flood	Moderate	M	6	10:26:00 AM	8.06	8.10	31.79	27.34	1.99	6.00	<0.1	<0.01
NF3	8/07/2024	Sunny	Mid-Flood	Moderate	M	6	10:26:00 AM	8.06	8.13	31.77	27.36	1.98	6.00	<0.1	<0.01
NF3	8/07/2024	Sunny	Mid-Flood	Moderate	B	11	10:27:00 AM	8.03	8.07	31.73	27.37	1.96	9.00	<0.1	<0.01
NF3	8/07/2024	Sunny	Mid-Flood	Moderate	B	11	10:27:00 AM	8.07	8.08	31.74	27.34	1.95	10.00	<0.1	<0.01
CE	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	11:01:00 AM	8.91	8.14	32.11	27.07	2.39	6.00	<0.1	<0.01
CE	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	11:01:00 AM	8.92	8.15	32.20	27.04	2.46	6.00	<0.1	<0.01
CE	10/07/2024	Sunny	Mid-Flood	Moderate	M	12	11:02:00 AM	8.97	8.16	32.14	27.03	2.47	6.00	<0.1	<0.01
CE	10/07/2024	Sunny	Mid-Flood	Moderate	M	12	11:02:00 AM	8.96	8.18	32.08	27.05	2.48	7.00	<0.1	<0.01
CE	10/07/2024	Sunny	Mid-Flood	Moderate	B	23	11:03:00 AM	8.88	8.16	32.08	27.05	2.38	8.00	<0.1	<0.01
CE	10/07/2024	Sunny	Mid-Flood	Moderate	B	23	11:03:00 AM	8.96	8.15	32.20	27.05	2.33	6.00	<0.1	<0.01
CF	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:00:00 AM	8.13	8.10	31.85	27.02	2.89	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CF	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:00:00 AM	8.05	8.06	31.81	27.02	2.92	7.00	<0.1	<0.01
CF	10/07/2024	Sunny	Mid-Flood	Moderate	M	10	8:01:00 AM	8.11	8.08	31.88	27.05	2.91	6.00	<0.1	<0.01
CF	10/07/2024	Sunny	Mid-Flood	Moderate	M	10	8:01:00 AM	8.12	8.05	31.93	27.05	2.90	7.00	<0.1	<0.01
CF	10/07/2024	Sunny	Mid-Flood	Moderate	B	19	8:02:00 AM	8.07	8.10	31.85	27.05	2.78	8.00	<0.1	<0.01
CF	10/07/2024	Sunny	Mid-Flood	Moderate	B	19	8:02:00 AM	8.13	8.08	31.88	27.04	2.75	8.00	<0.1	<0.01
WSR01	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:24:00 AM	8.73	8.14	31.50	27.10	1.82	8.00	<0.1	<0.01
WSR01	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:24:00 AM	8.73	8.14	31.47	27.09	1.82	7.00	<0.1	<0.01
WSR01	10/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:25:00 AM	8.70	8.15	31.42	27.07	1.82	7.00	<0.1	<0.01
WSR01	10/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:25:00 AM	8.76	8.16	31.47	27.09	1.81	6.00	<0.1	<0.01
WSR01	10/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:26:00 AM	8.72	8.14	31.52	27.05	1.81	8.00	<0.1	<0.01
WSR01	10/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:26:00 AM	8.71	8.16	31.47	27.06	1.82	7.00	<0.1	<0.01
WSR02	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:42:00 AM	8.28	8.31	32.95	27.28	1.56	6.00	<0.1	<0.01
WSR02	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:42:00 AM	8.34	8.33	32.94	27.25	1.58	6.00	<0.1	<0.01
WSR02	10/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:43:00 AM	8.31	8.32	33.03	27.25	1.54	6.00	<0.1	<0.01
WSR02	10/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:43:00 AM	8.28	8.34	32.92	27.26	1.55	7.00	<0.1	<0.01
WSR02	10/07/2024	Sunny	Mid-Flood	Moderate	B	9	8:44:00 AM	8.34	8.33	32.93	27.25	1.54	8.00	<0.1	<0.01
WSR02	10/07/2024	Sunny	Mid-Flood	Moderate	B	9	8:44:00 AM	8.28	8.31	32.99	27.27	1.55	7.00	<0.1	<0.01
WSR03	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:56:00 AM	8.13	8.05	32.60	27.07	1.80	6.00	<0.1	<0.01
WSR03	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:56:00 AM	8.08	8.06	32.63	27.08	1.81	5.00	<0.1	<0.01
WSR03	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	8:57:00 AM	8.08	8.08	32.63	27.12	1.81	8.00	<0.1	<0.01
WSR03	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	8:57:00 AM	8.13	8.08	32.61	27.10	1.80	7.00	<0.1	<0.01
WSR03	10/07/2024	Sunny	Mid-Flood	Moderate	B	7	8:58:00 AM	8.10	8.04	32.64	27.11	1.80	5.00	<0.1	<0.01
WSR03	10/07/2024	Sunny	Mid-Flood	Moderate	B	7	8:58:00 AM	8.10	8.07	32.58	27.10	1.84	6.00	<0.1	<0.01
WSR04	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:12:00 AM	8.45	8.27	32.09	27.35	1.72	6.00	<0.1	<0.01
WSR04	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:12:00 AM	8.36	8.27	32.09	27.35	1.73	6.00	<0.1	<0.01
WSR04	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:13:00 AM	8.38	8.29	32.09	27.36	1.72	7.00	<0.1	<0.01
WSR04	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:13:00 AM	8.42	8.31	32.09	27.32	1.75	6.00	<0.1	<0.01
WSR04	10/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:14:00 AM	8.43	8.31	32.13	27.33	1.71	7.00	<0.1	<0.01
WSR04	10/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:14:00 AM	8.38	8.28	32.11	27.35	1.71	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR16	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:41:00 AM	8.65	8.33	32.89	27.23	1.97	9.00	<0.1	<0.01
WSR16	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:41:00 AM	8.61	8.32	32.81	27.21	1.99	5.00	<0.1	<0.01
WSR16	10/07/2024	Sunny	Mid-Flood	Moderate	M	8	10:42:00 AM	8.61	8.32	32.90	27.22	2.00	6.00	<0.1	<0.01
WSR16	10/07/2024	Sunny	Mid-Flood	Moderate	M	8	10:42:00 AM	8.63	8.32	32.87	27.19	2.01	7.00	<0.1	<0.01
WSR16	10/07/2024	Sunny	Mid-Flood	Moderate	B	15	10:43:00 AM	8.60	8.32	32.84	27.19	2.01	5.00	<0.1	<0.01
WSR16	10/07/2024	Sunny	Mid-Flood	Moderate	B	15	10:43:00 AM	8.60	8.34	32.93	27.19	1.98	7.00	<0.1	<0.01
WSR33	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:29:00 AM	8.15	8.25	32.10	27.39	2.08	5.00	<0.1	<0.01
WSR33	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:29:00 AM	8.16	8.31	32.08	27.36	2.07	6.00	<0.1	<0.01
WSR33	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:30:00 AM	8.16	8.25	32.18	27.36	2.07	7.00	<0.1	<0.01
WSR33	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:30:00 AM	8.20	8.30	32.15	27.39	2.07	6.00	<0.1	<0.01
WSR33	10/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:31:00 AM	8.16	8.26	32.16	27.37	2.08	6.00	<0.1	<0.01
WSR33	10/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:31:00 AM	8.21	8.27	32.08	27.38	2.10	7.00	<0.1	<0.01
WSR36	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:46:00 AM	8.78	8.10	32.42	27.29	1.94	8.00	<0.1	<0.01
WSR36	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:46:00 AM	8.84	8.09	32.44	27.27	1.93	7.00	<0.1	<0.01
WSR36	10/07/2024	Sunny	Mid-Flood	Moderate	M	3	9:47:00 AM	8.81	8.08	32.45	27.29	1.93	7.00	<0.1	<0.01
WSR36	10/07/2024	Sunny	Mid-Flood	Moderate	M	3	9:47:00 AM	8.87	8.13	32.50	27.24	1.96	6.00	<0.1	<0.01
WSR36	10/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:47:00 AM	8.79	8.08	32.42	27.29	1.93	5.00	<0.1	<0.01
WSR36	10/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:47:00 AM	8.83	8.07	32.51	27.25	1.92	5.00	<0.1	<0.01
WSR37	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:03:00 AM	8.72	8.16	33.05	27.20	1.97	7.00	<0.1	<0.01
WSR37	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:03:00 AM	8.72	8.15	33.00	27.18	1.95	5.00	<0.1	<0.01
WSR37	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:04:00 AM	8.72	8.14	33.05	27.19	1.97	7.00	<0.1	<0.01
WSR37	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:04:00 AM	8.73	8.16	32.96	27.19	1.96	6.00	<0.1	<0.01
WSR37	10/07/2024	Sunny	Mid-Flood	Moderate	B	8	10:05:00 AM	8.68	8.13	33.09	27.18	1.96	7.00	<0.1	<0.01
WSR37	10/07/2024	Sunny	Mid-Flood	Moderate	B	8	10:05:00 AM	8.70	8.19	33.00	27.18	1.96	5.00	<0.1	<0.01
NF1	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:27:00 AM	8.41	8.06	32.35	27.26	1.82	6.00	<0.1	<0.01
NF1	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:27:00 AM	8.34	8.11	32.44	27.30	1.84	7.00	<0.1	<0.01
NF1	10/07/2024	Sunny	Mid-Flood	Moderate	M	7	10:28:00 AM	8.36	8.08	32.34	27.29	1.83	7.00	<0.1	<0.01
NF1	10/07/2024	Sunny	Mid-Flood	Moderate	M	7	10:28:00 AM	8.33	8.06	32.36	27.29	1.85	6.00	<0.1	<0.01
NF1	10/07/2024	Sunny	Mid-Flood	Moderate	B	12	10:29:00 AM	8.38	8.09	32.44	27.28	1.85	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF1	10/07/2024	Sunny	Mid-Flood	Moderate	B	12	10:29:00 AM	8.39	8.10	32.32	27.29	1.82	6.00	<0.1	<0.01
NF2	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:19:00 AM	8.59	8.33	31.80	26.95	1.61	7.00	<0.1	<0.01
NF2	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:19:00 AM	8.66	8.29	31.88	26.96	1.59	8.00	<0.1	<0.01
NF2	10/07/2024	Sunny	Mid-Flood	Moderate	M	5	10:20:00 AM	8.59	8.32	31.79	26.93	1.57	9.00	<0.1	<0.01
NF2	10/07/2024	Sunny	Mid-Flood	Moderate	M	5	10:20:00 AM	8.62	8.34	31.86	26.97	1.58	8.00	<0.1	<0.01
NF2	10/07/2024	Sunny	Mid-Flood	Moderate	B	10	10:21:00 AM	8.60	8.35	31.83	26.95	1.41	8.00	<0.1	<0.01
NF2	10/07/2024	Sunny	Mid-Flood	Moderate	B	10	10:21:00 AM	8.67	8.31	31.89	26.94	1.43	7.00	<0.1	<0.01
NF3	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:12:00 AM	8.28	8.12	32.53	27.08	2.03	6.00	<0.1	<0.01
NF3	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:12:00 AM	8.32	8.13	32.59	27.07	2.02	7.00	<0.1	<0.01
NF3	10/07/2024	Sunny	Mid-Flood	Moderate	M	6	10:13:00 AM	8.33	8.09	32.64	27.09	2.01	6.00	<0.1	<0.01
NF3	10/07/2024	Sunny	Mid-Flood	Moderate	M	6	10:13:00 AM	8.31	8.10	32.56	27.06	2.01	6.00	<0.1	<0.01
NF3	10/07/2024	Sunny	Mid-Flood	Moderate	B	12	10:14:00 AM	8.27	8.10	32.64	27.06	2.05	9.00	<0.1	<0.01
NF3	10/07/2024	Sunny	Mid-Flood	Moderate	B	12	10:14:00 AM	8.32	8.15	32.64	27.10	2.01	6.00	<0.1	<0.01
CE	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	11:13:00 AM	8.14	8.12	32.14	27.20	1.64	2.50	<0.1	<0.01
CE	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	11:13:00 AM	8.15	8.16	32.19	27.19	1.71	3.00	<0.1	<0.01
CE	13/07/2024	Sunny	Mid-Flood	Moderate	M	10	11:14:00 AM	8.11	8.14	32.09	27.27	1.73	4.00	<0.1	<0.01
CE	13/07/2024	Sunny	Mid-Flood	Moderate	M	10	11:14:00 AM	8.14	8.13	32.09	27.24	1.71	5.00	<0.1	<0.01
CE	13/07/2024	Sunny	Mid-Flood	Moderate	B	20	11:15:00 AM	8.23	8.14	32.13	27.21	1.73	4.00	<0.1	<0.01
CE	13/07/2024	Sunny	Mid-Flood	Moderate	B	20	11:15:00 AM	8.24	8.12	32.09	27.19	1.64	4.00	<0.1	<0.01
CF	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:05:00 AM	8.53	8.05	32.23	27.49	2.48	4.00	<0.1	<0.01
CF	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:05:00 AM	8.40	8.03	32.31	27.47	2.59	4.00	<0.1	<0.01
CF	13/07/2024	Sunny	Mid-Flood	Moderate	M	11	8:06:00 AM	8.50	8.03	32.42	27.44	2.52	4.00	<0.1	<0.01
CF	13/07/2024	Sunny	Mid-Flood	Moderate	M	11	8:06:00 AM	8.41	8.05	32.34	27.44	2.53	5.00	<0.1	<0.01
CF	13/07/2024	Sunny	Mid-Flood	Moderate	B	20	8:07:00 AM	8.54	8.06	32.42	27.44	2.48	6.00	<0.1	<0.01
CF	13/07/2024	Sunny	Mid-Flood	Moderate	B	20	8:07:00 AM	8.51	8.04	32.36	27.47	2.45	6.00	<0.1	<0.01
WSR01	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:31:00 AM	8.15	8.02	31.85	27.43	1.42	4.00	<0.1	<0.01
WSR01	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:31:00 AM	8.16	8.08	31.90	27.50	1.44	6.00	<0.1	<0.01
WSR01	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	8:32:00 AM	8.06	8.03	31.97	27.46	1.43	6.00	<0.1	<0.01
WSR01	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	8:32:00 AM	8.15	8.03	31.82	27.45	1.45	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR01	13/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:33:00 AM	8.10	8.03	31.91	27.45	1.42	4.00	<0.1	<0.01
WSR01	13/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:33:00 AM	8.10	8.05	31.92	27.46	1.46	4.00	<0.1	<0.01
WSR02	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:50:00 AM	8.56	8.08	31.52	27.44	1.53	5.00	<0.1	<0.01
WSR02	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:50:00 AM	8.65	8.08	31.45	27.46	1.53	5.00	<0.1	<0.01
WSR02	13/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:51:00 AM	8.56	8.09	31.44	27.44	1.56	4.00	<0.1	<0.01
WSR02	13/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:51:00 AM	8.58	8.07	31.52	27.51	1.51	4.00	<0.1	<0.01
WSR02	13/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:52:00 AM	8.62	8.08	31.41	27.51	1.52	4.00	<0.1	<0.01
WSR02	13/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:52:00 AM	8.57	8.11	31.49	27.48	1.56	4.00	<0.1	<0.01
WSR03	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:06:00 AM	7.94	8.26	32.02	27.09	1.60	4.00	<0.1	<0.01
WSR03	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:06:00 AM	8.07	8.24	31.85	27.09	1.61	5.00	<0.1	<0.01
WSR03	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:07:00 AM	7.98	8.28	31.91	27.08	1.59	7.00	<0.1	<0.01
WSR03	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:07:00 AM	8.07	8.25	32.01	27.06	1.56	4.00	<0.1	<0.01
WSR03	13/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:08:00 AM	7.99	8.26	31.92	27.09	1.59	6.00	<0.1	<0.01
WSR03	13/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:08:00 AM	7.93	8.28	31.87	27.04	1.58	5.00	<0.1	<0.01
WSR04	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:22:00 AM	8.82	8.15	30.87	27.28	1.66	3.00	<0.1	<0.01
WSR04	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:22:00 AM	8.75	8.14	30.73	27.26	1.67	4.00	<0.1	<0.01
WSR04	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:23:00 AM	8.76	8.12	30.68	27.27	1.65	4.00	<0.1	<0.01
WSR04	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:23:00 AM	8.82	8.11	30.83	27.30	1.72	3.00	<0.1	<0.01
WSR04	13/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:24:00 AM	8.83	8.12	30.72	27.28	1.64	5.00	<0.1	<0.01
WSR04	13/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:24:00 AM	8.81	8.11	30.76	27.23	1.64	4.00	<0.1	<0.01
WSR16	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:52:00 AM	7.91	8.03	30.61	27.19	2.04	5.00	<0.1	<0.01
WSR16	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:52:00 AM	7.86	8.07	30.70	27.22	1.98	5.00	<0.1	<0.01
WSR16	13/07/2024	Sunny	Mid-Flood	Moderate	M	9	10:53:00 AM	7.91	8.09	30.57	27.25	1.93	5.00	<0.1	<0.01
WSR16	13/07/2024	Sunny	Mid-Flood	Moderate	M	9	10:53:00 AM	7.93	8.06	30.60	27.23	1.95	5.00	<0.1	<0.01
WSR16	13/07/2024	Sunny	Mid-Flood	Moderate	B	16	10:54:00 AM	7.96	8.07	30.66	27.27	1.92	3.00	<0.1	<0.01
WSR16	13/07/2024	Sunny	Mid-Flood	Moderate	B	16	10:54:00 AM	7.90	8.03	30.71	27.26	1.90	4.00	<0.1	<0.01
WSR33	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:39:00 AM	8.75	8.06	32.11	27.43	1.67	3.00	<0.1	<0.01
WSR33	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:39:00 AM	8.73	8.08	32.17	27.43	1.63	5.00	<0.1	<0.01
WSR33	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:40:00 AM	8.70	8.07	32.20	27.47	1.65	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR33	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:40:00 AM	8.66	8.11	32.15	27.45	1.60	4.00	<0.1	<0.01
WSR33	13/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:41:00 AM	8.63	8.07	32.19	27.50	1.60	5.00	<0.1	<0.01
WSR33	13/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:41:00 AM	8.64	8.11	32.12	27.42	1.61	5.00	<0.1	<0.01
WSR36	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:56:00 AM	8.03	8.25	31.65	27.40	1.34	4.00	<0.1	<0.01
WSR36	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:56:00 AM	8.10	8.28	31.56	27.40	1.33	5.00	<0.1	<0.01
WSR36	13/07/2024	Sunny	Mid-Flood	Moderate	M	3	9:57:00 AM	8.14	8.24	31.47	27.45	1.32	3.00	<0.1	<0.01
WSR36	13/07/2024	Sunny	Mid-Flood	Moderate	M	3	9:57:00 AM	8.03	8.23	31.50	27.39	1.28	4.00	<0.1	<0.01
WSR36	13/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:57:00 AM	8.02	8.23	31.61	27.42	1.32	5.00	<0.1	<0.01
WSR36	13/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:57:00 AM	8.12	8.27	31.62	27.37	1.35	5.00	<0.1	<0.01
WSR37	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:13:00 AM	8.52	8.22	31.10	27.26	1.92	5.00	<0.1	<0.01
WSR37	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:13:00 AM	8.48	8.20	31.19	27.26	1.82	4.00	<0.1	<0.01
WSR37	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:14:00 AM	8.53	8.23	31.08	27.26	1.85	4.00	<0.1	<0.01
WSR37	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:14:00 AM	8.51	8.21	31.14	27.25	1.84	3.00	<0.1	<0.01
WSR37	13/07/2024	Sunny	Mid-Flood	Moderate	B	7	10:15:00 AM	8.49	8.24	31.08	27.30	1.85	4.00	<0.1	<0.01
WSR37	13/07/2024	Sunny	Mid-Flood	Moderate	B	7	10:15:00 AM	8.53	8.26	31.12	27.30	1.85	6.00	<0.1	<0.01
NF1	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:37:00 AM	8.17	8.08	31.44	27.46	1.65	5.00	<0.1	<0.01
NF1	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:37:00 AM	8.17	8.11	31.37	27.53	1.63	6.00	<0.1	<0.01
NF1	13/07/2024	Sunny	Mid-Flood	Moderate	M	7	10:38:00 AM	8.19	8.05	31.46	27.51	1.63	4.00	<0.1	<0.01
NF1	13/07/2024	Sunny	Mid-Flood	Moderate	M	7	10:38:00 AM	8.22	8.07	31.28	27.52	1.66	5.00	<0.1	<0.01
NF1	13/07/2024	Sunny	Mid-Flood	Moderate	B	13	10:39:00 AM	8.19	8.08	31.43	27.45	1.69	6.00	<0.1	<0.01
NF1	13/07/2024	Sunny	Mid-Flood	Moderate	B	13	10:39:00 AM	8.18	8.08	31.41	27.51	1.60	4.00	<0.1	<0.01
NF2	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:29:00 AM	7.75	8.16	32.17	27.42	1.98	4.00	<0.1	<0.01
NF2	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:29:00 AM	7.71	8.16	32.15	27.41	1.96	6.00	<0.1	<0.01
NF2	13/07/2024	Sunny	Mid-Flood	Moderate	M	5	10:30:00 AM	7.65	8.16	32.26	27.41	1.99	2.50	<0.1	<0.01
NF2	13/07/2024	Sunny	Mid-Flood	Moderate	M	5	10:30:00 AM	7.75	8.15	32.25	27.46	2.02	2.50	<0.1	<0.01
NF2	13/07/2024	Sunny	Mid-Flood	Moderate	B	9	10:31:00 AM	7.69	8.19	32.26	27.43	2.02	7.00	<0.1	<0.01
NF2	13/07/2024	Sunny	Mid-Flood	Moderate	B	9	10:31:00 AM	7.75	8.13	32.11	27.41	1.99	6.00	<0.1	<0.01
NF3	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:22:00 AM	8.27	8.27	31.53	27.50	1.51	5.00	<0.1	<0.01
NF3	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:22:00 AM	8.27	8.29	31.38	27.49	1.52	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF3	13/07/2024	Sunny	Mid-Flood	Moderate	M	6	10:23:00 AM	8.24	8.28	31.38	27.55	1.64	4.00	<0.1	<0.01
NF3	13/07/2024	Sunny	Mid-Flood	Moderate	M	6	10:23:00 AM	8.22	8.29	31.56	27.51	1.63	5.00	<0.1	<0.01
NF3	13/07/2024	Sunny	Mid-Flood	Moderate	B	11	10:24:00 AM	8.17	8.26	31.53	27.48	1.78	5.00	<0.1	<0.01
NF3	13/07/2024	Sunny	Mid-Flood	Moderate	B	11	10:24:00 AM	8.16	8.29	31.48	27.53	1.86	5.00	<0.1	<0.01
CE	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:08:00 AM	8.76	8.07	31.83	27.14	2.89	3.00	<0.1	<0.01
CE	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:08:00 AM	8.74	8.04	31.79	27.11	2.92	3.00	<0.1	<0.01
CE	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	8:09:00 AM	8.79	8.06	31.79	27.10	2.71	4.00	<0.1	<0.01
CE	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	8:09:00 AM	8.77	8.04	31.72	27.14	2.79	5.00	<0.1	<0.01
CE	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	22	8:10:00 AM	8.79	8.04	31.79	27.14	2.88	4.00	<0.1	<0.01
CE	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	22	8:10:00 AM	8.74	8.06	31.79	27.12	2.91	3.00	<0.1	<0.01
CF	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:28:00 AM	8.09	8.29	32.45	27.23	2.24	4.00	<0.1	<0.01
CF	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:28:00 AM	8.11	8.27	32.46	27.23	2.33	8.00	<0.1	<0.01
CF	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	11:29:00 AM	8.08	8.29	32.47	27.29	2.26	4.00	<0.1	<0.01
CF	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	11:29:00 AM	8.08	8.29	32.49	27.24	2.29	4.00	<0.1	<0.01
CF	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	11:30:00 AM	8.13	8.30	32.50	27.26	2.35	3.00	<0.1	<0.01
CF	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	11:30:00 AM	8.08	8.28	32.44	27.28	2.36	3.00	<0.1	<0.01
WSR01	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:02:00 AM	7.86	8.35	31.64	27.07	1.54	7.00	<0.1	<0.01
WSR01	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:02:00 AM	7.87	8.34	31.64	27.07	1.59	7.00	<0.1	<0.01
WSR01	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:03:00 AM	7.86	8.31	31.64	27.08	1.53	6.00	<0.1	<0.01
WSR01	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:03:00 AM	7.88	8.34	31.73	27.08	1.57	8.00	<0.1	<0.01
WSR01	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	11:04:00 AM	7.88	8.32	31.69	27.07	1.53	4.00	<0.1	<0.01
WSR01	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	11:04:00 AM	7.86	8.35	31.67	27.06	1.56	4.00	<0.1	<0.01
WSR02	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:41:00 AM	8.22	8.18	32.21	27.07	1.33	3.00	<0.1	<0.01
WSR02	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:41:00 AM	8.24	8.16	32.21	27.09	1.34	5.00	<0.1	<0.01
WSR02	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:42:00 AM	8.23	8.16	32.22	27.09	1.34	6.00	<0.1	<0.01
WSR02	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:42:00 AM	8.24	8.18	32.19	27.12	1.38	7.00	<0.1	<0.01
WSR02	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:43:00 AM	8.24	8.18	32.20	27.13	1.37	6.00	<0.1	<0.01
WSR02	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:43:00 AM	8.22	8.17	32.17	27.08	1.38	6.00	<0.1	<0.01
WSR03	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:23:00 AM	8.78	8.16	32.09	26.99	1.91	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR03	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:23:00 AM	8.77	8.17	32.13	26.98	1.91	4.00	<0.1	<0.01
WSR03	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:24:00 AM	8.77	8.18	32.08	27.02	1.93	6.00	<0.1	<0.01
WSR03	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:24:00 AM	8.78	8.18	32.04	26.99	1.89	9.00	<0.1	<0.01
WSR03	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:25:00 AM	8.74	8.15	32.12	27.03	1.93	4.00	<0.1	<0.01
WSR03	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:25:00 AM	8.76	8.15	32.15	27.00	1.87	4.00	<0.1	<0.01
WSR04	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:08:00 AM	8.37	8.10	32.12	26.97	2.10	4.00	<0.1	<0.01
WSR04	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:08:00 AM	8.32	8.10	32.12	26.96	2.16	3.00	<0.1	<0.01
WSR04	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:09:00 AM	8.37	8.10	32.04	26.98	2.16	4.00	<0.1	<0.01
WSR04	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:09:00 AM	8.36	8.11	32.08	26.98	2.08	6.00	<0.1	<0.01
WSR04	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:10:00 AM	8.37	8.11	32.04	26.94	2.13	5.00	<0.1	<0.01
WSR04	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:10:00 AM	8.32	8.12	32.01	26.96	2.10	4.00	<0.1	<0.01
WSR16	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:33:00 AM	8.38	8.16	31.12	27.24	1.50	4.00	<0.1	<0.01
WSR16	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:33:00 AM	8.44	8.14	31.19	27.28	1.46	5.00	<0.1	<0.01
WSR16	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:34:00 AM	8.38	8.16	31.25	27.26	1.52	4.00	<0.1	<0.01
WSR16	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:34:00 AM	8.44	8.18	31.23	27.27	1.49	4.00	<0.1	<0.01
WSR16	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	15	8:35:00 AM	8.43	8.18	31.15	27.28	1.51	7.00	<0.1	<0.01
WSR16	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	15	8:35:00 AM	8.41	8.18	31.23	27.27	1.52	8.00	<0.1	<0.01
WSR33	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:51:00 AM	8.33	8.29	30.92	26.93	1.52	5.00	<0.1	<0.01
WSR33	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:51:00 AM	8.32	8.25	30.98	26.94	1.52	5.00	<0.1	<0.01
WSR33	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:52:00 AM	8.29	8.29	31.00	26.91	1.54	4.00	<0.1	<0.01
WSR33	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:52:00 AM	8.32	8.28	30.96	26.93	1.52	5.00	<0.1	<0.01
WSR33	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:53:00 AM	8.29	8.26	30.95	26.91	1.58	6.00	<0.1	<0.01
WSR33	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:53:00 AM	8.33	8.28	31.01	26.93	1.60	5.00	<0.1	<0.01
WSR36	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:35:00 AM	7.88	8.22	31.15	26.83	1.74	5.00	<0.1	<0.01
WSR36	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:35:00 AM	7.88	8.19	31.20	26.86	1.78	5.00	<0.1	<0.01
WSR36	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	9:36:00 AM	7.85	8.21	31.12	26.88	1.74	3.00	<0.1	<0.01
WSR36	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	9:36:00 AM	7.84	8.22	31.23	26.82	1.73	5.00	<0.1	<0.01
WSR36	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:36:00 AM	7.87	8.18	31.14	26.83	1.72	3.00	<0.1	<0.01
WSR36	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:36:00 AM	7.83	8.19	31.18	26.82	1.79	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR37	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:29:00 AM	8.81	8.13	32.39	26.88	1.96	9.00	<0.1	<0.01
WSR37	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:29:00 AM	8.75	8.12	32.41	26.87	1.92	8.00	<0.1	<0.01
WSR37	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:30:00 AM	8.81	8.10	32.39	26.88	1.90	5.00	<0.1	<0.01
WSR37	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:30:00 AM	8.75	8.10	32.34	26.87	1.98	3.00	<0.1	<0.01
WSR37	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:31:00 AM	8.79	8.11	32.28	26.87	1.96	5.00	<0.1	<0.01
WSR37	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:31:00 AM	8.77	8.12	32.39	26.85	1.93	8.00	<0.1	<0.01
NF1	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:57:00 AM	8.55	8.23	32.16	27.00	2.07	4.00	<0.1	<0.01
NF1	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:57:00 AM	8.55	8.25	32.20	26.96	2.02	5.00	<0.1	<0.01
NF1	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	8:58:00 AM	8.54	8.24	32.12	27.01	1.99	6.00	<0.1	<0.01
NF1	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	8:58:00 AM	8.60	8.24	32.21	27.02	1.97	6.00	<0.1	<0.01
NF1	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	12	8:59:00 AM	8.55	8.24	32.20	27.01	1.94	5.00	<0.1	<0.01
NF1	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	12	8:59:00 AM	8.55	8.22	32.13	26.98	1.92	5.00	<0.1	<0.01
NF2	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:14:00 AM	8.22	8.18	32.47	27.16	1.91	6.00	<0.1	<0.01
NF2	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:14:00 AM	8.23	8.19	32.46	27.12	1.87	6.00	<0.1	<0.01
NF2	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:15:00 AM	8.17	8.22	32.45	27.11	1.83	5.00	<0.1	<0.01
NF2	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:15:00 AM	8.17	8.20	32.54	27.10	1.91	4.00	<0.1	<0.01
NF2	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	9:16:00 AM	8.19	8.21	32.44	27.16	1.85	5.00	<0.1	<0.01
NF2	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	9:16:00 AM	8.17	8.21	32.46	27.13	1.86	4.00	<0.1	<0.01
NF3	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:22:00 AM	8.74	8.27	31.41	26.94	1.82	7.00	<0.1	<0.01
NF3	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:22:00 AM	8.76	8.28	31.45	26.95	1.82	8.00	<0.1	<0.01
NF3	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:23:00 AM	8.72	8.26	31.49	26.95	1.84	8.00	<0.1	<0.01
NF3	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:23:00 AM	8.74	8.28	31.41	26.94	1.86	6.00	<0.1	<0.01
NF3	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:24:00 AM	8.73	8.28	31.39	26.97	1.81	6.00	<0.1	<0.01
NF3	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:24:00 AM	8.73	8.29	31.43	26.91	1.89	6.00	<0.1	<0.01
CE	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:25:00 AM	8.78	8.27	32.83	26.61	2.84	4.00	<0.1	<0.01
CE	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:25:00 AM	8.86	8.25	32.77	26.60	2.81	4.00	<0.1	<0.01
CE	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	8:26:00 AM	8.79	8.24	32.83	26.61	2.83	3.00	<0.1	<0.01
CE	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	8:26:00 AM	8.78	8.23	32.83	26.54	2.83	6.00	<0.1	<0.01
CE	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	8:27:00 AM	8.80	8.25	32.79	26.56	2.82	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CE	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	8:27:00 AM	8.82	8.28	32.83	26.53	2.79	3.00	<0.1	<0.01
CF	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:36:00 AM	7.87	8.35	31.95	26.64	2.34	5.00	<0.1	<0.01
CF	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:36:00 AM	7.94	8.34	31.95	26.70	2.38	3.00	<0.1	<0.01
CF	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	11:37:00 AM	7.90	8.32	31.98	26.63	2.36	3.00	<0.1	<0.01
CF	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	11:37:00 AM	7.83	8.36	31.95	26.69	2.41	4.00	<0.1	<0.01
CF	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	11:38:00 AM	7.83	8.36	32.02	26.64	2.53	6.00	<0.1	<0.01
CF	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	11:38:00 AM	7.86	8.33	31.97	26.62	2.55	4.00	<0.1	<0.01
WSR01	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:16:00 AM	7.76	8.37	31.52	26.67	1.64	2.50	<0.1	<0.01
WSR01	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:16:00 AM	7.81	8.41	31.52	26.68	1.65	4.00	<0.1	<0.01
WSR01	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:17:00 AM	7.72	8.41	31.48	26.74	1.64	4.00	<0.1	<0.01
WSR01	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:17:00 AM	7.72	8.40	31.43	26.72	1.67	6.00	<0.1	<0.01
WSR01	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	11:18:00 AM	7.84	8.39	31.52	26.69	1.63	4.00	<0.1	<0.01
WSR01	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	11:18:00 AM	7.73	8.37	31.52	26.70	1.64	4.00	<0.1	<0.01
WSR02	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:55:00 AM	8.39	8.16	32.37	26.82	1.30	3.00	<0.1	<0.01
WSR02	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:55:00 AM	8.34	8.20	32.41	26.86	1.32	4.00	<0.1	<0.01
WSR02	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:56:00 AM	8.36	8.16	32.36	26.78	1.34	3.00	<0.1	<0.01
WSR02	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:56:00 AM	8.28	8.15	32.37	26.83	1.32	4.00	<0.1	<0.01
WSR02	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	10:57:00 AM	8.28	8.15	32.39	26.86	1.30	4.00	<0.1	<0.01
WSR02	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	10:57:00 AM	8.34	8.18	32.38	26.85	1.33	7.00	<0.1	<0.01
WSR03	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:39:00 AM	8.76	8.39	31.90	26.68	1.42	5.00	<0.1	<0.01
WSR03	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:39:00 AM	8.80	8.35	31.84	26.68	1.41	7.00	<0.1	<0.01
WSR03	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:40:00 AM	8.76	8.37	31.93	26.71	1.38	6.00	<0.1	<0.01
WSR03	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:40:00 AM	8.77	8.34	31.84	26.75	1.39	7.00	<0.1	<0.01
WSR03	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:41:00 AM	8.75	8.39	31.91	26.68	1.42	5.00	<0.1	<0.01
WSR03	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:41:00 AM	8.68	8.35	31.91	26.67	1.43	5.00	<0.1	<0.01
WSR04	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:24:00 AM	8.58	8.22	32.38	26.62	1.91	5.00	<0.1	<0.01
WSR04	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:24:00 AM	8.50	8.19	32.39	26.70	1.94	5.00	<0.1	<0.01
WSR04	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:25:00 AM	8.50	8.23	32.30	26.62	1.88	5.00	<0.1	<0.01
WSR04	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:25:00 AM	8.49	8.23	32.38	26.64	1.93	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR04	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:26:00 AM	8.56	8.20	32.36	26.69	1.92	5.00	<0.1	<0.01
WSR04	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:26:00 AM	8.56	8.23	32.40	26.61	1.89	5.00	<0.1	<0.01
WSR16	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:47:00 AM	8.09	8.36	31.48	26.64	1.30	4.00	<0.1	<0.01
WSR16	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:47:00 AM	8.12	8.37	31.49	26.67	1.46	4.00	<0.1	<0.01
WSR16	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:48:00 AM	8.06	8.38	31.40	26.69	1.44	5.00	<0.1	<0.01
WSR16	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:48:00 AM	8.07	8.35	31.47	26.64	1.30	6.00	<0.1	<0.01
WSR16	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	14	8:49:00 AM	8.06	8.34	31.45	26.67	1.30	7.00	<0.1	<0.01
WSR16	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	14	8:49:00 AM	8.11	8.39	31.41	26.71	1.46	6.00	<0.1	<0.01
WSR33	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:09:00 AM	8.59	8.32	32.63	26.60	1.35	6.00	<0.1	<0.01
WSR33	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:09:00 AM	8.58	8.34	32.57	26.63	1.34	5.00	<0.1	<0.01
WSR33	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:10:00 AM	8.55	8.30	32.62	26.64	1.35	4.00	<0.1	<0.01
WSR33	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:10:00 AM	8.55	8.35	32.59	26.63	1.34	6.00	<0.1	<0.01
WSR33	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:11:00 AM	8.55	8.34	32.65	26.61	1.40	6.00	<0.1	<0.01
WSR33	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:11:00 AM	8.59	8.35	32.60	26.65	1.38	8.00	<0.1	<0.01
WSR36	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:53:00 AM	7.63	8.44	32.29	26.50	1.46	8.00	<0.1	<0.01
WSR36	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:53:00 AM	7.68	8.44	32.33	26.46	1.46	8.00	<0.1	<0.01
WSR36	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	9:54:00 AM	7.65	8.43	32.36	26.48	1.47	7.00	<0.1	<0.01
WSR36	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	9:54:00 AM	7.68	8.41	32.38	26.52	1.33	5.00	<0.1	<0.01
WSR36	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:54:00 AM	7.63	8.44	32.31	26.46	1.35	6.00	<0.1	<0.01
WSR36	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:54:00 AM	7.72	8.41	32.36	26.44	1.41	9.00	<0.1	<0.01
WSR37	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:45:00 AM	7.97	8.27	32.73	26.68	1.63	5.00	<0.1	<0.01
WSR37	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:45:00 AM	7.93	8.28	32.71	26.72	1.59	5.00	<0.1	<0.01
WSR37	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:46:00 AM	7.96	8.30	32.67	26.76	1.64	6.00	<0.1	<0.01
WSR37	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:46:00 AM	8.01	8.29	32.65	26.69	1.65	5.00	<0.1	<0.01
WSR37	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:47:00 AM	7.96	8.32	32.66	26.76	1.64	8.00	<0.1	<0.01
WSR37	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:47:00 AM	8.03	8.27	32.68	26.76	1.63	6.00	<0.1	<0.01
NF1	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:11:00 AM	7.70	8.32	32.41	26.51	2.07	6.00	<0.1	<0.01
NF1	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:11:00 AM	7.70	8.31	32.34	26.48	2.12	6.00	<0.1	<0.01
NF1	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	9:12:00 AM	7.70	8.34	32.41	26.50	2.09	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF1	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	9:12:00 AM	7.80	8.29	32.41	26.48	2.12	5.00	<0.1	<0.01
NF1	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	9:13:00 AM	7.77	8.34	32.41	26.47	2.11	6.00	<0.1	<0.01
NF1	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	9:13:00 AM	7.69	8.32	32.41	26.43	2.14	5.00	<0.1	<0.01
NF2	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:28:00 AM	8.15	8.26	32.33	26.68	2.10	5.00	<0.1	<0.01
NF2	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:28:00 AM	8.08	8.23	32.33	26.63	2.12	8.00	<0.1	<0.01
NF2	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:29:00 AM	8.12	8.22	32.28	26.63	2.13	5.00	<0.1	<0.01
NF2	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:29:00 AM	8.10	8.21	32.28	26.69	2.12	5.00	<0.1	<0.01
NF2	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	9:30:00 AM	8.17	8.26	32.26	26.71	2.12	6.00	<0.1	<0.01
NF2	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	9:30:00 AM	8.05	8.24	32.26	26.69	2.14	6.00	<0.1	<0.01
NF3	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:36:00 AM	8.64	8.34	32.22	26.86	1.73	7.00	<0.1	<0.01
NF3	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:36:00 AM	8.64	8.30	32.23	26.79	1.72	6.00	<0.1	<0.01
NF3	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:37:00 AM	8.62	8.32	32.17	26.79	1.72	8.00	<0.1	<0.01
NF3	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:37:00 AM	8.63	8.34	32.23	26.84	1.72	7.00	<0.1	<0.01
NF3	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:38:00 AM	8.62	8.31	32.25	26.88	1.68	6.00	<0.1	<0.01
NF3	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:38:00 AM	8.54	8.32	32.22	26.79	1.70	5.00	<0.1	<0.01
CE	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:30:00 AM	7.98	8.16	31.46	27.62	2.64	3.00	<0.1	<0.01
CE	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:30:00 AM	8.02	8.18	31.46	27.60	2.62	3.00	<0.1	<0.01
CE	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	9:31:00 AM	8.04	8.17	31.38	27.58	2.59	3.00	<0.1	<0.01
CE	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	9:31:00 AM	7.97	8.19	31.48	27.58	2.58	2.50	<0.1	<0.01
CE	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	9:32:00 AM	8.00	8.17	31.43	27.58	2.58	6.00	<0.1	<0.01
CE	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	9:32:00 AM	8.01	8.14	31.40	27.62	2.58	4.00	<0.1	<0.01
CF	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:38:00 PM	8.69	8.01	30.34	27.37	2.43	3.00	<0.1	<0.01
CF	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:38:00 PM	8.61	8.03	30.36	27.40	2.44	3.00	<0.1	<0.01
CF	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	12:39:00 PM	8.62	8.01	30.50	27.35	2.45	3.00	<0.1	<0.01
CF	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	12:39:00 PM	8.59	8.04	30.49	27.40	2.46	2.50	<0.1	<0.01
CF	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	20	12:40:00 PM	8.64	8.06	30.35	27.36	2.41	3.00	<0.1	<0.01
CF	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	20	12:40:00 PM	8.68	8.01	30.34	27.38	2.43	2.50	<0.1	<0.01
WSR01	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:16:00 PM	9.01	8.15	30.66	27.57	1.88	4.00	<0.1	<0.01
WSR01	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:16:00 PM	8.93	8.12	30.62	27.57	1.85	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR01	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:17:00 PM	8.98	8.08	30.55	27.60	1.91	2.50	<0.1	<0.01
WSR01	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:17:00 PM	9.00	8.08	30.61	27.57	1.90	2.50	<0.1	<0.01
WSR01	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:18:00 PM	8.96	8.09	30.62	27.57	1.85	2.50	<0.1	<0.01
WSR01	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:18:00 PM	8.95	8.13	30.56	27.61	1.89	2.50	<0.1	<0.01
WSR02	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:59:00 AM	8.78	8.12	31.30	27.40	2.02	2.50	<0.1	<0.01
WSR02	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:59:00 AM	8.75	8.11	31.38	27.36	2.06	2.50	<0.1	<0.01
WSR02	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:00:00 PM	8.73	8.09	31.39	27.39	2.06	2.50	<0.1	<0.01
WSR02	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:00:00 PM	8.79	8.06	31.21	27.39	2.02	2.50	<0.1	<0.01
WSR02	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	12:01:00 PM	8.81	8.11	31.25	27.35	2.05	4.00	<0.1	<0.01
WSR02	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	12:01:00 PM	8.76	8.05	31.34	27.41	2.02	4.00	<0.1	<0.01
WSR03	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:41:00 AM	8.36	8.02	31.19	27.48	1.31	2.50	<0.1	<0.01
WSR03	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:41:00 AM	8.35	8.08	31.23	27.47	1.30	4.00	<0.1	<0.01
WSR03	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:42:00 AM	8.43	8.03	31.21	27.44	1.32	3.00	<0.1	<0.01
WSR03	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:42:00 AM	8.41	8.05	31.19	27.46	1.31	3.00	<0.1	<0.01
WSR03	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:43:00 AM	8.46	8.10	31.08	27.42	1.30	3.00	<0.1	<0.01
WSR03	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:43:00 AM	8.39	8.04	31.18	27.43	1.30	2.50	<0.1	<0.01
WSR04	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:29:00 AM	8.27	7.99	31.29	27.29	2.07	2.50	<0.1	<0.01
WSR04	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:29:00 AM	8.25	8.04	31.31	27.29	2.06	3.00	<0.1	<0.01
WSR04	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:30:00 AM	8.23	8.01	31.34	27.30	2.01	2.50	<0.1	<0.01
WSR04	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:30:00 AM	8.22	8.05	31.38	27.28	1.96	3.00	<0.1	<0.01
WSR04	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:31:00 AM	8.19	8.04	31.33	27.28	1.95	2.50	<0.1	<0.01
WSR04	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:31:00 AM	8.23	7.99	31.45	27.28	1.92	3.00	<0.1	<0.01
WSR16	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:53:00 AM	8.11	8.25	30.43	27.27	2.09	2.50	<0.1	<0.01
WSR16	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:53:00 AM	8.13	8.29	30.42	27.29	2.13	2.50	<0.1	<0.01
WSR16	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	9:54:00 AM	8.06	8.25	30.33	27.29	2.15	2.50	<0.1	<0.01
WSR16	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	9:54:00 AM	8.13	8.23	30.30	27.32	2.13	2.50	<0.1	<0.01
WSR16	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	15	9:55:00 AM	8.18	8.23	30.31	27.29	2.12	2.50	<0.1	<0.01
WSR16	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	15	9:55:00 AM	8.14	8.24	30.36	27.28	2.14	2.50	<0.1	<0.01
WSR33	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	8.54	8.27	30.40	27.27	1.62	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR33	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	8.55	8.27	30.43	27.28	1.64	2.50	<0.1	<0.01
WSR33	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:15:00 AM	8.60	8.24	30.38	27.31	1.61	2.50	<0.1	<0.01
WSR33	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:15:00 AM	8.55	8.30	30.31	27.31	1.64	3.00	<0.1	<0.01
WSR33	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	11:16:00 AM	8.59	8.24	30.45	27.28	1.62	2.50	<0.1	<0.01
WSR33	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	11:16:00 AM	8.54	8.26	30.36	27.31	1.63	2.50	<0.1	<0.01
WSR36	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:58:00 AM	8.89	8.02	31.36	27.54	1.96	2.50	<0.1	<0.01
WSR36	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:58:00 AM	8.86	8.00	31.41	27.49	1.92	3.00	<0.1	<0.01
WSR36	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:59:00 AM	8.81	8.00	31.29	27.54	1.97	2.50	<0.1	<0.01
WSR36	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:59:00 AM	8.83	8.03	31.31	27.54	1.91	3.00	<0.1	<0.01
WSR36	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:59:00 AM	8.91	8.06	31.26	27.52	1.98	2.50	<0.1	<0.01
WSR36	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:59:00 AM	8.89	8.07	31.35	27.49	1.98	2.50	<0.1	<0.01
WSR37	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:49:00 AM	8.65	8.21	30.84	27.36	1.48	4.00	<0.1	<0.01
WSR37	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:49:00 AM	8.74	8.14	30.93	27.35	1.51	2.50	<0.1	<0.01
WSR37	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:50:00 AM	8.63	8.21	30.79	27.34	1.54	2.50	<0.1	<0.01
WSR37	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:50:00 AM	8.67	8.19	30.95	27.33	1.51	5.00	<0.1	<0.01
WSR37	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:51:00 AM	8.68	8.14	30.93	27.34	1.49	3.00	<0.1	<0.01
WSR37	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:51:00 AM	8.70	8.19	30.95	27.35	1.52	2.50	<0.1	<0.01
NF1	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:17:00 AM	8.13	8.26	31.50	27.27	1.95	5.00	<0.1	<0.01
NF1	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:17:00 AM	8.17	8.31	31.34	27.29	1.91	6.00	<0.1	<0.01
NF1	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	10:18:00 AM	8.24	8.28	31.39	27.28	1.91	3.00	<0.1	<0.01
NF1	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	10:18:00 AM	8.13	8.30	31.40	27.31	1.93	3.00	<0.1	<0.01
NF1	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	10:19:00 AM	8.22	8.26	31.49	27.25	1.89	6.00	<0.1	<0.01
NF1	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	10:19:00 AM	8.16	8.27	31.49	27.27	1.91	6.00	<0.1	<0.01
NF2	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:34:00 AM	8.87	8.05	31.38	27.69	1.56	3.00	<0.1	<0.01
NF2	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:34:00 AM	8.86	8.10	31.45	27.67	1.60	2.50	<0.1	<0.01
NF2	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:35:00 AM	8.97	8.03	31.42	27.70	1.58	4.00	<0.1	<0.01
NF2	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:35:00 AM	8.88	8.07	31.31	27.70	1.61	2.50	<0.1	<0.01
NF2	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	10:36:00 AM	8.98	8.02	31.37	27.71	1.62	4.00	<0.1	<0.01
NF2	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	10:36:00 AM	8.98	8.05	31.42	27.71	1.59	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF3	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:42:00 AM	8.90	8.26	30.88	27.40	2.16	3.00	<0.1	<0.01
NF3	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:42:00 AM	9.02	8.24	31.05	27.43	2.11	3.00	<0.1	<0.01
NF3	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	10:43:00 AM	8.92	8.28	30.95	27.43	1.99	3.00	<0.1	<0.01
NF3	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	10:43:00 AM	8.92	8.22	30.88	27.39	2.17	3.00	<0.1	<0.01
NF3	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	10:44:00 AM	9.02	8.24	30.90	27.42	1.93	2.50	<0.1	<0.01
NF3	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	10:44:00 AM	9.00	8.29	30.86	27.41	2.12	3.00	<0.1	<0.01
CE	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:04:00 AM	8.41	8.15	31.97	27.00	2.64	4.00	<0.1	<0.01
CE	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:04:00 AM	8.36	8.12	31.95	27.00	2.62	4.00	<0.1	<0.01
CE	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	11:05:00 AM	8.38	8.10	31.87	27.06	2.51	3.00	<0.1	<0.01
CE	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	11:05:00 AM	8.35	8.16	31.87	27.01	2.58	4.00	<0.1	<0.01
CE	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	11:06:00 AM	8.42	8.11	31.82	26.97	2.43	5.00	<0.1	<0.01
CE	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	11:06:00 AM	8.35	8.12	31.88	27.03	2.44	4.00	<0.1	<0.01
CF	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	2:14:00 PM	7.78	8.13	31.92	27.02	2.12	2.50	<0.1	<0.01
CF	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	2:14:00 PM	7.75	8.07	32.05	27.08	2.14	4.00	<0.1	<0.01
CF	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	2:15:00 PM	7.75	8.11	32.02	27.11	2.17	3.00	<0.1	<0.01
CF	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	2:15:00 PM	7.75	8.09	32.03	27.03	2.12	3.00	<0.1	<0.01
CF	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	2:16:00 PM	7.80	8.08	32.04	27.01	2.17	3.00	<0.1	<0.01
CF	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	2:16:00 PM	7.79	8.09	32.07	27.01	2.14	5.00	<0.1	<0.01
WSR01	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:50:00 PM	8.75	8.17	31.43	27.22	2.01	4.00	<0.1	<0.01
WSR01	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:50:00 PM	8.83	8.19	31.40	27.14	2.04	4.00	<0.1	<0.01
WSR01	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	1:51:00 PM	8.78	8.21	31.36	27.25	1.93	2.50	<0.1	<0.01
WSR01	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	1:51:00 PM	8.83	8.16	31.36	27.22	1.95	4.00	<0.1	<0.01
WSR01	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	1:52:00 PM	8.77	8.19	31.41	27.16	1.92	4.00	<0.1	<0.01
WSR01	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	1:52:00 PM	8.77	8.17	31.36	27.22	1.92	5.00	<0.1	<0.01
WSR02	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:32:00 PM	8.17	8.34	32.62	27.06	1.35	3.00	<0.1	<0.01
WSR02	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:32:00 PM	8.12	8.29	32.53	27.06	1.35	6.00	<0.1	<0.01
WSR02	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	1:33:00 PM	8.17	8.35	32.59	27.09	1.32	3.00	<0.1	<0.01
WSR02	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	1:33:00 PM	8.13	8.29	32.60	27.12	1.61	4.00	<0.1	<0.01
WSR02	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	1:34:00 PM	8.14	8.29	32.50	27.12	1.32	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR02	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	1:34:00 PM	8.13	8.35	32.57	27.12	1.36	3.00	<0.1	<0.01
WSR03	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:16:00 PM	8.17	8.30	32.25	27.11	1.56	5.00	<0.1	<0.01
WSR03	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:16:00 PM	8.15	8.34	32.31	27.03	1.57	4.00	<0.1	<0.01
WSR03	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:17:00 PM	8.22	8.34	32.36	27.06	1.59	5.00	<0.1	<0.01
WSR03	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:17:00 PM	8.21	8.33	32.30	27.10	1.46	3.00	<0.1	<0.01
WSR03	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	1:18:00 PM	8.15	8.32	32.36	27.11	1.49	4.00	<0.1	<0.01
WSR03	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	1:18:00 PM	8.20	8.29	32.36	27.10	1.53	6.00	<0.1	<0.01
WSR04	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:02:00 PM	8.71	8.05	32.39	27.15	2.11	5.00	<0.1	<0.01
WSR04	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:02:00 PM	8.71	8.05	32.33	27.11	2.08	4.00	<0.1	<0.01
WSR04	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:03:00 PM	8.71	8.04	32.33	27.09	1.92	5.00	<0.1	<0.01
WSR04	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:03:00 PM	8.71	8.06	32.46	27.14	1.95	6.00	<0.1	<0.01
WSR04	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	1:04:00 PM	8.77	8.07	32.44	27.19	2.11	5.00	<0.1	<0.01
WSR04	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	1:04:00 PM	8.71	8.09	32.43	27.17	1.93	3.00	<0.1	<0.01
WSR16	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:27:00 AM	7.75	8.25	31.79	27.00	1.68	4.00	<0.1	<0.01
WSR16	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:27:00 AM	7.81	8.31	31.73	27.04	1.66	6.00	<0.1	<0.01
WSR16	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	11:28:00 AM	7.76	8.26	31.78	27.10	1.68	6.00	<0.1	<0.01
WSR16	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	11:28:00 AM	7.78	8.29	31.74	27.10	1.68	6.00	<0.1	<0.01
WSR16	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	16	11:29:00 AM	7.74	8.27	31.77	27.10	1.63	2.50	<0.1	<0.01
WSR16	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	16	11:29:00 AM	7.82	8.31	31.64	27.04	1.63	4.00	<0.1	<0.01
WSR33	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:45:00 PM	8.62	8.30	32.72	27.23	2.11	3.00	<0.1	<0.01
WSR33	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:45:00 PM	8.57	8.29	32.64	27.19	2.14	6.00	<0.1	<0.01
WSR33	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:46:00 PM	8.59	8.27	32.59	27.23	2.19	3.00	<0.1	<0.01
WSR33	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:46:00 PM	8.57	8.25	32.68	27.17	2.07	4.00	<0.1	<0.01
WSR33	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:47:00 PM	8.55	8.30	32.71	27.25	2.01	5.00	<0.1	<0.01
WSR33	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:47:00 PM	8.55	8.23	32.69	27.24	1.99	6.00	<0.1	<0.01
WSR36	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:29:00 PM	8.83	8.25	32.68	27.18	1.48	5.00	<0.1	<0.01
WSR36	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:29:00 PM	8.79	8.27	32.74	27.24	1.48	5.00	<0.1	<0.01
WSR36	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:30:00 PM	8.83	8.29	32.73	27.25	1.50	3.00	<0.1	<0.01
WSR36	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:30:00 PM	8.78	8.26	32.64	27.26	1.50	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR36	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:30:00 PM	8.79	8.26	32.65	27.15	1.51	6.00	<0.1	<0.01
WSR36	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:30:00 PM	8.76	8.29	32.72	27.15	1.56	4.00	<0.1	<0.01
WSR37	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:21:00 PM	8.18	8.19	32.13	27.31	1.62	3.00	<0.1	<0.01
WSR37	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:21:00 PM	8.15	8.24	32.02	27.31	1.62	3.00	<0.1	<0.01
WSR37	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:22:00 PM	8.18	8.23	32.04	27.30	1.65	4.00	<0.1	<0.01
WSR37	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:22:00 PM	8.21	8.23	31.98	27.22	1.65	3.00	<0.1	<0.01
WSR37	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:23:00 PM	8.21	8.22	31.98	27.24	1.64	3.00	<0.1	<0.01
WSR37	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:23:00 PM	8.20	8.22	32.05	27.29	1.64	4.00	<0.1	<0.01
NF1	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:48:00 AM	8.19	8.27	31.16	27.14	1.75	4.00	<0.1	<0.01
NF1	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:48:00 AM	8.19	8.26	31.19	27.23	1.77	6.00	<0.1	<0.01
NF1	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	11:49:00 AM	8.23	8.27	31.05	27.21	1.75	5.00	<0.1	<0.01
NF1	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	11:49:00 AM	8.20	8.32	31.19	27.12	1.77	3.00	<0.1	<0.01
NF1	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	11:50:00 AM	8.18	8.27	31.11	27.18	1.78	4.00	<0.1	<0.01
NF1	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	11:50:00 AM	8.20	8.32	31.16	27.19	1.73	3.00	<0.1	<0.01
NF2	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:05:00 PM	8.09	8.20	31.77	27.20	1.40	4.00	<0.1	<0.01
NF2	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:05:00 PM	8.11	8.25	31.85	27.21	1.42	4.00	<0.1	<0.01
NF2	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:06:00 PM	8.16	8.18	31.78	27.22	1.39	2.50	<0.1	<0.01
NF2	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:06:00 PM	8.11	8.18	31.73	27.26	1.40	3.00	<0.1	<0.01
NF2	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	12:07:00 PM	8.10	8.20	31.78	27.21	1.42	3.00	<0.1	<0.01
NF2	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	12:07:00 PM	8.09	8.23	31.82	27.18	1.40	3.00	<0.1	<0.01
NF3	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:14:00 PM	8.04	8.17	31.97	27.11	1.92	4.00	<0.1	<0.01
NF3	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:14:00 PM	8.01	8.17	31.93	27.18	1.84	3.00	<0.1	<0.01
NF3	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	12:15:00 PM	8.03	8.22	31.98	27.14	1.83	3.00	<0.1	<0.01
NF3	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	12:15:00 PM	7.99	8.20	32.01	27.16	1.84	2.50	<0.1	<0.01
NF3	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	12	12:16:00 PM	8.06	8.19	31.94	27.13	1.82	3.00	<0.1	<0.01
NF3	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	12	12:16:00 PM	8.04	8.15	31.95	27.09	1.85	3.00	<0.1	<0.01
CE	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:54:00 AM	8.86	8.28	32.49	27.16	2.16	3.00	<0.1	<0.01
CE	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:54:00 AM	8.84	8.27	32.48	27.19	2.13	2.50	<0.1	<0.01
CE	24/07/2024	Cloudy	Mid-Flood	Moderate	M	12	10:55:00 AM	8.84	8.33	32.50	27.19	2.13	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CE	24/07/2024	Cloudy	Mid-Flood	Moderate	M	12	10:55:00 AM	8.85	8.33	32.47	27.17	2.13	3.00	<0.1	<0.01
CE	24/07/2024	Cloudy	Mid-Flood	Moderate	B	23	10:56:00 AM	8.84	8.33	32.51	27.16	2.15	2.50	<0.1	<0.01
CE	24/07/2024	Cloudy	Mid-Flood	Moderate	B	23	10:56:00 AM	8.89	8.28	32.53	27.18	2.17	2.50	<0.1	<0.01
CF	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:00:00 AM	8.13	8.07	32.26	27.12	2.40	2.50	<0.1	<0.01
CF	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:00:00 AM	8.10	8.07	32.26	27.11	2.38	4.00	<0.1	<0.01
CF	24/07/2024	Cloudy	Mid-Flood	Moderate	M	11	8:01:00 AM	8.16	8.07	32.33	27.06	2.41	2.50	<0.1	<0.01
CF	24/07/2024	Cloudy	Mid-Flood	Moderate	M	11	8:01:00 AM	8.16	8.10	32.33	27.10	2.43	2.50	<0.1	<0.01
CF	24/07/2024	Cloudy	Mid-Flood	Moderate	B	21	8:02:00 AM	8.15	8.13	32.38	27.07	2.41	3.00	<0.1	<0.01
CF	24/07/2024	Cloudy	Mid-Flood	Moderate	B	21	8:02:00 AM	8.16	8.08	32.29	27.13	2.44	4.00	<0.1	<0.01
WSR01	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:23:00 AM	9.00	8.19	32.98	27.23	1.61	5.00	<0.1	<0.01
WSR01	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:23:00 AM	8.93	8.13	33.05	27.19	1.59	2.50	<0.1	<0.01
WSR01	24/07/2024	Cloudy	Mid-Flood	Moderate	M	5	8:24:00 AM	8.99	8.17	32.97	27.24	1.64	4.00	<0.1	<0.01
WSR01	24/07/2024	Cloudy	Mid-Flood	Moderate	M	5	8:24:00 AM	8.97	8.20	33.01	27.23	1.59	3.00	<0.1	<0.01
WSR01	24/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:25:00 AM	8.96	8.20	33.05	27.21	1.64	2.50	<0.1	<0.01
WSR01	24/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:25:00 AM	9.00	8.20	33.01	27.21	1.62	2.50	<0.1	<0.01
WSR02	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:41:00 AM	8.83	8.18	32.45	27.21	1.89	2.50	<0.1	<0.01
WSR02	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:41:00 AM	8.86	8.21	32.44	27.26	1.87	2.50	<0.1	<0.01
WSR02	24/07/2024	Cloudy	Mid-Flood	Moderate	M	5	8:42:00 AM	8.90	8.22	32.46	27.23	1.88	2.50	<0.1	<0.01
WSR02	24/07/2024	Cloudy	Mid-Flood	Moderate	M	5	8:42:00 AM	8.83	8.23	32.48	27.27	1.85	3.00	<0.1	<0.01
WSR02	24/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:43:00 AM	8.86	8.19	32.44	27.23	1.88	4.00	<0.1	<0.01
WSR02	24/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:43:00 AM	8.87	8.24	32.41	27.27	1.90	2.50	<0.1	<0.01
WSR03	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:55:00 AM	8.16	8.31	31.77	27.20	1.60	4.00	<0.1	<0.01
WSR03	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:55:00 AM	8.16	8.26	31.84	27.26	1.60	3.00	<0.1	<0.01
WSR03	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	8:56:00 AM	8.15	8.24	31.80	27.26	1.59	3.00	<0.1	<0.01
WSR03	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	8:56:00 AM	8.16	8.29	31.89	27.27	1.59	3.00	<0.1	<0.01
WSR03	24/07/2024	Cloudy	Mid-Flood	Moderate	B	7	8:57:00 AM	8.18	8.25	31.78	27.21	1.55	2.50	<0.1	<0.01
WSR03	24/07/2024	Cloudy	Mid-Flood	Moderate	B	7	8:57:00 AM	8.14	8.30	31.80	27.26	1.57	3.00	<0.1	<0.01
WSR04	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:09:00 AM	8.04	8.03	32.34	27.33	1.67	2.50	<0.1	<0.01
WSR04	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:09:00 AM	8.03	8.06	32.34	27.33	1.69	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR04	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:10:00 AM	8.04	8.09	32.35	27.33	1.66	2.50	<0.1	<0.01
WSR04	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:10:00 AM	8.09	8.04	32.32	27.30	1.66	2.50	<0.1	<0.01
WSR04	24/07/2024	Cloudy	Mid-Flood	Moderate	B	6	9:11:00 AM	8.03	8.09	32.32	27.34	1.68	3.00	<0.1	<0.01
WSR04	24/07/2024	Cloudy	Mid-Flood	Moderate	B	6	9:11:00 AM	8.10	8.09	32.32	27.35	1.72	4.00	<0.1	<0.01
WSR16	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:32:00 AM	7.99	8.19	32.31	27.46	1.93	2.50	<0.1	<0.01
WSR16	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:32:00 AM	7.98	8.17	32.28	27.46	1.93	2.50	<0.1	<0.01
WSR16	24/07/2024	Cloudy	Mid-Flood	Moderate	M	9	10:33:00 AM	7.97	8.21	32.31	27.44	1.95	3.00	<0.1	<0.01
WSR16	24/07/2024	Cloudy	Mid-Flood	Moderate	M	9	10:33:00 AM	7.94	8.19	32.28	27.44	1.92	2.50	<0.1	<0.01
WSR16	24/07/2024	Cloudy	Mid-Flood	Moderate	B	16	10:34:00 AM	7.97	8.19	32.40	27.51	1.92	4.00	<0.1	<0.01
WSR16	24/07/2024	Cloudy	Mid-Flood	Moderate	B	16	10:34:00 AM	7.97	8.23	32.39	27.44	1.94	4.00	<0.1	<0.01
WSR33	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:24:00 AM	8.88	8.20	31.84	27.06	2.08	3.00	<0.1	<0.01
WSR33	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:24:00 AM	8.92	8.20	31.89	27.09	2.01	4.00	<0.1	<0.01
WSR33	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:25:00 AM	8.87	8.25	31.84	27.04	1.93	4.00	<0.1	<0.01
WSR33	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:25:00 AM	8.85	8.23	31.87	27.04	1.99	4.00	<0.1	<0.01
WSR33	24/07/2024	Cloudy	Mid-Flood	Moderate	B	6	9:26:00 AM	8.85	8.20	31.81	27.07	1.93	2.50	<0.1	<0.01
WSR33	24/07/2024	Cloudy	Mid-Flood	Moderate	B	6	9:26:00 AM	8.87	8.24	31.80	27.06	1.94	2.50	<0.1	<0.01
WSR36	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:38:00 AM	8.13	8.08	32.33	27.06	1.56	3.00	<0.1	<0.01
WSR36	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:38:00 AM	8.09	8.04	32.28	27.02	1.58	2.50	<0.1	<0.01
WSR36	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:39:00 AM	8.14	8.12	32.28	27.02	1.60	3.00	<0.1	<0.01
WSR36	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:39:00 AM	8.12	8.10	32.32	27.05	1.60	3.00	<0.1	<0.01
WSR36	24/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:39:00 AM	8.15	8.11	32.36	27.02	1.57	2.50	<0.1	<0.01
WSR36	24/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:39:00 AM	8.16	8.12	32.34	27.07	1.60	4.00	<0.1	<0.01
WSR37	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:53:00 AM	8.87	8.14	31.77	27.17	1.65	2.50	<0.1	<0.01
WSR37	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:53:00 AM	8.86	8.11	31.86	27.16	1.63	2.50	<0.1	<0.01
WSR37	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:54:00 AM	8.88	8.08	31.86	27.17	1.60	3.00	<0.1	<0.01
WSR37	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:54:00 AM	8.84	8.14	31.76	27.19	1.62	2.50	<0.1	<0.01
WSR37	24/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:55:00 AM	8.87	8.08	31.80	27.15	1.63	3.00	<0.1	<0.01
WSR37	24/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:55:00 AM	8.86	8.15	31.78	27.19	1.65	2.50	<0.1	<0.01
NF1	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:19:00 AM	8.49	8.22	32.77	27.43	1.69	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF1	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:19:00 AM	8.56	8.25	32.78	27.40	1.69	2.50	<0.1	<0.01
NF1	24/07/2024	Cloudy	Mid-Flood	Moderate	M	7	10:20:00 AM	8.51	8.23	32.71	27.41	1.67	3.00	<0.1	<0.01
NF1	24/07/2024	Cloudy	Mid-Flood	Moderate	M	7	10:20:00 AM	8.51	8.26	32.82	27.38	1.70	4.00	<0.1	<0.01
NF1	24/07/2024	Cloudy	Mid-Flood	Moderate	B	13	10:21:00 AM	8.49	8.18	32.83	27.41	1.68	3.00	<0.1	<0.01
NF1	24/07/2024	Cloudy	Mid-Flood	Moderate	B	13	10:21:00 AM	8.51	8.20	32.72	27.42	1.71	5.00	<0.1	<0.01
NF2	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:11:00 AM	8.10	8.16	32.01	27.33	1.81	3.00	<0.1	<0.01
NF2	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:11:00 AM	8.07	8.20	32.03	27.34	1.80	3.00	<0.1	<0.01
NF2	24/07/2024	Cloudy	Mid-Flood	Moderate	M	5	10:12:00 AM	8.08	8.14	32.09	27.32	1.80	3.00	<0.1	<0.01
NF2	24/07/2024	Cloudy	Mid-Flood	Moderate	M	5	10:12:00 AM	8.12	8.21	32.08	27.29	1.75	2.50	<0.1	<0.01
NF2	24/07/2024	Cloudy	Mid-Flood	Moderate	B	10	10:13:00 AM	8.08	8.21	32.08	27.30	1.76	3.00	<0.1	<0.01
NF2	24/07/2024	Cloudy	Mid-Flood	Moderate	B	10	10:13:00 AM	8.10	8.17	31.97	27.30	1.80	3.00	<0.1	<0.01
NF3	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:02:00 AM	9.13	8.31	31.99	27.06	1.62	4.00	<0.1	<0.01
NF3	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:02:00 AM	9.13	8.30	31.99	27.07	1.60	3.00	<0.1	<0.01
NF3	24/07/2024	Cloudy	Mid-Flood	Moderate	M	6	10:03:00 AM	9.09	8.29	32.02	27.01	1.61	3.00	<0.1	<0.01
NF3	24/07/2024	Cloudy	Mid-Flood	Moderate	M	6	10:03:00 AM	9.16	8.25	31.94	27.03	1.59	3.00	<0.1	<0.01
NF3	24/07/2024	Cloudy	Mid-Flood	Moderate	B	11	10:04:00 AM	9.11	8.28	31.96	27.05	1.56	4.00	<0.1	<0.01
NF3	24/07/2024	Cloudy	Mid-Flood	Moderate	B	11	10:04:00 AM	9.14	8.24	32.02	27.06	1.56	2.50	<0.1	<0.01
CE	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:43:00 AM	8.45	8.11	32.92	26.98	2.35	3.00	<0.1	<0.01
CE	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:43:00 AM	8.49	8.05	32.89	26.99	2.31	2.50	<0.1	<0.01
CE	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	12	11:44:00 AM	8.55	8.12	32.95	27.04	2.26	3.00	<0.1	<0.01
CE	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	12	11:44:00 AM	8.51	8.07	32.92	27.03	2.33	3.00	<0.1	<0.01
CE	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	23	11:45:00 AM	8.49	8.10	32.85	27.04	2.28	2.50	<0.1	<0.01
CE	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	23	11:45:00 AM	8.50	8.08	32.80	27.04	2.29	3.00	<0.1	<0.01
CF	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:42:00 AM	9.13	8.19	32.11	27.22	2.49	2.50	<0.1	<0.01
CF	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:42:00 AM	9.05	8.16	32.20	27.19	2.48	2.50	<0.1	<0.01
CF	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	8:43:00 AM	9.11	8.23	32.08	27.21	2.57	3.00	<0.1	<0.01
CF	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	8:43:00 AM	9.08	8.22	32.15	27.21	2.58	2.50	<0.1	<0.01
CF	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	8:44:00 AM	9.18	8.16	32.14	27.21	2.62	3.00	<0.1	<0.01
CF	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	8:44:00 AM	9.17	8.22	32.24	27.16	2.59	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR01	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:05:00 AM	8.78	8.19	32.56	27.04	2.17	3.00	<0.1	<0.01
WSR01	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:05:00 AM	8.78	8.18	32.57	27.01	2.15	3.00	<0.1	<0.01
WSR01	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:06:00 AM	8.86	8.14	32.56	26.97	2.14	2.50	<0.1	<0.01
WSR01	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:06:00 AM	8.87	8.21	32.58	27.05	2.16	2.50	<0.1	<0.01
WSR01	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	9:07:00 AM	8.76	8.16	32.52	27.02	2.13	3.00	<0.1	<0.01
WSR01	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	9:07:00 AM	8.90	8.20	32.57	26.99	2.12	3.00	<0.1	<0.01
WSR02	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:24:00 AM	8.54	8.24	33.36	26.97	2.09	2.50	<0.1	<0.01
WSR02	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:24:00 AM	8.56	8.25	33.32	26.96	2.12	2.50	<0.1	<0.01
WSR02	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:25:00 AM	8.49	8.21	33.41	26.99	2.10	3.00	<0.1	<0.01
WSR02	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:25:00 AM	8.50	8.26	33.34	26.97	2.13	3.00	<0.1	<0.01
WSR02	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	9:26:00 AM	8.51	8.24	33.38	27.01	2.09	3.00	<0.1	<0.01
WSR02	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	9:26:00 AM	8.58	8.23	33.40	26.97	2.11	3.00	<0.1	<0.01
WSR03	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:38:00 AM	8.92	8.16	32.63	26.75	1.56	2.50	<0.1	<0.01
WSR03	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:38:00 AM	8.88	8.15	32.52	26.75	1.59	3.00	<0.1	<0.01
WSR03	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:39:00 AM	8.90	8.13	32.61	26.78	1.54	2.50	<0.1	<0.01
WSR03	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:39:00 AM	8.95	8.17	32.60	26.77	1.51	2.50	<0.1	<0.01
WSR03	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:40:00 AM	8.85	8.19	32.61	26.81	1.51	3.00	<0.1	<0.01
WSR03	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:40:00 AM	8.88	8.15	32.65	26.79	1.47	3.00	<0.1	<0.01
WSR04	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:54:00 AM	8.39	8.28	32.95	26.81	1.55	3.00	<0.1	<0.01
WSR04	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:54:00 AM	8.45	8.30	32.96	26.77	1.66	2.50	<0.1	<0.01
WSR04	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:55:00 AM	8.44	8.24	32.99	26.78	1.63	3.00	<0.1	<0.01
WSR04	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:55:00 AM	8.46	8.27	32.85	26.81	1.37	4.00	<0.1	<0.01
WSR04	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:56:00 AM	8.37	8.27	32.96	26.79	1.38	2.50	<0.1	<0.01
WSR04	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:56:00 AM	8.33	8.27	32.91	26.74	1.63	4.00	<0.1	<0.01
WSR16	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:22:00 AM	9.06	8.32	32.23	27.20	1.46	2.50	<0.1	<0.01
WSR16	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:22:00 AM	8.94	8.31	32.28	27.17	1.47	2.50	<0.1	<0.01
WSR16	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	11:23:00 AM	9.06	8.25	32.34	27.14	1.48	2.50	<0.1	<0.01
WSR16	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	11:23:00 AM	9.03	8.31	32.24	27.14	1.46	2.50	<0.1	<0.01
WSR16	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	14	11:24:00 AM	9.05	8.29	32.18	27.16	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR16	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	14	11:24:00 AM	8.94	8.26	32.36	27.13	1.47	3.00	<0.1	<0.01
WSR33	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:09:00 AM	9.24	8.32	32.06	26.96	1.62	3.00	<0.1	<0.01
WSR33	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:09:00 AM	9.18	8.32	32.08	27.00	1.70	2.50	<0.1	<0.01
WSR33	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:10:00 AM	9.26	8.33	32.14	26.99	1.63	2.50	<0.1	<0.01
WSR33	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:10:00 AM	9.25	8.31	32.16	26.97	1.68	3.00	<0.1	<0.01
WSR33	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:11:00 AM	9.18	8.33	32.04	26.96	1.65	3.00	<0.1	<0.01
WSR33	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:11:00 AM	9.19	8.33	32.14	27.00	1.65	2.50	<0.1	<0.01
WSR36	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:26:00 AM	8.92	8.29	33.03	26.83	1.95	2.50	<0.1	<0.01
WSR36	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:26:00 AM	8.89	8.28	32.91	26.82	2.00	3.00	<0.1	<0.01
WSR36	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:27:00 AM	8.95	8.30	32.99	26.85	2.00	2.50	<0.1	<0.01
WSR36	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:27:00 AM	8.82	8.32	32.97	26.85	1.96	3.00	<0.1	<0.01
WSR36	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:27:00 AM	8.83	8.26	33.02	26.85	2.00	4.00	<0.1	<0.01
WSR36	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:27:00 AM	8.81	8.26	33.01	26.79	1.95	2.50	<0.1	<0.01
WSR37	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:43:00 AM	8.02	8.11	33.01	26.78	2.06	3.00	<0.1	<0.01
WSR37	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:43:00 AM	7.96	8.13	32.98	26.78	2.11	3.00	<0.1	<0.01
WSR37	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:44:00 AM	8.01	8.14	32.96	26.81	2.05	3.00	<0.1	<0.01
WSR37	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:44:00 AM	8.02	8.12	32.97	26.74	2.08	4.00	<0.1	<0.01
WSR37	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:45:00 AM	8.03	8.14	33.04	26.81	2.06	2.50	<0.1	<0.01
WSR37	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:45:00 AM	8.01	8.16	33.07	26.74	2.10	4.00	<0.1	<0.01
NF1	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:07:00 AM	8.00	8.08	31.89	26.90	2.49	3.00	<0.1	<0.01
NF1	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:07:00 AM	8.03	8.08	31.98	26.94	2.54	3.00	<0.1	<0.01
NF1	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	11:08:00 AM	8.11	8.13	31.98	26.92	2.42	2.50	<0.1	<0.01
NF1	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	11:08:00 AM	7.98	8.11	31.98	26.89	2.45	2.50	<0.1	<0.01
NF1	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	11:09:00 AM	8.09	8.10	31.97	26.89	2.49	2.50	<0.1	<0.01
NF1	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	11:09:00 AM	8.04	8.09	31.84	26.93	2.55	2.50	<0.1	<0.01
NF2	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:59:00 AM	8.90	8.27	32.65	26.79	1.99	3.00	<0.1	<0.01
NF2	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:59:00 AM	8.90	8.30	32.64	26.76	2.02	4.00	<0.1	<0.01
NF2	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	11:00:00 AM	8.85	8.25	32.57	26.78	2.01	3.00	<0.1	<0.01
NF2	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	11:00:00 AM	8.92	8.28	32.53	26.74	2.02	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF2	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	11:01:00 AM	8.95	8.31	32.51	26.79	1.99	2.50	<0.1	<0.01
NF2	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	11:01:00 AM	8.90	8.30	32.57	26.76	1.98	2.50	<0.1	<0.01
NF3	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:52:00 AM	9.47	8.33	31.73	26.88	2.18	3.00	<0.1	<0.01
NF3	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:52:00 AM	9.40	8.37	31.78	26.89	2.17	3.00	<0.1	<0.01
NF3	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	10:53:00 AM	9.45	8.36	31.62	26.92	2.15	2.50	<0.1	<0.01
NF3	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	10:53:00 AM	9.52	8.35	31.64	26.88	2.16	3.00	<0.1	<0.01
NF3	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	10:54:00 AM	9.47	8.33	31.71	26.86	2.20	3.00	<0.1	<0.01
NF3	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	10:54:00 AM	9.45	8.34	31.77	26.89	2.16	3.00	<0.1	<0.01
CE	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:00:00 AM	9.09	8.09	31.71	27.44	2.75	2.50	<0.1	<0.01
CE	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:00:00 AM	9.06	8.09	31.69	27.37	2.74	3.00	<0.1	<0.01
CE	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	8:01:00 AM	9.12	8.05	31.82	27.44	2.61	6.00	<0.1	<0.01
CE	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	8:01:00 AM	9.13	8.05	31.77	27.43	2.66	5.00	<0.1	<0.01
CE	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	20	8:02:00 AM	9.10	8.09	31.76	27.44	2.56	3.00	<0.1	<0.01
CE	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	20	8:02:00 AM	9.05	8.09	31.68	27.45	2.62	2.50	<0.1	<0.01
CF	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	9.17	8.26	31.10	27.51	2.41	3.00	<0.1	<0.01
CF	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	9.05	8.28	31.06	27.53	2.43	6.00	<0.1	<0.01
CF	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	11:15:00 AM	9.05	8.28	31.06	27.58	2.38	5.00	<0.1	<0.01
CF	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	11:15:00 AM	9.10	8.31	31.01	27.55	2.41	5.00	<0.1	<0.01
CF	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	11:16:00 AM	9.14	8.31	31.10	27.50	2.26	4.00	<0.1	<0.01
CF	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	11:16:00 AM	9.05	8.30	31.10	27.54	2.19	3.00	<0.1	<0.01
WSR01	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:52:00 AM	9.11	8.11	31.89	27.40	1.93	3.00	<0.1	<0.01
WSR01	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:52:00 AM	9.08	8.14	31.77	27.47	1.95	3.00	<0.1	<0.01
WSR01	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:53:00 AM	9.13	8.13	31.77	27.43	1.95	4.00	<0.1	<0.01
WSR01	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:53:00 AM	9.16	8.12	31.80	27.44	1.97	3.00	<0.1	<0.01
WSR01	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:54:00 AM	9.15	8.10	31.86	27.41	1.96	3.00	<0.1	<0.01
WSR01	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:54:00 AM	9.09	8.12	31.84	27.39	1.93	6.00	<0.1	<0.01
WSR02	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:33:00 AM	9.12	8.10	32.51	27.55	1.44	4.00	<0.1	<0.01
WSR02	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:33:00 AM	9.11	8.08	32.55	27.46	1.43	3.00	<0.1	<0.01
WSR02	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:34:00 AM	9.08	8.08	32.45	27.46	1.48	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR02	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:34:00 AM	9.02	8.11	32.53	27.47	1.45	4.00	<0.1	<0.01
WSR02	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:35:00 AM	8.96	8.07	32.46	27.49	1.46	3.00	<0.1	<0.01
WSR02	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:35:00 AM	9.06	8.10	32.56	27.55	1.48	5.00	<0.1	<0.01
WSR03	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:15:00 AM	8.69	8.26	32.28	27.57	2.16	3.00	<0.1	<0.01
WSR03	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:15:00 AM	8.67	8.24	32.33	27.62	2.18	5.00	<0.1	<0.01
WSR03	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:16:00 AM	8.55	8.23	32.21	27.56	2.18	5.00	<0.1	<0.01
WSR03	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:16:00 AM	8.55	8.26	32.25	27.57	2.14	5.00	<0.1	<0.01
WSR03	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:17:00 AM	8.52	8.21	32.29	27.59	2.18	3.00	<0.1	<0.01
WSR03	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:17:00 AM	8.53	8.25	32.25	27.54	2.15	5.00	<0.1	<0.01
WSR04	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:00:00 AM	8.98	8.24	31.64	27.22	1.41	4.00	<0.1	<0.01
WSR04	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:00:00 AM	8.89	8.22	31.62	27.22	1.50	4.00	<0.1	<0.01
WSR04	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:01:00 AM	8.98	8.24	31.72	27.18	1.53	3.00	<0.1	<0.01
WSR04	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:01:00 AM	9.02	8.23	31.64	27.18	1.45	4.00	<0.1	<0.01
WSR04	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:02:00 AM	8.98	8.20	31.64	27.21	1.46	6.00	<0.1	<0.01
WSR04	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:02:00 AM	8.97	8.21	31.63	27.21	1.43	4.00	<0.1	<0.01
WSR16	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:23:00 AM	8.59	8.16	31.51	27.42	2.15	2.50	<0.1	<0.01
WSR16	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:23:00 AM	8.50	8.20	31.45	27.40	2.13	3.00	<0.1	<0.01
WSR16	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	9	8:24:00 AM	8.59	8.16	31.51	27.41	2.08	3.00	<0.1	<0.01
WSR16	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	9	8:24:00 AM	8.56	8.21	31.45	27.42	2.04	6.00	<0.1	<0.01
WSR16	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	16	8:25:00 AM	8.51	8.19	31.55	27.42	2.03	4.00	<0.1	<0.01
WSR16	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	16	8:25:00 AM	8.53	8.20	31.57	27.46	2.11	3.00	<0.1	<0.01
WSR33	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:43:00 AM	8.55	8.28	31.98	27.55	1.87	3.00	<0.1	<0.01
WSR33	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:43:00 AM	8.45	8.30	31.95	27.54	1.82	5.00	<0.1	<0.01
WSR33	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:44:00 AM	8.38	8.30	31.89	27.62	1.85	5.00	<0.1	<0.01
WSR33	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:44:00 AM	8.41	8.33	31.91	27.58	1.86	5.00	<0.1	<0.01
WSR33	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:45:00 AM	8.57	8.31	31.97	27.59	1.82	3.00	<0.1	<0.01
WSR33	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:45:00 AM	8.48	8.29	31.98	27.62	1.83	5.00	<0.1	<0.01
WSR36	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:27:00 AM	8.31	8.14	31.60	27.37	1.80	3.00	<0.1	<0.01
WSR36	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:27:00 AM	8.34	8.13	31.62	27.35	1.76	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR36	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:28:00 AM	8.35	8.09	31.51	27.33	1.77	3.00	<0.1	<0.01
WSR36	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:28:00 AM	8.30	8.12	31.64	27.32	1.77	3.00	<0.1	<0.01
WSR36	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:28:00 AM	8.33	8.14	31.54	27.35	1.78	4.00	<0.1	<0.01
WSR36	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:28:00 AM	8.34	8.10	31.65	27.38	1.76	5.00	<0.1	<0.01
WSR37	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:19:00 AM	8.50	8.25	32.79	27.33	1.96	6.00	<0.1	<0.01
WSR37	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:19:00 AM	8.65	8.24	32.87	27.33	1.94	5.00	<0.1	<0.01
WSR37	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:20:00 AM	8.51	8.27	32.82	27.28	1.94	6.00	<0.1	<0.01
WSR37	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:20:00 AM	8.68	8.24	32.89	27.30	1.93	5.00	<0.1	<0.01
WSR37	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:21:00 AM	8.59	8.28	32.79	27.31	1.93	4.00	<0.1	<0.01
WSR37	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:21:00 AM	8.66	8.24	32.90	27.28	1.96	4.00	<0.1	<0.01
NF1	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:45:00 AM	8.18	8.05	31.47	27.28	1.86	3.00	<0.1	<0.01
NF1	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:45:00 AM	8.24	8.03	31.40	27.31	1.88	6.00	<0.1	<0.01
NF1	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	8:46:00 AM	8.07	8.01	31.44	27.26	1.86	4.00	<0.1	<0.01
NF1	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	8:46:00 AM	8.16	8.04	31.45	27.32	1.83	4.00	<0.1	<0.01
NF1	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	8:47:00 AM	8.10	8.02	31.41	27.26	1.84	5.00	<0.1	<0.01
NF1	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	8:47:00 AM	8.10	8.06	31.48	27.34	1.86	4.00	<0.1	<0.01
NF2	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:01:00 AM	9.19	8.32	31.79	27.36	1.34	2.50	<0.1	<0.01
NF2	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:01:00 AM	9.19	8.29	31.82	27.35	1.37	2.50	<0.1	<0.01
NF2	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:02:00 AM	9.14	8.30	31.72	27.38	1.53	2.50	<0.1	<0.01
NF2	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:02:00 AM	9.25	8.34	31.70	27.32	1.38	2.50	<0.1	<0.01
NF2	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	9:03:00 AM	9.18	8.32	31.82	27.32	1.36	4.00	<0.1	<0.01
NF2	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	9:03:00 AM	9.27	8.32	31.76	27.32	1.34	5.00	<0.1	<0.01
NF3	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:11:00 AM	8.23	8.14	31.60	27.58	1.91	6.00	<0.1	<0.01
NF3	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:11:00 AM	8.11	8.12	31.60	27.52	1.89	6.00	<0.1	<0.01
NF3	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:12:00 AM	8.24	8.16	31.60	27.61	1.89	4.00	<0.1	<0.01
NF3	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:12:00 AM	8.20	8.12	31.59	27.52	1.88	5.00	<0.1	<0.01
NF3	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:13:00 AM	8.15	8.12	31.54	27.52	1.93	7.00	<0.1	<0.01
NF3	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:13:00 AM	8.16	8.14	31.56	27.58	1.91	5.00	<0.1	<0.01



Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/01/2024 12:00 AM	50.54	7.14	26.1	0.04
07/01/2024 02:00 AM	51.68	7.65	26.8	0.01
07/01/2024 04:00 AM	50.58	7.13	26.4	0.01
07/01/2024 06:00 AM	50.68	7.25	26.1	0.01
07/01/2024 08:00 AM	51.36	7.58	25.9	0.06
07/01/2024 10:00 AM	52.68	7.18	26.3	0.04
07/01/2024 12:00 PM	51.68	7.10	26.6	0.06
07/01/2024 02:00 PM	50.31	7.17	26.1	0.05
07/01/2024 04:00 PM	51.55	6.20	26.0	0.01
07/01/2024 06:00 PM	50.31	7.92	25.6	0.03
07/01/2024 08:00 PM	51.54	6.58	25.0	0.05
07/01/2024 10:00 PM	52.68	8.14	25.3	0.07
07/02/2024 12:00 AM	53.54	7.73	26.4	0.06
07/02/2024 02:00 AM	52.14	6.19	26.9	0.01
07/02/2024 04:00 AM	50.36	6.28	26.9	0.07
07/02/2024 06:00 AM	50.98	6.80	25.2	0.05
07/02/2024 08:00 AM	50.12	6.64	26.7	0.04
07/02/2024 10:00 AM	51.56	6.36	26.0	0.03
07/02/2024 12:00 PM	50.68	8.01	25.5	0.07
07/02/2024 02:00 PM	52.68	6.95	25.2	0.05
07/02/2024 04:00 PM	50.36	6.80	25.6	0.01
07/02/2024 06:00 PM	51.23	6.55	26.3	0.02
07/02/2024 08:00 PM	51.98	7.05	25.9	0.02
07/02/2024 10:00 PM	52.36	8.00	25.6	0.06
07/03/2024 12:00 AM	53.68	6.46	25.2	0.02
07/03/2024 02:00 AM	52.48	7.30	25.7	0.07
07/03/2024 04:00 AM	51.36	6.38	25.3	0.05
07/03/2024 06:00 AM	50.38	6.62	26.7	0.03
07/03/2024 08:00 AM	51.58	8.06	26.5	0.01
07/03/2024 10:00 AM	54.58	8.01	25.6	0.06
07/03/2024 12:00 PM	53.84	7.44	25.3	0.07
07/03/2024 02:00 PM	56.57	6.82	25.1	0.04
07/03/2024 04:00 PM	51.68	6.25	26.1	0.02
07/03/2024 06:00 PM	56.87	6.24	26.9	0.02
07/03/2024 08:00 PM	53.48	7.03	25.8	0.04
07/03/2024 10:00 PM	58.47	7.67	25.9	0.05
07/04/2024 12:00 AM	56.65	6.47	26.4	0.07
07/04/2024 02:00 AM	58.12	6.16	26.8	0.02
07/04/2024 04:00 AM	53.54	7.98	26.1	0.04
07/04/2024 06:00 AM	51.89	6.33	26.2	0.04
07/04/2024 08:00 AM	53.21	7.59	26.5	0.04
07/04/2024 10:00 AM	54.21	7.60	26.7	0.01
07/04/2024 12:00 PM	58.65	6.86	25.8	0.06
07/04/2024 02:00 PM	54.17	7.20	25.6	0.02
07/04/2024 04:00 PM	53.27	6.16	26.9	0.07
07/04/2024 06:00 PM	52.54	7.81	26.9	0.01
07/04/2024 08:00 PM	53.54	7.10	26.5	0.05
07/04/2024 10:00 PM	48.25	7.82	26.5	0.04

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/05/2024 12:00 AM	58.31	7.82	25.4	0.01
07/05/2024 02:00 AM	56.65	7.82	25.5	0.02
07/05/2024 04:00 AM	55.21	7.82	26.3	0.04
07/05/2024 06:00 AM	55.36	7.82	25.9	0.03
07/05/2024 08:00 AM	54.12	7.82	26.0	0.04
07/05/2024 10:00 AM	49.87	7.82	25.8	0.05
07/05/2024 12:00 PM	51.36	7.82	25.0	0.06
07/05/2024 02:00 PM	52.10	7.82	25.2	0.08
07/05/2024 04:00 PM	51.01	7.82	26.2	0.04
07/05/2024 06:00 PM	50.25	7.72	26.3	0.05
07/05/2024 08:00 PM	49.36	7.72	25.8	0.03
07/05/2024 10:00 PM	53.21	7.72	25.6	0.01
07/06/2024 12:00 AM	51.36	7.72	25.5	0.02
07/06/2024 02:00 AM	51.00	7.72	26.1	0.01
07/06/2024 04:00 AM	49.87	7.72	25.3	0.03
07/06/2024 06:00 AM	49.63	7.72	26.0	0.06
07/06/2024 08:00 AM	52.21	7.72	26.5	0.05
07/06/2024 10:00 AM	53.32	7.62	26.3	0.04
07/06/2024 12:00 PM	51.47	7.72	25.0	0.03
07/06/2024 02:00 PM	50.36	7.62	26.9	0.02
07/06/2024 04:00 PM	52.48	7.72	26.4	0.02
07/06/2024 06:00 PM	49.68	7.72	25.4	0.02
07/06/2024 08:00 PM	53.21	7.62	25.9	0.02
07/06/2024 10:00 PM	52.36	7.62	26.8	0.02
07/07/2024 12:00 AM	53.69	7.62	26.2	0.02
07/07/2024 02:00 AM	52.14	7.62	25.2	0.02
07/07/2024 04:00 AM	52.10	7.72	25.5	0.02
07/07/2024 06:00 AM	51.21	7.62	26.8	0.02
07/07/2024 08:00 AM	50.36	7.62	25.4	0.02
07/07/2024 10:00 AM	54.68	7.62	26.3	0.02
07/07/2024 12:00 PM	53.24	7.62	25.5	0.02
07/07/2024 02:00 PM	55.68	7.72	26.0	0.02
07/07/2024 04:00 PM	54.68	7.62	25.1	0.02
07/07/2024 06:00 PM	56.31	7.62	26.6	0.02
07/07/2024 08:00 PM	58.65	7.62	26.3	0.02
07/07/2024 10:00 PM	57.64	7.62	25.8	0.02
07/08/2024 12:00 AM	57.31	7.62	26.4	0.02
07/08/2024 02:00 AM	57.01	7.62	26.5	0.02
07/08/2024 04:00 AM	57.09	7.62	26.9	0.02
07/08/2024 06:00 AM	58.12	7.62	26.6	0.02
07/08/2024 08:00 AM	58.36	7.62	26.1	0.02
07/08/2024 10:00 AM	57.21	7.62	25.5	0.02
07/08/2024 12:00 PM	56.32	7.61	26.5	0.07
07/08/2024 02:00 PM	60.21	7.73	25.3	0.06
07/08/2024 04:00 PM	58.54	7.73	26.8	0.03
07/08/2024 06:00 PM	57.68	7.73	26.8	0.06
07/08/2024 08:00 PM	58.22	7.73	26.8	0.07
07/08/2024 10:00 PM	57.36	7.73	26.4	0.03

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/09/2024 12:00 AM	56.32	7.73	26.4	0.07
07/09/2024 02:00 AM	57.14	7.73	25.8	0.04
07/09/2024 04:00 AM	58.36	7.63	25.5	0.03
07/09/2024 06:00 AM	54.11	7.73	26.2	0.07
07/09/2024 08:00 AM	53.02	7.63	26.7	0.05
07/09/2024 10:00 AM	58.36	7.63	25.0	0.02
07/09/2024 12:00 PM	59.31	7.73	25.1	0.04
07/09/2024 02:00 PM	58.36	7.73	25.2	0.06
07/09/2024 04:00 PM	57.14	7.63	25.2	0.05
07/09/2024 06:00 PM	56.31	7.63	25.6	0.06
07/09/2024 08:00 PM	55.36	7.63	26.3	0.04
07/09/2024 10:00 PM	54.21	7.53	25.2	0.03
07/10/2024 12:00 AM	53.20	7.63	25.7	0.02
07/10/2024 02:00 AM	55.36	7.63	25.7	0.03
07/10/2024 04:00 AM	54.07	7.53	26.8	0.02
07/10/2024 06:00 AM	53.68	7.63	26.0	0.01
07/10/2024 08:00 AM	52.21	7.53	26.9	0.03
07/10/2024 10:00 AM	58.35	7.64	25.6	0.07
07/10/2024 12:00 PM	54.35	7.63	26.3	0.02
07/10/2024 02:00 PM	55.14	7.63	26.1	0.07
07/10/2024 04:00 PM	56.38	7.53	25.0	0.02
07/10/2024 06:00 PM	57.14	7.63	25.2	0.02
07/10/2024 08:00 PM	52.21	7.63	25.0	0.02
07/10/2024 10:00 PM	51.02	7.52	25.7	0.05
07/11/2024 12:00 AM	53.68	7.63	25.7	0.02
07/11/2024 02:00 AM	55.21	7.63	26.7	0.02
07/11/2024 04:00 AM	53.68	7.63	26.3	0.06
07/11/2024 06:00 AM	54.38	7.63	25.6	0.05
07/11/2024 08:00 AM	55.01	7.63	25.9	0.02
07/11/2024 10:00 AM	56.36	7.53	26.9	0.04
07/11/2024 12:00 PM	56.84	7.53	26.7	0.03
07/11/2024 02:00 PM	56.87	7.53	25.8	0.06
07/11/2024 04:00 PM	55.32	7.63	25.3	0.06
07/11/2024 06:00 PM	54.01	7.53	25.9	0.03
07/11/2024 08:00 PM	55.36	7.53	25.0	0.07
07/11/2024 10:00 PM	58.64	7.53	25.9	0.01
07/12/2024 12:00 AM	59.24	7.30	26.3	0.01
07/12/2024 02:00 AM	58.11	7.26	25.2	0.07
07/12/2024 04:00 AM	55.21	7.30	26.5	0.04
07/12/2024 06:00 AM	54.01	6.14	25.0	0.01
07/12/2024 08:00 AM	56.37	7.54	26.0	0.04
07/12/2024 10:00 AM	57.14	7.17	25.1	0.06
07/12/2024 12:00 PM	53.14	6.41	25.6	0.04
07/12/2024 02:00 PM	57.48	7.30	26.6	0.07
07/12/2024 04:00 PM	56.21	6.72	25.7	0.07
07/12/2024 06:00 PM	53.24	7.62	25.2	0.07
07/12/2024 08:00 PM	55.14	7.57	26.2	0.03
07/12/2024 10:00 PM	54.25	8.01	26.2	0.07

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/13/2024 12:00 AM	56.32	8.06	25.4	0.05
07/13/2024 02:00 AM	55.86	7.15	25.9	0.03
07/13/2024 04:00 AM	54.16	6.63	25.6	0.07
07/13/2024 06:00 AM	56.32	7.05	25.7	0.03
07/13/2024 08:00 AM	58.54	6.39	25.3	0.03
07/13/2024 10:00 AM	57.10	6.14	26.1	0.03
07/13/2024 12:00 PM	56.36	8.10	26.4	0.01
07/13/2024 02:00 PM	55.21	7.75	26.7	0.01
07/13/2024 04:00 PM	54.36	7.95	26.7	0.01
07/13/2024 06:00 PM	55.20	7.62	26.6	0.05
07/13/2024 08:00 PM	54.39	7.62	26.7	0.04
07/13/2024 10:00 PM	60.25	7.62	26.8	0.04
07/14/2024 12:00 AM	58.54	7.52	26.3	0.05
07/14/2024 02:00 AM	57.44	7.62	25.9	0.03
07/14/2024 04:00 AM	52.58	7.62	26.2	0.06
07/14/2024 06:00 AM	54.36	7.62	26.0	0.02
07/14/2024 08:00 AM	55.14	7.62	25.6	0.02
07/14/2024 10:00 AM	58.45	7.62	25.6	0.01
07/14/2024 12:00 PM	56.98	7.62	25.7	0.02
07/14/2024 02:00 PM	55.27	7.62	25.4	0.05
07/14/2024 04:00 PM	54.65	7.62	26.8	0.01
07/14/2024 06:00 PM	53.12	7.62	25.8	0.05
07/14/2024 08:00 PM	60.59	7.62	26.3	0.07
07/14/2024 10:00 PM	59.74	7.52	25.2	0.02
07/15/2024 12:00 AM	59.43	7.62	26.7	0.04
07/15/2024 02:00 AM	58.22	7.62	26.3	0.04
07/15/2024 04:00 AM	56.95	7.62	26.0	0.05
07/15/2024 06:00 AM	56.88	7.62	25.7	0.02
07/15/2024 08:00 AM	56.35	7.52	25.0	0.02
07/15/2024 10:00 AM	64.59	7.50	26.4	0.06
07/15/2024 12:00 PM	64.32	7.50	26.4	0.04
07/15/2024 02:00 PM	65.32	7.50	26.4	0.01
07/15/2024 04:00 PM	61.36	7.50	26.1	0.07
07/15/2024 06:00 PM	62.33	7.50	26.3	0.07
07/15/2024 08:00 PM	60.36	7.50	26.4	0.05
07/15/2024 10:00 PM	59.54	7.50	26.1	0.02
07/16/2024 12:00 AM	59.57	7.50	25.3	0.04
07/16/2024 02:00 AM	59.21	7.50	26.9	0.05
07/16/2024 04:00 AM	58.36	7.50	26.8	0.03
07/16/2024 06:00 AM	60.32	7.50	26.2	0.01
07/16/2024 08:00 AM	61.25	7.50	25.2	0.05
07/16/2024 10:00 AM	60.02	7.50	26.7	0.04
07/16/2024 12:00 PM	59.68	7.12	25.9	0.05
07/16/2024 02:00 PM	59.47	7.05	25.9	0.04
07/16/2024 04:00 PM	58.21	7.03	26.9	0.06
07/16/2024 06:00 PM	61.32	7.69	26.6	0.03
07/16/2024 08:00 PM	61.36	7.69	26.6	0.07
07/16/2024 10:00 PM	60.25	7.69	25.0	0.02

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/17/2024 12:00 AM	62.58	7.69	25.5	0.04
07/17/2024 02:00 AM	63.55	7.69	26.7	0.06
07/17/2024 04:00 AM	63.12	7.69	26.1	0.04
07/17/2024 06:00 AM	59.36	7.69	25.9	0.07
07/17/2024 08:00 AM	64.21	7.69	25.4	0.04
07/17/2024 10:00 AM	63.21	7.69	25.4	0.02
07/17/2024 12:00 PM	47.89	7.74	26.5	0.03
07/17/2024 02:00 PM	46.49	7.74	25.1	0.02
07/17/2024 04:00 PM	46.40	7.74	26.5	0.02
07/17/2024 06:00 PM	44.37	7.74	25.7	0.04
07/17/2024 08:00 PM	44.26	7.74	26.0	0.01
07/17/2024 10:00 PM	44.36	7.74	25.4	0.06
07/18/2024 12:00 AM	44.25	7.74	25.0	0.02
07/18/2024 02:00 AM	44.53	7.74	26.2	0.01
07/18/2024 04:00 AM	44.59	7.74	26.1	0.03
07/18/2024 06:00 AM	44.71	7.74	25.3	0.06
07/18/2024 08:00 AM	44.98	7.74	26.9	0.04
07/18/2024 10:00 AM	45.23	7.74	26.4	0.04
07/18/2024 12:00 PM	43.40	7.65	25.8	0.03
07/18/2024 02:00 PM	43.12	7.76	25.9	0.07
07/18/2024 04:00 PM	42.80	7.76	26.7	0.02
07/18/2024 06:00 PM	42.02	7.74	26.6	0.03
07/18/2024 08:00 PM	41.92	7.74	25.6	0.06
07/18/2024 10:00 PM	42.36	7.74	25.0	0.03
07/19/2024 12:00 AM	42.49	7.74	26.0	0.07
07/19/2024 02:00 AM	42.59	7.74	26.8	0.01
07/19/2024 04:00 AM	43.11	7.74	25.5	0.05
07/19/2024 06:00 AM	43.14	7.74	26.5	0.01
07/19/2024 08:00 AM	43.51	7.74	25.7	0.04
07/19/2024 10:00 AM	43.15	7.74	25.2	0.06
07/19/2024 12:00 PM	42.12	7.74	26.3	0.07
07/19/2024 02:00 PM	41.95	7.64	25.2	0.03
07/19/2024 04:00 PM	41.59	7.64	26.9	0.03
07/19/2024 06:00 PM	41.68	7.64	25.5	0.03
07/19/2024 08:00 PM	41.65	7.64	25.6	0.07
07/19/2024 10:00 PM	41.66	7.64	25.5	0.06
07/20/2024 12:00 AM	41.67	7.64	26.0	0.06
07/20/2024 02:00 AM	39.61	7.64	25.6	0.06
07/20/2024 04:00 AM	41.24	7.64	26.3	0.01
07/20/2024 06:00 AM	45.32	8.06	26.2	0.07
07/20/2024 08:00 AM	45.12	8.06	25.6	0.05
07/20/2024 10:00 AM	46.85	7.76	25.9	0.02
07/20/2024 12:00 PM	45.71	7.66	25.6	0.02
07/20/2024 02:00 PM	46.22	7.66	25.6	0.02
07/20/2024 04:00 PM	46.22	7.66	26.1	0.02
07/20/2024 06:00 PM	46.24	7.66	26.2	0.07
07/20/2024 08:00 PM	46.19	7.66	25.1	0.01
07/20/2024 10:00 PM	46.18	7.66	25.3	0.01

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/21/2024 12:00 AM	46.08	7.66	26.2	0.04
07/21/2024 02:00 AM	46.08	7.66	25.2	0.02
07/21/2024 04:00 AM	45.98	7.66	24.5	0.02
07/21/2024 06:00 AM	45.87	7.66	25.3	0.02
07/21/2024 08:00 AM	45.63	7.66	25.8	0.02
07/21/2024 10:00 AM	45.64	7.66	26.3	0.02
07/21/2024 12:00 PM	45.54	7.66	25.1	0.02
07/21/2024 02:00 PM	45.43	7.66	25.3	0.06
07/21/2024 04:00 PM	45.36	7.66	25.2	0.06
07/21/2024 06:00 PM	45.35	7.66	25.3	0.06
07/21/2024 08:00 PM	45.25	7.66	25.1	0.06
07/21/2024 10:00 PM	45.25	7.66	25.8	0.06
07/22/2024 12:00 AM	45.15	7.76	26.2	0.06
07/22/2024 02:00 AM	45.05	7.76	25.8	0.06
07/22/2024 04:00 AM	44.94	7.76	25.1	0.06
07/22/2024 06:00 AM	44.84	7.76	26.3	0.06
07/22/2024 08:00 AM	44.74	7.76	26.2	0.06
07/22/2024 10:00 AM	44.64	7.76	26.1	0.06
07/22/2024 12:00 PM	44.26	7.76	26.2	0.06
07/22/2024 02:00 PM	44.17	7.76	26.0	0.06
07/22/2024 04:00 PM	43.98	7.76	26.3	0.06
07/22/2024 06:00 PM	43.72	7.76	25.8	0.06
07/22/2024 08:00 PM	43.70	7.76	25.1	0.06
07/22/2024 10:00 PM	43.59	7.76	25.8	0.06
07/23/2024 12:00 AM	43.49	7.76	25.4	0.03
07/23/2024 02:00 AM	43.28	7.76	26.2	0.03
07/23/2024 04:00 AM	43.07	7.76	26.1	0.03
07/23/2024 06:00 AM	42.87	7.76	25.8	0.03
07/23/2024 08:00 AM	43.38	7.76	25.4	0.03
07/23/2024 10:00 AM	43.38	7.66	25.3	0.03
07/23/2024 12:00 PM	43.27	7.66	25.2	0.03
07/23/2024 02:00 PM	43.17	7.66	25.1	0.03
07/23/2024 04:00 PM	42.90	7.66	26.2	0.03
07/23/2024 06:00 PM	42.72	7.66	26.1	0.03
07/23/2024 08:00 PM	42.65	7.76	26.0	0.03
07/23/2024 10:00 PM	42.35	7.76	26.9	0.03
07/24/2024 12:00 AM	42.14	7.76	25.1	0.03
07/24/2024 02:00 AM	41.94	7.76	25.3	0.03
07/24/2024 04:00 AM	42.09	7.76	24.0	0.03
07/24/2024 06:00 AM	41.88	7.76	25.1	0.03
07/24/2024 08:00 AM	42.05	7.76	25.8	0.03
07/24/2024 10:00 AM	42.15	7.76	25.3	0.03
07/24/2024 12:00 PM	41.94	7.76	26.8	0.03
07/24/2024 02:00 PM	41.74	7.76	25.4	0.03
07/24/2024 04:00 PM	41.77	7.76	24.3	0.03
07/24/2024 06:00 PM	41.53	7.76	25.8	0.03
07/24/2024 08:00 PM	41.32	7.76	25.4	0.03
07/24/2024 10:00 PM	40.98	7.76	25.3	0.03

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/25/2024 12:00 AM	41.08	7.76	24.1	0.03
07/25/2024 02:00 AM	40.88	7.76	25.2	0.03
07/25/2024 04:00 AM	41.04	7.76	25.3	0.03
07/25/2024 06:00 AM	41.04	7.76	25.6	0.03
07/25/2024 08:00 AM	40.94	7.76	25.7	0.03
07/25/2024 10:00 AM	40.74	7.76	25.6	0.03
07/25/2024 12:00 PM	46.89	8.05	26.0	0.05
07/25/2024 02:00 PM	47.22	8.05	25.7	0.04
07/25/2024 04:00 PM	47.34	8.05	26.1	0.06
07/25/2024 06:00 PM	47.34	8.05	26.0	0.01
07/25/2024 08:00 PM	47.38	8.05	24.1	0.02
07/25/2024 10:00 PM	47.43	8.05	24.1	0.07
07/26/2024 12:00 AM	47.51	8.05	25.1	0.06
07/26/2024 02:00 AM	47.57	8.05	25.3	0.04
07/26/2024 04:00 AM	47.72	8.05	25.8	0.01
07/26/2024 06:00 AM	47.70	8.05	25.1	0.01
07/26/2024 08:00 AM	47.67	8.05	26.1	0.07
07/26/2024 10:00 AM	47.81	8.05	25.7	0.05
07/26/2024 12:00 PM	47.92	7.97	25.1	0.02
07/26/2024 02:00 PM	47.93	7.97	25.1	0.05
07/26/2024 04:00 PM	48.07	7.97	25.7	0.04
07/26/2024 06:00 PM	48.20	7.97	26.6	0.03
07/26/2024 08:00 PM	48.29	7.97	25.6	0.02
07/26/2024 10:00 PM	48.44	7.87	25.8	0.01
07/27/2024 12:00 AM	48.57	7.87	26.1	0.06
07/27/2024 02:00 AM	48.70	7.85	26.3	0.05
07/27/2024 04:00 AM	48.85	7.85	25.2	0.04
07/27/2024 06:00 AM	48.95	7.85	25.8	0.05
07/27/2024 08:00 AM	48.98	7.85	25.2	0.02
07/27/2024 10:00 AM	49.10	7.85	25.4	0.02
07/27/2024 12:00 PM	49.25	7.85	25.6	0.02
07/27/2024 02:00 PM	49.39	7.85	25.8	0.02
07/27/2024 04:00 PM	49.45	7.85	25.4	0.02
07/27/2024 06:00 PM	49.54	7.85	25.9	0.02
07/27/2024 08:00 PM	49.60	7.85	26.3	0.02
07/27/2024 10:00 PM	49.84	7.85	25.1	0.02
07/28/2024 12:00 AM	49.86	7.85	24.1	0.02
07/28/2024 02:00 AM	50.03	7.85	25.7	0.02
07/28/2024 04:00 AM	50.26	7.85	25.8	0.02
07/28/2024 06:00 AM	50.38	7.85	25.8	0.02
07/28/2024 08:00 AM	50.38	7.85	25.7	0.02
07/28/2024 10:00 AM	50.55	7.85	25.8	0.02
07/28/2024 12:00 PM	50.64	7.85	25.1	0.02
07/28/2024 02:00 PM	50.74	7.85	25.3	0.02
07/28/2024 04:00 PM	50.84	7.85	26.2	0.02
07/28/2024 06:00 PM	51.04	7.85	26.1	0.02
07/28/2024 08:00 PM	50.90	7.85	25.1	0.02

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/28/2024 10:00 PM	51.04	7.85	25.1	0.02
07/29/2024 12:00 AM	51.18	7.85	26.3	0.02
07/29/2024 02:00 AM	51.28	7.85	25.1	0.02
07/29/2024 04:00 AM	51.43	7.85	25.1	0.02
07/29/2024 06:00 AM	51.46	7.85	25.6	0.02
07/29/2024 08:00 AM	51.59	7.85	25.1	0.02
07/29/2024 10:00 AM	51.24	7.85	25.1	0.02
07/29/2024 12:00 PM	51.23	7.85	25.1	0.02
07/29/2024 02:00 PM	51.54	7.85	25.8	0.02
07/29/2024 04:00 PM	51.17	7.85	25.6	0.02
07/29/2024 06:00 PM	51.60	7.85	25.1	0.02
07/29/2024 08:00 PM	51.91	7.85	25.1	0.02
07/29/2024 10:00 PM	52.38	7.85	25.1	0.02
07/30/2024 12:00 AM	52.71	7.85	25.4	0.02
07/30/2024 02:00 AM	53.06	7.85	25.3	0.02
07/30/2024 04:00 AM	53.33	7.75	26.1	0.02
07/30/2024 06:00 AM	53.37	7.75	25.3	0.02
07/30/2024 08:00 AM	52.64	7.75	25.7	0.02
07/30/2024 10:00 AM	52.85	7.75	25.8	0.02
07/30/2024 12:00 PM	52.03	7.75	25.6	0.03
07/30/2024 02:00 PM	52.50	7.75	25.6	0.02
07/30/2024 04:00 PM	51.87	7.75	25.1	0.02
07/30/2024 06:00 PM	51.84	7.75	25.1	0.03
07/30/2024 08:00 PM	52.07	7.75	26.7	0.04
07/30/2024 10:00 PM	52.11	7.71	25.8	0.05
07/31/2024 12:00 AM	52.33	7.69	26.1	0.06
07/31/2024 02:00 AM	52.33	7.69	26.2	0.06
07/31/2024 04:00 AM	52.43	7.72	26.3	0.05
07/31/2024 06:00 AM	52.33	7.72	25.3	0.04
07/31/2024 08:00 AM	52.27	7.72	25.0	0.03
07/31/2024 10:00 AM	52.20	7.72	25.2	0.02
07/31/2024 12:00 PM	52.27	7.72	25.1	0.01
07/31/2024 02:00 PM	52.29	7.72	25.5	0.02
07/31/2024 04:00 PM	52.37	7.62	26.9	0.06
07/31/2024 06:00 PM	51.40	7.72	26.8	0.05
07/31/2024 08:00 PM	51.37	7.72	26.8	0.03
07/31/2024 10:00 PM	51.05	7.72	24.5	0.02

Date & Time	Suspended Solids (mg/L)	Total Inorganic Nitrogen (mg/L)	Total Phosphorus (mg/L)	Sodium Metabisulphite (mg/L)	Iron (mg/L)
1/07/2024	<2	0.42	0.01	<2	<0.10
2/07/2024	4	0.38	<0.01	<2	<0.10
3/07/2024	<2	0.39	<0.01	<2	<0.10
4/07/2024	<2	0.45	<0.01	<2	<0.10
5/07/2024	<2	0.46	<0.01	<2	<0.10
6/07/2024	<2	0.39	<0.01	<2	<0.10
7/07/2024	<2	0.42	<0.01	<2	<0.10
8/07/2024	<2	0.51	0.03	<2	<0.10
9/07/2024	<2	0.40	<0.01	<2	<0.10
10/07/2024	<2	0.50	0.05	<2	<0.10
11/07/2024	<2	0.49	<0.01	<2	<0.10
12/07/2024	2	0.55	<0.01	<2	<0.10
13/07/2024	<2	0.50	0.01	<2	<0.10
14/07/2024	<2	0.52	0.01	<2	<0.10
15/07/2024	<2	0.68	<0.01	<2	<0.10
16/07/2024	<2	0.64	<0.01	<2	<0.10
17/07/2024	<2	0.70	0.02	<2	<0.10
18/07/2024	<2	0.70	0.02	<2	<0.10
19/07/2024	<2	0.82	0.02	<2	<0.10
20/07/2024	<2	0.69	0.03	<2	<0.10
21/07/2024	<2	0.73	0.03	<2	<0.10
22/07/2024	<2	0.67	0.02	<2	<0.10
23/07/2024	<2	0.68	<0.01	<2	<0.10
24/07/2024	<2	0.52	0.02	<2	<0.10
25/07/2024	<2	0.61	<0.01	<2	<0.10
26/07/2024	<2	0.62	<0.01	<2	<0.10
27/07/2024	<2	0.52	<0.01	<2	<0.10
28/07/2024	<2	0.52	<0.01	<2	<0.10
29/07/2024	<2	0.37	<0.01	<2	<0.10
30/07/2024	<2	0.45	<0.01	<2	<0.10
31/07/2024	<2	0.4	<0.01	<2	<0.10



# Landfill Gas Monitoring - Field Measurement Recording Sheet

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

Serial No.	Monitoring Equipment	Last Calibration
254938	GMI-PS500	22/8/2023

Monitoring Location	Working trench/ Pit	Date (dd/mm/yyyy)	Time (hh:mm)	Weather Condition	Landfill Gas Parameters				Physical Parameters	Trench/ Pit Depth (m)	Measured by	
				Sunny/ Fine/ Overcast/ Drizzle/ Rain/ Storm/ Hazy	Methane (%LEL)	Oxygen (%)	Carbon Dioxide (%)	Balance Gas (%) (e.g. H2S)	Temp (°C) / Pressure mBar		Name	Signature
Road L-0+210	U-Channel	1/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	32.0 / 1005	<1	San Hei Tung	[Signature]
			13:30	Sunny	0	20.8	0.03	0	32.1 / 1005	<1	San Hei Tung	[Signature]
			15:30	Sunny	0	20.9	0.03	0	32.0 / 1005	<1	San Hei Tung	[Signature]
Road L-0+210	U-Channel	2/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	30.2 / 1007	<1	San Hei Tung	[Signature]
			13:30	Sunny	0	20.9	0.03	0	32.1 / 1007	<1	San Hei Tung	[Signature]
			15:30	Sunny	0	20.9	0.03	0	32.3 / 1007	<1	San Hei Tung	[Signature]
Road L-0+210	U-Channel	3/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	29.8 / 1011	<1	San Hei Tung	[Signature]
			13:30	Sunny	0	20.9	0.03	0	32.3 / 1011	<1	San Hei Tung	[Signature]
			15:30	Sunny	0	20.9	0.03	0	32.7 / 1012	<1	San Hei Tung	[Signature]
Road L-0+210	U-Channel	4/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	29.3 / 1012	<1	San Hei Tung	[Signature]
			13:30	Sunny	0	20.9	0.03	0	32.1 / 1012	<1	San Hei Tung	[Signature]
			15:30	Sunny	0	20.9	0.03	0	32.0 / 1011	<1	San Hei Tung	[Signature]
Road L-0+210	U-Channel	5/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	31.5 / 1009	<1	San Hei Tung	[Signature]
			13:30	Sunny	0	20.9	0.03	0	33.6 / 1008	<1	San Hei Tung	[Signature]
			15:30	Sunny	0	20.9	0.03	0	33.4 / 1008	<1	San Hei Tung	[Signature]
Road L-0+210	U-Channel	6/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	30.5 / 1008	<1	San Hei Tung	[Signature]
			13:30	Sunny	0	20.9	0.03	0	33.8 / 1008	<1	San Hei Tung	[Signature]
			15:30	Sunny	0	20.9	0.03	0	33.6 / 1008	<1	San Hei Tung	[Signature]
Road L-0+210	U-Channel	8/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	31.3 / 1008	<1	San Hei Tung	[Signature]
			13:30	Sunny	0	20.9	0.03	0	34.2 / 1008	<1	San Hei Tung	[Signature]
			15:30	Sunny	0	20.9	0.03	0	34.1 / 1008	<1	San Hei Tung	[Signature]
Road L-0+210	U-Channel	9/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	30.5 / 1009	<1	San Hei Tung	[Signature]
			13:30	Sunny	0	20.9	0.03	0	33.9 / 1008	<1	San Hei Tung	[Signature]
			15:30	Sunny	0	20.9	0.03	0	34.2 / 1008	<1	San Hei Tung	[Signature]






















Checked by : Yan Hin Fung Alan  
Date : 9-7-2024



# Landfill Gas Monitoring - Field Measurement Recording Sheet

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

Serial No.	Monitoring Equipment	Last Calibration
254938	GMI-PS500	22/8/2023

Monitoring Location	Working trench/ Pit	Date (dd/mm/yyyy)	Time (hh:mm)	Weather Condition	Landfill Gas Parameters				Physical Parameters	Trench/ Pit Depth (m)	Measured by	
				Sunny/ Fine/ Overcast/ Drizzle/ Rain/ Storm/ Hazy	Methane (%LEL)	Oxygen (%)	Carbon Dioxide (%)	Balance Gas (%) (e.g. H2S)	Temp (°C) / Pressure mBar		Name	Signature
Road L-0+210	U-Channel	10/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	29.8 / 1009	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	33.5 / 1009	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	32.9 / 1008	<1	San Hei Tung	
Road L-0+210	U-Channel	11/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	29.7 / 1009	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	31.8 / 1066	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	31.6 / 1066	<1	San Hei Tung	
Road L-0+210	U-Channel	12/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	28.9 / 1005	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	31.2 / 1004	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	31.0 / 1005	<1	San Hei Tung	
Road L-0+210	U-Channel	13/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	30.5 / 1005	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	33.7 / 1005	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	33.8 / 1005	<1	San Hei Tung	
Road L-0+210	U-Channel	15/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	29.6 / 1008	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	32.7 / 1008	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	32.8 / 1008	<1	San Hei Tung	
Road L-0+210	U-Channel	16/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	28.5 / 1008	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	29.7 / 1008	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	29.5 / 1009	<1	San Hei Tung	
Road L-0+210	U-Channel	17/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	29.3 / 1009	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	32.7 / 1009	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	32.6 / 1009	<1	San Hei Tung	
Road L-0+210	U-Channel	1 / 2024	08:30 (before work)						/	<1	San Hei Tung	
			13:30						/	<1	San Hei Tung	
			15:30						/	<1	San Hei Tung	

























Checked by : Yan Hui Fung ASOW  
Date : 17-7-2024



# Landfill Gas Monitoring - Field Measurement Recording Sheet

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

Serial No.	Monitoring Equipment	Last Calibration
254938	GMI-PS500	22/8/2023

Monitoring Location	Working trench/ Pit	Date (dd/mm/yyyy)	Time (hh:mm)	Weather Condition	Landfill Gas Parameters				Physical Parameters	Trench/ Pit Depth (m)	Measured by	
				Sunny/ Fine/ Overcast/ Drizzle/ Rain/ Storm/ Hazy	Methane (%LEL)	Oxygen (%)	Carbon Dioxide (%)	Balance Gas (%) (e.g. H2S)	Temp (°C) / Pressure mBar		Name	Signature
Road L-0+210	U-Channel	18/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	27.3 / 1009	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	27.8 / 1009	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	28.5 / 1008	<1	San Hei Tung	
Road L-0+210	U-Channel	19/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	27.6 / 1007	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	29.3 / 1007	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	28.9 / 1007	<1	San Hei Tung	
Road L-0+210	U-Channel	20/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	31.3 / 1007	<1	San Hei Tung	
			13:30	Sunny	0	20.9	0.03	0	33.2 / 1007	<1	San Hei Tung	
			15:30	Sunny	0	20.9	0.03	0	33.1 / 1007	<1	San Hei Tung	
Road L-0+210	U-Channel	22/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	31.4 / 1005	<1	San Hei Tung	
			13:30	Sunny	0	20.9	0.03	0	33.4 / 1005	<1	San Hei Tung	
			15:30	Sunny	0	20.9	0.03	0	33.0 / 1005	<1	San Hei Tung	
Road L-0+210	U-Channel	23/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	29.3 / 1002	<1	San Hei Tung	
			13:30	Sunny	0	20.9	0.03	0	33.1 / 1001	<1	San Hei Tung	
			15:30	Sunny	0	20.9	0.03	0	32.9 / 1001	<1	San Hei Tung	
Road L-0+210	U-Channel	24/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	29.7 / 997	<1	San Hei Tung	
			13:30	Sunny	0	20.9	0.03	0	32.5 / 996	<1	San Hei Tung	
			15:30	Sunny	0	20.9	0.03	0	32.2 / 996	<1	San Hei Tung	
Road L-0+210	U-Channel	25/7/2024	08:30 (before work)	Sunny	0	20.9	0.03	0	30.5 / 992	<1	San Hei Tung	
			13:30	Sunny	0	20.9	0.03	0	32.9 / 992	<1	San Hei Tung	
			15:30	Sunny	0	20.9	0.03	0	32.8 / 992	<1	San Hei Tung	
Road L-0+210	U-Channel	26/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	29.1 / 995	<1	San Hei Tung	
			13:30	Rain	0	20.9	0.03	0	30.3 / 995	<1	San Hei Tung	
			15:30	Rain	0	20.9	0.03	0	30.2 / 995	<1	San Hei Tung	

Checked by : Yau Hui Fung  
Date : 26-7-2024

# Landfill Gas Monitoring - Field Measurement Recording Sheet

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

Serial No.	Monitoring Equipment	Last Calibration
254938	GMI-PS500	22/8/2023

Monitoring Location	Working trench/ Pit	Date (dd/mm/yyyy)	Time (hh:mm)	Weather Condition	Landfill Gas Parameters				Physical Parameters	Trench/ Pit Depth (m)	Measured by	
				Sunny/ Fine/ Overcast/ Drizzle/ Rain/ Storm/ Hazy	Methane (%LEL)	Oxygen (%)	Carbon Dioxide (%)	Balance Gas (%) (e.g. H2S)	Temp (°C) / Pressure mBar		Name	Signature
Road L-0+210	U-Channel	27/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	28.3 / 1003	<1	San Hei Tung	8281
			13:30	Rain	0	20.9	0.03	0	29.8 / 1002	<1	San Hei Tung	8281
			15:30	Rain	0	20.9	0.03	0	29.9 / 1003	<1	San Hei Tung	8281
Road L-0+210	U-Channel	29/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	26.8 / 1005	<1	San Hei Tung	8281
			13:30	Rain	0	20.9	0.03	0	28.2 / 1006	<1	San Hei Tung	8281
			15:30	Rain	0	20.9	0.03	0	28.1 / 1006	<1	San Hei Tung	8281
Road L-0+210	U-Channel	30/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	28.3 / 1006	<1	San Hei Tung	8281
			13:30	Rain	0	20.9	0.03	0	30.1 / 1006	<1	San Hei Tung	8281
			15:30	Rain	0	20.9	0.03	0	30.0 / 1006	<1	San Hei Tung	8281
Road L-0+210	U-Channel	31/7/2024	08:30 (before work)	Rain	0	20.9	0.03	0	27.9 / 1006	<1	San Hei Tung	8281
			13:30	Rain	0	20.9	0.03	0	29.9 / 1006	<1	San Hei Tung	8281
			15:30	Rain	0	20.9	0.03	0	30.0 / 1006	<1	San Hei Tung	8281
Road L-0+210	U-Channel	/ /2024	08:30 (before work)						/	<1	San Hei Tung	
			13:30						/	<1	San Hei Tung	
			15:30						/	<1	San Hei Tung	
Road L-0+210	U-Channel	/ /2024	08:30 (before work)						/	<1	San Hei Tung	
			13:30						/	<1	San Hei Tung	
			15:30						/	<1	San Hei Tung	
Road L-0+210	U-Channel	/ /2024	08:30 (before work)						/	<1	San Hei Tung	
			13:30						/	<1	San Hei Tung	
			15:30						/	<1	San Hei Tung	
Road L-0+210	U-Channel	/ /2024	08:30 (before work)						/	<1	San Hei Tung	
			13:30						/	<1	San Hei Tung	
			15:30						/	<1	San Hei Tung	

Checked by : Yan Hin Fung ALOW  
Date : 31-7-2024



# 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

W

Monthly Summary Waste Flow Table for 2024 (year)

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	49.190	0.000	0.000	0.000	49.190	0.000	0.000	0.000	0.002	0.000	60.780
Sub-total	27818.971	0.000	0.000	26550.751	1268.220	0.000	0.000	0.000	0.002	0.000	368.970
Jul	60378.440	0.000	0.000	0.000	60378.440	0.000	0.000	0.000	0.000	0.000	42.820
Aug											
Sep											
Oct											
Nov											
Dec											
Total	88197.411	0.000	0.000	26550.751	61646.660	0.000	0.000	0.000	0.002	0.000	411.790

- 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 on 13 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 operational 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 till the end of the first year of the plant 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 pre-operation phase monitoring surveys should be reviewed with reference to findings of the baseline survey.
- 2.4 If, during the pre-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 Construction Phase Coral Monitoring**

<b>Parameter</b>	<b>Action Level Definition</b>	<b>Limit Level Definition</b>
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 Construction Phase Monitoring**

<b>Event</b>	<b>Action</b>			
	<b>ET Leader</b>	<b>IEC</b>	<b>SOR</b>	<b>Contractor</b>
Action Level Exceedance	<ol style="list-style-type: none"> <li>1. Check monitoring data</li> <li>2. Inform the IEC, SOR and Contractor of the findings;</li> <li>3. Increase the monitoring to at least once a month to confirm findings;</li> <li>4. Propose mitigation measures for consideration</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss monitoring with the ET and the Contractor;</li> <li>2. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise the SOR accordingly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET;</li> <li>2. Make agreement on the measures to be implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the SOR and confirm notification of the non-compliance in writing;</li> <li>2. Discuss with the ET and the IEC and propose measures to the IEC and the SOR;</li> <li>3. Implement the agreed measures.</li> </ol>

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

### 3. Result

3.1 The July 2024 operation phase monitoring were performed on 18<sup>th</sup> July 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 July 2024 Construction Phase Monitoring**

Date	Condition	Average Underwater Visibility
18 <sup>th</sup> July 2024	<ul style="list-style-type: none"> <li>- Southwest force 4 to 5,</li> <li>- Cloudy</li> </ul>	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 July 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 July 2024 Coral Monitoring Survey**

Tag #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline	18-Jul	Baseline	18-Jul	Baseline	18-Jul
1	<i>Favites pentagona</i>	66	Good	0	0	0	0	0	0
2	<i>Porites lutea</i>	58	Good	0	0	0	0	0	0
3	<i>Plesiastrea versipora</i>	31	Good	0	0	0	0	0	0
4	<i>Platygyra carnosus</i>	30	Good	0	0	0	0	0	0
5	<i>Acropora solitaryensis</i>	32	Good	0	0	0	0	0	0
6	<i>Plesiastrea versipora</i>	27	Good	0	0	0	0	0	0
7	<i>Porites lutea</i>	39	Good	0	0	0	0	0	0
8	<i>Favites pentagona</i>	20	Good	0	0	0	0	0	0
9	<i>Platygyra carnosus</i>	26	Good	0	0	0	0	0	0
10	<i>Acropora solitaryensis</i>	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 July 2024 Coral Monitoring Survey**

Tag #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline	18-Jul	Baseline	18-Jul	Baseline	18-Jul
1	<i>Porites lutea</i>	21	Good	0	0	0	0	0	0
2	<i>Favites abdita</i>	43	Good	0	0	0	0	0	0
3	<i>Duncanopsammia peltata</i>	45	Good	0	0	0	0	0	0
4	<i>Dipsastraea veroni</i>	20	Good	0	0	0	0	0	0
5	<i>Favites pentagona</i>	19	Good	0	0	0	0	0	0
6	<i>Plesiastrea versipora</i>	21	Good	0	0	0	0	0	0
7	<i>Dipsastraea rotumana</i>	21	Good	0	0	0	0	0	0
8	<i>Dipsastraea speciosa</i>	20	Good	0	0	0	0	0	0
9	<i>Porites lutea</i>	37	Good	0	0	0	0	0	0
10	<i>Porites lutea</i>	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 July 2024 Coral Monitoring Survey**

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

19	<i>Duncanopsammia peltata</i>	29	Good	0	0	0	0	0	0
20	<i>Platygyra carnosus</i>	23	Good	0	0	0	0	0	0

**#newly tagged coral colony**

#### **4. Discussion and Conclusion**

- 4.1 The July 2024 coral monitoring survey were carried out in the indirect impact area (C2 and C3) and control site (C8) on 18<sup>th</sup> July 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 Construction Phase

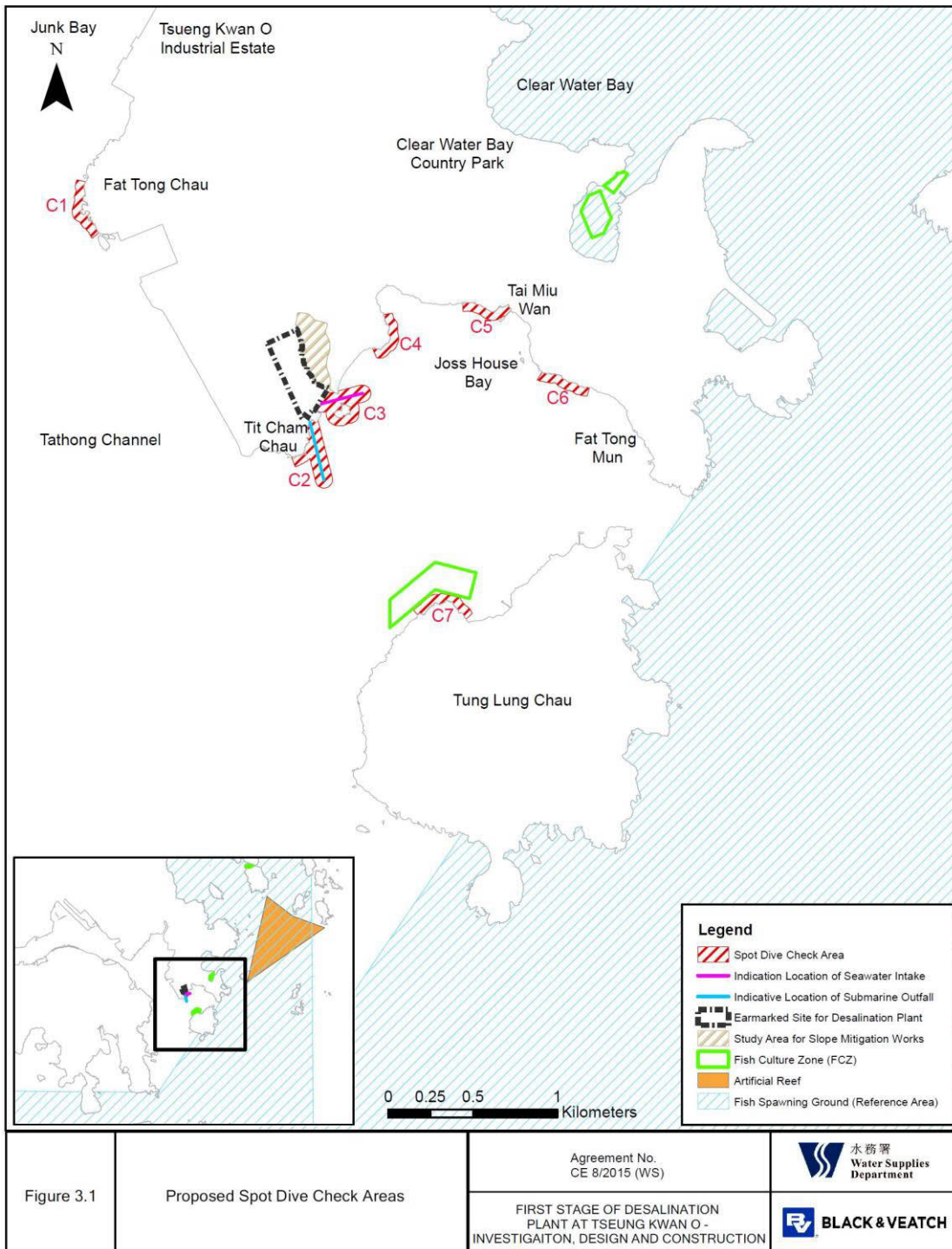






Figure 2 Proposed Control Site (C8) during Construction Phase











**APPENDIX A**  
**TAGGED CORAL PHOTO**

**Photo Plate A Tagged Corals at Control Site C8**





Tag #	18 <sup>th</sup> July 2024
#1	
#2	
#3	
#4	

#5			
#6			
#7			
#8			






#9			
#10			



**Photo Plate B Tagged Corals at Indirect Impact Site C2**





Tag #	18 <sup>th</sup> July 2024		
#1			
#2			
#3			
#4			








#5			
#6			
#7			
#8			
#9			

#10			
-----	--	--	--

**Photo Plate C Tagged Corals at Indirect Impact Site C3**

Tag #	18 <sup>th</sup> July 2024		
#11			
#12			
#13			
#14			

#15			
#16			
#17			
#18			
#19			

#20			
-----	--	--	--



THE END

# Appendix I

## Site Inspection Proforma

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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 2 July 2024 Inspected by: ET: Toby Wan SO: Derek Lai WSD: \_\_\_\_\_  
Contractor: Tiffany Tsang IEC: \_\_\_\_\_

Inspection Time: 14:30

<b>Weather</b>							
<b>Condition</b>	<input checked="" type="checkbox"/> Sunny	<input type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
<b>Temperature</b>	<input type="text" value="31"/> °C		<b>Humidity</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low	
<b>Wind</b>	<input checked="" type="checkbox"/> Calm	<input type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong			

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
<b>0.00</b>		<b>General</b>				
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0.02		Is ET Leader's log-book kept readily available for inspections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>1.00</b>		<b>Construction Dust</b>				
S4.8.1		Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.01						
1.02	S4.8.1	Are screenings, enclosures, water spraying, or vacuum cleaning devices provided to dusty construction works for dust suppression?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.03	S4.8.1	Are fumes or smoke emitting plants or construction activities shielded by a screen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	S4.8.1	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.05	S4.8.1	Is wheel-washing provided to all vehicles leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.06	S4.8.1	Are road section near the site exit free from dusty material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.07	S4.8.1	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.08	S4.8.1	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.09	S4.8.1	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.10	S4.8.1	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.11	S4.8.1	Is exposed earth properly treated within six months after the last construction activity on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	S4.8.1	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.13	S4.8.1	Are vehicles travelling at speed not exceeding 15km/hr within the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.14	S4.8.1	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
		and 3 sides?				
1.15	S4.8.1	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	S4.8.1	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	S4.8.1	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>2.00</b>		<b>Construction Noise (Airborne)</b>				
2.01	S5.7	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	S5.7	Are the PME's operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.03	S5.7	Are plants throttled down or turned off when not in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	S5.7	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	S5.7	Are moveable barriers provided to screen NSRs from plant or noisy operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	S5.7	Are silencers, mufflers and enclosures provided to plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.07	S5.7	Are the hoods, cover panels and inspection hatches of PME's closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.08	S5.7	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	S5.7	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	S5.7	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	S5.7	Are valid noise emission label(s) affixed to all air compressors operating on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.12	S5.7	Are all construction noise permit(s) applied for percussive piling work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	S5.7	Are construction noise permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S5.7	Are valid construction noise permit(s) displayed at all vehicular exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Water Quality</b>				
3.01	S6.9	Is effluent discharge license obtained for wastewater discharge from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S6.9	Is effluent discharged according to the effluent discharge license?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S6.9	Is wastewater discharge from site properly treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S6.9	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S6.9	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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		to remove sand/silt particles from runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S6.9	Is surface runoff diverted to sedimentation facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.07	S6.9	Is the drainage system properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S6.9	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	S6.9	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.10	S6.9	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.11	S6.9	Are exposed slope surface properly protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.12	S6.9	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.13	S6.9	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.14	S6.9	Is runoff from wheel-washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.15	S6.9	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.16	S6.9	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.17	S6.9	Are the oil interceptors/ grease traps properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.18	S6.9	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.19	S6.9	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.20	S6.9	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.21	S6.9	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	S6.9	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.23	S6.9	Is concrete washing water properly collected and treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.24	S6.9	Is suitable type of silt curtains deployed during dredging to reduce the elevation of suspended solids to nearby sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.25	S6.9	Is closed grab dredger used to reduce the potential leakage of sediments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.26	S6.9	Is closed grab dredger of 3 to 6 m <sup>3</sup> used for dredging at seawater intake?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.27	S6.9	Is specific work staff assigned the responsibility for monitoring the number of grab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



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		dredged per hour? Is number of cycle limited to 20-21 grab per hour for 3m <sup>3</sup> closed grab, 10-11 grab per hour for 6m <sup>3</sup> closed grab?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.28	S6.9	Is the grab operated in slow and controlled manner such that the impact to seabed by the grab when being lowered could be minimized? Is the operator ensured the grab be properly closed before lifting the grab?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.29	S6.9	Is the maximum allowed dredging rate at the seawater intake limited to 750 m <sup>3</sup> /day while the maximum allowed dredging rate at the submarine outfall is 3,500 m <sup>3</sup> /day?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.30	S6.9	Is dredged marine sediment disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.31	S6.9	Are disposal vessels fitted with tight bottom seals in order to prevent leakage of material during transport?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.32	S6.9	Are barges filled to a level which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.33	S6.9	Are excess materials cleaned from decks and exposed fittings before the vessel is moved from the dredging area after dredging?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.34	S6.9	Are the contractor(s) confirmed that the works cause no visible foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the dredging site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.35	S6.9	When the dredged material has been unloaded at the disposal areas, is any material accumulated on the deck or other exposed parts of the vessel removed and placed in the hold or a hopper?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.36	S6.9	Is dredger maintained adequate clearance between vessels and the seabed at all states of the tide and reduce operations speed to ensure that excessive turbidity is not generated by turbulence from vessel movement or propeller wash?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.37	S6.9	Is the contractor shall regularly inspect the silt curtains and check that they are moored and marked to avoid danger to marine traffic? Is regular inspection on the integrity of the silt curtain carried out by the contractor and any damage to the silt curtain shall be repaired by the contractor promptly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.38	S6.9	Are all vessels have a clean ballast system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.39	S6.9	Are all vessels well maintained and inspected before use to limit any potential discharges to the marine environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.40	S6.9	Is any discharge of sewage/grey wastewater? Is wastewater from potentially contaminated area on working vessels should be minimized and collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.41	S6.9	Is any soil waste disposed overboard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Waste Management</b>				
4.01	S8.5	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S8.5	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	S8.5	Is the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	S8.5	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.05	S8.5	Are trip tickets for chemical waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S8.5	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.07	S8.5	Are all containers for chemical waste properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.08	S8.5	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.09	S8.5	Are incompatible chemical wastes stored in different areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.10	S8.5	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.11	S8.5	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.12	S8.5	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.13	S8.5	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.14	S8.5	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.15	S8.5	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.16	S8.5	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.17	S8.5	Are C&D wastes sorted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.18	S8.5	Are C&D waste disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.19	S8.5	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.20	S8.5	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.21	S8.5	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.22	S8.5	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>	<b>S11.10</b>	<b>Landscape and Visual</b>				
5.01	& 11.11	Are Is site hoarding provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.02	S11.10 &	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
	11.11					
5.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.06	S11.10 & 11.11	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.00	S9.7	<b>Ecology</b>				
6.01		Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.02	S9.7	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03	S9.7	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.04	S9.7	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.05	S9.7	For slope mitigation works within the Clear Water Bay Country Park, are tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.06	S9.7	Are pruning of tree canopies along the alignment of the flexible barriers limited to a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.07	S9.7	Is the alignment of flexible barriers optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable? Are the alignment of flexible barriers positioned at minimum 1.5 m in a radius away from these individuals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.08	S9.7	Is temporary fencing installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction? Is a sign identifying the site attached to the fence and flagging tape shall be attached to the individuals to visualize their locations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.09	S9.7	Is a specification for fencing and demarcating individuals of Marsdenia lachnostoma (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers prepared to protect the species?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.10	S9.7	Is any induction training provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.11	S9.7	Is the resident site supervisory staff closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.12	S9.7	Are fences erected along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.13	S9.7	Is regular check of the work site boundaries performed to ensure that they are not				

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		breached and that damage does not occur to surrounding areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.14	S9.7	Is any damage and disturbance avoided, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.15	S9.7	Are temporarily affected areas reinstated, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.16	S9.7	Are affected habitats within the Clear Water Bay Country Bay reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>7.00</b>		<b>Landfill Gas Hazard</b>				
7.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.03	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.04	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.05	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.07	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.09	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.10	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.11	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>8.00</b>		<b>Overall</b>				
8.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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 : 2 July 2024

No major observation was found during site inspection.

**Signatures:**

ET  
Representative

(Name: Toby Wan)

Contractor's  
Representative

(Name: Philip Tong)

Supervising Officer's  
Representative

(Name: Raymond  
Lau)

IEC's  
Representative

(Name: )

WSD's  
Representative

(Name: )



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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 9 July 2024 Inspected by: ET: Toby Wan SO: Derek Lai WSD: \_\_\_\_\_  
Contractor: Tiffany Tsang IEC: \_\_\_\_\_

Inspection Time: 14:30

<b>Weather</b>							
<b>Condition</b>	<input checked="" type="checkbox"/> Sunny	<input type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
<b>Temperature</b>	<input type="text" value="30"/> °C		<b>Humidity</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low	
<b>Wind</b>	<input checked="" type="checkbox"/> Calm	<input type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong			

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
<b>0.00</b>		<b>General</b>				
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0.02		Is ET Leader's log-book kept readily available for inspections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>1.00</b>		<b>Construction Dust</b>				
S4.8.1		Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.01						
1.02	S4.8.1	Are screenings, enclosures, water spraying, or vacuum cleaning devices provided to dusty construction works for dust suppression?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.03	S4.8.1	Are fumes or smoke emitting plants or construction activities shielded by a screen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	S4.8.1	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.05	S4.8.1	Is wheel-washing provided to all vehicles leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.06	S4.8.1	Are road section near the site exit free from dusty material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.07	S4.8.1	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.08	S4.8.1	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.09	S4.8.1	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.10	S4.8.1	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.11	S4.8.1	Is exposed earth properly treated within six months after the last construction activity on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	S4.8.1	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.13	S4.8.1	Are vehicles travelling at speed not exceeding 15km/hr within the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.14	S4.8.1	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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
		and 3 sides?				
1.15	S4.8.1	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	S4.8.1	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	S4.8.1	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>2.00</b>		<b>Construction Noise (Airborne)</b>				
2.01	S5.7	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	S5.7	Are the PME's operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.03	S5.7	Are plants throttled down or turned off when not in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	S5.7	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	S5.7	Are moveable barriers provided to screen NSRs from plant or noisy operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	S5.7	Are silencers, mufflers and enclosures provided to plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.07	S5.7	Are the hoods, cover panels and inspection hatches of PME's closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.08	S5.7	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	S5.7	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	S5.7	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	S5.7	Are valid noise emission label(s) affixed to all air compressors operating on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.12	S5.7	Are all construction noise permit(s) applied for percussive piling work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	S5.7	Are construction noise permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S5.7	Are valid construction noise permit(s) displayed at all vehicular exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Water Quality</b>				
3.01	S6.9	Is effluent discharge license obtained for wastewater discharge from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S6.9	Is effluent discharged according to the effluent discharge license?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S6.9	Is wastewater discharge from site properly treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S6.9	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S6.9	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**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
		to remove sand/silt particles from runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S6.9	Is surface runoff diverted to sedimentation facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.07	S6.9	Is the drainage system properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S6.9	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	S6.9	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.10	S6.9	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.11	S6.9	Are exposed slope surface properly protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.12	S6.9	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.13	S6.9	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.14	S6.9	Is runoff from wheel-washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.15	S6.9	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.16	S6.9	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.17	S6.9	Are the oil interceptors/ grease traps properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.18	S6.9	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.19	S6.9	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.20	S6.9	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.21	S6.9	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	S6.9	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.23	S6.9	Is concrete washing water properly collected and treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.24	S6.9	Is suitable type of silt curtains deployed during dredging to reduce the elevation of suspended solids to nearby sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.25	S6.9	Is closed grab dredger used to reduce the potential leakage of sediments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.26	S6.9	Is closed grab dredger of 3 to 6 m <sup>3</sup> used for dredging at seawater intake?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.27	S6.9	Is specific work staff assigned the responsibility for monitoring the number of grab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**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
		dredged per hour? Is number of cycle limited to 20-21 grab per hour for 3m <sup>3</sup> closed grab, 10-11 grab per hour for 6m <sup>3</sup> closed grab?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.28	S6.9	Is the grab operated in slow and controlled manner such that the impact to seabed by the grab when being lowered could be minimized? Is the operator ensured the grab be properly closed before lifting the grab?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.29	S6.9	Is the maximum allowed dredging rate at the seawater intake limited to 750 m <sup>3</sup> /day while the maximum allowed dredging rate at the submarine outfall is 3,500 m <sup>3</sup> /day?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.30	S6.9	Is dredged marine sediment disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.31	S6.9	Are disposal vessels fitted with tight bottom seals in order to prevent leakage of material during transport?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.32	S6.9	Are barges filled to a level which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.33	S6.9	Are excess materials cleaned from decks and exposed fittings before the vessel is moved from the dredging area after dredging?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.34	S6.9	Are the contractor(s) confirmed that the works cause no visible foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the dredging site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.35	S6.9	When the dredged material has been unloaded at the disposal areas, is any material accumulated on the deck or other exposed parts of the vessel removed and placed in the hold or a hopper?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.36	S6.9	Is dredger maintained adequate clearance between vessels and the seabed at all states of the tide and reduce operations speed to ensure that excessive turbidity is not generated by turbulence from vessel movement or propeller wash?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.37	S6.9	Is the contractor shall regularly inspect the silt curtains and check that they are moored and marked to avoid danger to marine traffic? Is regular inspection on the integrity of the silt curtain carried out by the contractor and any damage to the silt curtain shall be repaired by the contractor promptly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.38	S6.9	Are all vessels have a clean ballast system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.39	S6.9	Are all vessels well maintained and inspected before use to limit any potential discharges to the marine environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.40	S6.9	Is any discharge of sewage/grey wastewater? Is wastewater from potentially contaminated area on working vessels should be minimized and collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.41	S6.9	Is any soil waste disposed overboard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Waste Management</b>				
4.01	S8.5	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S8.5	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	S8.5	Is the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	S8.5	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.05	S8.5	Are trip tickets for chemical waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S8.5	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.07	S8.5	Are all containers for chemical waste properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.08	S8.5	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.09	S8.5	Are incompatible chemical wastes stored in different areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.10	S8.5	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.11	S8.5	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.12	S8.5	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.13	S8.5	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.14	S8.5	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.15	S8.5	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.16	S8.5	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.17	S8.5	Are C&D wastes sorted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.18	S8.5	Are C&D waste disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.19	S8.5	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.20	S8.5	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.21	S8.5	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.22	S8.5	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>	<b>S11.10</b>	<b>Landscape and Visual</b>				
5.01	& 11.11	Are Is site hoarding provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.02	S11.10 &	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
	11.11					
5.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.06	S11.10 & 11.11	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.00	S9.7	<b>Ecology</b>				
6.01		Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.02	S9.7	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03	S9.7	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.04	S9.7	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.05	S9.7	For slope mitigation works within the Clear Water Bay Country Park, are tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.06	S9.7	Are pruning of tree canopies along the alignment of the flexible barriers limited to a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.07	S9.7	Is the alignment of flexible barriers optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable? Are the alignment of flexible barriers positioned at minimum 1.5 m in a radius away from these individuals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.08	S9.7	Is temporary fencing installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction? Is a sign identifying the site attached to the fence and flagging tape shall be attached to the individuals to visualize their locations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.09	S9.7	Is a specification for fencing and demarcating individuals of Marsdenia laevis (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers prepared to protect the species?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.10	S9.7	Is any induction training provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.11	S9.7	Is the resident site supervisory staff closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.12	S9.7	Are fences erected along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.13	S9.7	Is regular check of the work site boundaries performed to ensure that they are not				

**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
		breached and that damage does not occur to surrounding areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.14	S9.7	Is any damage and disturbance avoided, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.15	S9.7	Are temporarily affected areas reinstated, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.16	S9.7	Are affected habitats within the Clear Water Bay Country Bay reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>7.00</b>		<b>Landfill Gas Hazard</b>				
7.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.03	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.04	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.05	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.07	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.09	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.10	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.11	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>8.00</b>		<b>Overall</b>				
8.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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: 8 July 2024

No major observation was found during site inspection.

**Signatures:**

ET  
Representative

(Name: Toby Wan )

Contractor's  
Representative

(Name: Andy Tsang)

Supervising Officer's  
Representative

(Name: Peter Lee)

IEC's  
Representative

(Name: )

WSD's  
Representative

(Name: )

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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 16 July 2024 Inspected by: ET: Toby Wan SO: Alan Lung WSD: \_\_\_\_\_  
Contractor: Tiffany Tsang IEC: \_\_\_\_\_

Inspection Time: 14:30

<b>Weather</b>							
<b>Condition</b>	<input checked="" type="checkbox"/> Sunny	<input type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
<b>Temperature</b>	<input type="text" value="29"/> °C		<b>Humidity</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low	
<b>Wind</b>	<input checked="" type="checkbox"/> Calm	<input type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong			

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
<b>0.00</b>		<b>General</b>				
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0.02		Is ET Leader's log-book kept readily available for inspections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>1.00</b>		<b>Construction Dust</b>				
S4.8.1		Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.01						
1.02	S4.8.1	Are screenings, enclosures, water spraying, or vacuum cleaning devices provided to dusty construction works for dust suppression?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.03	S4.8.1	Are fumes or smoke emitting plants or construction activities shielded by a screen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	S4.8.1	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.05	S4.8.1	Is wheel-washing provided to all vehicles leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.06	S4.8.1	Are road section near the site exit free from dusty material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.07	S4.8.1	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.08	S4.8.1	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.09	S4.8.1	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.10	S4.8.1	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.11	S4.8.1	Is exposed earth properly treated within six months after the last construction activity on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	S4.8.1	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.13	S4.8.1	Are vehicles travelling at speed not exceeding 15km/hr within the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.14	S4.8.1	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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
		and 3 sides?				
1.15	S4.8.1	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	S4.8.1	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	S4.8.1	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>2.00</b>		<b>Construction Noise (Airborne)</b>				
2.01	S5.7	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	S5.7	Are the PME's operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.03	S5.7	Are plants throttled down or turned off when not in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	S5.7	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	S5.7	Are moveable barriers provided to screen NSRs from plant or noisy operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	S5.7	Are silencers, mufflers and enclosures provided to plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.07	S5.7	Are the hoods, cover panels and inspection hatches of PME's closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.08	S5.7	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	S5.7	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	S5.7	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	S5.7	Are valid noise emission label(s) affixed to all air compressors operating on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.12	S5.7	Are all construction noise permit(s) applied for percussive piling work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	S5.7	Are construction noise permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S5.7	Are valid construction noise permit(s) displayed at all vehicular exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Water Quality</b>				
3.01	S6.9	Is effluent discharge license obtained for wastewater discharge from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S6.9	Is effluent discharged according to the effluent discharge license?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S6.9	Is wastewater discharge from site properly treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S6.9	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S6.9	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided				



**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
		to remove sand/silt particles from runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S6.9	Is surface runoff diverted to sedimentation facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.07	S6.9	Is the drainage system properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S6.9	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	S6.9	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.10	S6.9	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.11	S6.9	Are exposed slope surface properly protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.12	S6.9	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.13	S6.9	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.14	S6.9	Is runoff from wheel-washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.15	S6.9	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.16	S6.9	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.17	S6.9	Are the oil interceptors/ grease traps properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.18	S6.9	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.19	S6.9	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.20	S6.9	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.21	S6.9	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	S6.9	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.23	S6.9	Is concrete washing water properly collected and treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.24	S6.9	Is suitable type of silt curtains deployed during dredging to reduce the elevation of suspended solids to nearby sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.25	S6.9	Is closed grab dredger used to reduce the potential leakage of sediments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.26	S6.9	Is closed grab dredger of 3 to 6 m <sup>3</sup> used for dredging at seawater intake?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.27	S6.9	Is specific work staff assigned the responsibility for monitoring the number of grab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**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
		dredged per hour? Is number of cycle limited to 20-21 grab per hour for 3m <sup>3</sup> closed grab, 10-11 grab per hour for 6m <sup>3</sup> closed grab?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.28	S6.9	Is the grab operated in slow and controlled manner such that the impact to seabed by the grab when being lowered could be minimized? Is the operator ensured the grab be properly closed before lifting the grab?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.29	S6.9	Is the maximum allowed dredging rate at the seawater intake limited to 750 m <sup>3</sup> /day while the maximum allowed dredging rate at the submarine outfall is 3,500 m <sup>3</sup> /day?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.30	S6.9	Is dredged marine sediment disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.31	S6.9	Are disposal vessels fitted with tight bottom seals in order to prevent leakage of material during transport?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.32	S6.9	Are barges filled to a level which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.33	S6.9	Are excess materials cleaned from decks and exposed fittings before the vessel is moved from the dredging area after dredging?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.34	S6.9	Are the contractor(s) confirmed that the works cause no visible foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the dredging site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.35	S6.9	When the dredged material has been unloaded at the disposal areas, is any material accumulated on the deck or other exposed parts of the vessel removed and placed in the hold or a hopper?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.36	S6.9	Is dredger maintained adequate clearance between vessels and the seabed at all states of the tide and reduce operations speed to ensure that excessive turbidity is not generated by turbulence from vessel movement or propeller wash?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.37	S6.9	Is the contractor shall regularly inspect the silt curtains and check that they are moored and marked to avoid danger to marine traffic? Is regular inspection on the integrity of the silt curtain carried out by the contractor and any damage to the silt curtain shall be repaired by the contractor promptly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.38	S6.9	Are all vessels have a clean ballast system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.39	S6.9	Are all vessels well maintained and inspected before use to limit any potential discharges to the marine environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.40	S6.9	Is any discharge of sewage/grey wastewater? Is wastewater from potentially contaminated area on working vessels should be minimized and collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.41	S6.9	Is any soil waste disposed overboard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Waste Management</b>				
4.01	S8.5	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S8.5	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	S8.5	Is the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	S8.5	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.05	S8.5	Are trip tickets for chemical waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S8.5	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.07	S8.5	Are all containers for chemical waste properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.08	S8.5	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.09	S8.5	Are incompatible chemical wastes stored in different areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.10	S8.5	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.11	S8.5	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.12	S8.5	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.13	S8.5	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.14	S8.5	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.15	S8.5	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.16	S8.5	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.17	S8.5	Are C&D wastes sorted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.18	S8.5	Are C&D waste disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.19	S8.5	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.20	S8.5	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.21	S8.5	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.22	S8.5	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>	<b>S11.10</b>	<b>Landscape and Visual</b>				
5.01	& 11.11	Are Is site hoarding provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.02	S11.10 &	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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
	11.11					
5.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.06	S11.10 & 11.11	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.00	S9.7	<b>Ecology</b>				
6.01		Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.02	S9.7	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03	S9.7	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.04	S9.7	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.05	S9.7	For slope mitigation works within the Clear Water Bay Country Park, are tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.06	S9.7	Are pruning of tree canopies along the alignment of the flexible barriers limited to a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.07	S9.7	Is the alignment of flexible barriers optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable? Are the alignment of flexible barriers positioned at minimum 1.5 m in a radius away from these individuals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.08	S9.7	Is temporary fencing installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction? Is a sign identifying the site attached to the fence and flagging tape shall be attached to the individuals to visualize their locations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.09	S9.7	Is a specification for fencing and demarcating individuals of Marsdenia lauchnostoma (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers prepared to protect the species?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.10	S9.7	Is any induction training provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.11	S9.7	Is the resident site supervisory staff closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.12	S9.7	Are fences erected along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.13	S9.7	Is regular check of the work site boundaries performed to ensure that they are not				

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
		breached and that damage does not occur to surrounding areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.14	S9.7	Is any damage and disturbance avoided, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.15	S9.7	Are temporarily affected areas reinstated, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.16	S9.7	Are affected habitats within the Clear Water Bay Country Bay reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>7.00</b>		<b>Landfill Gas Hazard</b>				
7.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.03	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.04	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.05	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.07	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.09	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.10	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.11	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>8.00</b>		<b>Overall</b>				
8.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



**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: 16 July 2024

No major observation was found during site inspection.

**Signatures:**

ET  
Representative

(Name: Toby Wan )

Contractor's  
Representative

(Name: Tony Tang )

Supervising Officer's  
Representative

(Name: Lucy Wai Lam )

IEC's  
Representative

(Name: )

WSD's  
Representative

(Name: )

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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 23 July 2024 Inspected by: ET: Toby Wan SO: Derek Lai WSD: \_\_\_\_\_  
Contractor: Tiffany Tsang IEC: \_\_\_\_\_

Inspection Time: 14:30

<b>Weather</b>							
<b>Condition</b>	<input checked="" type="checkbox"/> Sunny	<input type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
<b>Temperature</b>	<input type="text" value="31"/> °C	<b>Humidity</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low		
<b>Wind</b>	<input checked="" type="checkbox"/> Calm	<input type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong			

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
<b>0.00</b>		<b>General</b>				
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0.02		Is ET Leader's log-book kept readily available for inspections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>1.00</b>		<b>Construction Dust</b>				
S4.8.1		Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.01						
1.02	S4.8.1	Are screenings, enclosures, water spraying, or vacuum cleaning devices provided to dusty construction works for dust suppression?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.03	S4.8.1	Are fumes or smoke emitting plants or construction activities shielded by a screen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	S4.8.1	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.05	S4.8.1	Is wheel-washing provided to all vehicles leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.06	S4.8.1	Are road section near the site exit free from dusty material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.07	S4.8.1	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.08	S4.8.1	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.09	S4.8.1	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.10	S4.8.1	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.11	S4.8.1	Is exposed earth properly treated within six months after the last construction activity on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	S4.8.1	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.13	S4.8.1	Are vehicles travelling at speed not exceeding 15km/hr within the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.14	S4.8.1	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
		and 3 sides?				
1.15	S4.8.1	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	S4.8.1	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	S4.8.1	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>2.00</b>		<b>Construction Noise (Airborne)</b>				
2.01	S5.7	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	S5.7	Are the PME's operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.03	S5.7	Are plants throttled down or turned off when not in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	S5.7	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	S5.7	Are moveable barriers provided to screen NSRs from plant or noisy operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	S5.7	Are silencers, mufflers and enclosures provided to plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.07	S5.7	Are the hoods, cover panels and inspection hatches of PME's closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.08	S5.7	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	S5.7	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	S5.7	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	S5.7	Are valid noise emission label(s) affixed to all air compressors operating on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.12	S5.7	Are all construction noise permit(s) applied for percussive piling work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	S5.7	Are construction noise permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S5.7	Are valid construction noise permit(s) displayed at all vehicular exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Water Quality</b>				
3.01	S6.9	Is effluent discharge license obtained for wastewater discharge from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S6.9	Is effluent discharged according to the effluent discharge license?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S6.9	Is wastewater discharge from site properly treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S6.9	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S6.9	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided				

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
		to remove sand/silt particles from runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S6.9	Is surface runoff diverted to sedimentation facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.07	S6.9	Is the drainage system properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S6.9	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	S6.9	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.10	S6.9	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.11	S6.9	Are exposed slope surface properly protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.12	S6.9	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.13	S6.9	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.14	S6.9	Is runoff from wheel-washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.15	S6.9	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.16	S6.9	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.17	S6.9	Are the oil interceptors/ grease traps properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.18	S6.9	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.19	S6.9	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.20	S6.9	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.21	S6.9	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	S6.9	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.23	S6.9	Is concrete washing water properly collected and treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.24	S6.9	Is suitable type of silt curtains deployed during dredging to reduce the elevation of suspended solids to nearby sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.25	S6.9	Is closed grab dredger used to reduce the potential leakage of sediments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.26	S6.9	Is closed grab dredger of 3 to 6 m <sup>3</sup> used for dredging at seawater intake?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.27	S6.9	Is specific work staff assigned the responsibility for monitoring the number of grab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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		dredged per hour? Is number of cycle limited to 20-21 grab per hour for 3m <sup>3</sup> closed grab, 10-11 grab per hour for 6m <sup>3</sup> closed grab?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.28	S6.9	Is the grab operated in slow and controlled manner such that the impact to seabed by the grab when being lowered could be minimized? Is the operator ensured the grab be properly closed before lifting the grab?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.29	S6.9	Is the maximum allowed dredging rate at the seawater intake limited to 750 m <sup>3</sup> /day while the maximum allowed dredging rate at the submarine outfall is 3,500 m <sup>3</sup> /day?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.30	S6.9	Is dredged marine sediment disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.31	S6.9	Are disposal vessels fitted with tight bottom seals in order to prevent leakage of material during transport?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.32	S6.9	Are barges filled to a level which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.33	S6.9	Are excess materials cleaned from decks and exposed fittings before the vessel is moved from the dredging area after dredging?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.34	S6.9	Are the contractor(s) confirmed that the works cause no visible foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the dredging site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.35	S6.9	When the dredged material has been unloaded at the disposal areas, is any material accumulated on the deck or other exposed parts of the vessel removed and placed in the hold or a hopper?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.36	S6.9	Is dredger maintained adequate clearance between vessels and the seabed at all states of the tide and reduce operations speed to ensure that excessive turbidity is not generated by turbulence from vessel movement or propeller wash?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.37	S6.9	Is the contractor shall regularly inspect the silt curtains and check that they are moored and marked to avoid danger to marine traffic? Is regular inspection on the integrity of the silt curtain carried out by the contractor and any damage to the silt curtain shall be repaired by the contractor promptly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.38	S6.9	Are all vessels have a clean ballast system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.39	S6.9	Are all vessels well maintained and inspected before use to limit any potential discharges to the marine environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.40	S6.9	Is any discharge of sewage/grey wastewater? Is wastewater from potentially contaminated area on working vessels should be minimized and collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.41	S6.9	Is any soil waste disposed overboard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Waste Management</b>				
4.01	S8.5	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S8.5	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	S8.5	Is the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	S8.5	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.05	S8.5	Are trip tickets for chemical waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S8.5	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.07	S8.5	Are all containers for chemical waste properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.08	S8.5	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.09	S8.5	Are incompatible chemical wastes stored in different areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.10	S8.5	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.11	S8.5	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.12	S8.5	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.13	S8.5	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.14	S8.5	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.15	S8.5	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.16	S8.5	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.17	S8.5	Are C&D wastes sorted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.18	S8.5	Are C&D waste disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.19	S8.5	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.20	S8.5	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.21	S8.5	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.22	S8.5	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>	<b>S11.10</b>	<b>Landscape and Visual</b>				
5.01	& 11.11	Are Is site hoarding provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.02	S11.10 &	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
	11.11					
5.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.06	S11.10 & 11.11	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.00	S9.7	<b>Ecology</b>				
6.01		Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.02	S9.7	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03	S9.7	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.04	S9.7	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.05	S9.7	For slope mitigation works within the Clear Water Bay Country Park, are tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.06	S9.7	Are pruning of tree canopies along the alignment of the flexible barriers limited to a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.07	S9.7	Is the alignment of flexible barriers optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable? Are the alignment of flexible barriers positioned at minimum 1.5 m in a radius away from these individuals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.08	S9.7	Is temporary fencing installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction? Is a sign identifying the site attached to the fence and flagging tape shall be attached to the individuals to visualize their locations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.09	S9.7	Is a specification for fencing and demarcating individuals of Marsdenia lachnostoma (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers prepared to protect the species?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.10	S9.7	Is any induction training provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.11	S9.7	Is the resident site supervisory staff closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.12	S9.7	Are fences erected along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.13	S9.7	Is regular check of the work site boundaries performed to ensure that they are not				

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
		breached and that damage does not occur to surrounding areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.14	S9.7	Is any damage and disturbance avoided, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.15	S9.7	Are temporarily affected areas reinstated, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.16	S9.7	Are affected habitats within the Clear Water Bay Country Bay reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>7.00</b>		<b>Landfill Gas Hazard</b>				
7.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.03	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.04	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.05	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.07	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.09	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.10	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.11	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>8.00</b>		<b>Overall</b>				
8.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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 July 2024

No major observation was found during site inspection.

**Signatures:**

ET  
Representative

(Name: *Toby Wan*)

Contractor's  
Representative

(Name: *Tiffany Tsang*)

Supervising Officer's  
Representative

(Name: *Rock Lai*)

IEC's  
Representative

(Name: )

WSD's  
Representative

(Name: )

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**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 29 July 2024 Inspected by: ET: Toby Wan SO: David Wong WSD: W.P. Ho  
Contractor: Tiffany Tsang IEC: Serena Shek

Inspection Time: 9:30

<b>Weather</b>							
Condition	<input checked="" type="checkbox"/> Sunny	<input type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
Temperature	<u>27</u> °C		Humidity	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low	
Wind	<input checked="" type="checkbox"/> Calm	<input type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong			

Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
<b>0.00</b>		<b>General</b>				
0.01		Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0.02		Is ET Leader's log-book kept readily available for inspections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>1.00</b>		<b>Construction Dust</b>				
S4.8.1 1.01		Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.02	S4.8.1	Are screenings, enclosures, water spraying, or vacuum cleaning devices provided to dusty construction works for dust suppression?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.03	S4.8.1	Are fumes or smoke emitting plants or construction activities shielded by a screen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	S4.8.1	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.05	S4.8.1	Is wheel-washing provided to all vehicles leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.06	S4.8.1	Are road section near the site exit free from dusty material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.07	S4.8.1	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.08	S4.8.1	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.09	S4.8.1	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.10	S4.8.1	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.11	S4.8.1	Is exposed earth properly treated within six months after the last construction activity on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	S4.8.1	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.13	S4.8.1	Are vehicles travelling at speed not exceeding 15km/hr within the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.14	S4.8.1	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
		and 3 sides?				
1.15	S4.8.1	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	S4.8.1	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	S4.8.1	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>2.00</b>		<b>Construction Noise (Airborne)</b>				
2.01	S5.7	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	S5.7	Are the PME's operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.03	S5.7	Are plants throttled down or turned off when not in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	S5.7	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	S5.7	Are moveable barriers provided to screen NSRs from plant or noisy operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	S5.7	Are silencers, mufflers and enclosures provided to plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.07	S5.7	Are the hoods, cover panels and inspection hatches of PME's closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.08	S5.7	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	S5.7	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	S5.7	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	S5.7	Are valid noise emission label(s) affixed to all air compressors operating on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.12	S5.7	Are all construction noise permit(s) applied for percussive piling work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	S5.7	Are construction noise permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S5.7	Are valid construction noise permit(s) displayed at all vehicular exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Water Quality</b>				
3.01	S6.9	Is effluent discharge license obtained for wastewater discharge from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S6.9	Is effluent discharged according to the effluent discharge license?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S6.9	Is wastewater discharge from site properly treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S6.9	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S6.9	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided				

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
		to remove sand/silt particles from runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S6.9	Is surface runoff diverted to sedimentation facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.07	S6.9	Is the drainage system properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S6.9	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	S6.9	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.10	S6.9	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.11	S6.9	Are exposed slope surface properly protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.12	S6.9	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.13	S6.9	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.14	S6.9	Is runoff from wheel-washing facilities avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.15	S6.9	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.16	S6.9	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.17	S6.9	Are the oil interceptors/ grease traps properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.18	S6.9	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.19	S6.9	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.20	S6.9	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.21	S6.9	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	S6.9	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.23	S6.9	Is concrete washing water properly collected and treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.24	S6.9	Is suitable type of silt curtains deployed during dredging to reduce the elevation of suspended solids to nearby sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.25	S6.9	Is closed grab dredger used to reduce the potential leakage of sediments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.26	S6.9	Is closed grab dredger of 3 to 6 m <sup>3</sup> used for dredging at seawater intake?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.27	S6.9	Is specific work staff assigned the responsibility for monitoring the number of grab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
		dredged per hour? Is number of cycle limited to 20-21 grab per hour for 3m <sup>3</sup> closed grab, 10-11 grab per hour for 6m <sup>3</sup> closed grab?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.28	S6.9	Is the grab operated in slow and controlled manner such that the impact to seabed by the grab when being lowered could be minimized? Is the operator ensured the grab be properly closed before lifting the grab?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.29	S6.9	Is the maximum allowed dredging rate at the seawater intake limited to 750 m <sup>3</sup> /day while the maximum allowed dredging rate at the submarine outfall is 3,500 m <sup>3</sup> /day?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.30	S6.9	Is dredged marine sediment disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.31	S6.9	Are disposal vessels fitted with tight bottom seals in order to prevent leakage of material during transport?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.32	S6.9	Are barges filled to a level which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.33	S6.9	Are excess materials cleaned from decks and exposed fittings before the vessel is moved from the dredging area after dredging?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.34	S6.9	Are the contractor(s) confirmed that the works cause no visible foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the dredging site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.35	S6.9	When the dredged material has been unloaded at the disposal areas, is any material accumulated on the deck or other exposed parts of the vessel removed and placed in the hold or a hopper?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.36	S6.9	Is dredger maintained adequate clearance between vessels and the seabed at all states of the tide and reduce operations speed to ensure that excessive turbidity is not generated by turbulence from vessel movement or propeller wash?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.37	S6.9	Is the contractor shall regularly inspect the silt curtains and check that they are moored and marked to avoid danger to marine traffic? Is regular inspection on the integrity of the silt curtain carried out by the contractor and any damage to the silt curtain shall be repaired by the contractor promptly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.38	S6.9	Are all vessels have a clean ballast system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.39	S6.9	Are all vessels well maintained and inspected before use to limit any potential discharges to the marine environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.40	S6.9	Is any discharge of sewage/grey wastewater? Is wastewater from potentially contaminated area on working vessels should be minimized and collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.41	S6.9	Is any soil waste disposed overboard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Waste Management</b>				
4.01	S8.5	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S8.5	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	S8.5	Is the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Item No.	EIA ref.		N/A	Yes	No	Photo/Remarks
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	S8.5	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.05	S8.5	Are trip tickets for chemical waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S8.5	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.07	S8.5	Are all containers for chemical waste properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.08	S8.5	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.09	S8.5	Are incompatible chemical wastes stored in different areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.10	S8.5	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.11	S8.5	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.12	S8.5	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.13	S8.5	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.14	S8.5	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.15	S8.5	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.16	S8.5	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.17	S8.5	Are C&D wastes sorted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.18	S8.5	Are C&D waste disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.19	S8.5	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.20	S8.5	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.21	S8.5	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.22	S8.5	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>	<b>S11.10</b>	<b>Landscape and Visual</b>				
5.01	& 11.11	Are Is site hoarding provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.02	S11.10 &	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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
	11.11					
5.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.06	S11.10 & 11.11	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.00	S9.7	<b>Ecology</b>				
6.01		Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.02	S9.7	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03	S9.7	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.04	S9.7	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.05	S9.7	For slope mitigation works within the Clear Water Bay Country Park, are tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.06	S9.7	Are pruning of tree canopies along the alignment of the flexible barriers limited to a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.07	S9.7	Is the alignment of flexible barriers optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable? Are the alignment of flexible barriers positioned at minimum 1.5 m in a radius away from these individuals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.08	S9.7	Is temporary fencing installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction? Is a sign identifying the site attached to the fence and flagging tape shall be attached to the individuals to visualize their locations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.09	S9.7	Is a specification for fencing and demarcating individuals of Marsdenia laevis (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers prepared to protect the species?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.10	S9.7	Is any induction training provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.11	S9.7	Is the resident site supervisory staff closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.12	S9.7	Are fences erected along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.13	S9.7	Is regular check of the work site boundaries performed to ensure that they are not				



**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
		breached and that damage does not occur to surrounding areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.14	S9.7	Is any damage and disturbance avoided, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.15	S9.7	Are temporarily affected areas reinstated, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.16	S9.7	Are affected habitats within the Clear Water Bay Country Bay reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>7.00</b>		<b>Landfill Gas Hazard</b>				
7.01	S12.7	Are the safety procedures implemented to minimise the risks of fires and explosions, asphyxiation of works and toxicity effects during all works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.03	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.04	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.05	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.07	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.09	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.10	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.11	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>8.00</b>		<b>Overall</b>				
8.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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 29 July 2024

No major observation was found during site inspection.

**Signatures:**

ET  
Representative

(Name: Toby Wan)

Contractor's  
Representative

(Name: Brian Kam)

Supervising Officer's  
Representative

(Name: David Wong)

IEC's  
Representative

(Name: Serena Shek)

WSD's  
Representative

(Name: Adam Pui)

# Appendix J

## Complaint Log

Statistical Summary of Environmental Complaints

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

Statistical Summary of Environmental Summons

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

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 – 31 July 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)
16/07/2024	WSR1	Ebb	Suspended Solid (SS)	--	--	6.00	5.00	4.40	6.00	4.77	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR2			--	--	5.50					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR3			--	--	5.33					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR16			--	--	5.33					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR33			--	--	5.00					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR37			--	--	6.33					Limit Level	N	N		✓	✓		✓	✓	✓
	NF1			--	--	5.17					Limit Level	N	N		✓	✓		✓	✓	✓
	NF2			--	--	5.00					Limit Level	N	N		✓	✓		✓	✓	✓
	NF3			--	--	6.83					Limit Level	N	N		✓	✓		✓	✓	✓
18/07/2024	WSR3	Ebb	Suspended Solid (SS)	--	--	5.83	5.00	4.80	6.00	5.20	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR4			--	--	5.17					Action Level	N	N		✓	✓		✓	✓	✓
	WSR16			--	--	5.33					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR33			--	--	5.83					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR36			--	--	7.17					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR37			--	--	5.83					Limit Level	N	N		✓	✓		✓	✓	✓
	NF1			--	--	5.50					Limit Level	N	N		✓	✓		✓	✓	✓
	NF2			--	--	5.83					Limit Level	N	N		✓	✓		✓	✓	✓
	NF3			--	--	6.50					Limit Level	N	N		✓	✓		✓	✓	✓
20/07/2024	NF1	Ebb	Suspended Solid (SS)	--	--	4.83	5.00	4.30	6.00	4.66	Limit Level	N	N		✓	✓	✓	✓	✓	✓
30/07/2024	WSR37	Ebb	Suspended Solid (SS)	--	--	5.00	5.00	4.40	6.00	4.77	Limit Level	N	N		✓	✓		✓	✓	✓
	NF3			--	--	5.50					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 from 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) Water quality mitigation measures were observed maintained / implemented properly (double silt curtain).

Conclusion:

During water quality monitoring on 16, 18, 20, and 30 July 2024, one (1) Action Level exceedances and twenty (20) Limit Level exceedance were recorded during mid-ebb tide. Total one (1) Action Level and twenty (20) Limit Level exceedances for SS of impact water quality monitoring were recorded between 16 June to 31 July 2024.

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

The desalination plant and the outfall shaft work normally.





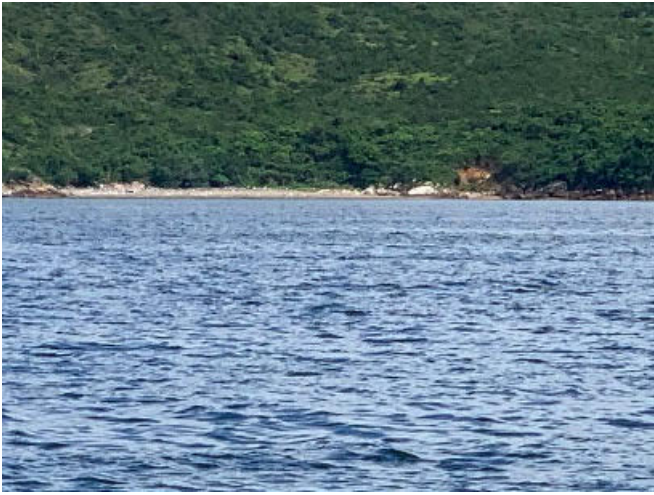




After investigation, all exceedances were considered non-project related.

**Pre-operation Activities:**





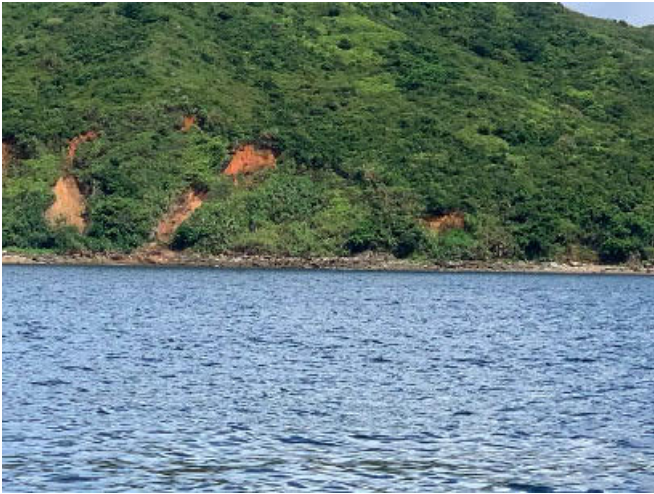




16 July 2024	18 July 2024
<ul style="list-style-type: none"><li>• Production of desalinated water</li><li>• Water sampling and analysis</li></ul>	<ul style="list-style-type: none"><li>• Production of desalinated water</li><li>• Water sampling and analysis</li><li>• Actidaff backwashing</li></ul>
20 July 2024	30 July 2024
<ul style="list-style-type: none"><li>• Production of desalinated water</li><li>• Water sampling and analysis</li><li>• Actidaff backwashing</li></ul>	<ul style="list-style-type: none"><li>• Production of desalinated water</li><li>• Water sampling and analysis</li><li>Actidaff backwashing</li></ul>




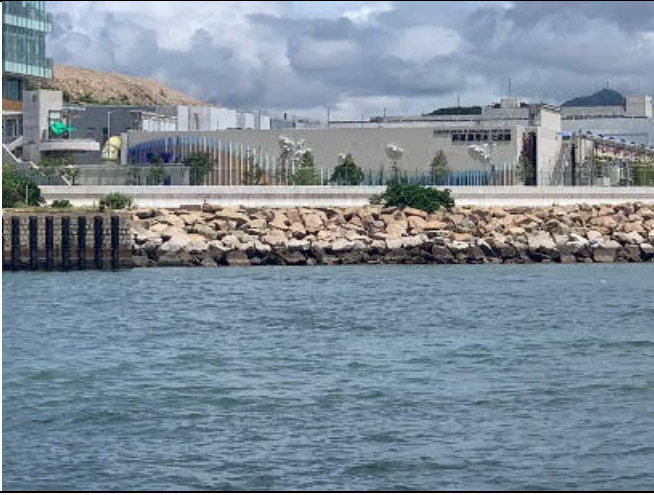

Supporting Photo:

Date of exceedance	Monitoring station(s)			
16/07/2024				
	WSR1	WSR2	WSR3	WSR16
				
	WSR33	WSR37	NF1	NF2
				
	NF3			

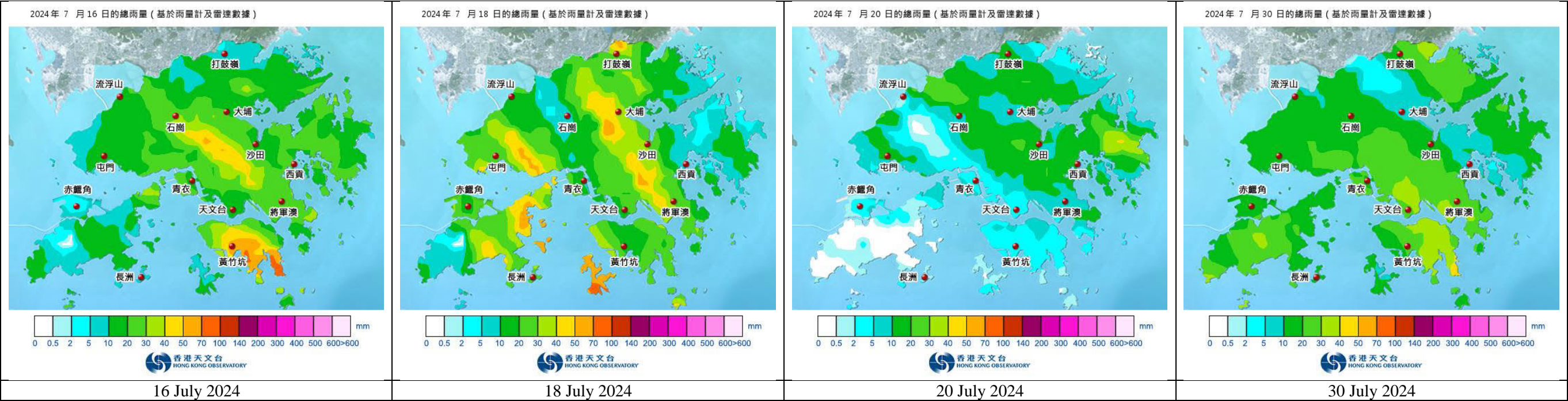


Date of exceedance	Monitoring station(s)			
18/07/2024				
	WSR3	WSR4	WSR16	WSR33
				
	WSR36	WSR37	NF1	NF2
				
	NF3			



Date of exceedance	Monitoring station(s)			
20/07/2024				
	NF1			
30/07/2024				
	WSR37	NF3		





**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)
02/07/2024	NF1	Flood	Suspended Solid (SS)	--	--	5.83	5.00	8.00	6.00	8.67	Action Level	N	N	✓	✓	✓	✓	✓	✓	✓
	NF2	Flood	Suspended Solid (SS)	--	--	5.33	5.00	8.00	6.00	8.67	Action Level	N	N	✓	✓	✓	✓	✓	✓	✓
	NF3	Flood	Suspended Solid (SS)	--	--	5.83	5.00	8.00	6.00	8.67	Action Level	N	N	✓	✓	✓	✓	✓	✓	✓
04/07/2024	WSR1	Ebb	Suspended Solid (SS)	--	--	9.33	5.00	8.00	6.00	8.67	Action Level	N	N		✓	✓		✓	✓	✓
	WSR2	Ebb	Suspended Solid (SS)	--	--	7.83	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR3	Ebb	Suspended Solid (SS)	--	--	7.83	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR4	Ebb	Suspended Solid (SS)	--	--	6.50	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR16	Ebb	Suspended Solid (SS)	--	--	8.17	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR33	Ebb	Suspended Solid (SS)	--	--	8.33	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR36	Ebb	Suspended Solid (SS)	--	--	8.33	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR37	Ebb	Suspended Solid (SS)	--	--	8.50	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	NF1	Ebb	Suspended Solid (SS)	--	--	9.83	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	NF2	Ebb	Suspended Solid (SS)	--	--	7.17	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
06/07/2024	WSR4	Ebb	Suspended Solid (SS)	--	--	4.83	5.00	8.00	6.00	8.67	Limit Level	N	N		✓	✓	✓	✓	✓	✓
	WSR36	Ebb	Suspended Solid (SS)	--	--	3.58	5.00	8.00	6.00	8.67	Limit Level	N	N		✓	✓	✓	✓	✓	✓
08/07/2024	WSR1	Flood	Suspended Solid (SS)	--	--	5.50	5.00	9.80	6.00	10.62	Action Level	N	N	✓	✓		✓	✓	✓	✓
	WSR16	Flood	Suspended Solid (SS)	--	--	6.83	5.00	9.80	6.00	10.62	Limit Level	N	N	✓	✓		✓	✓	✓	✓
	WSR33	Flood	Suspended Solid (SS)	--	--	8.17	5.00	9.80	6.00	10.62	Limit Level	N	N	✓	✓		✓	✓	✓	✓
	WSR36	Flood	Suspended Solid (SS)	--	--	6.33	5.00	9.80	6.00	10.62	Limit Level	N	N	✓	✓		✓	✓	✓	✓
	NF1	Flood	Suspended Solid (SS)	--	--	7.83	5.00	9.80	6.00	10.62	Limit Level	N	N	✓	✓		✓	✓	✓	✓
	NF2	Flood	Suspended Solid (SS)	--	--	7.83	5.00	9.80	6.00	10.62	Limit Level	N	N	✓	✓		✓	✓	✓	✓
	NF3	Flood	Suspended Solid (SS)	--	--	7.67	5.00	9.80	6.00	10.62	Limit Level	N	N	✓	✓		✓	✓	✓	✓
10/07/2024	WSR1	Flood	Suspended Solid (SS)	--	--	7.17	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	WSR2	Flood	Suspended Solid (SS)	--	--	6.67	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	WSR3	Flood	Suspended Solid (SS)	--	--	6.17	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	WSR4	Flood	Suspended Solid (SS)	--	--	6.33	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	WSR16	Flood	Suspended Solid (SS)	--	--	6.50	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	WSR33	Flood	Suspended Solid (SS)	--	--	6.17	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓

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)
	WSR36	Flood	Suspended Solid (SS)	--	--	6.33	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	WSR37	Flood	Suspended Solid (SS)	--	--	6.17	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	NF1	Flood	Suspended Solid (SS)	--	--	6.67	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	NF2	Flood	Suspended Solid (SS)	--	--	7.83	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	NF3	Flood	Suspended Solid (SS)	--	--	6.67	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
13/07/2024	WSR3	Flood	Suspended Solid (SS)	--	--	5.17	5.00	5.80	6.00	6.28	Action 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) Water quality mitigation measures were observed maintained / implemented properly (double silt curtain).

Conclusion:

During water quality monitoring on 2, 4, 6, 8, 10 and 13 July 2024, five (5) Action Level and seventeen (17) Limit Level exceedances were recorded during mid-flood tide and one (1) Action Level and twelve (12) Limit Level exceedances were recorded during mid-ebb. Total six (6) Action Level and twenty-nine (29) Limit Level exceedances for SS of impact water quality monitoring were recorded between 1 July to 15 July 2024.

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

The desalination plant and the outfall shaft work normally.





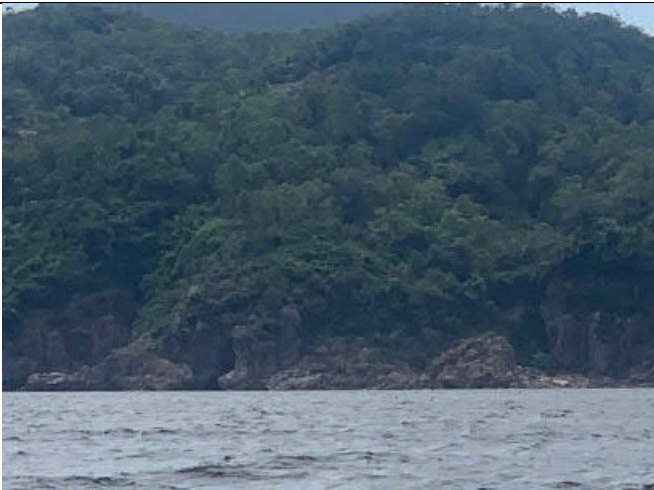


After investigation, all exceedances were considered non-project related.

Pre-operation Activities:










2 July 2024	4 July 2024
<ul style="list-style-type: none"><li>Production of desalinated water</li><li>Water sampling and analysis</li><li>Actidaff backwash</li></ul>	<ul style="list-style-type: none"><li>Production of desalinated water</li><li>Water sampling and analysis</li><li>Actidaff backwash</li></ul>
6 July 2024	8 July 2024
<ul style="list-style-type: none"><li>Production of desalinated water</li><li>Water sampling and analysis</li><li>Actidaff backwash</li></ul>	<ul style="list-style-type: none"><li>Production of desalinated water</li><li>Water sampling and analysis</li><li>Actidaff backwash</li></ul>
10 July 2024	13 July 2024
<ul style="list-style-type: none"><li>Production of desalinated water</li><li>Water sampling and analysis</li></ul>	<ul style="list-style-type: none"><li>Production of desalinated water</li><li>Water sampling and analysis</li></ul>




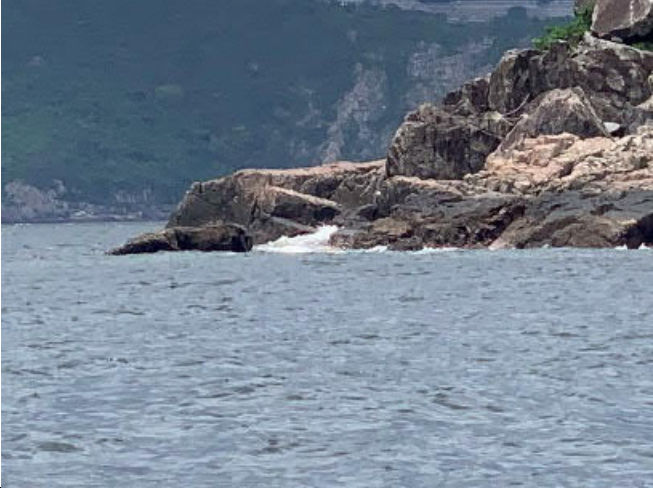









Supporting Photo:

Date of exceedance	Monitoring station(s)			
02/07/2024				
	NF1	NF2	NF3	
04/07/2024				
	WSR1	WSR2	WSR3	WSR4
				
	WSR16	WSR33	WSR36	WSR37







Date of exceedance	Monitoring station(s)			
				
	NF1	NF2	NF3	
06/07/2024				
	WSR4	WSR36		
08/07/2024				
	WSR1	WSR16	WSR33	WSR36

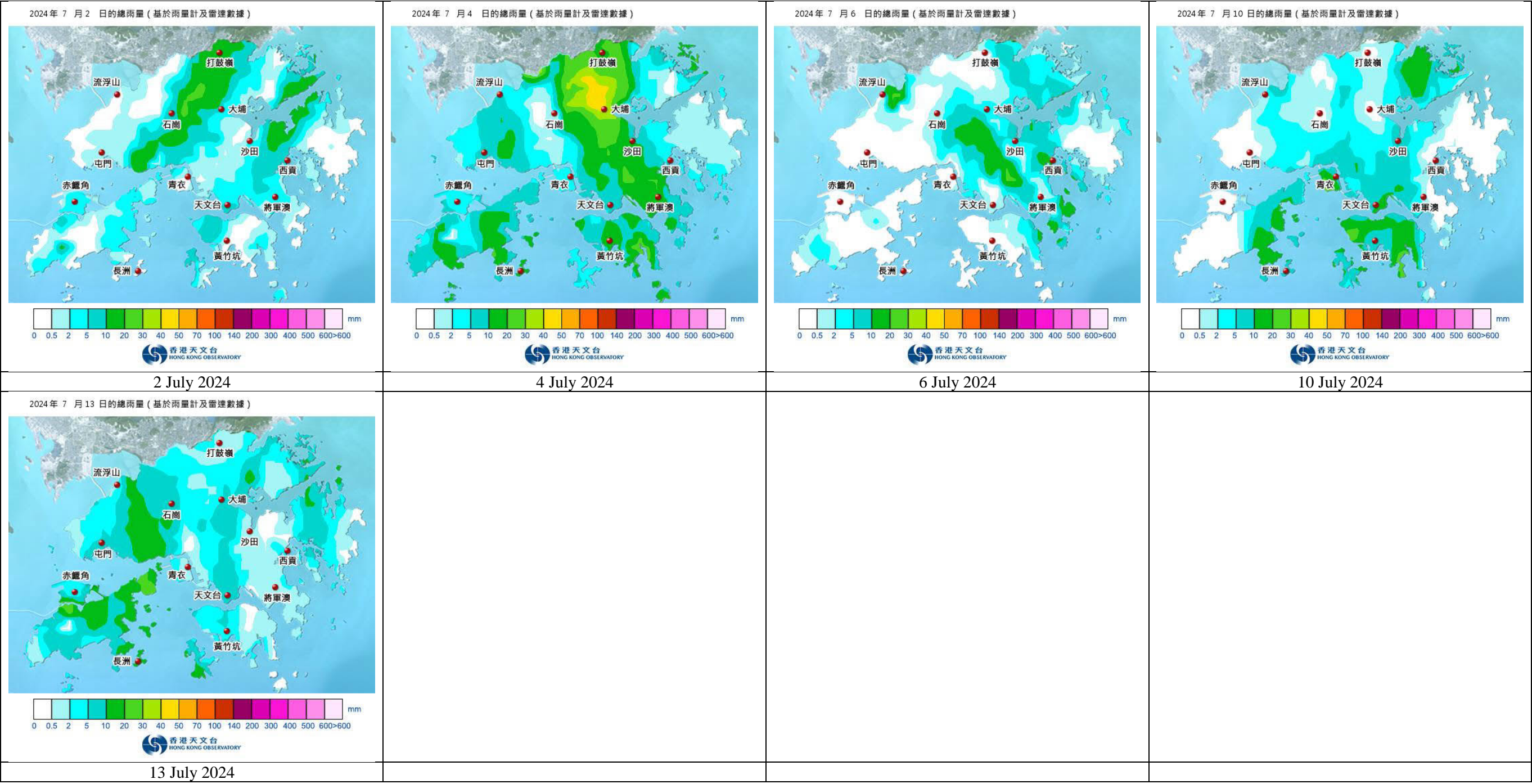


Date of exceedance	Monitoring station(s)			
				
	NF1	NF2	NF3	
10/07/2024				
	WSR1	WSR2	WSR3	WSR4
				
	WSR16	WSR33	WSR36	WSR37



Date of exceedance	Monitoring station(s)			
				
	NF1	NF2	NF3	
13/07/2024				
	WSR3			








**Contract No. 13/WSD/17**

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

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

Document No.

Aurecon	/	P525597	/	OPMEMAR01	/	4
Publisher		Project Code		Sequential No.		Revision Index

	Certified by:
Name	Toby WAN
Position	Environmental Team Leader
Signature	
Date:	15 August 2024



Our ref.: LES/J2024-01/CS/L031  
Date : 16 Aug 2024

**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 July 2024**

Referring to the Operation Phase Monthly Environmental Monitoring and Audit Report (July 2024) Rev.4.0 as submitted by the Environmental Team on 16 August 2024, 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](mailto:serenashek@lamenviro.com).

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

Serena Shek  
Independent Environmental Checker

Binnies (Attn.: Derek Lai)  
Aurecon (Attn.: Toby Wan)

By E-mail  
By E-mail



## REVISION HISTORY

REV.	DESCRIPTION OF MODIFICATION	DATE
1.	First Issue for Comments	12 August 2024
2.	Revised According to Comments	14 August 2024
3.	Revised According to Comments	15 August 2024
4.	Revised According to Comments	16 August 2024

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Appendix E	Water Quality Monitoring Equipment and Landfill Gas Equipment Calibration Certificate
Appendix F	Water Quality Monitoring Data and Landfill Gas Monitoring Data
Appendix G	Waste Flow Table
Appendix H	Ecology (Coral & Fishery) Survey Report
Appendix I	Site Inspection Proforma
Appendix J	Complaint Log
Appendix K	Exceedance Report

## **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 1<sup>st</sup> 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 July 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. Seven (7) of SS obtained had exceeded the Action Level. Forty-nine (49) 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 had exceeded the Limit Level.

#### **ECOLOGY IMPACT MONITORING**

- A7. Monthly operation phase coral monitoring works was conducted on 18 July 2024. There is no AL/LL exceedance during the monitoring period.
- A8. Pre-operation phase fishery monitoring for dry season 2024 was carried out on 17 and 24 February 2024. The detail of the monitoring was presented in the 50th Construction Phase Monthly EM&A Report.

**LANDFILL GAS MONITORING**

- A9. In this reporting period, monthly landfill gas monitoring was conducted on 18 and 19 July 2024. No exceedances of action level and limit level was observed.

**WEEKLY SITE INSPECTIONS**

- A10. In this reporting period, site inspections were carried out by ET on 2, 9, 16, 23 and 29 July 2024. Joint site inspections of the operation work by ET were and IEC were carried out on 29 July 2024 to audit the mitigation measures implementation status.

**COMPLAINT HANDLING AND PROSECUTION**

- A11. No environmental complaint, notification of summons and prosecution was received in the reporting period.

**REPORTING CHANGE**

- A12. There was no change to be reported that may affect the on-going EM&A programme.
- A13. According to the contractor's information, the TKODP commenced operation phase on 1 July 2024. The outstanding construction works would still be carried out. Details of the construction phase monitoring will be presented in the Construction Phase Monthly EM&A Report.

## 1. BASIC CONTRACT INFORMATION

### BACKGROUND

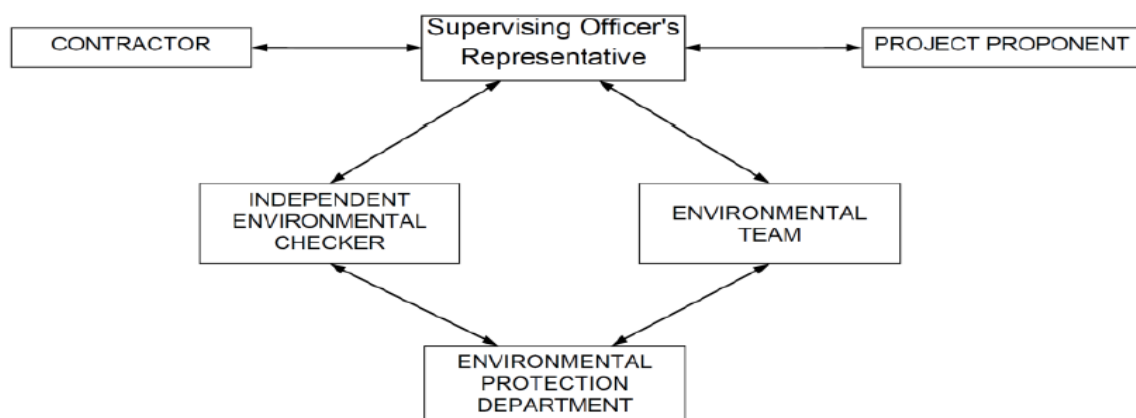
- 1.1. The Acciona Agua, S.A. Trading, Jardine Engineering Corporation, Limited and China State Construction Engineering (Hong Kong) Limited as AJC Joint Venture (AJCJV) is contracted to carry out the Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant (DPTKO) under Contract No. 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 1<sup>st</sup> 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 July 2024 to 31 July 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	Christina Ko	2608-7302
	Chief Resident Engineer	Roger Wu	6343-1002
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
	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:
- Production of water
- 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
Chemical Waste Producer Registration				
5213-839-A2987-01	Throughout the Contract		Valid	-
Wastewater Discharge Licence (Land and Marine works)				
WT00035775-2020	23/08/2021	31/07/2025	Valid	-
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).

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
<b>Water Quality</b>	
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

Parameters	Status
<b>Waste Management</b>	
Mitigation Measures in Waste Management Plan	On-going
<b>Landfill Gas</b>	
Monthly Monitoring for buildings, manholes and utility pits within the Project Site and along the fresh water mains	On-going
<b>Ecology (Coral)</b>	
Operation phase Regular Coral Monitoring (Monthly)	On-going
<b>Ecology (Fishery)</b>	
Operation phase Regular Fishery Monitoring (Seasonally)	On-going
<b>Landscape</b>	
Operation phase Landscape and Visual Site Inspection	On-going
<b>Environmental Audit</b>	
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 be 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
<b>In-situ measurements</b>		
Dissolved oxygen	mg/L	DO
Temperature	°C	-
pH	-	-
Turbidity	NTU	-
Salinity	0/00	-
Total Residual Chlorine	mg/L	TRC
<b>Laboratory measurements</b>		
Suspended Solids	mg/L	SS
Iron-Soluble	mg/L	Fe
Anti-scalant as Reactive Phosphorus*	mg/L	PO <sub>4</sub> 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
<b>In-situ measurements</b>		
Temperature	°C	-
pH	pH	-
Salinity	0/00	-
Total Residual Chlorine	mg/L	TRC
<b>Laboratory measurements</b>		
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 23 <sup>rd</sup> 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 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 (‰)	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

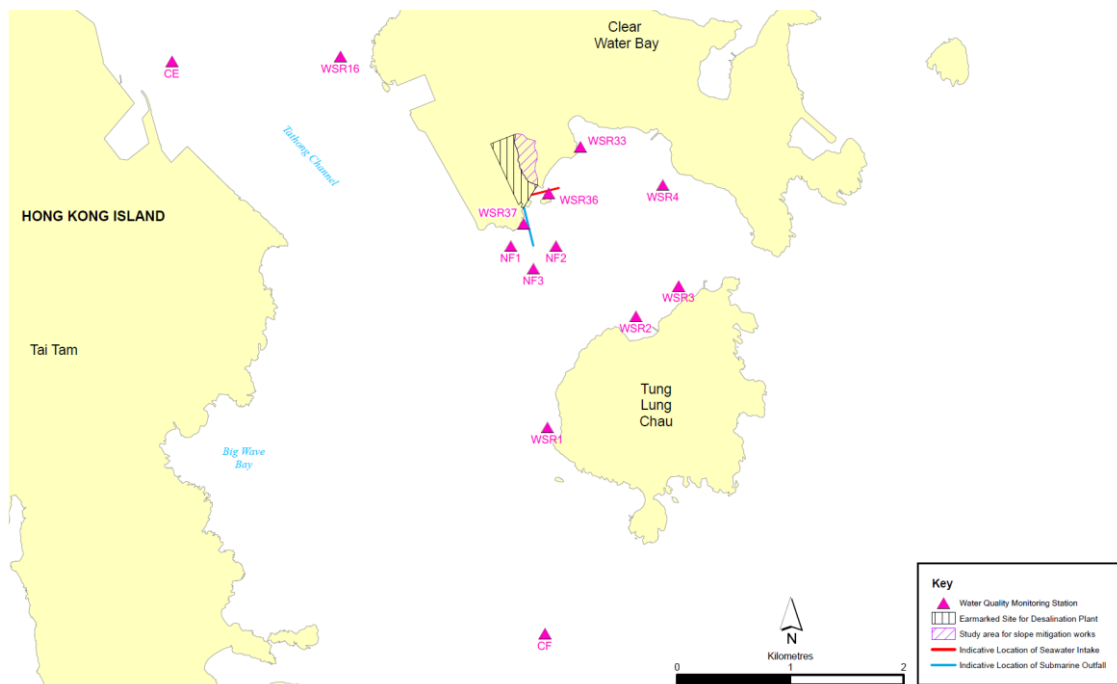
- 2.15. The operation phase water quality monitoring locations are in accordance with the EM&A Manual and detailed in **Table 2.6** below. A schedule for water quality monitoring was prepared by the ET and submitted to IEC and EPD prior to the commencement of the monitoring.

**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.

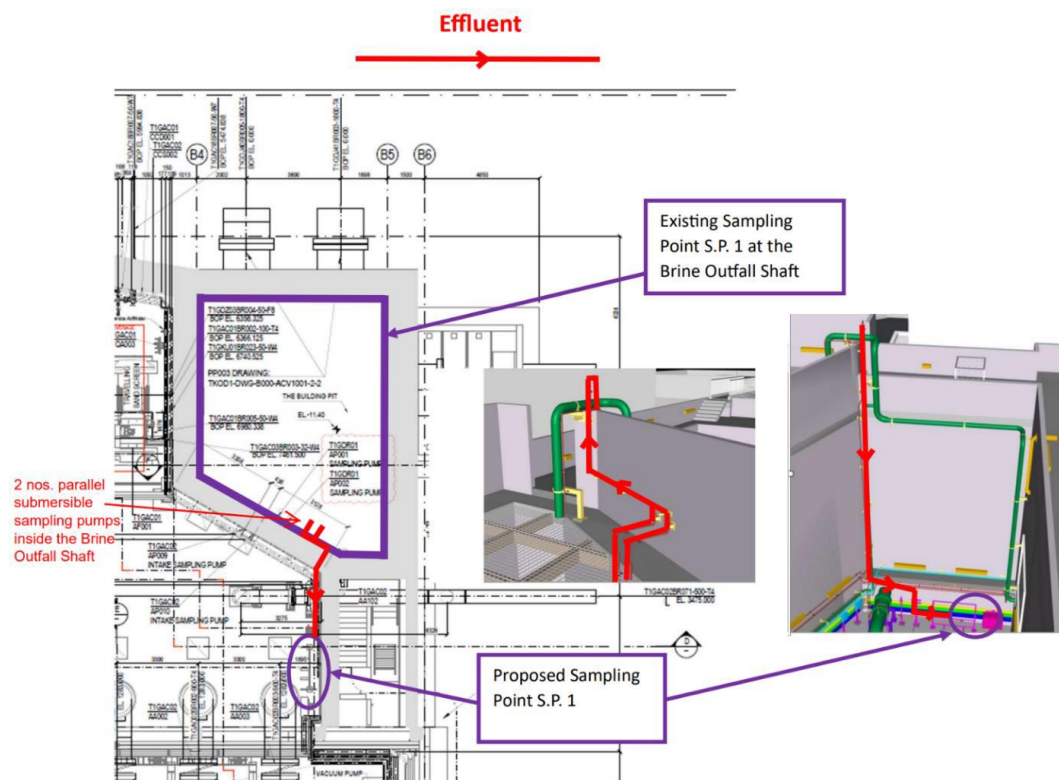




**Figure 2.1 Water Quality Monitoring Locations under EM&A Manual**

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
<b>Operation phase Marine Water Quality Monitoring</b>		
DO in mg/L	<u>Surface and Middle</u> 7.30 mg L <sup>-1</sup> <u>Bottom</u> 7.31 mg L <sup>-1</sup> <u>Tung Lung Chau Fish Culture Zone</u> 5.1 mgL <sup>-1</sup> or level at control station (Whichever the lower)	<u>Surface and Middle</u> 4 mg L <sup>-1</sup> <u>Bottom</u> 2 mg L <sup>-1</sup> <u>Tung Lung Chau Fish Culture Zone</u> 5.0 mgL <sup>-1</sup> or level at control station (Whichever the lower)
SS in mg/L (Depth-averaged)	5.00 mg L <sup>-1</sup> or 20% exceedance of value at any impact station compared with corresponding data from control station	6.00 mg L <sup>-1</sup> 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 mg/L (EPD ref. QIn EP 2/N8/E/120 Pt.14).

b) Continuous Monitoring of Effluent Quality

**Table 2.8 Derived Limit Levels for Water Quality**

Parameters	Limit
<b>Continuous Monitoring of Effluent Quality</b>	
Flow Rate in m <sup>3</sup> /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*	5.0

\*Remark:

1. Anti-scalant water quality testing will only be conducted whenever anti-scalant dosage is adopted.
2. 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 mg/L (EPD ref. QIn EP 2/N8/E/120 Pt.14).

**MONITORING RESULTS AND OBSERVATIONS**

a) Operation phase Marine Water Quality Monitoring

2.23. Considering the operation phase of Tseung Kwan O Desalination Plant commenced from [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 [2, 4, 6, 8, 10, 13, 16, 18, 20, 22, 24, 27 and 30 July 2024](#).

- 2.25. **Seven (7)** of the operation phase water quality monitoring results of SS obtained had exceeded the Action Level. **Forty-nine (49)** 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 **2, 4, 6, 8, 10, 13, 16, 18, 20, and 30 July 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) Operation phase Marine Water Quality Monitoring
- 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 had exceeded the Limit Level. The detailed results are presented in **Appendix F**.



**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.	31.97	8.46	8.47	8.14	2.43	4.22	27.13	<0.01	<0.1
	Min.	31.06	7.86	7.81	7.99	1.64	2.50	26.53	<0.01	<0.1
	Max.	32.95	9.09	9.10	8.33	2.92	9.00	27.62	<0.01	<0.1
CF	Avg.	31.86	8.27	8.28	8.12	2.44	4.77	27.15	<0.01	<0.1
	Min.	30.34	7.75	7.72	7.94	2.12	2.50	26.62	<0.01	<0.1
	Max.	32.50	9.13	9.18	8.36	2.92	10.00	27.55	<0.01	<0.1
WSR1	Avg.	31.63	8.40	8.39	8.15	1.79	4.72	27.18	<0.01	<0.1
	Min.	30.55	7.76	7.73	8.00	1.42	2.50	26.67	<0.01	<0.1
	Max.	33.05	9.01	9.00	8.41	2.17	11.00	27.61	<0.01	<0.1
WSR2	Avg.	32.08	8.41	8.39	8.17	1.62	4.31	27.22	<0.01	<0.1
	Min.	31.06	7.71	7.63	7.96	1.30	2.50	26.78	<0.01	<0.1
	Max.	33.41	8.95	8.93	8.35	2.13	11.00	27.51	<0.01	<0.1
WSR3	Avg.	31.95	8.42	8.42	8.18	1.66	4.52	27.07	<0.01	<0.1
	Min.	31.08	7.94	7.93	8.02	1.30	2.50	26.67	<0.01	<0.1
	Max.	32.65	8.92	8.88	8.39	2.12	9.00	27.48	<0.01	<0.1
WSR4	Avg.	31.88	8.43	8.44	8.13	1.75	4.40	27.14	<0.01	<0.1
	Min.	30.68	7.76	7.84	7.98	1.37	2.50	26.61	<0.01	<0.1
	Max.	32.99	8.98	8.98	8.31	2.16	10.00	27.42	<0.01	<0.1
WSR16	Avg.	31.67	8.37	8.37	8.21	1.72	4.74	27.18	<0.01	<0.1
	Min.	30.30	7.75	7.74	8.03	1.30	2.50	26.64	<0.01	<0.1
	Max.	32.93	9.06	9.05	8.39	2.15	11.00	27.51	<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.	31.79	8.49	8.48	8.21	1.76	4.91	27.16	<0.01	<0.1
	Min.	30.31	7.76	7.86	7.94	1.34	2.50	26.60	<0.01	<0.1
	Max.	32.72	9.24	9.19	8.35	2.19	11.00	27.50	<0.01	<0.1
WSR36	Avg.	31.92	8.41	8.40	8.16	1.73	4.82	27.13	<0.01	<0.1
	Min.	30.60	7.63	7.63	7.94	1.28	2.50	26.44	<0.01	<0.1
	Max.	33.03	8.92	8.91	8.44	2.13	11.00	27.54	<0.01	<0.1
WSR37	Avg.	31.91	8.44	8.46	8.17	1.79	4.54	27.17	<0.01	<0.1
	Min.	30.56	7.76	7.73	8.01	1.43	2.50	26.68	<0.01	<0.1
	Max.	33.09	8.87	8.87	8.32	2.11	10.00	27.72	<0.01	<0.1
NF1	Avg.	31.88	8.32	8.33	8.18	1.85	5.32	27.17	<0.01	<0.1
	Min.	31.04	7.70	7.69	8.05	1.41	2.50	26.43	<0.01	<0.1
	Max.	32.83	8.75	8.74	8.34	2.55	11.00	27.53	<0.01	<0.1
NF2	Avg.	31.92	8.32	8.34	8.17	1.81	4.89	27.15	<0.01	<0.1
	Min.	30.94	7.71	7.69	8.01	1.39	2.50	26.63	<0.01	<0.1
	Max.	32.65	8.90	8.98	8.35	2.14	11.00	27.71	<0.01	<0.1
NF3	Avg.	31.79	8.58	8.56	8.20	1.82	5.08	27.18	<0.01	<0.1
	Min.	30.86	7.74	7.73	7.97	1.51	2.50	26.79	<0.01	<0.1
	Max.	32.64	9.47	9.47	8.37	2.20	11.00	27.56	<0.01	<0.1

Notes:

- "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.
- 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.

### 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 <sup>(1)</sup>	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)
Jul 2024	60378.440	0.000	0.000	0.000	60378.440	0.000	0.000	0.000	0.000	0.000	42.820

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.

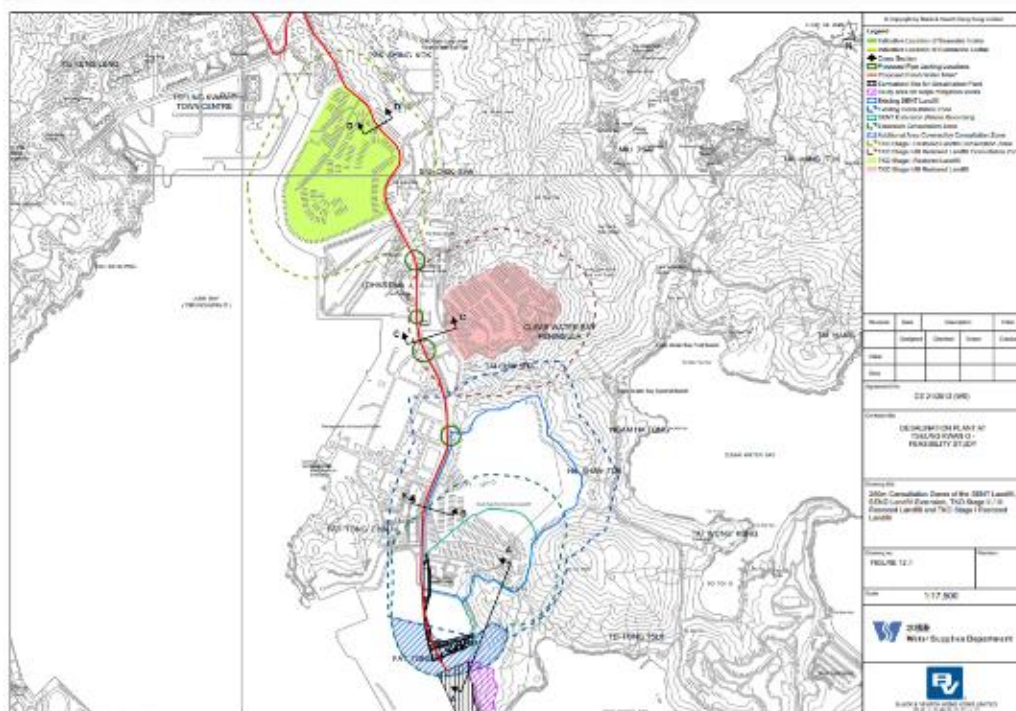
## 4. LANDFILL GAS MONITORING

### MONITORING REQUIREMENT

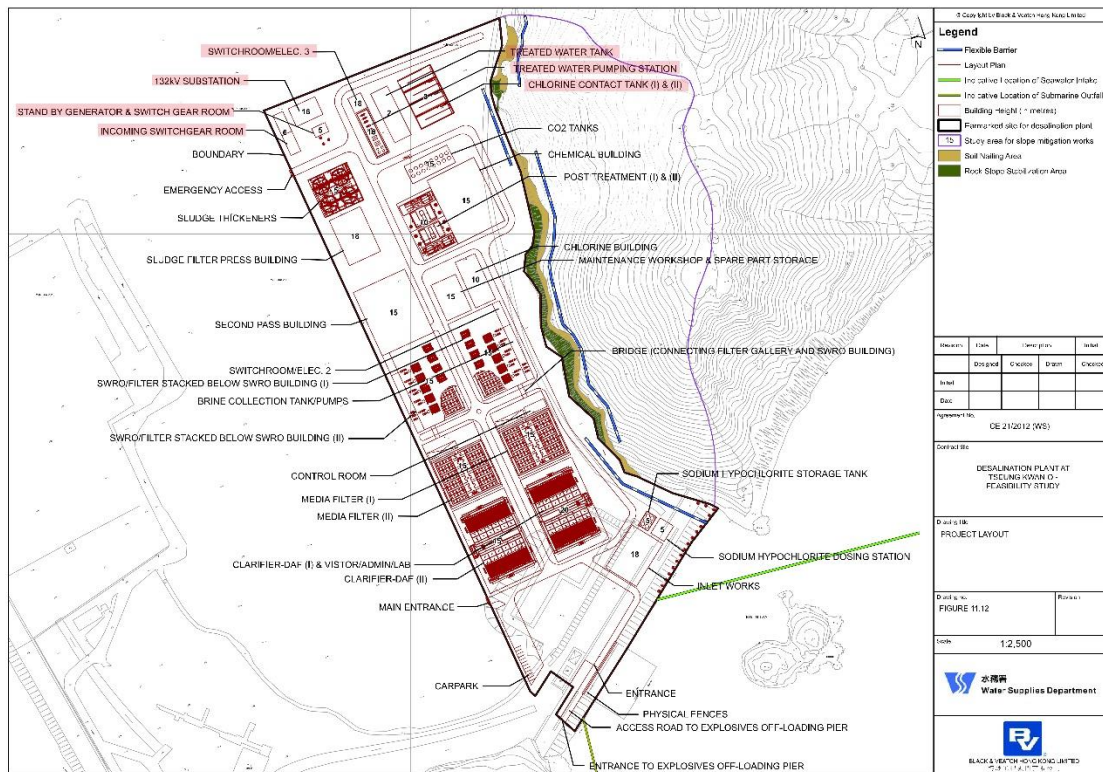
- 4.1. In accordance with Section 11 of the EM&A Manual, monthly monitoring of landfill gas is required for the first year of operation at buildings within the Project Site and consultation zone. Part of the desalination plant and the indicative area of natural slope mitigation works fall within the 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

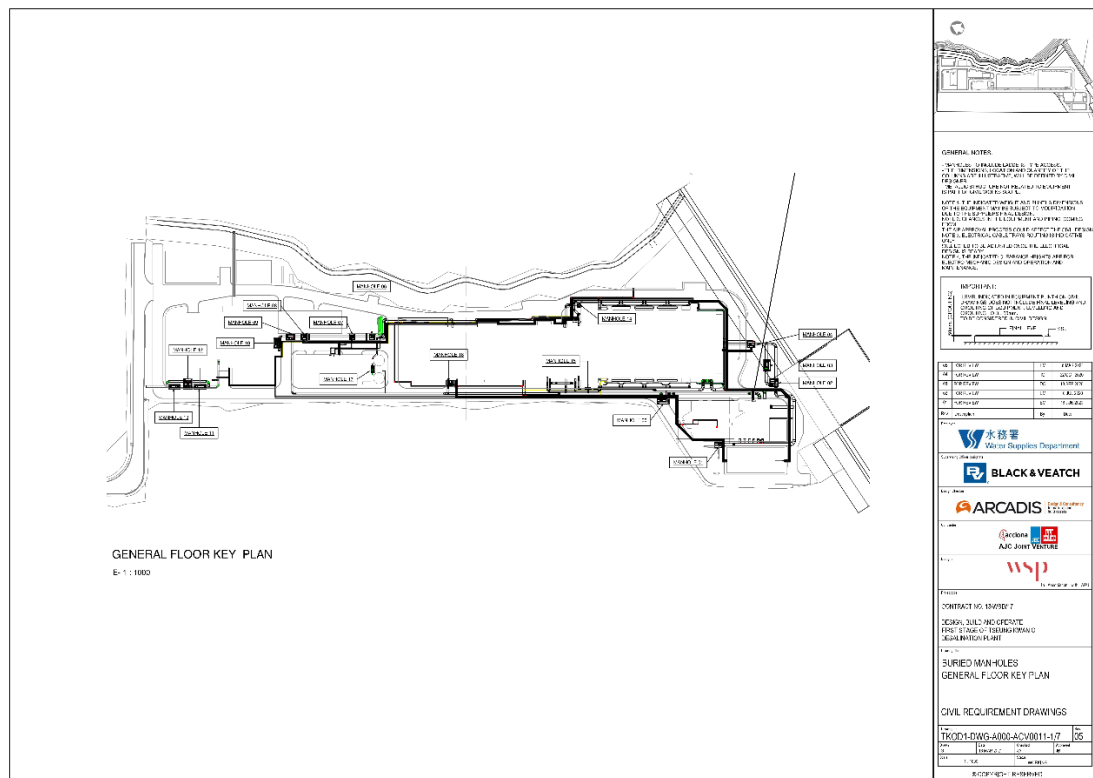
- 4.5. The area required to be monitored for landfill gas in the reporting period is shown in **Figure 4.1, Figure 4.2 and Figure 4.3.**



**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 <sub>2</sub> )	<19% O <sub>2</sub>	<19% O <sub>2</sub>
Methane (CH <sub>4</sub> )	>10% LEL	>20% LEL
Carbon Dioxide (CO <sub>2</sub> )	>0.5% CO <sub>2</sub>	>1.5% CO <sub>2</sub>

### 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	GMI PS500 – 25492809/21	21 August 2024

**MONITORING RESULTS AND OBSERVATIONS**

- 4.9. In this reporting period, monthly landfill gas monitoring was conducted on [18 and 19 July 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

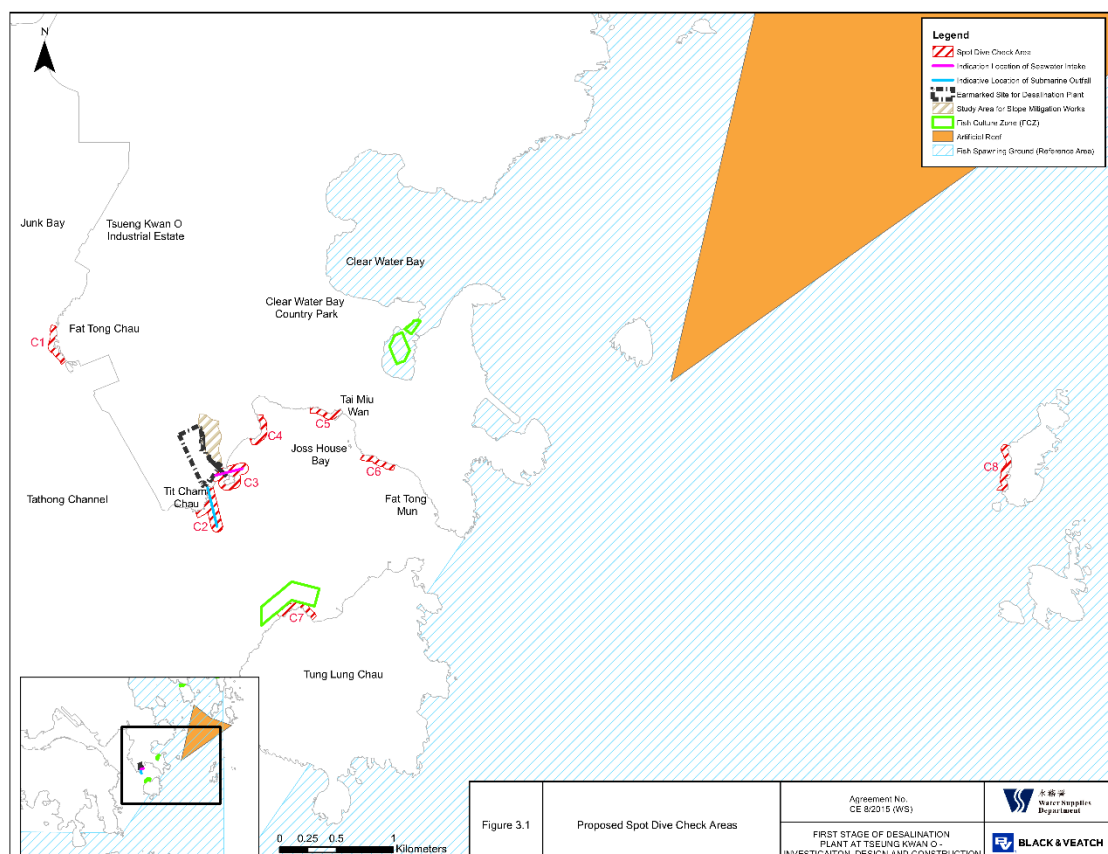
- 5.2. Weekly site audit was carried out by the ET in the reporting month, no trespass by the Contractor outside the works area of the Project and Clear Water Bay Country Park, and no damage to the vegetation and rocky shore outside the Project area was observed in the reporting month.
- 5.3. If non-compliance 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 operation 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 July 2024](#). The detail of the monitoring is presented in **Appendix H**.

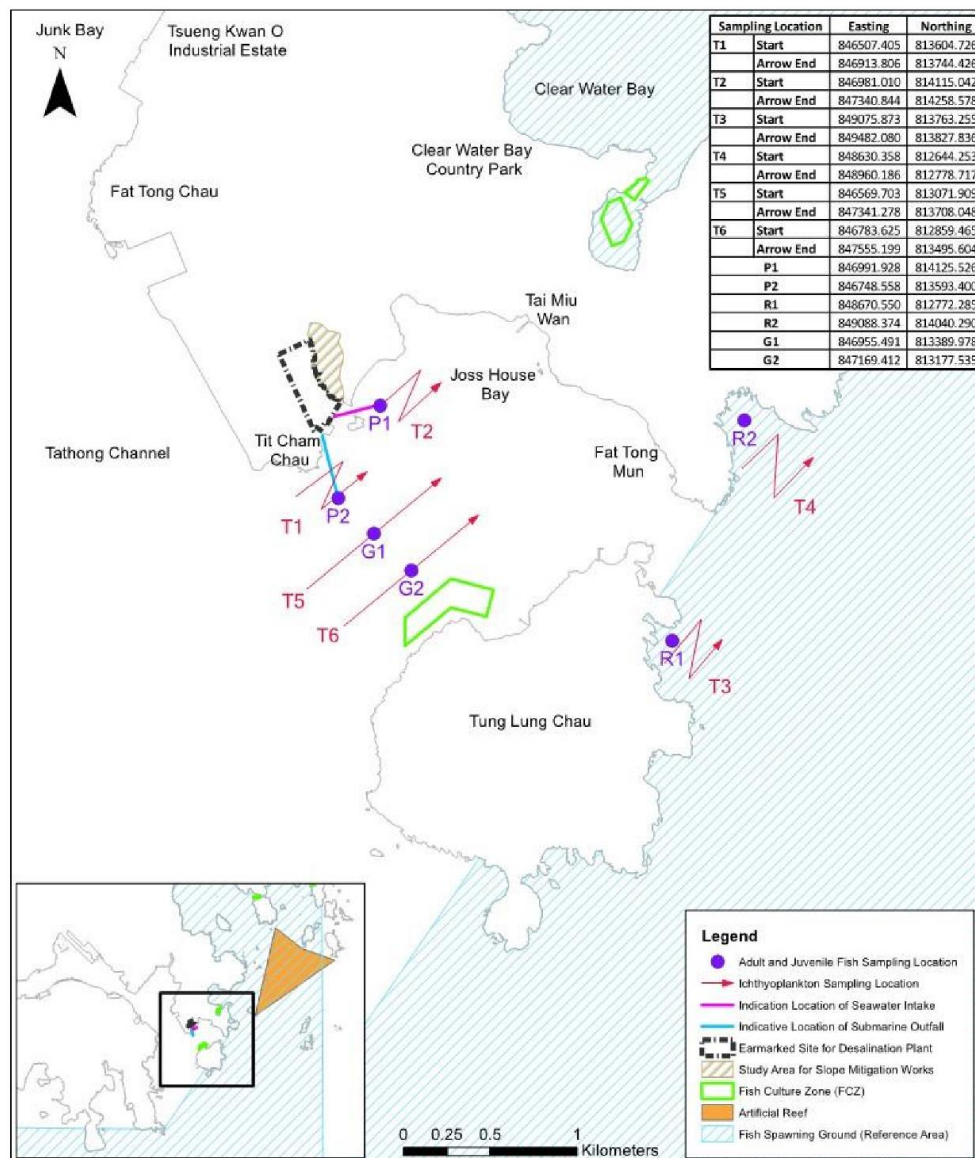


## 7. ECOLOGY (FISHERY MONITORING)

- 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**.



**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 (November to March) to examine the following:

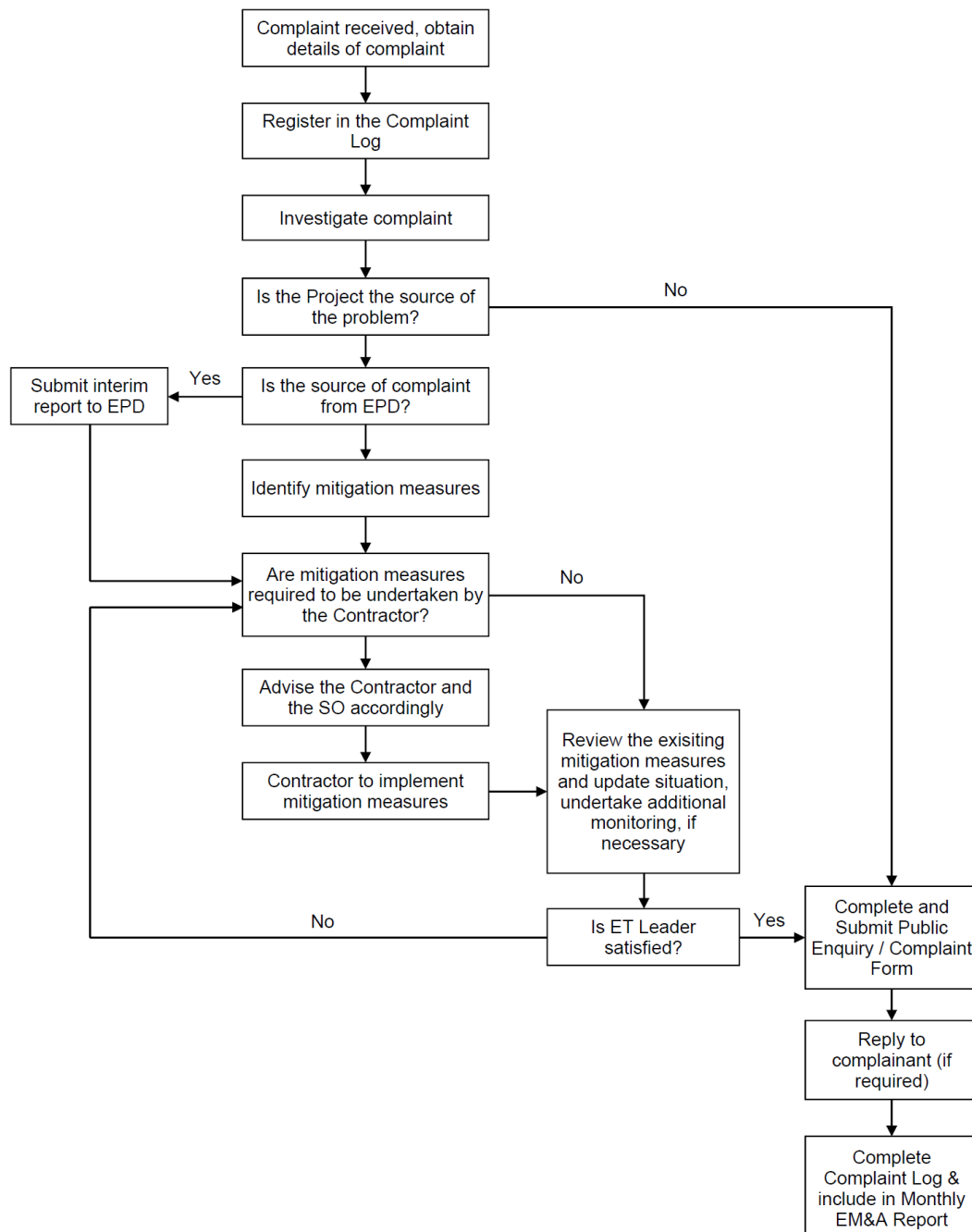
- Fish species composition;
- Abundance: number of fish captured;
- Diversity of fish resources: species diversity and evenness;
- Size: range of total length; Biomass in weight; and
- Values of catches of commercial species: catch per unit effort (CPUE) and yield per unit effort (YPUE).

**MONITORING RESULT AND OBSERVATION**

- 7.8. Pre-operation phase fishery monitoring for dry season 2024 was carried out on [17 and 24 February 2024](#). The detail of the monitoring was presented in the 50<sup>th</sup> EM&A Monthly Report.
- 7.9. The operation phase fishery monitoring for wet season 2024 was scheduled on [24 and 31 August 2024](#).

## 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 [2, 4, 6, 8, 10, 13, 16, 18, 20, 22, 24, 27 and 30 July 2024](#). [Seven \(7\)](#) of SS obtained had exceeded the Action Level. [Forty-nine \(49\)](#) 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 had exceeded the Limit Level.
- 8.5. Operation phase coral monitoring works was conducted on [18 July 2024](#). There is no AL/LL exceedance during the monitoring period. The detail of the monitoring was presented in **Appendix H**.
- 8.6. Pre-operation phase fishery monitoring for dry season 2024 was carried out on [17 and 24 February 2024](#). The detailed of the monitoring was presented in the 50<sup>th</sup> Construction Phase Monthly EM&A Report.
- 8.7. In this reporting period, monthly landfill gas monitoring was conducted on [18 and 19 July 2024](#). No exceedances of action level and limit level was observed.
- 8.8. [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 **2, 9, 16, 23 and 29 July 2024** at the site portions listed in **Table 10.1** below.

**Table 10.1 Summaries of Site Inspection Record**

Date	Inspected Site Portion	Time
<b>2 July 2024</b>	TKO Area 137	14:30 – 15:30
<b>9 July 2024</b>	TKO Area 137	14:30 – 15:30
<b>16 July 2024</b>	TKO Area 137	14:30 – 15:30
<b>23 July 2024</b>	TKO Area 137	14:30 – 15:30

- 9.2. Joint site inspections with IEC were carried out on **29 July 2024**.
- 9.3. 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
<b>2 July 2024</b>	No major environmental deficiency was observed.	N/A
<b>9 July 2024</b>	No major environmental deficiency was observed.	N/A
<b>16 July 2024</b>	No major environmental deficiency was observed.	N/A
<b>23 July 2024</b>	No major environmental deficiency was observed.	N/A
<b>29 July 2024</b>	No major environmental deficiency was observed.	N/A

- 9.4. 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:

- Production of water

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

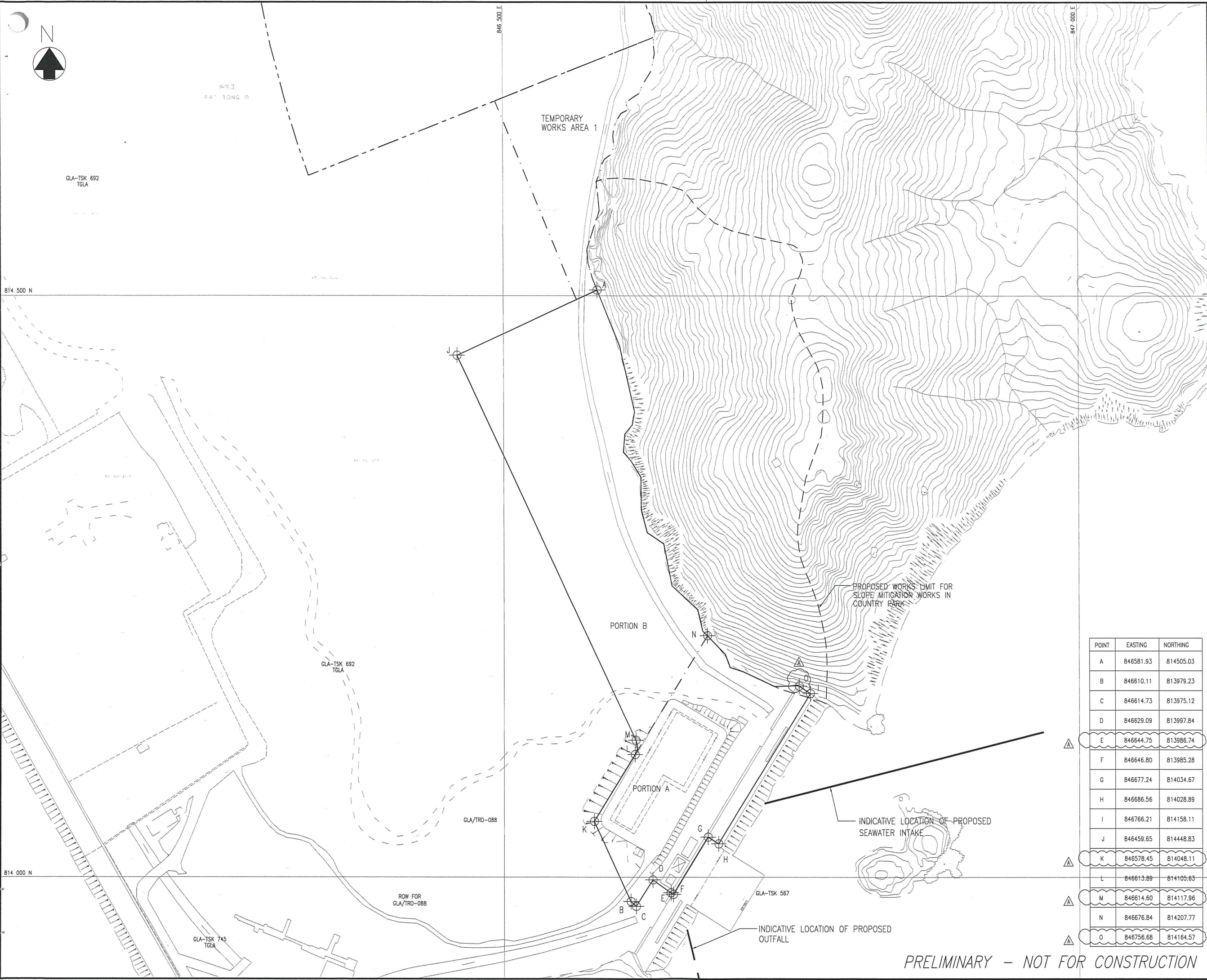
## 11. CONCLUSIONS AND RECOMMENDATIONS

- 11.1. This is the 1<sup>st</sup> Monthly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from [Date] to [Date], 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. Seven (7) of SS obtained had exceeded the Action Level. Forty-nine (49) 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 had exceeded the Limit Level.
- 11.4. Operation phase coral monitoring works was conducted on 18 July 2024. There is no AL/LL exceedance during the monitoring period.
- 11.5. Pre-operation phase fishery monitoring for dry season 2024 was carried out on 17 and 24 February 2024. The detailed of the monitoring was presented in the 50th EM&A Monthly Report.
- 11.6. In this reporting period, monthly landfill gas monitoring was conducted on 18 and 19 July 2024. No exceedances of action level and limit level was observed.
- 11.7. 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.
- 11.8. No environmental complaint, notification of summons and prosecution was received in the reporting period.
- 11.9. 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





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**LEGEND:**

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

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

B	10/03	UPDATE NOTES			YLC
A	07/18	UPDATE COORDINATES			YLC
Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	YLC	CKH	SZ	WLS	
Date	02/18	02/18	02/18	02/18	

Approved

*Christina Go*

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.	Revision
190495/K/TEND/10/0003	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

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	846613.89	814105.63
M	846614.60	814117.96
N	846676.84	814207.77
O	846756.68	814164.57

PRELIMINARY – NOT FOR CONSTRUCTION



BUILDINGS IN FIRST STAGE

CODE	NAME OF BUILDING	TOTAL G.F.A. (m²)	SITE COVERAGE (m²)
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	2933,980
K	SUDGE TREATMENT BUILDING, TANK AND PUMP ROOM	2531,044	1228,361
M	ADMINISTRATION BUILDING & ELECTRICAL BUILDING C	2450,713	1114,062
N	MAIN ELECTRICAL AND CENTRAL CHILLER PLANT BUILDING	-	409,893
R1	ELECTROCHLORINATION BUILDING & ELECTRICAL BUILDING A	657,992	825,776
S	132 KV SUBSTATION	-	943,590
T	IRRIGATION WATER TANK AND PUMP ROOM	-	156,148
R2	CHEMICAL BUILDING	813,056	613,056
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	21490,023

LEGEND / ABBREVIATION

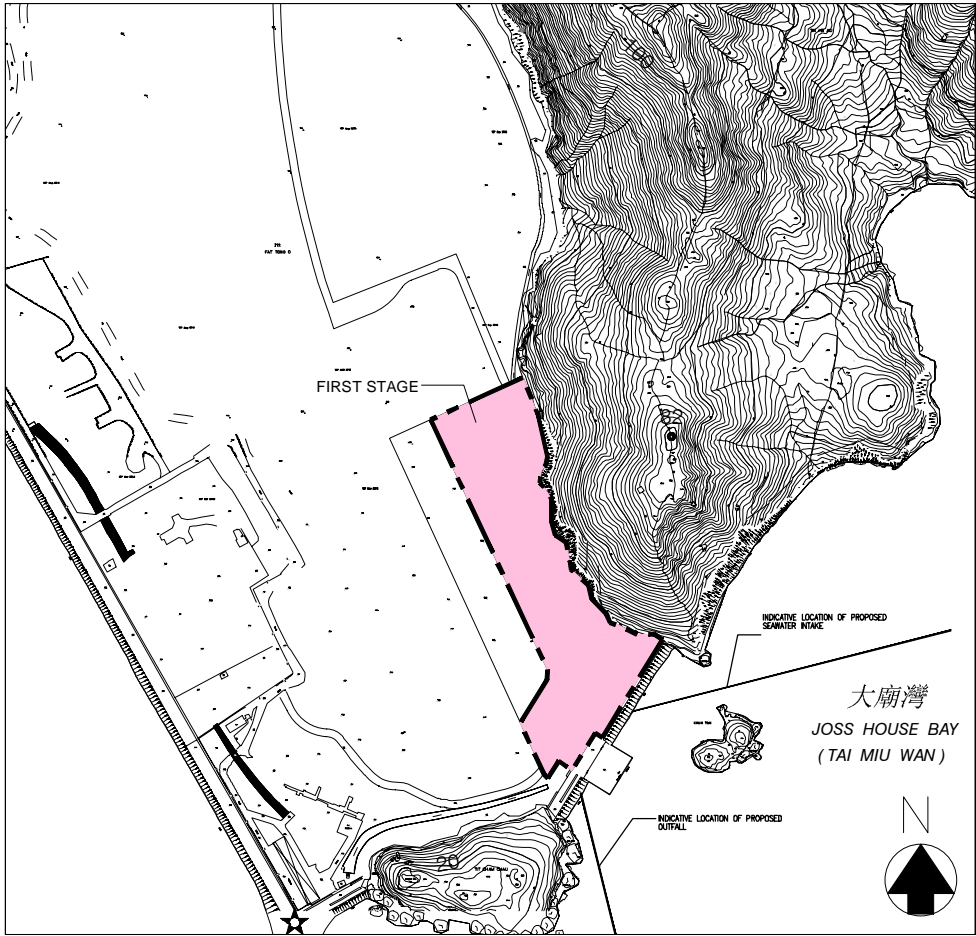
H/L WINDOW	HIGH LEVEL WINDOW
M.L.	METAL LOUVRES
C.L.	CAT LADDER
A.U.T.	ACCESSIBLE UNISEX TOILET
⊕	PROPOSED FINISH FLOOR LEVEL IN METER ABOVE P.D.
⊕	STRUCTURAL FLOOR LEVEL IN METER ABOVE P.D.
M.V.A.L.	MECHANICAL VENTILATION & ARTIFICIAL LIGHTING
F.E.	4.5kg CO <sub>2</sub> FIRE EXTINGUISHER
H.R.	HOSE REEL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

PLOT RATIO & SITE COVERAGE CALCULATION:

SITE AREA OF THE FIRST STAGE	=	56108 m²
TOTAL G.F.A.	=	25092.141 m²
TOTAL SITE COVERAGE	=	21414.841 m²
PLOT RATIO	=	25092.141 / 56108
	=	0.447 < PERMITTED
SITE COVERAGE	=	21414.841 / 56108 x 100
	=	38.167%

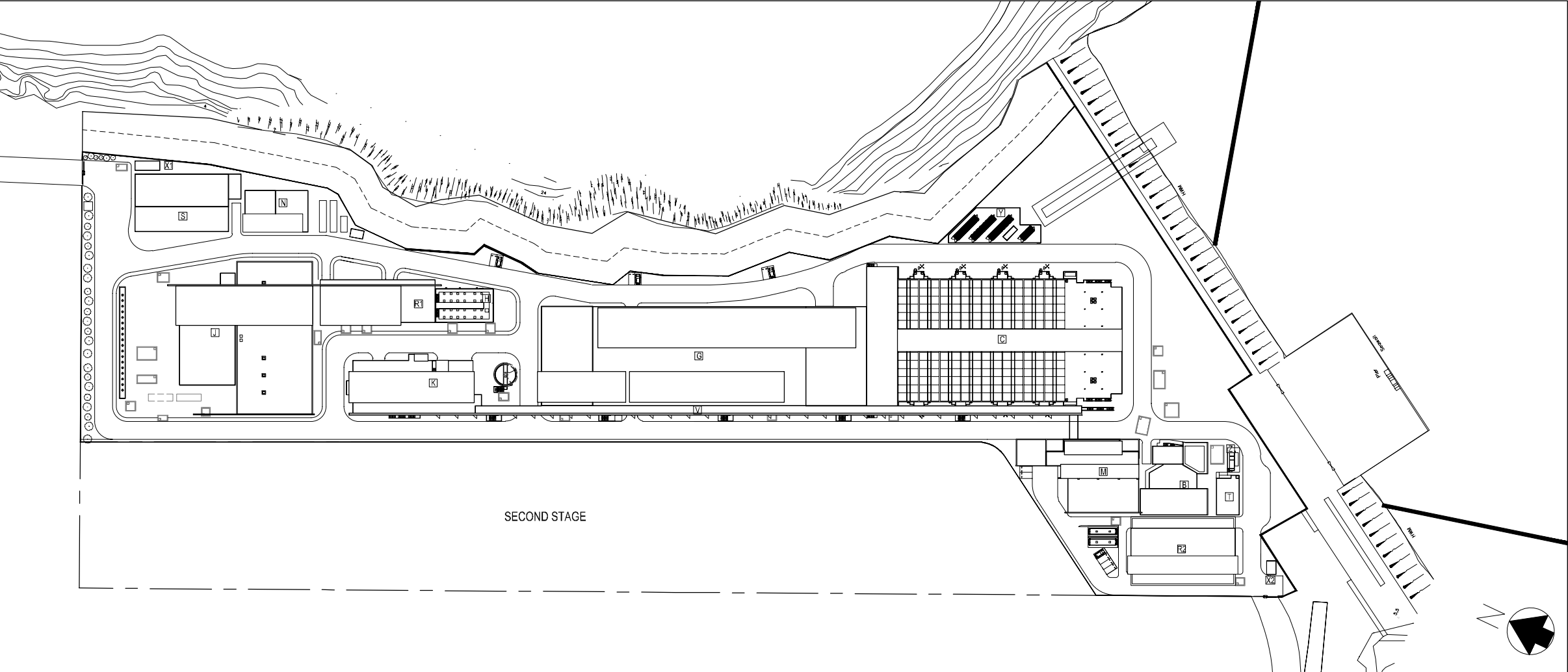
SITE LOCATION PLAN


1 : 5000



FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT

1 : 1000



0	TENDER SUBMISSION	CAD	JAN 19
Rev	Description	By	Date
Employer			
			
Employer's Consultant			
			
Tenderer			
			
Designer			
			
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
OKAL	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	-
<b>Landscape &amp; Visual</b>								
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	-
<b>Landfill Gas Hazard</b>								
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

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	19	20
21	22	23	24	25	26	27
28	29	30				
Remarks: 1. Monitoring Parameters: Oxygen, Methane, Carbon Dioxide and Barometric Pressure						

Remarks:

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

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
				Landfill Gas Monitoring	Landfill Gas Monitoring	
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  
Water Quality Monitoring Schedule (July 2024)

[illegible]

[illegible]

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

Jul-24	
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31

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	19	20
			Regular Operation Phase Coral Monitoring			
21	22	23	24	25	26	27
28	29	30	31			

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

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

Aug-24						
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	19	20	21	22	23	24
25	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	<ol style="list-style-type: none"><li>1. Repeat <i>in situ</i> measurement on the next day of exceedance to confirm findings;</li><li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li><li>3. Identify source(s) of impact and record in notification of exceedance;</li><li>4. Inform IEC, Contractor(s) and ER.</li></ol>	<ol style="list-style-type: none"><li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li><li>2. Inform EPD.</li></ol>	<ol style="list-style-type: none"><li>1. Confirm receipt of notification of exceedance in writing;</li><li>2. Check plant and equipment and rectify unacceptable practice</li></ol>	<ol style="list-style-type: none"><li>1. Confirm receipt of notification of exceedance in writing.</li></ol>	
Action Level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"><li>1. Repeat <i>in situ</i> measurement on the next day of exceedance to confirm findings;</li><li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li><li>3. Identify source(s) of impact and record in notification of exceedance;</li><li>4. Inform IEC, Contractor(s) and ER;</li><li>5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented</li></ol>	<ol style="list-style-type: none"><li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li><li>2. Inform EPD;</li><li>3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li><li>4. Assess the effectiveness of the implemented mitigation measures.</li></ol>	<ol style="list-style-type: none"><li>1. Confirm receipt of notification of exceedance in writing;</li><li>2. Check plant and equipment and rectify unacceptable practice;</li><li>3. Consider changes of working methods;</li><li>4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li><li>5. Implement the agreed mitigation measures.</li></ol>	<ol style="list-style-type: none"><li>1. Confirm receipt of notification of exceedance in writing;</li><li>2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li><li>3. Ensure additional mitigation measures are properly implemented.</li></ol>	
Limit Level being exceeded by one sampling day	<ol style="list-style-type: none"><li>1. Repeat <i>in situ</i> measurement on the next day of exceedance to confirm findings;</li><li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li><li>3. Identify source(s) of impact and record in notification of exceedance;</li><li>4. Inform IEC, Contractor(s) and ER;</li><li>5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented</li></ol>	<ol style="list-style-type: none"><li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li><li>2. Inform EPD;</li><li>3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li><li>4. Assess the effectiveness of the implemented mitigation measures.</li></ol>	<ol style="list-style-type: none"><li>1. Confirm receipt of notification of exceedance in writing;</li><li>2. Check plant and equipment and rectify unacceptable practice;</li><li>3. Critically review the need to change working methods;</li><li>4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li><li>5. Implement the agreed mitigation measures.</li></ol>	<ol style="list-style-type: none"><li>1. Confirm receipt of notification of exceedance in writing;</li><li>2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li><li>3. Ensure additional mitigation measures are properly implemented.</li><li>4. Request Contractor(s) to critically review the working methods.</li></ol>	
Limit Level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"><li>1. Repeat <i>in situ</i> measurement on the next day of exceedance to confirm findings;</li><li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li><li>3. Identify source(s) of impact and record in notification of exceedance;</li><li>4. Inform IEC, Contractor(s) and ER;</li><li>5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented</li></ol>	<ol style="list-style-type: none"><li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li><li>2. Inform EPD;</li><li>3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li><li>4. Assess the effectiveness of the implemented mitigation measures.</li></ol>	<ol style="list-style-type: none"><li>1. Confirm receipt of notification of exceedance in writing;</li><li>2. Check plant and equipment and rectify unacceptable practice;</li><li>3. Critically review the need to change working methods;</li><li>4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li><li>5. Implement the agreed mitigation measures.</li><li>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.</li></ol>	<ol style="list-style-type: none"><li>1. Confirm receipt of notification of exceedance in writing;</li><li>2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li><li>3. Ensure additional mitigation measures are properly implemented.</li><li>4. Request Contractor(s) to critically review the working methods;</li><li>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.</li></ol>	

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

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	<ol style="list-style-type: none"> <li>1. Check monitoring data</li> <li>2. Inform the IEC, SOR and Contractor of the findings;</li> <li>3. Increase the monitoring to at least once a month to confirm findings;</li> <li>4. Propose mitigation measures for consideration</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss monitoring with the ET and the Contractor;</li> <li>2. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise the SOR accordingly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET;</li> <li>2. Make agreement on the measures to be implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the SOR and confirm notification of the non-compliance in writing;</li> <li>2. Discuss with the ET and the IEC and propose measures to the IEC and the SOR;</li> <li>3. Implement the agreed measures.</li> </ol>
Limit Level Exceedance	<ol style="list-style-type: none"> <li>1. Undertake Steps 1-4 as in the Action Level Exceedance. If further exceedance of Limit Level, propose enhancement measures for consideration.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss monitoring with the ET and the Contractor;</li> <li>2. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise the SOR accordingly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET;</li> <li>2. Make agreement on the measures to be implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the SOR and confirm notification of the non-compliance in writing;</li> <li>2. Discuss with the ET and the IEC and propose measures to the IEC and the SOR;</li> <li>3. Implement the agreed measures.</li> </ol>

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 <sub>2</sub> )	Action Level < 19% O <sub>2</sub>	Ventilate trench/void to restore O <sub>2</sub> to > 19%
	Limit Level < 19% O <sub>2</sub>	Stop works Evacuate personnel/prohibit entry Increase ventilation to restore O <sub>2</sub> to > 19%
Methane (CH <sub>4</sub> )	Action Level >10% LEL	Post "No Smoking" signs Prohibit hot works Increase ventilation to restore CH <sub>4</sub> to <10% LEL
	Limit Level >20% LEL	Stop works Evacuate personnel/prohibit entry Increase ventilation to restore CH <sub>4</sub> to <10% LEL
Carbon Dioxide (CO <sub>2</sub> )	Action Level >0.5% CO <sub>2</sub>	Ventilate to restore CO <sub>2</sub> to < 0.5%
	Limit Level >1.5% CO <sub>2</sub>	Stop works Evacuate personnel / prohibit entry Increase ventilation to restore CO <sub>2</sub> to <0.5%

# Appendix E

## Water Quality Monitoring Equipment and Landfill Gas Equipment Calibration Certification





# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD060107  
Date of Issue : 03 July 2024  
Page No. : 1 of 2

### 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 : 15M101091  
Date of Received : 26 June 2024  
Date of Calibration : 03 July 2024  
Date of Next Calibration : 02 October 2024  
Request No. : D-BD060107

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

Test Parameter	Reference Method
pH value	APHA 21e 4500-H <sup>+</sup> 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	4.10	0.10	Satisfactory
7.42	7.40	-0.02	Satisfactory
10.01	9.90	-0.11	Satisfactory

Tolerance of pH value should be less than  $\pm 0.2$  ( pH unit )

#### (2) Temperature

Reading of Ref. thermometer ( °C )	Display Reading ( °C )	Tolerance	Result
20.0	19.0	-1.0	Satisfactory
27.5	26.8	-0.7	Satisfactory
36.0	35.5	-0.5	Satisfactory

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

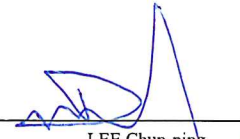
#### (3) Salinity

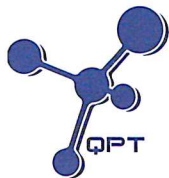
Expected Reading ( g/L )	Display Reading ( g/L )	Tolerance ( % )	Result
10	9.90	-1.00	Satisfactory
20	20.24	1.20	Satisfactory
30	30.62	2.07	Satisfactory

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

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Assistant Manager



專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

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Email: info@qualityprotest.com; Website: www.qualityprotest.com

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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD060107

Date of Issue : 03 July 2024

Page No. : 2 of 2

### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
8.55	8.34	-0.21	Satisfactory
5.80	5.60	-0.20	Satisfactory
3.40	3.40	0.00	Satisfactory
0.43	0.42	-0.01	Satisfactory

Tolerance of Dissolved oxygen should be less than  $\pm 0.5$  ( mg/L )

### (5) Turbidity

Expected Reading ( NTU )	Display Reading ( NTU )	Tolerance ( % )	Result
0	2.58	--	--
10	9.62	-3.8	Satisfactory
20	19.67	-1.6	Satisfactory
100	104.41	4.4	Satisfactory
800	778.88	-2.6	Satisfactory

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

### Remark(s)

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

--- END OF REPORT ---



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD070022

Date of Issue : 15 July 2024

Page No. : 1 of 2

### 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 : 11 July 2024

Date of Calibration : 12 July 2024

Date of Next Calibration : 11 October 2024

Request No. : D-BD070022

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

#### Test Parameter

#### Reference Method

pH value

APHA 21e 4500-H<sup>+</sup> 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	7.46	0.04	Satisfactory
10.01	10.05	0.04	Satisfactory

Tolerance of pH value should be less than  $\pm 0.2$  (pH unit)

#### (2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
16.0	14.7	-1.3	Satisfactory
25.5	24.1	-1.4	Satisfactory
32.0	30.8	-1.2	Satisfactory

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

#### (3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.01	0.10	Satisfactory
20	20.21	1.05	Satisfactory
30	30.90	3.00	Satisfactory

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

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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD070022

Date of Issue : 15 July 2024

Page No. : 2 of 2

### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
8.50	8.56	0.06	Satisfactory
7.11	6.66	-0.45	Satisfactory
4.31	4.13	-0.18	Satisfactory
0.69	0.30	-0.39	Satisfactory

Tolerance of Dissolved oxygen should be less than  $\pm 0.5$  ( mg/L )

### (5) Turbidity

Expected Reading ( NTU )	Display Reading ( NTU )	Tolerance ( % )	Result
0	-0.12	--	--
10	9.88	-1.2	Satisfactory
20	19.42	-2.9	Satisfactory
100	97.08	-2.9	Satisfactory
800	743.03	-7.1	Satisfactory

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

### Remark(s)

- The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.
- The results relate only to the calibrated equipment as received
- The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
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- The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.

--- END OF REPORT ---





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F: +852 2610 2021  
www.alsglobal.com

## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

**CONTACT:** JOE HO  
**CLIENT:** AURECON HONG KONG LIMITED  
**ADDRESS:** UNIT E, 12/F, FORD GLORY PLAZA,  
NO. 37-39 WING HONG STREET,  
LAI CHI KOK

**WORK ORDER:** HK2452185

**SUB-BATCH:** 0  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 09-Jul-2024  
**DATE OF ISSUE:** 18-Jul-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: Chlorine Meter  
Service Nature: Performance Check  
Scope: Free Chlorine and Total Residual Chlorine  
Brand Name/ Model No.: [LOVIBOND]/ [MD200]  
Serial No./ Equipment No.: [19/79699]/ [N/A]  
Date of Calibration: 09-Jul-2024

Mr Chan Siu Ming, Vico  
Assistant Laboratory Manager  
Environmental

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2452185  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 18-Jul-2024  
**CLIENT:** AURECON HONG KONG LIMITED

Equipment Type: Chlorine Meter  
Brand Name/ Model No.: [LOVIBOND]/ [MD200]  
Serial No.: [19/79699]/ [N/A]  
Equipment No.:  
Date of Calibration: 09-Jul-2024

Date of Next Calibration: 09-October-2024

## PARAMETERS:

### Free Chlorine

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (%)
0.2	0.23	+5.0
1.0	1.01	+1.0
2.0	1.97	-5.0
	Tolerance Limit (%)	±10.0

### Total Residual Chlorine

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (%)
0.2	0.21	+5.0
1.0	0.98	-2.0
2.0	2.00	+0.0
	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



## **REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION**

**CONTACT:** TOBY WAN  
**CLIENT:** AURECON HONG KONG LIMITED  
**ADDRESS:** UNIT 1608, 16/F, TOWER B,  
MANULIFE FINANCIAL CENTRE,  
223-231 WAI YIP STREET,  
KWUN TONG, HONG KONG

**WORK ORDER:** HK2425655  
**SUB-BATCH:** 0  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 26-Jun-2024  
**DATE OF ISSUE:** 08-Jul-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.: [23462251]/ [N/A]

Date of Calibration: 26-June-2024

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



WORK ORDER: HK2425655  
SUB-BATCH: 0  
DATE OF ISSUE: 08-Jul-2024  
CLIENT: AURECON HONG KONG LIMITED

Equipment Type: pH meter  
Brand Name/ Model No.: [Xylem]/ [SensoLyt®700IQ SW, SensoLyt® SEA]  
Serial No./ Equipment No.: [23462251]/ [N/A]  
Date of Calibration: 26-June-2024      Date of Next Calibration: 26-September-2024

PARAMETERS:

pH Value

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

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	4.04	+0.04
7.0	6.90	-0.10
10.0	9.67	-0.33
	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.

Mr Chan Siu Ming, Vico  
Assistant Laboratory Manager  
Environmental



## **REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION**

**CONTACT:** TOBY WAN  
**CLIENT:** AURECON HONG KONG LIMITED  
**ADDRESS:** UNIT 1608, 16/F, TOWER B,  
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**WORK ORDER:** HK2425655  
**SUB-BATCH:** 1  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 26-Jun-2024  
**DATE OF ISSUE:** 08-Jul-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.: [24141069]/ [N/A]  
Date of Calibration: 26-June-2024

Mr Chan Siu Ming, Vico  
Assistant Laboratory Manager  
Environmental

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2425655  
**SUB-BATCH:** 1  
**DATE OF ISSUE:** 08-Jul-2024  
**CLIENT:** AURECON HONG KONG LIMITED

Equipment Type: Salinity Meter  
Brand Name/ Model No.: [Xylem]/ [TetraCon® 700 IQ SW]  
Serial No./ Equipment No.: [24141069]/ [N/A]  
Date of Calibration: 26-June-2024      Date of Next Calibration: 26-September-2024

**PARAMETERS:**

Salinity	Method Ref: APHA (23rd edition), 2520B		
	Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
	20	20.2 Tolerance Limit (%)	+1.0 ±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





## **REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION**

**CONTACT:** TOBY WAN  
**CLIENT:** AURECON HONG KONG LIMITED  
**ADDRESS:** UNIT 1608, 16/F, TOWER B,  
MANULIFE FINANCIAL CENTRE,  
223-231 WAI YIP STREET,  
KWUN TONG, HONG KONG

**WORK ORDER:** HK2425655  
**SUB-BATCH:** 2  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 26-Jun-2024  
**DATE OF ISSUE:** 08-Jul-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: Dissolved Oxygen Meter

Service Nature: Performance Check

Scope: Dissolved Oxygen

Brand Name/ Model No.: [Xylem]/ [FDO® 700 IQ SW]

Serial No./ Equipment No.: [24131693]/ [N/A]

Date of Calibration: 26-June-2024

Mr Chan Siu Ming, Vico  
Assistant Laboratory Manager  
Environmental

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2425655  
**SUB-BATCH:** 2  
**DATE OF ISSUE:** 08-Jul-2024  
**CLIENT:** AURECON HONG KONG LIMITED

Equipment Type: Dissolved Oxygen Meter  
Brand Name/ Model No.: [Xylem]/ [FDO® 700 IQ SW]  
Serial No./ Equipment No.: [24131693]/ [N/A]  
Date of Calibration: 26-June-2024      Date of Next Calibration: 26-September-2024

**PARAMETERS:**

Dissolved Oxygen	Method Ref: APHA (23rd edition), 4500O: G		
	Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
	7.45	7.54 Tolerance Limit (mg/L)	+0.09 ±0.20

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



## **REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION**

**CONTACT:** TOBY WAN  
**CLIENT:** AURECON HONG KONG LIMITED  
**ADDRESS:** UNIT 1608, 16/F, TOWER B,  
MANULIFE FINANCIAL CENTRE,  
223-231 WAI YIP STREET,  
KWUN TONG, HONG KONG

**WORK ORDER:** HK2425655  
**SUB-BATCH:** 3  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 26-Jun-2024  
**DATE OF ISSUE:** 08-Jul-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: Turbidimeter  
Service Nature: Performance Check  
Scope: Turbidity  
Brand Name/ Model No.: [Xylem]/ [VisoTurb® 700 IQ SW]  
Serial No./ Equipment No.: [24120626]/ [N/A]  
Date of Calibration: 26-June-2024

Mr Chan Siu Ming, Vico  
Assistant Laboratory Manager  
Environmental

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2425655  
**SUB-BATCH:** 3  
**DATE OF ISSUE:** 08-Jul-2024  
**CLIENT:** AURECON HONG KONG LIMITED

Equipment Type: Turbidimeter  
Brand Name/ Model No.: [Xylem]/ [VisoTurb® 700 IQ SW]  
Serial No./ Equipment No.: [24120626]/ [N/A]  
Date of Calibration: 26-June-2024      Date of Next Calibration: 26-September-2024

**PARAMETERS:**

**Turbidity**

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

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
7.73	8.00	+3.5
	Tolerance Limit (%)	±10.0

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

A handwritten signature in black ink, appearing to read 'Chan Siu Ming'.

Mr Chan Siu Ming, Vico  
Assistant Laboratory Manager  
Environmental



## **REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION**

**CONTACT:** TOBY WAN  
**CLIENT:** AURECON HONG KONG LIMITED  
**ADDRESS:** UNIT 1608, 16/F, TOWER B,  
MANULIFE FINANCIAL CENTRE,  
223-231 WAI YIP STREET,  
KWUN TONG, HONG KONG

**WORK ORDER:** HK2425655  
**SUB-BATCH:** 4  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 26-Jun-2024  
**DATE OF ISSUE:** 08-Jul-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.: [23462251]/ [N/A]

Date of Calibration: 26-June-2024

Mr Chan Siu Ming, Vico  
Assistant Laboratory Manager  
Environmental

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2425655  
**SUB-BATCH:** 4  
**DATE OF ISSUE:** 08-Jul-2024  
**CLIENT:** AURECON HONG KONG LIMITED

Equipment Type: Thermometer  
Brand Name/ Model No.: [Xylem]/ [TetraCon® 700IQ SW, SensoLyt®700IQ SW]  
Serial No./ Equipment No.: [23462251]/ [N/A]  
Date of Calibration: 26-June-2024      Date of Next Calibration: 26-September-2024

**PARAMETERS:**

**Temperature**

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

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
28.1	27.7	-0.4
	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  
Assistant Laboratory Manager  
Environmental



## **REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION**

**CONTACT:** TOBY WAN  
**CLIENT:** AURECON HONG KONG LIMITED  
**ADDRESS:** UNIT 1608, 16/F, TOWER B,  
MANULIFE FINANCIAL CENTRE,  
223-231 WAI YIP STREET,  
KWUN TONG, HONG KONG

**WORK ORDER:** HK2425963  
**SUB-BATCH:** 0  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 28-Jun-2024  
**DATE OF ISSUE:** 10-Jul-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.: [23462251]/ [N/A]

Date of Calibration: 28-June-2024

Mr Chan Siu Ming, Vico  
Assistant Laboratory Manager  
Environmental

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK2425963  
SUB-BATCH: 0  
DATE OF ISSUE: 10-Jul-2024  
CLIENT: AURECON HONG KONG LIMITED

Equipment Type: pH meter  
Brand Name/ Model No.: [Xylem]/ [SensoLyt®700IQ SW, SensoLyt® SEA]  
Serial No./ Equipment No.: [23462251]/ [N/A]  
Date of Calibration: 28-June-2024      Date of Next Calibration: 28-September-2024

PARAMETERS:

pH Value

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

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	4.10	+0.10
7.0	6.95	-0.05
10.0	9.82	-0.18
	Tolerance Limit (pH unit)	±0.20

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

Mr Chan Siu Ming, Vico  
Assistant Laboratory Manager  
Environmental



**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  
Customer Aurecon Hong Kong Ltd.

Date: 23-Apr-24

**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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CE	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	11:04:00 AM	8.74	8.15	31.58	27.19	2.37	5.00	<0.1	<0.01
CE	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	11:04:00 AM	8.74	8.17	31.48	27.16	2.42	4.00	<0.1	<0.01
CE	2/07/2024	Cloudy	Mid-Flood	Moderate	M	12	11:05:00 AM	8.76	8.14	31.39	27.12	2.35	4.00	<0.1	<0.01
CE	2/07/2024	Cloudy	Mid-Flood	Moderate	M	12	11:05:00 AM	8.81	8.14	31.56	27.16	2.41	5.00	<0.1	<0.01
CE	2/07/2024	Cloudy	Mid-Flood	Moderate	B	23	11:06:00 AM	8.74	8.12	31.43	27.19	2.36	8.00	<0.1	<0.01
CE	2/07/2024	Cloudy	Mid-Flood	Moderate	B	23	11:06:00 AM	8.72	8.16	31.54	27.19	2.35	7.00	<0.1	<0.01
CF	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:00:00 AM	8.71	8.23	31.66	27.40	2.43	4.00	<0.1	<0.01
CF	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:00:00 AM	8.72	8.18	31.70	27.46	2.59	8.00	<0.1	<0.01
CF	2/07/2024	Cloudy	Mid-Flood	Moderate	M	10	8:01:00 AM	8.72	8.20	31.77	27.45	2.48	6.00	<0.1	<0.01
CF	2/07/2024	Cloudy	Mid-Flood	Moderate	M	10	8:01:00 AM	8.73	8.23	31.70	27.47	2.54	7.00	<0.1	<0.01
CF	2/07/2024	Cloudy	Mid-Flood	Moderate	B	19	8:02:00 AM	8.64	8.20	31.74	27.43	2.55	7.00	<0.1	<0.01
CF	2/07/2024	Cloudy	Mid-Flood	Moderate	B	19	8:02:00 AM	8.66	8.21	31.74	27.46	2.62	8.00	<0.1	<0.01
WSR01	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:24:00 AM	7.86	8.08	31.03	27.44	2.10	4.00	<0.1	<0.01
WSR01	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:24:00 AM	7.84	8.08	30.90	27.43	2.11	5.00	<0.1	<0.01
WSR01	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	8:25:00 AM	7.78	8.10	31.06	27.46	2.11	5.00	<0.1	<0.01
WSR01	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	8:25:00 AM	7.89	8.09	31.03	27.40	2.02	5.00	<0.1	<0.01
WSR01	2/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:26:00 AM	7.82	8.10	30.89	27.45	2.01	4.00	<0.1	<0.01
WSR01	2/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:26:00 AM	7.85	8.07	31.01	27.43	2.08	4.00	<0.1	<0.01
WSR02	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:43:00 AM	8.95	8.19	31.66	27.47	1.86	5.00	<0.1	<0.01
WSR02	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:43:00 AM	8.88	8.22	31.61	27.44	1.86	4.00	<0.1	<0.01
WSR02	2/07/2024	Cloudy	Mid-Flood	Moderate	M	5	8:44:00 AM	8.94	8.21	31.70	27.43	1.82	4.00	<0.1	<0.01
WSR02	2/07/2024	Cloudy	Mid-Flood	Moderate	M	5	8:44:00 AM	8.84	8.21	31.81	27.45	1.81	4.00	<0.1	<0.01
WSR02	2/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:45:00 AM	8.88	8.21	31.80	27.50	1.85	5.00	<0.1	<0.01
WSR02	2/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:45:00 AM	8.93	8.20	31.62	27.47	1.84	4.00	<0.1	<0.01
WSR03	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:56:00 AM	8.39	8.11	31.74	27.21	2.12	4.00	<0.1	<0.01
WSR03	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:56:00 AM	8.37	8.11	31.73	27.17	2.07	6.00	<0.1	<0.01
WSR03	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	8:57:00 AM	8.39	8.14	31.78	27.17	1.99	4.00	<0.1	<0.01
WSR03	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	8:57:00 AM	8.34	8.09	31.64	27.19	2.02	5.00	<0.1	<0.01
WSR03	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	8:58:00 AM	8.35	8.09	31.82	27.22	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR03	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	8:58:00 AM	8.40	8.09	31.76	27.22	1.92	5.00	<0.1	<0.01
WSR04	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:11:00 AM	8.35	8.01	31.29	27.38	1.99	3.00	<0.1	<0.01
WSR04	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:11:00 AM	8.31	7.98	31.19	27.40	1.94	5.00	<0.1	<0.01
WSR04	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:12:00 AM	8.35	7.99	31.36	27.42	1.95	5.00	<0.1	<0.01
WSR04	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:12:00 AM	8.27	8.01	31.20	27.41	1.99	5.00	<0.1	<0.01
WSR04	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:13:00 AM	8.31	7.99	31.21	27.39	1.93	5.00	<0.1	<0.01
WSR04	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:13:00 AM	8.31	7.99	31.23	27.40	1.98	4.00	<0.1	<0.01
WSR16	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:41:00 AM	8.34	8.14	32.19	27.27	1.47	4.00	<0.1	<0.01
WSR16	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:41:00 AM	8.37	8.14	31.99	27.29	1.52	5.00	<0.1	<0.01
WSR16	2/07/2024	Cloudy	Mid-Flood	Moderate	M	8	10:42:00 AM	8.35	8.16	32.00	27.27	1.54	4.00	<0.1	<0.01
WSR16	2/07/2024	Cloudy	Mid-Flood	Moderate	M	8	10:42:00 AM	8.26	8.12	32.08	27.29	1.50	5.00	<0.1	<0.01
WSR16	2/07/2024	Cloudy	Mid-Flood	Moderate	B	14	10:43:00 AM	8.36	8.13	32.11	27.25	1.55	4.00	<0.1	<0.01
WSR16	2/07/2024	Cloudy	Mid-Flood	Moderate	B	14	10:43:00 AM	8.26	8.13	32.16	27.25	1.56	5.00	<0.1	<0.01
WSR33	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:28:00 AM	7.87	8.15	31.93	27.48	1.69	5.00	<0.1	<0.01
WSR33	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:28:00 AM	7.76	8.15	31.75	27.50	1.69	4.00	<0.1	<0.01
WSR33	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:29:00 AM	7.77	8.15	31.83	27.46	1.71	6.00	<0.1	<0.01
WSR33	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:29:00 AM	7.76	8.13	31.93	27.43	1.79	5.00	<0.1	<0.01
WSR33	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:30:00 AM	7.87	8.16	31.86	27.48	1.69	5.00	<0.1	<0.01
WSR33	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:30:00 AM	7.86	8.14	31.75	27.44	1.78	4.00	<0.1	<0.01
WSR36	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:45:00 AM	8.48	7.95	31.66	27.13	1.51	5.00	<0.1	<0.01
WSR36	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:45:00 AM	8.53	7.94	31.44	27.17	1.51	5.00	<0.1	<0.01
WSR36	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:46:00 AM	8.45	7.94	31.60	27.18	1.52	5.00	<0.1	<0.01
WSR36	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:46:00 AM	8.53	7.97	31.66	27.12	1.53	5.00	<0.1	<0.01
WSR36	2/07/2024	Cloudy	Mid-Flood	Moderate	B	6	9:46:00 AM	8.44	7.94	31.57	27.19	1.53	4.00	<0.1	<0.01
WSR36	2/07/2024	Cloudy	Mid-Flood	Moderate	B	6	9:46:00 AM	8.53	7.95	31.58	27.13	1.48	5.00	<0.1	<0.01
WSR37	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:02:00 AM	8.70	8.20	30.74	27.66	1.70	3.00	<0.1	<0.01
WSR37	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:02:00 AM	8.78	8.19	30.56	27.68	1.65	5.00	<0.1	<0.01
WSR37	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	10:03:00 AM	8.78	8.21	30.72	27.66	1.62	3.00	<0.1	<0.01
WSR37	2/07/2024	Cloudy	Mid-Flood	Moderate	M	4	10:03:00 AM	8.78	8.21	30.74	27.68	1.59	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR37	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	10:04:00 AM	8.80	8.17	30.60	27.69	1.60	5.00	<0.1	<0.01
WSR37	2/07/2024	Cloudy	Mid-Flood	Moderate	B	7	10:04:00 AM	8.80	8.20	30.68	27.72	1.62	4.00	<0.1	<0.01
NF1	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:26:00 AM	8.75	8.12	31.13	27.41	1.46	5.00	<0.1	<0.01
NF1	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:26:00 AM	8.68	8.09	31.10	27.42	1.53	8.00	<0.1	<0.01
NF1	2/07/2024	Cloudy	Mid-Flood	Moderate	M	7	10:27:00 AM	8.69	8.09	31.06	27.39	1.52	5.00	<0.1	<0.01
NF1	2/07/2024	Cloudy	Mid-Flood	Moderate	M	7	10:27:00 AM	8.70	8.12	31.04	27.39	1.52	6.00	<0.1	<0.01
NF1	2/07/2024	Cloudy	Mid-Flood	Moderate	B	12	10:28:00 AM	8.74	8.10	31.13	27.39	1.53	4.00	<0.1	<0.01
NF1	2/07/2024	Cloudy	Mid-Flood	Moderate	B	12	10:28:00 AM	8.71	8.09	31.09	27.40	1.46	7.00	<0.1	<0.01
NF2	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:18:00 AM	8.19	8.12	31.36	27.55	1.94	6.00	<0.1	<0.01
NF2	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:18:00 AM	8.25	8.13	31.23	27.51	1.88	5.00	<0.1	<0.01
NF2	2/07/2024	Cloudy	Mid-Flood	Moderate	M	5	10:19:00 AM	8.22	8.10	31.34	27.51	2.13	5.00	<0.1	<0.01
NF2	2/07/2024	Cloudy	Mid-Flood	Moderate	M	5	10:19:00 AM	8.27	8.14	31.32	27.56	2.04	6.00	<0.1	<0.01
NF2	2/07/2024	Cloudy	Mid-Flood	Moderate	B	10	10:20:00 AM	8.21	8.14	31.20	27.55	2.03	5.00	<0.1	<0.01
NF2	2/07/2024	Cloudy	Mid-Flood	Moderate	B	10	10:20:00 AM	8.31	8.09	31.30	27.51	2.09	5.00	<0.1	<0.01
NF3	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:11:00 AM	8.68	8.16	32.17	27.53	1.84	6.00	<0.1	<0.01
NF3	2/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:11:00 AM	8.69	8.18	32.05	27.49	1.84	6.00	<0.1	<0.01
NF3	2/07/2024	Cloudy	Mid-Flood	Moderate	M	6	10:12:00 AM	8.66	8.17	32.19	27.54	1.86	6.00	<0.1	<0.01
NF3	2/07/2024	Cloudy	Mid-Flood	Moderate	M	6	10:12:00 AM	8.69	8.16	31.96	27.54	1.81	7.00	<0.1	<0.01
NF3	2/07/2024	Cloudy	Mid-Flood	Moderate	B	11	10:13:00 AM	8.74	8.21	32.09	27.56	1.87	5.00	<0.1	<0.01
NF3	2/07/2024	Cloudy	Mid-Flood	Moderate	B	11	10:13:00 AM	8.64	8.21	31.98	27.49	1.79	5.00	<0.1	<0.01
CE	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:23:00 AM	7.89	8.07	31.29	27.34	2.67	3.00	<0.1	<0.01
CE	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:23:00 AM	7.86	8.06	31.29	27.31	2.63	3.00	<0.1	<0.01
CE	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	12	9:24:00 AM	7.88	8.10	31.06	27.34	2.63	4.00	<0.1	<0.01
CE	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	12	9:24:00 AM	7.88	8.07	31.09	27.37	2.51	4.00	<0.1	<0.01
CE	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	22	9:25:00 AM	7.84	8.06	31.17	27.30	2.46	6.00	<0.1	<0.01
CE	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	22	9:25:00 AM	7.81	8.10	31.17	27.33	2.51	7.00	<0.1	<0.01
CF	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:33:00 PM	7.85	8.04	31.87	27.46	2.29	10.00	<0.1	<0.01
CF	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:33:00 PM	7.82	8.06	31.73	27.53	2.25	8.00	<0.1	<0.01
CF	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	12:34:00 PM	7.81	8.04	31.86	27.43	2.24	10.00	<0.1	<0.01



Location	Date	Weather	Tide	Sea Condition	Water Level	Depth (m)	Time	DO (mg/L)	pH	Sal (ppt)	Temp (°C)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CF	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	12:34:00 PM	7.75	8.06	31.75	27.46	2.18	6.00	<0.1	<0.01
CF	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	20	12:35:00 PM	7.72	8.06	31.72	27.55	2.20	3.00	<0.1	<0.01
CF	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	20	12:35:00 PM	7.79	8.03	31.84	27.49	2.21	6.00	<0.1	<0.01
WSR01	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:09:00 PM	7.84	8.00	31.11	27.38	1.90	11.00	<0.1	<0.01
WSR01	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:09:00 PM	7.89	8.03	31.05	27.36	1.87	7.00	<0.1	<0.01
WSR01	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:10:00 PM	7.89	8.03	31.19	27.36	1.86	7.00	<0.1	<0.01
WSR01	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:10:00 PM	7.96	8.02	31.27	27.38	1.81	10.00	<0.1	<0.01
WSR01	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	12:11:00 PM	7.79	8.02	31.04	27.38	1.86	10.00	<0.1	<0.01
WSR01	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	12:11:00 PM	7.87	8.02	31.20	27.32	1.91	11.00	<0.1	<0.01
WSR02	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:48:00 AM	7.92	8.11	32.13	27.39	1.53	7.00	<0.1	<0.01
WSR02	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:48:00 AM	7.78	8.11	32.02	27.35	1.51	9.00	<0.1	<0.01
WSR02	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	11:49:00 AM	7.87	8.09	32.20	27.32	1.61	5.00	<0.1	<0.01
WSR02	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	11:49:00 AM	7.80	8.12	32.25	27.43	1.55	5.00	<0.1	<0.01
WSR02	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	11:50:00 AM	7.78	8.10	32.04	27.35	1.59	11.00	<0.1	<0.01
WSR02	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	11:50:00 AM	7.87	8.10	32.01	27.44	1.61	10.00	<0.1	<0.01
WSR03	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:32:00 AM	8.62	8.18	31.20	27.17	1.53	9.00	<0.1	<0.01
WSR03	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:32:00 AM	8.51	8.20	31.22	27.18	1.46	7.00	<0.1	<0.01
WSR03	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:33:00 AM	8.62	8.19	31.30	27.09	1.44	8.00	<0.1	<0.01
WSR03	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:33:00 AM	8.52	8.21	31.21	27.08	1.41	8.00	<0.1	<0.01
WSR03	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:34:00 AM	8.63	8.20	31.32	27.20	1.40	8.00	<0.1	<0.01
WSR03	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:34:00 AM	8.65	8.21	31.30	27.08	1.41	7.00	<0.1	<0.01
WSR04	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:19:00 AM	7.76	8.07	31.82	27.29	1.73	6.00	<0.1	<0.01
WSR04	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:19:00 AM	7.83	8.07	31.87	27.28	1.77	7.00	<0.1	<0.01
WSR04	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:20:00 AM	7.76	8.07	31.76	27.33	1.84	6.00	<0.1	<0.01
WSR04	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:20:00 AM	7.76	8.06	31.93	27.20	1.73	8.00	<0.1	<0.01
WSR04	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	11:21:00 AM	7.84	8.06	31.89	27.31	1.78	6.00	<0.1	<0.01
WSR04	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	11:21:00 AM	7.87	8.04	31.71	27.20	1.75	6.00	<0.1	<0.01
WSR16	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:46:00 AM	8.51	8.08	32.08	27.38	1.59	6.00	<0.1	<0.01
WSR16	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:46:00 AM	8.40	8.09	32.02	27.32	1.63	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR16	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	9:47:00 AM	8.41	8.10	31.99	27.29	1.63	11.00	<0.1	<0.01
WSR16	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	9:47:00 AM	8.49	8.10	31.94	27.32	1.57	10.00	<0.1	<0.01
WSR16	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	16	9:48:00 AM	8.46	8.12	31.97	27.36	1.57	6.00	<0.1	<0.01
WSR16	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	16	9:48:00 AM	8.37	8.12	31.92	27.27	1.61	10.00	<0.1	<0.01
WSR33	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:02:00 AM	8.63	8.18	31.26	27.25	2.05	9.00	<0.1	<0.01
WSR33	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:02:00 AM	8.55	8.17	31.24	27.34	2.14	6.00	<0.1	<0.01
WSR33	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:03:00 AM	8.57	8.16	31.24	27.36	2.11	7.00	<0.1	<0.01
WSR33	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:03:00 AM	8.64	8.17	31.08	27.34	2.13	10.00	<0.1	<0.01
WSR33	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:04:00 AM	8.63	8.15	31.19	27.37	2.15	11.00	<0.1	<0.01
WSR33	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:04:00 AM	8.66	8.19	31.19	27.24	2.12	7.00	<0.1	<0.01
WSR36	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:46:00 AM	8.25	8.07	30.75	27.28	2.04	8.00	<0.1	<0.01
WSR36	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:46:00 AM	8.34	8.09	30.80	27.30	2.13	11.00	<0.1	<0.01
WSR36	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:47:00 AM	8.23	8.08	30.68	27.28	2.08	8.00	<0.1	<0.01
WSR36	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:47:00 AM	8.29	8.07	30.80	27.32	2.03	11.00	<0.1	<0.01
WSR36	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:47:00 AM	8.24	8.09	30.70	27.23	2.13	6.00	<0.1	<0.01
WSR36	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:47:00 AM	8.32	8.09	30.60	27.30	2.04	6.00	<0.1	<0.01
WSR37	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:40:00 AM	7.76	8.04	31.13	27.28	1.46	9.00	<0.1	<0.01
WSR37	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:40:00 AM	7.83	8.04	31.01	27.36	1.43	10.00	<0.1	<0.01
WSR37	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:41:00 AM	7.86	8.02	31.13	27.33	1.46	8.00	<0.1	<0.01
WSR37	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:41:00 AM	7.87	8.02	31.24	27.32	1.50	7.00	<0.1	<0.01
WSR37	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:42:00 AM	7.73	8.03	31.20	27.30	1.48	7.00	<0.1	<0.01
WSR37	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:42:00 AM	7.79	8.01	31.16	27.23	1.52	10.00	<0.1	<0.01
NF1	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:08:00 AM	8.52	8.18	31.99	27.48	1.68	9.00	<0.1	<0.01
NF1	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:08:00 AM	8.56	8.21	32.04	27.38	1.71	8.00	<0.1	<0.01
NF1	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	10:09:00 AM	8.59	8.22	32.01	27.43	1.76	11.00	<0.1	<0.01
NF1	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	10:09:00 AM	8.60	8.19	32.16	27.44	1.70	11.00	<0.1	<0.01
NF1	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	12	10:10:00 AM	8.59	8.18	32.11	27.37	1.66	10.00	<0.1	<0.01
NF1	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	12	10:10:00 AM	8.51	8.18	32.18	27.49	1.75	10.00	<0.1	<0.01
NF2	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:22:00 AM	8.54	8.02	31.02	27.17	2.03	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF2	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:22:00 AM	8.50	8.05	31.08	27.14	2.03	6.00	<0.1	<0.01
NF2	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:23:00 AM	8.58	8.03	30.96	27.14	2.04	9.00	<0.1	<0.01
NF2	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:23:00 AM	8.46	8.02	30.96	27.08	1.98	6.00	<0.1	<0.01
NF2	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	10:24:00 AM	8.62	8.01	30.99	27.19	2.01	6.00	<0.1	<0.01
NF2	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	10:24:00 AM	8.63	8.04	30.94	27.16	2.00	9.00	<0.1	<0.01
NF3	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:32:00 AM	7.83	7.97	31.30	27.45	1.56	6.00	<0.1	<0.01
NF3	4/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:32:00 AM	7.74	7.99	31.44	27.39	1.58	8.00	<0.1	<0.01
NF3	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	10:33:00 AM	7.70	7.98	31.29	27.40	1.57	7.00	<0.1	<0.01
NF3	4/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	10:33:00 AM	7.85	8.01	31.46	27.49	1.53	8.00	<0.1	<0.01
NF3	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	10:34:00 AM	7.73	7.99	31.48	27.51	1.56	11.00	<0.1	<0.01
NF3	4/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	10:34:00 AM	7.83	7.99	31.33	27.41	1.56	7.00	<0.1	<0.01
CE	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:51:00 AM	7.94	8.24	32.52	26.86	2.49	2.50	<0.1	<0.01
CE	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:51:00 AM	8.07	8.22	32.47	26.89	2.52	2.50	<0.1	<0.01
CE	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	10:52:00 AM	7.94	8.21	32.45	26.87	2.48	2.50	<0.1	<0.01
CE	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	10:52:00 AM	8.01	8.21	32.46	26.90	2.39	3.00	<0.1	<0.01
CE	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	22	10:53:00 AM	7.98	8.23	32.44	26.84	2.35	3.00	<0.1	<0.01
CE	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	22	10:53:00 AM	7.94	8.21	32.53	26.90	2.49	2.50	<0.1	<0.01
CF	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	2:05:00 PM	8.34	8.10	31.62	26.79	2.24	2.50	<0.1	<0.01
CF	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	2:05:00 PM	8.38	8.09	31.71	26.81	2.22	3.00	<0.1	<0.01
CF	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	2:06:00 PM	8.35	8.12	31.71	26.79	2.30	3.00	<0.1	<0.01
CF	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	2:06:00 PM	8.31	8.12	31.67	26.85	2.18	2.50	<0.1	<0.01
CF	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	2:07:00 PM	8.37	8.08	31.69	26.79	2.14	2.50	<0.1	<0.01
CF	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	2:07:00 PM	8.40	8.09	31.61	26.80	2.13	4.00	<0.1	<0.01
WSR01	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:39:00 PM	8.51	8.12	32.06	26.93	1.65	2.50	<0.1	<0.01
WSR01	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:39:00 PM	8.53	8.14	32.04	26.91	1.66	2.50	<0.1	<0.01
WSR01	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:40:00 PM	8.44	8.14	32.05	26.92	1.69	3.00	<0.1	<0.01
WSR01	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:40:00 PM	8.52	8.13	32.12	26.88	1.66	2.50	<0.1	<0.01
WSR01	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	1:41:00 PM	8.51	8.14	32.08	26.92	1.68	2.50	<0.1	<0.01
WSR01	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	1:41:00 PM	8.53	8.14	32.06	26.89	1.65	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR02	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:20:00 PM	7.71	8.17	31.06	27.15	1.42	2.50	<0.1	<0.01
WSR02	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:20:00 PM	7.74	8.18	31.17	27.09	1.39	4.00	<0.1	<0.01
WSR02	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	1:21:00 PM	7.73	8.18	31.17	27.10	1.39	2.50	<0.1	<0.01
WSR02	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	1:21:00 PM	7.70	8.19	31.10	27.13	1.42	2.50	<0.1	<0.01
WSR02	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	1:22:00 PM	7.64	8.18	31.09	27.13	1.41	4.00	<0.1	<0.01
WSR02	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	1:22:00 PM	7.63	8.17	31.07	27.10	1.44	2.50	<0.1	<0.01
WSR03	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:02:00 PM	8.65	8.13	31.93	26.96	2.06	2.50	<0.1	<0.01
WSR03	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:02:00 PM	8.64	8.15	31.94	26.91	2.06	2.50	<0.1	<0.01
WSR03	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:03:00 PM	8.58	8.13	31.97	26.95	2.04	2.50	<0.1	<0.01
WSR03	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:03:00 PM	8.67	8.16	31.88	26.92	2.04	2.50	<0.1	<0.01
WSR03	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	1:04:00 PM	8.62	8.14	31.90	26.92	2.04	4.00	<0.1	<0.01
WSR03	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	1:04:00 PM	8.67	8.14	31.92	26.96	2.02	2.50	<0.1	<0.01
WSR04	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:49:00 PM	8.52	8.18	32.36	26.98	1.41	7.00	<0.1	<0.01
WSR04	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:49:00 PM	8.43	8.18	32.39	26.99	1.42	10.00	<0.1	<0.01
WSR04	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	12:50:00 PM	8.41	8.18	32.35	27.03	1.43	3.00	<0.1	<0.01
WSR04	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	12:50:00 PM	8.52	8.17	32.48	26.98	1.47	2.50	<0.1	<0.01
WSR04	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:51:00 PM	8.53	8.14	32.44	26.99	1.47	4.00	<0.1	<0.01
WSR04	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:51:00 PM	8.42	8.14	32.41	26.99	1.41	2.50	<0.1	<0.01
WSR16	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	8.80	8.21	31.11	27.09	1.59	2.50	<0.1	<0.01
WSR16	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	8.82	8.23	31.17	27.10	1.62	4.00	<0.1	<0.01
WSR16	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	11:15:00 AM	8.81	8.21	31.12	27.09	1.64	2.50	<0.1	<0.01
WSR16	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	11:15:00 AM	8.87	8.21	31.14	27.05	1.61	3.00	<0.1	<0.01
WSR16	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	14	11:16:00 AM	8.91	8.20	31.09	27.07	1.59	2.50	<0.1	<0.01
WSR16	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	14	11:16:00 AM	8.80	8.22	31.11	27.06	1.60	2.50	<0.1	<0.01
WSR33	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:32:00 PM	7.86	8.15	32.03	26.98	1.41	2.50	<0.1	<0.01
WSR33	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:32:00 PM	7.96	8.13	32.02	26.99	1.39	2.50	<0.1	<0.01
WSR33	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:33:00 PM	7.97	8.15	32.01	27.00	1.46	2.50	<0.1	<0.01
WSR33	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:33:00 PM	7.87	8.12	32.01	27.04	1.48	3.00	<0.1	<0.01
WSR33	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:34:00 PM	7.89	8.15	31.99	27.02	1.46	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR33	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:34:00 PM	7.87	8.13	31.96	27.04	1.39	3.00	<0.1	<0.01
WSR36	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:16:00 PM	8.55	8.06	31.46	27.16	1.83	5.00	<0.1	<0.01
WSR36	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:16:00 PM	8.52	8.06	31.47	27.15	1.80	3.00	<0.1	<0.01
WSR36	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	12:17:00 PM	8.62	8.09	31.47	27.18	1.79	4.00	<0.1	<0.01
WSR36	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	12:17:00 PM	8.62	8.08	31.48	27.19	1.82	3.00	<0.1	<0.01
WSR36	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:17:00 PM	8.53	8.08	31.49	27.20	1.76	4.00	<0.1	<0.01
WSR36	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:17:00 PM	8.58	8.05	31.43	27.21	1.83	2.50	<0.1	<0.01
WSR37	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:08:00 PM	8.42	8.09	32.03	27.13	2.03	3.00	<0.1	<0.01
WSR37	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:08:00 PM	8.33	8.09	31.94	27.11	2.03	2.50	<0.1	<0.01
WSR37	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:09:00 PM	8.46	8.11	31.99	27.06	2.09	3.00	<0.1	<0.01
WSR37	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:09:00 PM	8.33	8.10	31.94	27.06	2.03	4.00	<0.1	<0.01
WSR37	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:10:00 PM	8.41	8.11	32.00	27.11	2.10	2.50	<0.1	<0.01
WSR37	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:10:00 PM	8.46	8.09	31.94	27.12	2.07	2.50	<0.1	<0.01
NF1	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:36:00 AM	8.40	8.21	32.37	27.03	2.16	3.00	<0.1	<0.01
NF1	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:36:00 AM	8.46	8.22	32.32	27.05	2.16	2.50	<0.1	<0.01
NF1	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	11:37:00 AM	8.39	8.22	32.30	27.04	2.17	4.00	<0.1	<0.01
NF1	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	11:37:00 AM	8.42	8.18	32.36	27.02	2.16	3.00	<0.1	<0.01
NF1	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	11:38:00 AM	8.43	8.21	32.32	27.02	2.14	2.50	<0.1	<0.01
NF1	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	11:38:00 AM	8.37	8.22	32.42	27.05	2.17	2.50	<0.1	<0.01
NF2	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:50:00 AM	8.64	8.14	32.32	26.92	1.86	2.50	<0.1	<0.01
NF2	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:50:00 AM	8.65	8.12	32.39	26.85	1.83	2.50	<0.1	<0.01
NF2	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	11:51:00 AM	8.55	8.10	32.39	26.90	1.85	2.50	<0.1	<0.01
NF2	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	11:51:00 AM	8.54	8.13	32.42	26.86	1.83	2.50	<0.1	<0.01
NF2	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	11:52:00 AM	8.64	8.13	32.44	26.89	1.87	2.50	<0.1	<0.01
NF2	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	11:52:00 AM	8.52	8.10	32.33	26.87	1.86	3.00	<0.1	<0.01
NF3	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:58:00 AM	8.83	8.09	31.99	27.00	1.57	3.00	<0.1	<0.01
NF3	6/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:58:00 AM	8.92	8.09	31.95	27.02	1.54	2.50	<0.1	<0.01
NF3	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	11:59:00 AM	8.87	8.11	31.96	27.01	1.58	3.00	<0.1	<0.01
NF3	6/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	11:59:00 AM	8.83	8.09	32.05	27.02	1.60	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF3	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	12:00:00 PM	8.81	8.10	32.00	27.04	1.54	2.50	<0.1	<0.01
NF3	6/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	12:00:00 PM	8.81	8.12	31.96	26.98	1.55	3.00	<0.1	<0.01
CE	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	11:18:00 AM	8.01	7.99	31.15	27.18	2.28	5.00	<0.1	<0.01
CE	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	11:18:00 AM	8.00	8.04	31.21	27.13	2.37	5.00	<0.1	<0.01
CE	8/07/2024	Sunny	Mid-Flood	Moderate	M	10	11:19:00 AM	8.04	8.03	31.19	27.14	2.18	9.00	<0.1	<0.01
CE	8/07/2024	Sunny	Mid-Flood	Moderate	M	10	11:19:00 AM	8.03	8.03	31.23	27.16	2.15	8.00	<0.1	<0.01
CE	8/07/2024	Sunny	Mid-Flood	Moderate	B	20	11:20:00 AM	8.04	7.99	31.18	27.14	2.05	8.00	<0.1	<0.01
CE	8/07/2024	Sunny	Mid-Flood	Moderate	B	20	11:20:00 AM	8.04	7.99	31.17	27.13	2.10	9.00	<0.1	<0.01
CF	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:08:00 AM	8.18	7.94	31.66	26.97	2.68	10.00	<0.1	<0.01
CF	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:08:00 AM	8.14	7.99	31.65	26.99	2.68	9.00	<0.1	<0.01
CF	8/07/2024	Sunny	Mid-Flood	Moderate	M	10	8:09:00 AM	8.16	7.99	31.63	26.98	2.64	6.00	<0.1	<0.01
CF	8/07/2024	Sunny	Mid-Flood	Moderate	M	10	8:09:00 AM	8.18	7.98	31.70	26.97	2.70	7.00	<0.1	<0.01
CF	8/07/2024	Sunny	Mid-Flood	Moderate	B	18	8:10:00 AM	8.15	7.94	31.63	26.96	2.69	9.00	<0.1	<0.01
CF	8/07/2024	Sunny	Mid-Flood	Moderate	B	18	8:10:00 AM	8.15	7.95	31.71	26.97	2.68	8.00	<0.1	<0.01
WSR01	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:32:00 AM	8.52	8.01	31.24	27.17	1.87	7.00	<0.1	<0.01
WSR01	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:32:00 AM	8.49	8.01	31.23	27.17	1.91	8.00	<0.1	<0.01
WSR01	8/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:33:00 AM	8.50	8.06	31.24	27.18	1.90	4.00	<0.1	<0.01
WSR01	8/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:33:00 AM	8.50	8.05	31.23	27.14	1.88	3.00	<0.1	<0.01
WSR01	8/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:34:00 AM	8.48	8.07	31.28	27.19	1.84	5.00	<0.1	<0.01
WSR01	8/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:34:00 AM	8.50	8.01	31.25	27.14	1.84	6.00	<0.1	<0.01
WSR02	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:53:00 AM	8.60	8.00	31.34	27.30	1.48	4.00	<0.1	<0.01
WSR02	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:53:00 AM	8.60	8.00	31.35	27.28	1.48	3.00	<0.1	<0.01
WSR02	8/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:54:00 AM	8.58	7.98	31.31	27.29	1.47	2.50	<0.1	<0.01
WSR02	8/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:54:00 AM	8.59	8.01	31.33	27.26	1.44	4.00	<0.1	<0.01
WSR02	8/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:55:00 AM	8.59	7.97	31.37	27.28	1.45	3.00	<0.1	<0.01
WSR02	8/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:55:00 AM	8.58	7.96	31.30	27.27	1.50	3.00	<0.1	<0.01
WSR03	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:09:00 AM	8.27	8.07	32.07	27.18	1.76	2.50	<0.1	<0.01
WSR03	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:09:00 AM	8.25	8.08	32.06	27.21	1.76	3.00	<0.1	<0.01
WSR03	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:10:00 AM	8.23	8.07	32.07	27.19	1.75	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR03	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:10:00 AM	8.24	8.09	32.14	27.21	1.75	3.00	<0.1	<0.01
WSR03	8/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:11:00 AM	8.24	8.10	32.07	27.16	1.71	3.00	<0.1	<0.01
WSR03	8/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:11:00 AM	8.26	8.11	32.03	27.16	1.71	2.50	<0.1	<0.01
WSR04	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:25:00 AM	8.59	8.11	30.95	27.21	1.52	3.00	<0.1	<0.01
WSR04	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:25:00 AM	8.56	8.13	30.97	27.20	1.51	4.00	<0.1	<0.01
WSR04	8/07/2024	Sunny	Mid-Flood	Moderate	M	3	9:26:00 AM	8.59	8.11	30.98	27.21	1.50	7.00	<0.1	<0.01
WSR04	8/07/2024	Sunny	Mid-Flood	Moderate	M	3	9:26:00 AM	8.55	8.12	31.00	27.20	1.54	4.00	<0.1	<0.01
WSR04	8/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:27:00 AM	8.56	8.15	30.92	27.18	1.50	2.50	<0.1	<0.01
WSR04	8/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:27:00 AM	8.57	8.13	30.96	27.21	1.49	4.00	<0.1	<0.01
WSR16	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:55:00 AM	8.88	8.19	31.96	27.18	1.81	10.00	<0.1	<0.01
WSR16	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:55:00 AM	8.90	8.17	31.99	27.17	1.84	7.00	<0.1	<0.01
WSR16	8/07/2024	Sunny	Mid-Flood	Moderate	M	8	10:56:00 AM	8.90	8.21	32.03	27.13	1.86	6.00	<0.1	<0.01
WSR16	8/07/2024	Sunny	Mid-Flood	Moderate	M	8	10:56:00 AM	8.89	8.22	32.02	27.17	1.84	8.00	<0.1	<0.01
WSR16	8/07/2024	Sunny	Mid-Flood	Moderate	B	16	10:57:00 AM	8.90	8.18	32.05	27.16	1.84	6.00	<0.1	<0.01
WSR16	8/07/2024	Sunny	Mid-Flood	Moderate	B	16	10:57:00 AM	8.88	8.17	32.02	27.17	1.84	4.00	<0.1	<0.01
WSR33	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:42:00 AM	8.53	7.99	31.53	27.23	1.94	10.00	<0.1	<0.01
WSR33	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:42:00 AM	8.53	7.98	31.54	27.22	1.92	7.00	<0.1	<0.01
WSR33	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:43:00 AM	8.52	7.94	31.53	27.23	1.91	7.00	<0.1	<0.01
WSR33	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:43:00 AM	8.49	7.94	31.48	27.21	1.96	10.00	<0.1	<0.01
WSR33	8/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:44:00 AM	8.51	8.00	31.52	27.23	1.92	9.00	<0.1	<0.01
WSR33	8/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:44:00 AM	8.49	7.95	31.54	27.22	1.92	6.00	<0.1	<0.01
WSR36	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:59:00 AM	8.46	8.15	32.48	27.32	1.90	7.00	<0.1	<0.01
WSR36	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:59:00 AM	8.44	8.13	32.45	27.32	1.96	8.00	<0.1	<0.01
WSR36	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:00:00 AM	8.46	8.12	32.43	27.34	1.93	3.00	<0.1	<0.01
WSR36	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:00:00 AM	8.45	8.14	32.52	27.32	1.97	5.00	<0.1	<0.01
WSR36	8/07/2024	Sunny	Mid-Flood	Moderate	B	6	10:00:00 AM	8.47	8.16	32.43	27.37	1.90	6.00	<0.1	<0.01
WSR36	8/07/2024	Sunny	Mid-Flood	Moderate	B	6	10:00:00 AM	8.47	8.16	32.41	27.34	1.91	9.00	<0.1	<0.01
WSR37	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:16:00 AM	8.61	8.16	31.28	27.25	1.93	5.00	<0.1	<0.01
WSR37	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:16:00 AM	8.61	8.18	31.33	27.23	1.86	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR37	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:17:00 AM	8.61	8.15	31.32	27.26	1.88	2.50	<0.1	<0.01
WSR37	8/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:17:00 AM	8.65	8.12	31.35	27.23	1.86	4.00	<0.1	<0.01
WSR37	8/07/2024	Sunny	Mid-Flood	Moderate	B	8	10:18:00 AM	8.64	8.15	31.33	27.24	1.88	2.50	<0.1	<0.01
WSR37	8/07/2024	Sunny	Mid-Flood	Moderate	B	8	10:18:00 AM	8.63	8.13	31.32	27.23	1.89	2.50	<0.1	<0.01
NF1	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:40:00 AM	8.52	8.07	31.44	27.16	1.41	10.00	<0.1	<0.01
NF1	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:40:00 AM	8.53	8.05	31.39	27.20	1.47	9.00	<0.1	<0.01
NF1	8/07/2024	Sunny	Mid-Flood	Moderate	M	7	10:41:00 AM	8.53	8.05	31.41	27.18	1.44	9.00	<0.1	<0.01
NF1	8/07/2024	Sunny	Mid-Flood	Moderate	M	7	10:41:00 AM	8.56	8.06	31.44	27.21	1.47	9.00	<0.1	<0.01
NF1	8/07/2024	Sunny	Mid-Flood	Moderate	B	13	10:42:00 AM	8.54	8.05	31.43	27.21	1.44	6.00	<0.1	<0.01
NF1	8/07/2024	Sunny	Mid-Flood	Moderate	B	13	10:42:00 AM	8.55	8.08	31.39	27.19	1.46	4.00	<0.1	<0.01
NF2	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:32:00 AM	7.81	8.14	31.84	27.11	1.57	9.00	<0.1	<0.01
NF2	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:32:00 AM	7.84	8.17	31.87	27.09	1.55	11.00	<0.1	<0.01
NF2	8/07/2024	Sunny	Mid-Flood	Moderate	M	5	10:33:00 AM	7.83	8.13	31.80	27.08	1.58	8.00	<0.1	<0.01
NF2	8/07/2024	Sunny	Mid-Flood	Moderate	M	5	10:33:00 AM	7.84	8.15	31.82	27.07	1.52	7.00	<0.1	<0.01
NF2	8/07/2024	Sunny	Mid-Flood	Moderate	B	9	10:34:00 AM	7.84	8.15	31.78	27.08	1.59	5.00	<0.1	<0.01
NF2	8/07/2024	Sunny	Mid-Flood	Moderate	B	9	10:34:00 AM	7.85	8.17	31.81	27.09	1.56	7.00	<0.1	<0.01
NF3	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:25:00 AM	8.05	8.08	31.79	27.38	1.98	7.00	<0.1	<0.01
NF3	8/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:25:00 AM	8.05	8.11	31.75	27.35	2.01	8.00	<0.1	<0.01
NF3	8/07/2024	Sunny	Mid-Flood	Moderate	M	6	10:26:00 AM	8.06	8.10	31.79	27.34	1.99	6.00	<0.1	<0.01
NF3	8/07/2024	Sunny	Mid-Flood	Moderate	M	6	10:26:00 AM	8.06	8.13	31.77	27.36	1.98	6.00	<0.1	<0.01
NF3	8/07/2024	Sunny	Mid-Flood	Moderate	B	11	10:27:00 AM	8.03	8.07	31.73	27.37	1.96	9.00	<0.1	<0.01
NF3	8/07/2024	Sunny	Mid-Flood	Moderate	B	11	10:27:00 AM	8.07	8.08	31.74	27.34	1.95	10.00	<0.1	<0.01
CE	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	11:01:00 AM	8.91	8.14	32.11	27.07	2.39	6.00	<0.1	<0.01
CE	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	11:01:00 AM	8.92	8.15	32.20	27.04	2.46	6.00	<0.1	<0.01
CE	10/07/2024	Sunny	Mid-Flood	Moderate	M	12	11:02:00 AM	8.97	8.16	32.14	27.03	2.47	6.00	<0.1	<0.01
CE	10/07/2024	Sunny	Mid-Flood	Moderate	M	12	11:02:00 AM	8.96	8.18	32.08	27.05	2.48	7.00	<0.1	<0.01
CE	10/07/2024	Sunny	Mid-Flood	Moderate	B	23	11:03:00 AM	8.88	8.16	32.08	27.05	2.38	8.00	<0.1	<0.01
CE	10/07/2024	Sunny	Mid-Flood	Moderate	B	23	11:03:00 AM	8.96	8.15	32.20	27.05	2.33	6.00	<0.1	<0.01
CF	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:00:00 AM	8.13	8.10	31.85	27.02	2.89	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CF	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:00:00 AM	8.05	8.06	31.81	27.02	2.92	7.00	<0.1	<0.01
CF	10/07/2024	Sunny	Mid-Flood	Moderate	M	10	8:01:00 AM	8.11	8.08	31.88	27.05	2.91	6.00	<0.1	<0.01
CF	10/07/2024	Sunny	Mid-Flood	Moderate	M	10	8:01:00 AM	8.12	8.05	31.93	27.05	2.90	7.00	<0.1	<0.01
CF	10/07/2024	Sunny	Mid-Flood	Moderate	B	19	8:02:00 AM	8.07	8.10	31.85	27.05	2.78	8.00	<0.1	<0.01
CF	10/07/2024	Sunny	Mid-Flood	Moderate	B	19	8:02:00 AM	8.13	8.08	31.88	27.04	2.75	8.00	<0.1	<0.01
WSR01	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:24:00 AM	8.73	8.14	31.50	27.10	1.82	8.00	<0.1	<0.01
WSR01	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:24:00 AM	8.73	8.14	31.47	27.09	1.82	7.00	<0.1	<0.01
WSR01	10/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:25:00 AM	8.70	8.15	31.42	27.07	1.82	7.00	<0.1	<0.01
WSR01	10/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:25:00 AM	8.76	8.16	31.47	27.09	1.81	6.00	<0.1	<0.01
WSR01	10/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:26:00 AM	8.72	8.14	31.52	27.05	1.81	8.00	<0.1	<0.01
WSR01	10/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:26:00 AM	8.71	8.16	31.47	27.06	1.82	7.00	<0.1	<0.01
WSR02	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:42:00 AM	8.28	8.31	32.95	27.28	1.56	6.00	<0.1	<0.01
WSR02	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:42:00 AM	8.34	8.33	32.94	27.25	1.58	6.00	<0.1	<0.01
WSR02	10/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:43:00 AM	8.31	8.32	33.03	27.25	1.54	6.00	<0.1	<0.01
WSR02	10/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:43:00 AM	8.28	8.34	32.92	27.26	1.55	7.00	<0.1	<0.01
WSR02	10/07/2024	Sunny	Mid-Flood	Moderate	B	9	8:44:00 AM	8.34	8.33	32.93	27.25	1.54	8.00	<0.1	<0.01
WSR02	10/07/2024	Sunny	Mid-Flood	Moderate	B	9	8:44:00 AM	8.28	8.31	32.99	27.27	1.55	7.00	<0.1	<0.01
WSR03	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:56:00 AM	8.13	8.05	32.60	27.07	1.80	6.00	<0.1	<0.01
WSR03	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:56:00 AM	8.08	8.06	32.63	27.08	1.81	5.00	<0.1	<0.01
WSR03	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	8:57:00 AM	8.08	8.08	32.63	27.12	1.81	8.00	<0.1	<0.01
WSR03	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	8:57:00 AM	8.13	8.08	32.61	27.10	1.80	7.00	<0.1	<0.01
WSR03	10/07/2024	Sunny	Mid-Flood	Moderate	B	7	8:58:00 AM	8.10	8.04	32.64	27.11	1.80	5.00	<0.1	<0.01
WSR03	10/07/2024	Sunny	Mid-Flood	Moderate	B	7	8:58:00 AM	8.10	8.07	32.58	27.10	1.84	6.00	<0.1	<0.01
WSR04	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:12:00 AM	8.45	8.27	32.09	27.35	1.72	6.00	<0.1	<0.01
WSR04	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:12:00 AM	8.36	8.27	32.09	27.35	1.73	6.00	<0.1	<0.01
WSR04	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:13:00 AM	8.38	8.29	32.09	27.36	1.72	7.00	<0.1	<0.01
WSR04	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:13:00 AM	8.42	8.31	32.09	27.32	1.75	6.00	<0.1	<0.01
WSR04	10/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:14:00 AM	8.43	8.31	32.13	27.33	1.71	7.00	<0.1	<0.01
WSR04	10/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:14:00 AM	8.38	8.28	32.11	27.35	1.71	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR16	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:41:00 AM	8.65	8.33	32.89	27.23	1.97	9.00	<0.1	<0.01
WSR16	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:41:00 AM	8.61	8.32	32.81	27.21	1.99	5.00	<0.1	<0.01
WSR16	10/07/2024	Sunny	Mid-Flood	Moderate	M	8	10:42:00 AM	8.61	8.32	32.90	27.22	2.00	6.00	<0.1	<0.01
WSR16	10/07/2024	Sunny	Mid-Flood	Moderate	M	8	10:42:00 AM	8.63	8.32	32.87	27.19	2.01	7.00	<0.1	<0.01
WSR16	10/07/2024	Sunny	Mid-Flood	Moderate	B	15	10:43:00 AM	8.60	8.32	32.84	27.19	2.01	5.00	<0.1	<0.01
WSR16	10/07/2024	Sunny	Mid-Flood	Moderate	B	15	10:43:00 AM	8.60	8.34	32.93	27.19	1.98	7.00	<0.1	<0.01
WSR33	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:29:00 AM	8.15	8.25	32.10	27.39	2.08	5.00	<0.1	<0.01
WSR33	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:29:00 AM	8.16	8.31	32.08	27.36	2.07	6.00	<0.1	<0.01
WSR33	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:30:00 AM	8.16	8.25	32.18	27.36	2.07	7.00	<0.1	<0.01
WSR33	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:30:00 AM	8.20	8.30	32.15	27.39	2.07	6.00	<0.1	<0.01
WSR33	10/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:31:00 AM	8.16	8.26	32.16	27.37	2.08	6.00	<0.1	<0.01
WSR33	10/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:31:00 AM	8.21	8.27	32.08	27.38	2.10	7.00	<0.1	<0.01
WSR36	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:46:00 AM	8.78	8.10	32.42	27.29	1.94	8.00	<0.1	<0.01
WSR36	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:46:00 AM	8.84	8.09	32.44	27.27	1.93	7.00	<0.1	<0.01
WSR36	10/07/2024	Sunny	Mid-Flood	Moderate	M	3	9:47:00 AM	8.81	8.08	32.45	27.29	1.93	7.00	<0.1	<0.01
WSR36	10/07/2024	Sunny	Mid-Flood	Moderate	M	3	9:47:00 AM	8.87	8.13	32.50	27.24	1.96	6.00	<0.1	<0.01
WSR36	10/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:47:00 AM	8.79	8.08	32.42	27.29	1.93	5.00	<0.1	<0.01
WSR36	10/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:47:00 AM	8.83	8.07	32.51	27.25	1.92	5.00	<0.1	<0.01
WSR37	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:03:00 AM	8.72	8.16	33.05	27.20	1.97	7.00	<0.1	<0.01
WSR37	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:03:00 AM	8.72	8.15	33.00	27.18	1.95	5.00	<0.1	<0.01
WSR37	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:04:00 AM	8.72	8.14	33.05	27.19	1.97	7.00	<0.1	<0.01
WSR37	10/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:04:00 AM	8.73	8.16	32.96	27.19	1.96	6.00	<0.1	<0.01
WSR37	10/07/2024	Sunny	Mid-Flood	Moderate	B	8	10:05:00 AM	8.68	8.13	33.09	27.18	1.96	7.00	<0.1	<0.01
WSR37	10/07/2024	Sunny	Mid-Flood	Moderate	B	8	10:05:00 AM	8.70	8.19	33.00	27.18	1.96	5.00	<0.1	<0.01
NF1	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:27:00 AM	8.41	8.06	32.35	27.26	1.82	6.00	<0.1	<0.01
NF1	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:27:00 AM	8.34	8.11	32.44	27.30	1.84	7.00	<0.1	<0.01
NF1	10/07/2024	Sunny	Mid-Flood	Moderate	M	7	10:28:00 AM	8.36	8.08	32.34	27.29	1.83	7.00	<0.1	<0.01
NF1	10/07/2024	Sunny	Mid-Flood	Moderate	M	7	10:28:00 AM	8.33	8.06	32.36	27.29	1.85	6.00	<0.1	<0.01
NF1	10/07/2024	Sunny	Mid-Flood	Moderate	B	12	10:29:00 AM	8.38	8.09	32.44	27.28	1.85	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF1	10/07/2024	Sunny	Mid-Flood	Moderate	B	12	10:29:00 AM	8.39	8.10	32.32	27.29	1.82	6.00	<0.1	<0.01
NF2	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:19:00 AM	8.59	8.33	31.80	26.95	1.61	7.00	<0.1	<0.01
NF2	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:19:00 AM	8.66	8.29	31.88	26.96	1.59	8.00	<0.1	<0.01
NF2	10/07/2024	Sunny	Mid-Flood	Moderate	M	5	10:20:00 AM	8.59	8.32	31.79	26.93	1.57	9.00	<0.1	<0.01
NF2	10/07/2024	Sunny	Mid-Flood	Moderate	M	5	10:20:00 AM	8.62	8.34	31.86	26.97	1.58	8.00	<0.1	<0.01
NF2	10/07/2024	Sunny	Mid-Flood	Moderate	B	10	10:21:00 AM	8.60	8.35	31.83	26.95	1.41	8.00	<0.1	<0.01
NF2	10/07/2024	Sunny	Mid-Flood	Moderate	B	10	10:21:00 AM	8.67	8.31	31.89	26.94	1.43	7.00	<0.1	<0.01
NF3	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:12:00 AM	8.28	8.12	32.53	27.08	2.03	6.00	<0.1	<0.01
NF3	10/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:12:00 AM	8.32	8.13	32.59	27.07	2.02	7.00	<0.1	<0.01
NF3	10/07/2024	Sunny	Mid-Flood	Moderate	M	6	10:13:00 AM	8.33	8.09	32.64	27.09	2.01	6.00	<0.1	<0.01
NF3	10/07/2024	Sunny	Mid-Flood	Moderate	M	6	10:13:00 AM	8.31	8.10	32.56	27.06	2.01	6.00	<0.1	<0.01
NF3	10/07/2024	Sunny	Mid-Flood	Moderate	B	12	10:14:00 AM	8.27	8.10	32.64	27.06	2.05	9.00	<0.1	<0.01
NF3	10/07/2024	Sunny	Mid-Flood	Moderate	B	12	10:14:00 AM	8.32	8.15	32.64	27.10	2.01	6.00	<0.1	<0.01
CE	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	11:13:00 AM	8.14	8.12	32.14	27.20	1.64	2.50	<0.1	<0.01
CE	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	11:13:00 AM	8.15	8.16	32.19	27.19	1.71	3.00	<0.1	<0.01
CE	13/07/2024	Sunny	Mid-Flood	Moderate	M	10	11:14:00 AM	8.11	8.14	32.09	27.27	1.73	4.00	<0.1	<0.01
CE	13/07/2024	Sunny	Mid-Flood	Moderate	M	10	11:14:00 AM	8.14	8.13	32.09	27.24	1.71	5.00	<0.1	<0.01
CE	13/07/2024	Sunny	Mid-Flood	Moderate	B	20	11:15:00 AM	8.23	8.14	32.13	27.21	1.73	4.00	<0.1	<0.01
CE	13/07/2024	Sunny	Mid-Flood	Moderate	B	20	11:15:00 AM	8.24	8.12	32.09	27.19	1.64	4.00	<0.1	<0.01
CF	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:05:00 AM	8.53	8.05	32.23	27.49	2.48	4.00	<0.1	<0.01
CF	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:05:00 AM	8.40	8.03	32.31	27.47	2.59	4.00	<0.1	<0.01
CF	13/07/2024	Sunny	Mid-Flood	Moderate	M	11	8:06:00 AM	8.50	8.03	32.42	27.44	2.52	4.00	<0.1	<0.01
CF	13/07/2024	Sunny	Mid-Flood	Moderate	M	11	8:06:00 AM	8.41	8.05	32.34	27.44	2.53	5.00	<0.1	<0.01
CF	13/07/2024	Sunny	Mid-Flood	Moderate	B	20	8:07:00 AM	8.54	8.06	32.42	27.44	2.48	6.00	<0.1	<0.01
CF	13/07/2024	Sunny	Mid-Flood	Moderate	B	20	8:07:00 AM	8.51	8.04	32.36	27.47	2.45	6.00	<0.1	<0.01
WSR01	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:31:00 AM	8.15	8.02	31.85	27.43	1.42	4.00	<0.1	<0.01
WSR01	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:31:00 AM	8.16	8.08	31.90	27.50	1.44	6.00	<0.1	<0.01
WSR01	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	8:32:00 AM	8.06	8.03	31.97	27.46	1.43	6.00	<0.1	<0.01
WSR01	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	8:32:00 AM	8.15	8.03	31.82	27.45	1.45	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR01	13/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:33:00 AM	8.10	8.03	31.91	27.45	1.42	4.00	<0.1	<0.01
WSR01	13/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:33:00 AM	8.10	8.05	31.92	27.46	1.46	4.00	<0.1	<0.01
WSR02	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:50:00 AM	8.56	8.08	31.52	27.44	1.53	5.00	<0.1	<0.01
WSR02	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	8:50:00 AM	8.65	8.08	31.45	27.46	1.53	5.00	<0.1	<0.01
WSR02	13/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:51:00 AM	8.56	8.09	31.44	27.44	1.56	4.00	<0.1	<0.01
WSR02	13/07/2024	Sunny	Mid-Flood	Moderate	M	5	8:51:00 AM	8.58	8.07	31.52	27.51	1.51	4.00	<0.1	<0.01
WSR02	13/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:52:00 AM	8.62	8.08	31.41	27.51	1.52	4.00	<0.1	<0.01
WSR02	13/07/2024	Sunny	Mid-Flood	Moderate	B	8	8:52:00 AM	8.57	8.11	31.49	27.48	1.56	4.00	<0.1	<0.01
WSR03	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:06:00 AM	7.94	8.26	32.02	27.09	1.60	4.00	<0.1	<0.01
WSR03	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:06:00 AM	8.07	8.24	31.85	27.09	1.61	5.00	<0.1	<0.01
WSR03	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:07:00 AM	7.98	8.28	31.91	27.08	1.59	7.00	<0.1	<0.01
WSR03	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:07:00 AM	8.07	8.25	32.01	27.06	1.56	4.00	<0.1	<0.01
WSR03	13/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:08:00 AM	7.99	8.26	31.92	27.09	1.59	6.00	<0.1	<0.01
WSR03	13/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:08:00 AM	7.93	8.28	31.87	27.04	1.58	5.00	<0.1	<0.01
WSR04	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:22:00 AM	8.82	8.15	30.87	27.28	1.66	3.00	<0.1	<0.01
WSR04	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:22:00 AM	8.75	8.14	30.73	27.26	1.67	4.00	<0.1	<0.01
WSR04	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:23:00 AM	8.76	8.12	30.68	27.27	1.65	4.00	<0.1	<0.01
WSR04	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:23:00 AM	8.82	8.11	30.83	27.30	1.72	3.00	<0.1	<0.01
WSR04	13/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:24:00 AM	8.83	8.12	30.72	27.28	1.64	5.00	<0.1	<0.01
WSR04	13/07/2024	Sunny	Mid-Flood	Moderate	B	7	9:24:00 AM	8.81	8.11	30.76	27.23	1.64	4.00	<0.1	<0.01
WSR16	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:52:00 AM	7.91	8.03	30.61	27.19	2.04	5.00	<0.1	<0.01
WSR16	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:52:00 AM	7.86	8.07	30.70	27.22	1.98	5.00	<0.1	<0.01
WSR16	13/07/2024	Sunny	Mid-Flood	Moderate	M	9	10:53:00 AM	7.91	8.09	30.57	27.25	1.93	5.00	<0.1	<0.01
WSR16	13/07/2024	Sunny	Mid-Flood	Moderate	M	9	10:53:00 AM	7.93	8.06	30.60	27.23	1.95	5.00	<0.1	<0.01
WSR16	13/07/2024	Sunny	Mid-Flood	Moderate	B	16	10:54:00 AM	7.96	8.07	30.66	27.27	1.92	3.00	<0.1	<0.01
WSR16	13/07/2024	Sunny	Mid-Flood	Moderate	B	16	10:54:00 AM	7.90	8.03	30.71	27.26	1.90	4.00	<0.1	<0.01
WSR33	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:39:00 AM	8.75	8.06	32.11	27.43	1.67	3.00	<0.1	<0.01
WSR33	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:39:00 AM	8.73	8.08	32.17	27.43	1.63	5.00	<0.1	<0.01
WSR33	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:40:00 AM	8.70	8.07	32.20	27.47	1.65	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR33	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	9:40:00 AM	8.66	8.11	32.15	27.45	1.60	4.00	<0.1	<0.01
WSR33	13/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:41:00 AM	8.63	8.07	32.19	27.50	1.60	5.00	<0.1	<0.01
WSR33	13/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:41:00 AM	8.64	8.11	32.12	27.42	1.61	5.00	<0.1	<0.01
WSR36	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:56:00 AM	8.03	8.25	31.65	27.40	1.34	4.00	<0.1	<0.01
WSR36	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	9:56:00 AM	8.10	8.28	31.56	27.40	1.33	5.00	<0.1	<0.01
WSR36	13/07/2024	Sunny	Mid-Flood	Moderate	M	3	9:57:00 AM	8.14	8.24	31.47	27.45	1.32	3.00	<0.1	<0.01
WSR36	13/07/2024	Sunny	Mid-Flood	Moderate	M	3	9:57:00 AM	8.03	8.23	31.50	27.39	1.28	4.00	<0.1	<0.01
WSR36	13/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:57:00 AM	8.02	8.23	31.61	27.42	1.32	5.00	<0.1	<0.01
WSR36	13/07/2024	Sunny	Mid-Flood	Moderate	B	6	9:57:00 AM	8.12	8.27	31.62	27.37	1.35	5.00	<0.1	<0.01
WSR37	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:13:00 AM	8.52	8.22	31.10	27.26	1.92	5.00	<0.1	<0.01
WSR37	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:13:00 AM	8.48	8.20	31.19	27.26	1.82	4.00	<0.1	<0.01
WSR37	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:14:00 AM	8.53	8.23	31.08	27.26	1.85	4.00	<0.1	<0.01
WSR37	13/07/2024	Sunny	Mid-Flood	Moderate	M	4	10:14:00 AM	8.51	8.21	31.14	27.25	1.84	3.00	<0.1	<0.01
WSR37	13/07/2024	Sunny	Mid-Flood	Moderate	B	7	10:15:00 AM	8.49	8.24	31.08	27.30	1.85	4.00	<0.1	<0.01
WSR37	13/07/2024	Sunny	Mid-Flood	Moderate	B	7	10:15:00 AM	8.53	8.26	31.12	27.30	1.85	6.00	<0.1	<0.01
NF1	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:37:00 AM	8.17	8.08	31.44	27.46	1.65	5.00	<0.1	<0.01
NF1	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:37:00 AM	8.17	8.11	31.37	27.53	1.63	6.00	<0.1	<0.01
NF1	13/07/2024	Sunny	Mid-Flood	Moderate	M	7	10:38:00 AM	8.19	8.05	31.46	27.51	1.63	4.00	<0.1	<0.01
NF1	13/07/2024	Sunny	Mid-Flood	Moderate	M	7	10:38:00 AM	8.22	8.07	31.28	27.52	1.66	5.00	<0.1	<0.01
NF1	13/07/2024	Sunny	Mid-Flood	Moderate	B	13	10:39:00 AM	8.19	8.08	31.43	27.45	1.69	6.00	<0.1	<0.01
NF1	13/07/2024	Sunny	Mid-Flood	Moderate	B	13	10:39:00 AM	8.18	8.08	31.41	27.51	1.60	4.00	<0.1	<0.01
NF2	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:29:00 AM	7.75	8.16	32.17	27.42	1.98	4.00	<0.1	<0.01
NF2	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:29:00 AM	7.71	8.16	32.15	27.41	1.96	6.00	<0.1	<0.01
NF2	13/07/2024	Sunny	Mid-Flood	Moderate	M	5	10:30:00 AM	7.65	8.16	32.26	27.41	1.99	2.50	<0.1	<0.01
NF2	13/07/2024	Sunny	Mid-Flood	Moderate	M	5	10:30:00 AM	7.75	8.15	32.25	27.46	2.02	2.50	<0.1	<0.01
NF2	13/07/2024	Sunny	Mid-Flood	Moderate	B	9	10:31:00 AM	7.69	8.19	32.26	27.43	2.02	7.00	<0.1	<0.01
NF2	13/07/2024	Sunny	Mid-Flood	Moderate	B	9	10:31:00 AM	7.75	8.13	32.11	27.41	1.99	6.00	<0.1	<0.01
NF3	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:22:00 AM	8.27	8.27	31.53	27.50	1.51	5.00	<0.1	<0.01
NF3	13/07/2024	Sunny	Mid-Flood	Moderate	S	1	10:22:00 AM	8.27	8.29	31.38	27.49	1.52	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF3	13/07/2024	Sunny	Mid-Flood	Moderate	M	6	10:23:00 AM	8.24	8.28	31.38	27.55	1.64	4.00	<0.1	<0.01
NF3	13/07/2024	Sunny	Mid-Flood	Moderate	M	6	10:23:00 AM	8.22	8.29	31.56	27.51	1.63	5.00	<0.1	<0.01
NF3	13/07/2024	Sunny	Mid-Flood	Moderate	B	11	10:24:00 AM	8.17	8.26	31.53	27.48	1.78	5.00	<0.1	<0.01
NF3	13/07/2024	Sunny	Mid-Flood	Moderate	B	11	10:24:00 AM	8.16	8.29	31.48	27.53	1.86	5.00	<0.1	<0.01
CE	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:08:00 AM	8.76	8.07	31.83	27.14	2.89	3.00	<0.1	<0.01
CE	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:08:00 AM	8.74	8.04	31.79	27.11	2.92	3.00	<0.1	<0.01
CE	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	8:09:00 AM	8.79	8.06	31.79	27.10	2.71	4.00	<0.1	<0.01
CE	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	8:09:00 AM	8.77	8.04	31.72	27.14	2.79	5.00	<0.1	<0.01
CE	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	22	8:10:00 AM	8.79	8.04	31.79	27.14	2.88	4.00	<0.1	<0.01
CE	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	22	8:10:00 AM	8.74	8.06	31.79	27.12	2.91	3.00	<0.1	<0.01
CF	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:28:00 AM	8.09	8.29	32.45	27.23	2.24	4.00	<0.1	<0.01
CF	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:28:00 AM	8.11	8.27	32.46	27.23	2.33	8.00	<0.1	<0.01
CF	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	11:29:00 AM	8.08	8.29	32.47	27.29	2.26	4.00	<0.1	<0.01
CF	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	11:29:00 AM	8.08	8.29	32.49	27.24	2.29	4.00	<0.1	<0.01
CF	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	11:30:00 AM	8.13	8.30	32.50	27.26	2.35	3.00	<0.1	<0.01
CF	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	11:30:00 AM	8.08	8.28	32.44	27.28	2.36	3.00	<0.1	<0.01
WSR01	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:02:00 AM	7.86	8.35	31.64	27.07	1.54	7.00	<0.1	<0.01
WSR01	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:02:00 AM	7.87	8.34	31.64	27.07	1.59	7.00	<0.1	<0.01
WSR01	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:03:00 AM	7.86	8.31	31.64	27.08	1.53	6.00	<0.1	<0.01
WSR01	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:03:00 AM	7.88	8.34	31.73	27.08	1.57	8.00	<0.1	<0.01
WSR01	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	11:04:00 AM	7.88	8.32	31.69	27.07	1.53	4.00	<0.1	<0.01
WSR01	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	11:04:00 AM	7.86	8.35	31.67	27.06	1.56	4.00	<0.1	<0.01
WSR02	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:41:00 AM	8.22	8.18	32.21	27.07	1.33	3.00	<0.1	<0.01
WSR02	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:41:00 AM	8.24	8.16	32.21	27.09	1.34	5.00	<0.1	<0.01
WSR02	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:42:00 AM	8.23	8.16	32.22	27.09	1.34	6.00	<0.1	<0.01
WSR02	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:42:00 AM	8.24	8.18	32.19	27.12	1.38	7.00	<0.1	<0.01
WSR02	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:43:00 AM	8.24	8.18	32.20	27.13	1.37	6.00	<0.1	<0.01
WSR02	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:43:00 AM	8.22	8.17	32.17	27.08	1.38	6.00	<0.1	<0.01
WSR03	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:23:00 AM	8.78	8.16	32.09	26.99	1.91	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR03	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:23:00 AM	8.77	8.17	32.13	26.98	1.91	4.00	<0.1	<0.01
WSR03	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:24:00 AM	8.77	8.18	32.08	27.02	1.93	6.00	<0.1	<0.01
WSR03	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:24:00 AM	8.78	8.18	32.04	26.99	1.89	9.00	<0.1	<0.01
WSR03	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:25:00 AM	8.74	8.15	32.12	27.03	1.93	4.00	<0.1	<0.01
WSR03	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:25:00 AM	8.76	8.15	32.15	27.00	1.87	4.00	<0.1	<0.01
WSR04	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:08:00 AM	8.37	8.10	32.12	26.97	2.10	4.00	<0.1	<0.01
WSR04	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:08:00 AM	8.32	8.10	32.12	26.96	2.16	3.00	<0.1	<0.01
WSR04	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:09:00 AM	8.37	8.10	32.04	26.98	2.16	4.00	<0.1	<0.01
WSR04	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:09:00 AM	8.36	8.11	32.08	26.98	2.08	6.00	<0.1	<0.01
WSR04	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:10:00 AM	8.37	8.11	32.04	26.94	2.13	5.00	<0.1	<0.01
WSR04	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:10:00 AM	8.32	8.12	32.01	26.96	2.10	4.00	<0.1	<0.01
WSR16	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:33:00 AM	8.38	8.16	31.12	27.24	1.50	4.00	<0.1	<0.01
WSR16	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:33:00 AM	8.44	8.14	31.19	27.28	1.46	5.00	<0.1	<0.01
WSR16	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:34:00 AM	8.38	8.16	31.25	27.26	1.52	4.00	<0.1	<0.01
WSR16	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:34:00 AM	8.44	8.18	31.23	27.27	1.49	4.00	<0.1	<0.01
WSR16	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	15	8:35:00 AM	8.43	8.18	31.15	27.28	1.51	7.00	<0.1	<0.01
WSR16	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	15	8:35:00 AM	8.41	8.18	31.23	27.27	1.52	8.00	<0.1	<0.01
WSR33	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:51:00 AM	8.33	8.29	30.92	26.93	1.52	5.00	<0.1	<0.01
WSR33	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:51:00 AM	8.32	8.25	30.98	26.94	1.52	5.00	<0.1	<0.01
WSR33	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:52:00 AM	8.29	8.29	31.00	26.91	1.54	4.00	<0.1	<0.01
WSR33	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:52:00 AM	8.32	8.28	30.96	26.93	1.52	5.00	<0.1	<0.01
WSR33	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:53:00 AM	8.29	8.26	30.95	26.91	1.58	6.00	<0.1	<0.01
WSR33	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:53:00 AM	8.33	8.28	31.01	26.93	1.60	5.00	<0.1	<0.01
WSR36	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:35:00 AM	7.88	8.22	31.15	26.83	1.74	5.00	<0.1	<0.01
WSR36	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:35:00 AM	7.88	8.19	31.20	26.86	1.78	5.00	<0.1	<0.01
WSR36	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	9:36:00 AM	7.85	8.21	31.12	26.88	1.74	3.00	<0.1	<0.01
WSR36	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	9:36:00 AM	7.84	8.22	31.23	26.82	1.73	5.00	<0.1	<0.01
WSR36	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:36:00 AM	7.87	8.18	31.14	26.83	1.72	3.00	<0.1	<0.01
WSR36	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:36:00 AM	7.83	8.19	31.18	26.82	1.79	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR37	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:29:00 AM	8.81	8.13	32.39	26.88	1.96	9.00	<0.1	<0.01
WSR37	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:29:00 AM	8.75	8.12	32.41	26.87	1.92	8.00	<0.1	<0.01
WSR37	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:30:00 AM	8.81	8.10	32.39	26.88	1.90	5.00	<0.1	<0.01
WSR37	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:30:00 AM	8.75	8.10	32.34	26.87	1.98	3.00	<0.1	<0.01
WSR37	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:31:00 AM	8.79	8.11	32.28	26.87	1.96	5.00	<0.1	<0.01
WSR37	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:31:00 AM	8.77	8.12	32.39	26.85	1.93	8.00	<0.1	<0.01
NF1	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:57:00 AM	8.55	8.23	32.16	27.00	2.07	4.00	<0.1	<0.01
NF1	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:57:00 AM	8.55	8.25	32.20	26.96	2.02	5.00	<0.1	<0.01
NF1	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	8:58:00 AM	8.54	8.24	32.12	27.01	1.99	6.00	<0.1	<0.01
NF1	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	8:58:00 AM	8.60	8.24	32.21	27.02	1.97	6.00	<0.1	<0.01
NF1	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	12	8:59:00 AM	8.55	8.24	32.20	27.01	1.94	5.00	<0.1	<0.01
NF1	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	12	8:59:00 AM	8.55	8.22	32.13	26.98	1.92	5.00	<0.1	<0.01
NF2	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:14:00 AM	8.22	8.18	32.47	27.16	1.91	6.00	<0.1	<0.01
NF2	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:14:00 AM	8.23	8.19	32.46	27.12	1.87	6.00	<0.1	<0.01
NF2	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:15:00 AM	8.17	8.22	32.45	27.11	1.83	5.00	<0.1	<0.01
NF2	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:15:00 AM	8.17	8.20	32.54	27.10	1.91	4.00	<0.1	<0.01
NF2	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	9:16:00 AM	8.19	8.21	32.44	27.16	1.85	5.00	<0.1	<0.01
NF2	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	9:16:00 AM	8.17	8.21	32.46	27.13	1.86	4.00	<0.1	<0.01
NF3	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:22:00 AM	8.74	8.27	31.41	26.94	1.82	7.00	<0.1	<0.01
NF3	16/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:22:00 AM	8.76	8.28	31.45	26.95	1.82	8.00	<0.1	<0.01
NF3	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:23:00 AM	8.72	8.26	31.49	26.95	1.84	8.00	<0.1	<0.01
NF3	16/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:23:00 AM	8.74	8.28	31.41	26.94	1.86	6.00	<0.1	<0.01
NF3	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:24:00 AM	8.73	8.28	31.39	26.97	1.81	6.00	<0.1	<0.01
NF3	16/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:24:00 AM	8.73	8.29	31.43	26.91	1.89	6.00	<0.1	<0.01
CE	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:25:00 AM	8.78	8.27	32.83	26.61	2.84	4.00	<0.1	<0.01
CE	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:25:00 AM	8.86	8.25	32.77	26.60	2.81	4.00	<0.1	<0.01
CE	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	8:26:00 AM	8.79	8.24	32.83	26.61	2.83	3.00	<0.1	<0.01
CE	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	8:26:00 AM	8.78	8.23	32.83	26.54	2.83	6.00	<0.1	<0.01
CE	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	8:27:00 AM	8.80	8.25	32.79	26.56	2.82	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CE	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	8:27:00 AM	8.82	8.28	32.83	26.53	2.79	3.00	<0.1	<0.01
CF	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:36:00 AM	7.87	8.35	31.95	26.64	2.34	5.00	<0.1	<0.01
CF	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:36:00 AM	7.94	8.34	31.95	26.70	2.38	3.00	<0.1	<0.01
CF	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	11:37:00 AM	7.90	8.32	31.98	26.63	2.36	3.00	<0.1	<0.01
CF	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	11:37:00 AM	7.83	8.36	31.95	26.69	2.41	4.00	<0.1	<0.01
CF	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	11:38:00 AM	7.83	8.36	32.02	26.64	2.53	6.00	<0.1	<0.01
CF	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	11:38:00 AM	7.86	8.33	31.97	26.62	2.55	4.00	<0.1	<0.01
WSR01	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:16:00 AM	7.76	8.37	31.52	26.67	1.64	2.50	<0.1	<0.01
WSR01	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:16:00 AM	7.81	8.41	31.52	26.68	1.65	4.00	<0.1	<0.01
WSR01	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:17:00 AM	7.72	8.41	31.48	26.74	1.64	4.00	<0.1	<0.01
WSR01	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:17:00 AM	7.72	8.40	31.43	26.72	1.67	6.00	<0.1	<0.01
WSR01	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	11:18:00 AM	7.84	8.39	31.52	26.69	1.63	4.00	<0.1	<0.01
WSR01	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	11:18:00 AM	7.73	8.37	31.52	26.70	1.64	4.00	<0.1	<0.01
WSR02	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:55:00 AM	8.39	8.16	32.37	26.82	1.30	3.00	<0.1	<0.01
WSR02	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:55:00 AM	8.34	8.20	32.41	26.86	1.32	4.00	<0.1	<0.01
WSR02	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:56:00 AM	8.36	8.16	32.36	26.78	1.34	3.00	<0.1	<0.01
WSR02	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:56:00 AM	8.28	8.15	32.37	26.83	1.32	4.00	<0.1	<0.01
WSR02	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	10:57:00 AM	8.28	8.15	32.39	26.86	1.30	4.00	<0.1	<0.01
WSR02	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	10:57:00 AM	8.34	8.18	32.38	26.85	1.33	7.00	<0.1	<0.01
WSR03	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:39:00 AM	8.76	8.39	31.90	26.68	1.42	5.00	<0.1	<0.01
WSR03	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:39:00 AM	8.80	8.35	31.84	26.68	1.41	7.00	<0.1	<0.01
WSR03	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:40:00 AM	8.76	8.37	31.93	26.71	1.38	6.00	<0.1	<0.01
WSR03	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:40:00 AM	8.77	8.34	31.84	26.75	1.39	7.00	<0.1	<0.01
WSR03	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:41:00 AM	8.75	8.39	31.91	26.68	1.42	5.00	<0.1	<0.01
WSR03	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:41:00 AM	8.68	8.35	31.91	26.67	1.43	5.00	<0.1	<0.01
WSR04	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:24:00 AM	8.58	8.22	32.38	26.62	1.91	5.00	<0.1	<0.01
WSR04	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:24:00 AM	8.50	8.19	32.39	26.70	1.94	5.00	<0.1	<0.01
WSR04	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:25:00 AM	8.50	8.23	32.30	26.62	1.88	5.00	<0.1	<0.01
WSR04	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:25:00 AM	8.49	8.23	32.38	26.64	1.93	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR04	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:26:00 AM	8.56	8.20	32.36	26.69	1.92	5.00	<0.1	<0.01
WSR04	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:26:00 AM	8.56	8.23	32.40	26.61	1.89	5.00	<0.1	<0.01
WSR16	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:47:00 AM	8.09	8.36	31.48	26.64	1.30	4.00	<0.1	<0.01
WSR16	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:47:00 AM	8.12	8.37	31.49	26.67	1.46	4.00	<0.1	<0.01
WSR16	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:48:00 AM	8.06	8.38	31.40	26.69	1.44	5.00	<0.1	<0.01
WSR16	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	8:48:00 AM	8.07	8.35	31.47	26.64	1.30	6.00	<0.1	<0.01
WSR16	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	14	8:49:00 AM	8.06	8.34	31.45	26.67	1.30	7.00	<0.1	<0.01
WSR16	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	14	8:49:00 AM	8.11	8.39	31.41	26.71	1.46	6.00	<0.1	<0.01
WSR33	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:09:00 AM	8.59	8.32	32.63	26.60	1.35	6.00	<0.1	<0.01
WSR33	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:09:00 AM	8.58	8.34	32.57	26.63	1.34	5.00	<0.1	<0.01
WSR33	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:10:00 AM	8.55	8.30	32.62	26.64	1.35	4.00	<0.1	<0.01
WSR33	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:10:00 AM	8.55	8.35	32.59	26.63	1.34	6.00	<0.1	<0.01
WSR33	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:11:00 AM	8.55	8.34	32.65	26.61	1.40	6.00	<0.1	<0.01
WSR33	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:11:00 AM	8.59	8.35	32.60	26.65	1.38	8.00	<0.1	<0.01
WSR36	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:53:00 AM	7.63	8.44	32.29	26.50	1.46	8.00	<0.1	<0.01
WSR36	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:53:00 AM	7.68	8.44	32.33	26.46	1.46	8.00	<0.1	<0.01
WSR36	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	9:54:00 AM	7.65	8.43	32.36	26.48	1.47	7.00	<0.1	<0.01
WSR36	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	3	9:54:00 AM	7.68	8.41	32.38	26.52	1.33	5.00	<0.1	<0.01
WSR36	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:54:00 AM	7.63	8.44	32.31	26.46	1.35	6.00	<0.1	<0.01
WSR36	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:54:00 AM	7.72	8.41	32.36	26.44	1.41	9.00	<0.1	<0.01
WSR37	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:45:00 AM	7.97	8.27	32.73	26.68	1.63	5.00	<0.1	<0.01
WSR37	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:45:00 AM	7.93	8.28	32.71	26.72	1.59	5.00	<0.1	<0.01
WSR37	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:46:00 AM	7.96	8.30	32.67	26.76	1.64	6.00	<0.1	<0.01
WSR37	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:46:00 AM	8.01	8.29	32.65	26.69	1.65	5.00	<0.1	<0.01
WSR37	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:47:00 AM	7.96	8.32	32.66	26.76	1.64	8.00	<0.1	<0.01
WSR37	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:47:00 AM	8.03	8.27	32.68	26.76	1.63	6.00	<0.1	<0.01
NF1	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:11:00 AM	7.70	8.32	32.41	26.51	2.07	6.00	<0.1	<0.01
NF1	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:11:00 AM	7.70	8.31	32.34	26.48	2.12	6.00	<0.1	<0.01
NF1	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	9:12:00 AM	7.70	8.34	32.41	26.50	2.09	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF1	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	9:12:00 AM	7.80	8.29	32.41	26.48	2.12	5.00	<0.1	<0.01
NF1	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	9:13:00 AM	7.77	8.34	32.41	26.47	2.11	6.00	<0.1	<0.01
NF1	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	9:13:00 AM	7.69	8.32	32.41	26.43	2.14	5.00	<0.1	<0.01
NF2	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:28:00 AM	8.15	8.26	32.33	26.68	2.10	5.00	<0.1	<0.01
NF2	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:28:00 AM	8.08	8.23	32.33	26.63	2.12	8.00	<0.1	<0.01
NF2	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:29:00 AM	8.12	8.22	32.28	26.63	2.13	5.00	<0.1	<0.01
NF2	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:29:00 AM	8.10	8.21	32.28	26.69	2.12	5.00	<0.1	<0.01
NF2	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	9:30:00 AM	8.17	8.26	32.26	26.71	2.12	6.00	<0.1	<0.01
NF2	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	9:30:00 AM	8.05	8.24	32.26	26.69	2.14	6.00	<0.1	<0.01
NF3	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:36:00 AM	8.64	8.34	32.22	26.86	1.73	7.00	<0.1	<0.01
NF3	18/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:36:00 AM	8.64	8.30	32.23	26.79	1.72	6.00	<0.1	<0.01
NF3	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:37:00 AM	8.62	8.32	32.17	26.79	1.72	8.00	<0.1	<0.01
NF3	18/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:37:00 AM	8.63	8.34	32.23	26.84	1.72	7.00	<0.1	<0.01
NF3	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:38:00 AM	8.62	8.31	32.25	26.88	1.68	6.00	<0.1	<0.01
NF3	18/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:38:00 AM	8.54	8.32	32.22	26.79	1.70	5.00	<0.1	<0.01
CE	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:30:00 AM	7.98	8.16	31.46	27.62	2.64	3.00	<0.1	<0.01
CE	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:30:00 AM	8.02	8.18	31.46	27.60	2.62	3.00	<0.1	<0.01
CE	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	9:31:00 AM	8.04	8.17	31.38	27.58	2.59	3.00	<0.1	<0.01
CE	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	9:31:00 AM	7.97	8.19	31.48	27.58	2.58	2.50	<0.1	<0.01
CE	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	9:32:00 AM	8.00	8.17	31.43	27.58	2.58	6.00	<0.1	<0.01
CE	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	9:32:00 AM	8.01	8.14	31.40	27.62	2.58	4.00	<0.1	<0.01
CF	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:38:00 PM	8.69	8.01	30.34	27.37	2.43	3.00	<0.1	<0.01
CF	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:38:00 PM	8.61	8.03	30.36	27.40	2.44	3.00	<0.1	<0.01
CF	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	12:39:00 PM	8.62	8.01	30.50	27.35	2.45	3.00	<0.1	<0.01
CF	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	12:39:00 PM	8.59	8.04	30.49	27.40	2.46	2.50	<0.1	<0.01
CF	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	20	12:40:00 PM	8.64	8.06	30.35	27.36	2.41	3.00	<0.1	<0.01
CF	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	20	12:40:00 PM	8.68	8.01	30.34	27.38	2.43	2.50	<0.1	<0.01
WSR01	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:16:00 PM	9.01	8.15	30.66	27.57	1.88	4.00	<0.1	<0.01
WSR01	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:16:00 PM	8.93	8.12	30.62	27.57	1.85	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR01	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:17:00 PM	8.98	8.08	30.55	27.60	1.91	2.50	<0.1	<0.01
WSR01	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:17:00 PM	9.00	8.08	30.61	27.57	1.90	2.50	<0.1	<0.01
WSR01	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:18:00 PM	8.96	8.09	30.62	27.57	1.85	2.50	<0.1	<0.01
WSR01	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:18:00 PM	8.95	8.13	30.56	27.61	1.89	2.50	<0.1	<0.01
WSR02	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:59:00 AM	8.78	8.12	31.30	27.40	2.02	2.50	<0.1	<0.01
WSR02	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:59:00 AM	8.75	8.11	31.38	27.36	2.06	2.50	<0.1	<0.01
WSR02	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:00:00 PM	8.73	8.09	31.39	27.39	2.06	2.50	<0.1	<0.01
WSR02	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:00:00 PM	8.79	8.06	31.21	27.39	2.02	2.50	<0.1	<0.01
WSR02	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	12:01:00 PM	8.81	8.11	31.25	27.35	2.05	4.00	<0.1	<0.01
WSR02	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	12:01:00 PM	8.76	8.05	31.34	27.41	2.02	4.00	<0.1	<0.01
WSR03	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:41:00 AM	8.36	8.02	31.19	27.48	1.31	2.50	<0.1	<0.01
WSR03	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:41:00 AM	8.35	8.08	31.23	27.47	1.30	4.00	<0.1	<0.01
WSR03	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:42:00 AM	8.43	8.03	31.21	27.44	1.32	3.00	<0.1	<0.01
WSR03	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:42:00 AM	8.41	8.05	31.19	27.46	1.31	3.00	<0.1	<0.01
WSR03	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:43:00 AM	8.46	8.10	31.08	27.42	1.30	3.00	<0.1	<0.01
WSR03	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:43:00 AM	8.39	8.04	31.18	27.43	1.30	2.50	<0.1	<0.01
WSR04	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:29:00 AM	8.27	7.99	31.29	27.29	2.07	2.50	<0.1	<0.01
WSR04	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:29:00 AM	8.25	8.04	31.31	27.29	2.06	3.00	<0.1	<0.01
WSR04	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:30:00 AM	8.23	8.01	31.34	27.30	2.01	2.50	<0.1	<0.01
WSR04	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:30:00 AM	8.22	8.05	31.38	27.28	1.96	3.00	<0.1	<0.01
WSR04	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:31:00 AM	8.19	8.04	31.33	27.28	1.95	2.50	<0.1	<0.01
WSR04	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	11:31:00 AM	8.23	7.99	31.45	27.28	1.92	3.00	<0.1	<0.01
WSR16	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:53:00 AM	8.11	8.25	30.43	27.27	2.09	2.50	<0.1	<0.01
WSR16	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:53:00 AM	8.13	8.29	30.42	27.29	2.13	2.50	<0.1	<0.01
WSR16	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	9:54:00 AM	8.06	8.25	30.33	27.29	2.15	2.50	<0.1	<0.01
WSR16	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	9:54:00 AM	8.13	8.23	30.30	27.32	2.13	2.50	<0.1	<0.01
WSR16	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	15	9:55:00 AM	8.18	8.23	30.31	27.29	2.12	2.50	<0.1	<0.01
WSR16	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	15	9:55:00 AM	8.14	8.24	30.36	27.28	2.14	2.50	<0.1	<0.01
WSR33	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	8.54	8.27	30.40	27.27	1.62	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR33	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	8.55	8.27	30.43	27.28	1.64	2.50	<0.1	<0.01
WSR33	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:15:00 AM	8.60	8.24	30.38	27.31	1.61	2.50	<0.1	<0.01
WSR33	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	11:15:00 AM	8.55	8.30	30.31	27.31	1.64	3.00	<0.1	<0.01
WSR33	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	11:16:00 AM	8.59	8.24	30.45	27.28	1.62	2.50	<0.1	<0.01
WSR33	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	11:16:00 AM	8.54	8.26	30.36	27.31	1.63	2.50	<0.1	<0.01
WSR36	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:58:00 AM	8.89	8.02	31.36	27.54	1.96	2.50	<0.1	<0.01
WSR36	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:58:00 AM	8.86	8.00	31.41	27.49	1.92	3.00	<0.1	<0.01
WSR36	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:59:00 AM	8.81	8.00	31.29	27.54	1.97	2.50	<0.1	<0.01
WSR36	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:59:00 AM	8.83	8.03	31.31	27.54	1.91	3.00	<0.1	<0.01
WSR36	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:59:00 AM	8.91	8.06	31.26	27.52	1.98	2.50	<0.1	<0.01
WSR36	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:59:00 AM	8.89	8.07	31.35	27.49	1.98	2.50	<0.1	<0.01
WSR37	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:49:00 AM	8.65	8.21	30.84	27.36	1.48	4.00	<0.1	<0.01
WSR37	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:49:00 AM	8.74	8.14	30.93	27.35	1.51	2.50	<0.1	<0.01
WSR37	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:50:00 AM	8.63	8.21	30.79	27.34	1.54	2.50	<0.1	<0.01
WSR37	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:50:00 AM	8.67	8.19	30.95	27.33	1.51	5.00	<0.1	<0.01
WSR37	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:51:00 AM	8.68	8.14	30.93	27.34	1.49	3.00	<0.1	<0.01
WSR37	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:51:00 AM	8.70	8.19	30.95	27.35	1.52	2.50	<0.1	<0.01
NF1	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:17:00 AM	8.13	8.26	31.50	27.27	1.95	5.00	<0.1	<0.01
NF1	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:17:00 AM	8.17	8.31	31.34	27.29	1.91	6.00	<0.1	<0.01
NF1	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	10:18:00 AM	8.24	8.28	31.39	27.28	1.91	3.00	<0.1	<0.01
NF1	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	10:18:00 AM	8.13	8.30	31.40	27.31	1.93	3.00	<0.1	<0.01
NF1	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	10:19:00 AM	8.22	8.26	31.49	27.25	1.89	6.00	<0.1	<0.01
NF1	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	10:19:00 AM	8.16	8.27	31.49	27.27	1.91	6.00	<0.1	<0.01
NF2	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:34:00 AM	8.87	8.05	31.38	27.69	1.56	3.00	<0.1	<0.01
NF2	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:34:00 AM	8.86	8.10	31.45	27.67	1.60	2.50	<0.1	<0.01
NF2	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:35:00 AM	8.97	8.03	31.42	27.70	1.58	4.00	<0.1	<0.01
NF2	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:35:00 AM	8.88	8.07	31.31	27.70	1.61	2.50	<0.1	<0.01
NF2	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	10:36:00 AM	8.98	8.02	31.37	27.71	1.62	4.00	<0.1	<0.01
NF2	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	10	10:36:00 AM	8.98	8.05	31.42	27.71	1.59	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF3	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:42:00 AM	8.90	8.26	30.88	27.40	2.16	3.00	<0.1	<0.01
NF3	20/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:42:00 AM	9.02	8.24	31.05	27.43	2.11	3.00	<0.1	<0.01
NF3	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	10:43:00 AM	8.92	8.28	30.95	27.43	1.99	3.00	<0.1	<0.01
NF3	20/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	10:43:00 AM	8.92	8.22	30.88	27.39	2.17	3.00	<0.1	<0.01
NF3	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	10:44:00 AM	9.02	8.24	30.90	27.42	1.93	2.50	<0.1	<0.01
NF3	20/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	10:44:00 AM	9.00	8.29	30.86	27.41	2.12	3.00	<0.1	<0.01
CE	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:04:00 AM	8.41	8.15	31.97	27.00	2.64	4.00	<0.1	<0.01
CE	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:04:00 AM	8.36	8.12	31.95	27.00	2.62	4.00	<0.1	<0.01
CE	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	11:05:00 AM	8.38	8.10	31.87	27.06	2.51	3.00	<0.1	<0.01
CE	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	11:05:00 AM	8.35	8.16	31.87	27.01	2.58	4.00	<0.1	<0.01
CE	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	11:06:00 AM	8.42	8.11	31.82	26.97	2.43	5.00	<0.1	<0.01
CE	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	11:06:00 AM	8.35	8.12	31.88	27.03	2.44	4.00	<0.1	<0.01
CF	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	2:14:00 PM	7.78	8.13	31.92	27.02	2.12	2.50	<0.1	<0.01
CF	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	2:14:00 PM	7.75	8.07	32.05	27.08	2.14	4.00	<0.1	<0.01
CF	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	2:15:00 PM	7.75	8.11	32.02	27.11	2.17	3.00	<0.1	<0.01
CF	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	11	2:15:00 PM	7.75	8.09	32.03	27.03	2.12	3.00	<0.1	<0.01
CF	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	2:16:00 PM	7.80	8.08	32.04	27.01	2.17	3.00	<0.1	<0.01
CF	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	21	2:16:00 PM	7.79	8.09	32.07	27.01	2.14	5.00	<0.1	<0.01
WSR01	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:50:00 PM	8.75	8.17	31.43	27.22	2.01	4.00	<0.1	<0.01
WSR01	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:50:00 PM	8.83	8.19	31.40	27.14	2.04	4.00	<0.1	<0.01
WSR01	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	1:51:00 PM	8.78	8.21	31.36	27.25	1.93	2.50	<0.1	<0.01
WSR01	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	1:51:00 PM	8.83	8.16	31.36	27.22	1.95	4.00	<0.1	<0.01
WSR01	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	1:52:00 PM	8.77	8.19	31.41	27.16	1.92	4.00	<0.1	<0.01
WSR01	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	1:52:00 PM	8.77	8.17	31.36	27.22	1.92	5.00	<0.1	<0.01
WSR02	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:32:00 PM	8.17	8.34	32.62	27.06	1.35	3.00	<0.1	<0.01
WSR02	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:32:00 PM	8.12	8.29	32.53	27.06	1.35	6.00	<0.1	<0.01
WSR02	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	1:33:00 PM	8.17	8.35	32.59	27.09	1.32	3.00	<0.1	<0.01
WSR02	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	1:33:00 PM	8.13	8.29	32.60	27.12	1.61	4.00	<0.1	<0.01
WSR02	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	1:34:00 PM	8.14	8.29	32.50	27.12	1.32	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR02	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	1:34:00 PM	8.13	8.35	32.57	27.12	1.36	3.00	<0.1	<0.01
WSR03	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:16:00 PM	8.17	8.30	32.25	27.11	1.56	5.00	<0.1	<0.01
WSR03	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:16:00 PM	8.15	8.34	32.31	27.03	1.57	4.00	<0.1	<0.01
WSR03	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:17:00 PM	8.22	8.34	32.36	27.06	1.59	5.00	<0.1	<0.01
WSR03	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:17:00 PM	8.21	8.33	32.30	27.10	1.46	3.00	<0.1	<0.01
WSR03	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	1:18:00 PM	8.15	8.32	32.36	27.11	1.49	4.00	<0.1	<0.01
WSR03	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	1:18:00 PM	8.20	8.29	32.36	27.10	1.53	6.00	<0.1	<0.01
WSR04	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:02:00 PM	8.71	8.05	32.39	27.15	2.11	5.00	<0.1	<0.01
WSR04	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	1:02:00 PM	8.71	8.05	32.33	27.11	2.08	4.00	<0.1	<0.01
WSR04	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:03:00 PM	8.71	8.04	32.33	27.09	1.92	5.00	<0.1	<0.01
WSR04	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	1:03:00 PM	8.71	8.06	32.46	27.14	1.95	6.00	<0.1	<0.01
WSR04	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	1:04:00 PM	8.77	8.07	32.44	27.19	2.11	5.00	<0.1	<0.01
WSR04	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	1:04:00 PM	8.71	8.09	32.43	27.17	1.93	3.00	<0.1	<0.01
WSR16	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:27:00 AM	7.75	8.25	31.79	27.00	1.68	4.00	<0.1	<0.01
WSR16	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:27:00 AM	7.81	8.31	31.73	27.04	1.66	6.00	<0.1	<0.01
WSR16	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	11:28:00 AM	7.76	8.26	31.78	27.10	1.68	6.00	<0.1	<0.01
WSR16	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	11:28:00 AM	7.78	8.29	31.74	27.10	1.68	6.00	<0.1	<0.01
WSR16	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	16	11:29:00 AM	7.74	8.27	31.77	27.10	1.63	2.50	<0.1	<0.01
WSR16	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	16	11:29:00 AM	7.82	8.31	31.64	27.04	1.63	4.00	<0.1	<0.01
WSR33	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:45:00 PM	8.62	8.30	32.72	27.23	2.11	3.00	<0.1	<0.01
WSR33	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:45:00 PM	8.57	8.29	32.64	27.19	2.14	6.00	<0.1	<0.01
WSR33	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:46:00 PM	8.59	8.27	32.59	27.23	2.19	3.00	<0.1	<0.01
WSR33	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:46:00 PM	8.57	8.25	32.68	27.17	2.07	4.00	<0.1	<0.01
WSR33	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:47:00 PM	8.55	8.30	32.71	27.25	2.01	5.00	<0.1	<0.01
WSR33	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:47:00 PM	8.55	8.23	32.69	27.24	1.99	6.00	<0.1	<0.01
WSR36	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:29:00 PM	8.83	8.25	32.68	27.18	1.48	5.00	<0.1	<0.01
WSR36	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:29:00 PM	8.79	8.27	32.74	27.24	1.48	5.00	<0.1	<0.01
WSR36	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:30:00 PM	8.83	8.29	32.73	27.25	1.50	3.00	<0.1	<0.01
WSR36	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:30:00 PM	8.78	8.26	32.64	27.26	1.50	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR36	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:30:00 PM	8.79	8.26	32.65	27.15	1.51	6.00	<0.1	<0.01
WSR36	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:30:00 PM	8.76	8.29	32.72	27.15	1.56	4.00	<0.1	<0.01
WSR37	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:21:00 PM	8.18	8.19	32.13	27.31	1.62	3.00	<0.1	<0.01
WSR37	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:21:00 PM	8.15	8.24	32.02	27.31	1.62	3.00	<0.1	<0.01
WSR37	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:22:00 PM	8.18	8.23	32.04	27.30	1.65	4.00	<0.1	<0.01
WSR37	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:22:00 PM	8.21	8.23	31.98	27.22	1.65	3.00	<0.1	<0.01
WSR37	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:23:00 PM	8.21	8.22	31.98	27.24	1.64	3.00	<0.1	<0.01
WSR37	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	12:23:00 PM	8.20	8.22	32.05	27.29	1.64	4.00	<0.1	<0.01
NF1	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:48:00 AM	8.19	8.27	31.16	27.14	1.75	4.00	<0.1	<0.01
NF1	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:48:00 AM	8.19	8.26	31.19	27.23	1.77	6.00	<0.1	<0.01
NF1	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	11:49:00 AM	8.23	8.27	31.05	27.21	1.75	5.00	<0.1	<0.01
NF1	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	11:49:00 AM	8.20	8.32	31.19	27.12	1.77	3.00	<0.1	<0.01
NF1	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	11:50:00 AM	8.18	8.27	31.11	27.18	1.78	4.00	<0.1	<0.01
NF1	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	11:50:00 AM	8.20	8.32	31.16	27.19	1.73	3.00	<0.1	<0.01
NF2	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:05:00 PM	8.09	8.20	31.77	27.20	1.40	4.00	<0.1	<0.01
NF2	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:05:00 PM	8.11	8.25	31.85	27.21	1.42	4.00	<0.1	<0.01
NF2	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:06:00 PM	8.16	8.18	31.78	27.22	1.39	2.50	<0.1	<0.01
NF2	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	12:06:00 PM	8.11	8.18	31.73	27.26	1.40	3.00	<0.1	<0.01
NF2	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	12:07:00 PM	8.10	8.20	31.78	27.21	1.42	3.00	<0.1	<0.01
NF2	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	12:07:00 PM	8.09	8.23	31.82	27.18	1.40	3.00	<0.1	<0.01
NF3	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:14:00 PM	8.04	8.17	31.97	27.11	1.92	4.00	<0.1	<0.01
NF3	22/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:14:00 PM	8.01	8.17	31.93	27.18	1.84	3.00	<0.1	<0.01
NF3	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	12:15:00 PM	8.03	8.22	31.98	27.14	1.83	3.00	<0.1	<0.01
NF3	22/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	12:15:00 PM	7.99	8.20	32.01	27.16	1.84	2.50	<0.1	<0.01
NF3	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	12	12:16:00 PM	8.06	8.19	31.94	27.13	1.82	3.00	<0.1	<0.01
NF3	22/07/2024	Cloudy	Mid-Ebb	Moderate	B	12	12:16:00 PM	8.04	8.15	31.95	27.09	1.85	3.00	<0.1	<0.01
CE	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:54:00 AM	8.86	8.28	32.49	27.16	2.16	3.00	<0.1	<0.01
CE	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:54:00 AM	8.84	8.27	32.48	27.19	2.13	2.50	<0.1	<0.01
CE	24/07/2024	Cloudy	Mid-Flood	Moderate	M	12	10:55:00 AM	8.84	8.33	32.50	27.19	2.13	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
CE	24/07/2024	Cloudy	Mid-Flood	Moderate	M	12	10:55:00 AM	8.85	8.33	32.47	27.17	2.13	3.00	<0.1	<0.01
CE	24/07/2024	Cloudy	Mid-Flood	Moderate	B	23	10:56:00 AM	8.84	8.33	32.51	27.16	2.15	2.50	<0.1	<0.01
CE	24/07/2024	Cloudy	Mid-Flood	Moderate	B	23	10:56:00 AM	8.89	8.28	32.53	27.18	2.17	2.50	<0.1	<0.01
CF	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:00:00 AM	8.13	8.07	32.26	27.12	2.40	2.50	<0.1	<0.01
CF	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:00:00 AM	8.10	8.07	32.26	27.11	2.38	4.00	<0.1	<0.01
CF	24/07/2024	Cloudy	Mid-Flood	Moderate	M	11	8:01:00 AM	8.16	8.07	32.33	27.06	2.41	2.50	<0.1	<0.01
CF	24/07/2024	Cloudy	Mid-Flood	Moderate	M	11	8:01:00 AM	8.16	8.10	32.33	27.10	2.43	2.50	<0.1	<0.01
CF	24/07/2024	Cloudy	Mid-Flood	Moderate	B	21	8:02:00 AM	8.15	8.13	32.38	27.07	2.41	3.00	<0.1	<0.01
CF	24/07/2024	Cloudy	Mid-Flood	Moderate	B	21	8:02:00 AM	8.16	8.08	32.29	27.13	2.44	4.00	<0.1	<0.01
WSR01	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:23:00 AM	9.00	8.19	32.98	27.23	1.61	5.00	<0.1	<0.01
WSR01	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:23:00 AM	8.93	8.13	33.05	27.19	1.59	2.50	<0.1	<0.01
WSR01	24/07/2024	Cloudy	Mid-Flood	Moderate	M	5	8:24:00 AM	8.99	8.17	32.97	27.24	1.64	4.00	<0.1	<0.01
WSR01	24/07/2024	Cloudy	Mid-Flood	Moderate	M	5	8:24:00 AM	8.97	8.20	33.01	27.23	1.59	3.00	<0.1	<0.01
WSR01	24/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:25:00 AM	8.96	8.20	33.05	27.21	1.64	2.50	<0.1	<0.01
WSR01	24/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:25:00 AM	9.00	8.20	33.01	27.21	1.62	2.50	<0.1	<0.01
WSR02	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:41:00 AM	8.83	8.18	32.45	27.21	1.89	2.50	<0.1	<0.01
WSR02	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:41:00 AM	8.86	8.21	32.44	27.26	1.87	2.50	<0.1	<0.01
WSR02	24/07/2024	Cloudy	Mid-Flood	Moderate	M	5	8:42:00 AM	8.90	8.22	32.46	27.23	1.88	2.50	<0.1	<0.01
WSR02	24/07/2024	Cloudy	Mid-Flood	Moderate	M	5	8:42:00 AM	8.83	8.23	32.48	27.27	1.85	3.00	<0.1	<0.01
WSR02	24/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:43:00 AM	8.86	8.19	32.44	27.23	1.88	4.00	<0.1	<0.01
WSR02	24/07/2024	Cloudy	Mid-Flood	Moderate	B	8	8:43:00 AM	8.87	8.24	32.41	27.27	1.90	2.50	<0.1	<0.01
WSR03	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:55:00 AM	8.16	8.31	31.77	27.20	1.60	4.00	<0.1	<0.01
WSR03	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	8:55:00 AM	8.16	8.26	31.84	27.26	1.60	3.00	<0.1	<0.01
WSR03	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	8:56:00 AM	8.15	8.24	31.80	27.26	1.59	3.00	<0.1	<0.01
WSR03	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	8:56:00 AM	8.16	8.29	31.89	27.27	1.59	3.00	<0.1	<0.01
WSR03	24/07/2024	Cloudy	Mid-Flood	Moderate	B	7	8:57:00 AM	8.18	8.25	31.78	27.21	1.55	2.50	<0.1	<0.01
WSR03	24/07/2024	Cloudy	Mid-Flood	Moderate	B	7	8:57:00 AM	8.14	8.30	31.80	27.26	1.57	3.00	<0.1	<0.01
WSR04	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:09:00 AM	8.04	8.03	32.34	27.33	1.67	2.50	<0.1	<0.01
WSR04	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:09:00 AM	8.03	8.06	32.34	27.33	1.69	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR04	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:10:00 AM	8.04	8.09	32.35	27.33	1.66	2.50	<0.1	<0.01
WSR04	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:10:00 AM	8.09	8.04	32.32	27.30	1.66	2.50	<0.1	<0.01
WSR04	24/07/2024	Cloudy	Mid-Flood	Moderate	B	6	9:11:00 AM	8.03	8.09	32.32	27.34	1.68	3.00	<0.1	<0.01
WSR04	24/07/2024	Cloudy	Mid-Flood	Moderate	B	6	9:11:00 AM	8.10	8.09	32.32	27.35	1.72	4.00	<0.1	<0.01
WSR16	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:32:00 AM	7.99	8.19	32.31	27.46	1.93	2.50	<0.1	<0.01
WSR16	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:32:00 AM	7.98	8.17	32.28	27.46	1.93	2.50	<0.1	<0.01
WSR16	24/07/2024	Cloudy	Mid-Flood	Moderate	M	9	10:33:00 AM	7.97	8.21	32.31	27.44	1.95	3.00	<0.1	<0.01
WSR16	24/07/2024	Cloudy	Mid-Flood	Moderate	M	9	10:33:00 AM	7.94	8.19	32.28	27.44	1.92	2.50	<0.1	<0.01
WSR16	24/07/2024	Cloudy	Mid-Flood	Moderate	B	16	10:34:00 AM	7.97	8.19	32.40	27.51	1.92	4.00	<0.1	<0.01
WSR16	24/07/2024	Cloudy	Mid-Flood	Moderate	B	16	10:34:00 AM	7.97	8.23	32.39	27.44	1.94	4.00	<0.1	<0.01
WSR33	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:24:00 AM	8.88	8.20	31.84	27.06	2.08	3.00	<0.1	<0.01
WSR33	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:24:00 AM	8.92	8.20	31.89	27.09	2.01	4.00	<0.1	<0.01
WSR33	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:25:00 AM	8.87	8.25	31.84	27.04	1.93	4.00	<0.1	<0.01
WSR33	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:25:00 AM	8.85	8.23	31.87	27.04	1.99	4.00	<0.1	<0.01
WSR33	24/07/2024	Cloudy	Mid-Flood	Moderate	B	6	9:26:00 AM	8.85	8.20	31.81	27.07	1.93	2.50	<0.1	<0.01
WSR33	24/07/2024	Cloudy	Mid-Flood	Moderate	B	6	9:26:00 AM	8.87	8.24	31.80	27.06	1.94	2.50	<0.1	<0.01
WSR36	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:38:00 AM	8.13	8.08	32.33	27.06	1.56	3.00	<0.1	<0.01
WSR36	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:38:00 AM	8.09	8.04	32.28	27.02	1.58	2.50	<0.1	<0.01
WSR36	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:39:00 AM	8.14	8.12	32.28	27.02	1.60	3.00	<0.1	<0.01
WSR36	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:39:00 AM	8.12	8.10	32.32	27.05	1.60	3.00	<0.1	<0.01
WSR36	24/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:39:00 AM	8.15	8.11	32.36	27.02	1.57	2.50	<0.1	<0.01
WSR36	24/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:39:00 AM	8.16	8.12	32.34	27.07	1.60	4.00	<0.1	<0.01
WSR37	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:53:00 AM	8.87	8.14	31.77	27.17	1.65	2.50	<0.1	<0.01
WSR37	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	9:53:00 AM	8.86	8.11	31.86	27.16	1.63	2.50	<0.1	<0.01
WSR37	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:54:00 AM	8.88	8.08	31.86	27.17	1.60	3.00	<0.1	<0.01
WSR37	24/07/2024	Cloudy	Mid-Flood	Moderate	M	4	9:54:00 AM	8.84	8.14	31.76	27.19	1.62	2.50	<0.1	<0.01
WSR37	24/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:55:00 AM	8.87	8.08	31.80	27.15	1.63	3.00	<0.1	<0.01
WSR37	24/07/2024	Cloudy	Mid-Flood	Moderate	B	7	9:55:00 AM	8.86	8.15	31.78	27.19	1.65	2.50	<0.1	<0.01
NF1	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:19:00 AM	8.49	8.22	32.77	27.43	1.69	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF1	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:19:00 AM	8.56	8.25	32.78	27.40	1.69	2.50	<0.1	<0.01
NF1	24/07/2024	Cloudy	Mid-Flood	Moderate	M	7	10:20:00 AM	8.51	8.23	32.71	27.41	1.67	3.00	<0.1	<0.01
NF1	24/07/2024	Cloudy	Mid-Flood	Moderate	M	7	10:20:00 AM	8.51	8.26	32.82	27.38	1.70	4.00	<0.1	<0.01
NF1	24/07/2024	Cloudy	Mid-Flood	Moderate	B	13	10:21:00 AM	8.49	8.18	32.83	27.41	1.68	3.00	<0.1	<0.01
NF1	24/07/2024	Cloudy	Mid-Flood	Moderate	B	13	10:21:00 AM	8.51	8.20	32.72	27.42	1.71	5.00	<0.1	<0.01
NF2	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:11:00 AM	8.10	8.16	32.01	27.33	1.81	3.00	<0.1	<0.01
NF2	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:11:00 AM	8.07	8.20	32.03	27.34	1.80	3.00	<0.1	<0.01
NF2	24/07/2024	Cloudy	Mid-Flood	Moderate	M	5	10:12:00 AM	8.08	8.14	32.09	27.32	1.80	3.00	<0.1	<0.01
NF2	24/07/2024	Cloudy	Mid-Flood	Moderate	M	5	10:12:00 AM	8.12	8.21	32.08	27.29	1.75	2.50	<0.1	<0.01
NF2	24/07/2024	Cloudy	Mid-Flood	Moderate	B	10	10:13:00 AM	8.08	8.21	32.08	27.30	1.76	3.00	<0.1	<0.01
NF2	24/07/2024	Cloudy	Mid-Flood	Moderate	B	10	10:13:00 AM	8.10	8.17	31.97	27.30	1.80	3.00	<0.1	<0.01
NF3	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:02:00 AM	9.13	8.31	31.99	27.06	1.62	4.00	<0.1	<0.01
NF3	24/07/2024	Cloudy	Mid-Flood	Moderate	S	1	10:02:00 AM	9.13	8.30	31.99	27.07	1.60	3.00	<0.1	<0.01
NF3	24/07/2024	Cloudy	Mid-Flood	Moderate	M	6	10:03:00 AM	9.09	8.29	32.02	27.01	1.61	3.00	<0.1	<0.01
NF3	24/07/2024	Cloudy	Mid-Flood	Moderate	M	6	10:03:00 AM	9.16	8.25	31.94	27.03	1.59	3.00	<0.1	<0.01
NF3	24/07/2024	Cloudy	Mid-Flood	Moderate	B	11	10:04:00 AM	9.11	8.28	31.96	27.05	1.56	4.00	<0.1	<0.01
NF3	24/07/2024	Cloudy	Mid-Flood	Moderate	B	11	10:04:00 AM	9.14	8.24	32.02	27.06	1.56	2.50	<0.1	<0.01
CE	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:43:00 AM	8.45	8.11	32.92	26.98	2.35	3.00	<0.1	<0.01
CE	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:43:00 AM	8.49	8.05	32.89	26.99	2.31	2.50	<0.1	<0.01
CE	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	12	11:44:00 AM	8.55	8.12	32.95	27.04	2.26	3.00	<0.1	<0.01
CE	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	12	11:44:00 AM	8.51	8.07	32.92	27.03	2.33	3.00	<0.1	<0.01
CE	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	23	11:45:00 AM	8.49	8.10	32.85	27.04	2.28	2.50	<0.1	<0.01
CE	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	23	11:45:00 AM	8.50	8.08	32.80	27.04	2.29	3.00	<0.1	<0.01
CF	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:42:00 AM	9.13	8.19	32.11	27.22	2.49	2.50	<0.1	<0.01
CF	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:42:00 AM	9.05	8.16	32.20	27.19	2.48	2.50	<0.1	<0.01
CF	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	8:43:00 AM	9.11	8.23	32.08	27.21	2.57	3.00	<0.1	<0.01
CF	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	8:43:00 AM	9.08	8.22	32.15	27.21	2.58	2.50	<0.1	<0.01
CF	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	8:44:00 AM	9.18	8.16	32.14	27.21	2.62	3.00	<0.1	<0.01
CF	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	8:44:00 AM	9.17	8.22	32.24	27.16	2.59	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR01	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:05:00 AM	8.78	8.19	32.56	27.04	2.17	3.00	<0.1	<0.01
WSR01	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:05:00 AM	8.78	8.18	32.57	27.01	2.15	3.00	<0.1	<0.01
WSR01	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:06:00 AM	8.86	8.14	32.56	26.97	2.14	2.50	<0.1	<0.01
WSR01	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:06:00 AM	8.87	8.21	32.58	27.05	2.16	2.50	<0.1	<0.01
WSR01	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	9:07:00 AM	8.76	8.16	32.52	27.02	2.13	3.00	<0.1	<0.01
WSR01	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	9:07:00 AM	8.90	8.20	32.57	26.99	2.12	3.00	<0.1	<0.01
WSR02	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:24:00 AM	8.54	8.24	33.36	26.97	2.09	2.50	<0.1	<0.01
WSR02	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:24:00 AM	8.56	8.25	33.32	26.96	2.12	2.50	<0.1	<0.01
WSR02	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:25:00 AM	8.49	8.21	33.41	26.99	2.10	3.00	<0.1	<0.01
WSR02	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:25:00 AM	8.50	8.26	33.34	26.97	2.13	3.00	<0.1	<0.01
WSR02	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	9:26:00 AM	8.51	8.24	33.38	27.01	2.09	3.00	<0.1	<0.01
WSR02	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	9:26:00 AM	8.58	8.23	33.40	26.97	2.11	3.00	<0.1	<0.01
WSR03	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:38:00 AM	8.92	8.16	32.63	26.75	1.56	2.50	<0.1	<0.01
WSR03	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:38:00 AM	8.88	8.15	32.52	26.75	1.59	3.00	<0.1	<0.01
WSR03	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:39:00 AM	8.90	8.13	32.61	26.78	1.54	2.50	<0.1	<0.01
WSR03	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:39:00 AM	8.95	8.17	32.60	26.77	1.51	2.50	<0.1	<0.01
WSR03	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:40:00 AM	8.85	8.19	32.61	26.81	1.51	3.00	<0.1	<0.01
WSR03	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:40:00 AM	8.88	8.15	32.65	26.79	1.47	3.00	<0.1	<0.01
WSR04	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:54:00 AM	8.39	8.28	32.95	26.81	1.55	3.00	<0.1	<0.01
WSR04	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:54:00 AM	8.45	8.30	32.96	26.77	1.66	2.50	<0.1	<0.01
WSR04	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:55:00 AM	8.44	8.24	32.99	26.78	1.63	3.00	<0.1	<0.01
WSR04	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:55:00 AM	8.46	8.27	32.85	26.81	1.37	4.00	<0.1	<0.01
WSR04	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:56:00 AM	8.37	8.27	32.96	26.79	1.38	2.50	<0.1	<0.01
WSR04	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:56:00 AM	8.33	8.27	32.91	26.74	1.63	4.00	<0.1	<0.01
WSR16	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:22:00 AM	9.06	8.32	32.23	27.20	1.46	2.50	<0.1	<0.01
WSR16	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:22:00 AM	8.94	8.31	32.28	27.17	1.47	2.50	<0.1	<0.01
WSR16	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	11:23:00 AM	9.06	8.25	32.34	27.14	1.48	2.50	<0.1	<0.01
WSR16	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	8	11:23:00 AM	9.03	8.31	32.24	27.14	1.46	2.50	<0.1	<0.01
WSR16	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	14	11:24:00 AM	9.05	8.29	32.18	27.16	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR16	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	14	11:24:00 AM	8.94	8.26	32.36	27.13	1.47	3.00	<0.1	<0.01
WSR33	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:09:00 AM	9.24	8.32	32.06	26.96	1.62	3.00	<0.1	<0.01
WSR33	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:09:00 AM	9.18	8.32	32.08	27.00	1.70	2.50	<0.1	<0.01
WSR33	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:10:00 AM	9.26	8.33	32.14	26.99	1.63	2.50	<0.1	<0.01
WSR33	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:10:00 AM	9.25	8.31	32.16	26.97	1.68	3.00	<0.1	<0.01
WSR33	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:11:00 AM	9.18	8.33	32.04	26.96	1.65	3.00	<0.1	<0.01
WSR33	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	10:11:00 AM	9.19	8.33	32.14	27.00	1.65	2.50	<0.1	<0.01
WSR36	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:26:00 AM	8.92	8.29	33.03	26.83	1.95	2.50	<0.1	<0.01
WSR36	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:26:00 AM	8.89	8.28	32.91	26.82	2.00	3.00	<0.1	<0.01
WSR36	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:27:00 AM	8.95	8.30	32.99	26.85	2.00	2.50	<0.1	<0.01
WSR36	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:27:00 AM	8.82	8.32	32.97	26.85	1.96	3.00	<0.1	<0.01
WSR36	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:27:00 AM	8.83	8.26	33.02	26.85	2.00	4.00	<0.1	<0.01
WSR36	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:27:00 AM	8.81	8.26	33.01	26.79	1.95	2.50	<0.1	<0.01
WSR37	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:43:00 AM	8.02	8.11	33.01	26.78	2.06	3.00	<0.1	<0.01
WSR37	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:43:00 AM	7.96	8.13	32.98	26.78	2.11	3.00	<0.1	<0.01
WSR37	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:44:00 AM	8.01	8.14	32.96	26.81	2.05	3.00	<0.1	<0.01
WSR37	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:44:00 AM	8.02	8.12	32.97	26.74	2.08	4.00	<0.1	<0.01
WSR37	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:45:00 AM	8.03	8.14	33.04	26.81	2.06	2.50	<0.1	<0.01
WSR37	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:45:00 AM	8.01	8.16	33.07	26.74	2.10	4.00	<0.1	<0.01
NF1	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:07:00 AM	8.00	8.08	31.89	26.90	2.49	3.00	<0.1	<0.01
NF1	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:07:00 AM	8.03	8.08	31.98	26.94	2.54	3.00	<0.1	<0.01
NF1	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	11:08:00 AM	8.11	8.13	31.98	26.92	2.42	2.50	<0.1	<0.01
NF1	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	11:08:00 AM	7.98	8.11	31.98	26.89	2.45	2.50	<0.1	<0.01
NF1	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	11:09:00 AM	8.09	8.10	31.97	26.89	2.49	2.50	<0.1	<0.01
NF1	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	11:09:00 AM	8.04	8.09	31.84	26.93	2.55	2.50	<0.1	<0.01
NF2	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:59:00 AM	8.90	8.27	32.65	26.79	1.99	3.00	<0.1	<0.01
NF2	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:59:00 AM	8.90	8.30	32.64	26.76	2.02	4.00	<0.1	<0.01
NF2	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	11:00:00 AM	8.85	8.25	32.57	26.78	2.01	3.00	<0.1	<0.01
NF2	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	11:00:00 AM	8.92	8.28	32.53	26.74	2.02	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
NF2	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	11:01:00 AM	8.95	8.31	32.51	26.79	1.99	2.50	<0.1	<0.01
NF2	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	11:01:00 AM	8.90	8.30	32.57	26.76	1.98	2.50	<0.1	<0.01
NF3	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:52:00 AM	9.47	8.33	31.73	26.88	2.18	3.00	<0.1	<0.01
NF3	27/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:52:00 AM	9.40	8.37	31.78	26.89	2.17	3.00	<0.1	<0.01
NF3	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	10:53:00 AM	9.45	8.36	31.62	26.92	2.15	2.50	<0.1	<0.01
NF3	27/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	10:53:00 AM	9.52	8.35	31.64	26.88	2.16	3.00	<0.1	<0.01
NF3	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	10:54:00 AM	9.47	8.33	31.71	26.86	2.20	3.00	<0.1	<0.01
NF3	27/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	10:54:00 AM	9.45	8.34	31.77	26.89	2.16	3.00	<0.1	<0.01
CE	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:00:00 AM	9.09	8.09	31.71	27.44	2.75	2.50	<0.1	<0.01
CE	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:00:00 AM	9.06	8.09	31.69	27.37	2.74	3.00	<0.1	<0.01
CE	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	8:01:00 AM	9.12	8.05	31.82	27.44	2.61	6.00	<0.1	<0.01
CE	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	8:01:00 AM	9.13	8.05	31.77	27.43	2.66	5.00	<0.1	<0.01
CE	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	20	8:02:00 AM	9.10	8.09	31.76	27.44	2.56	3.00	<0.1	<0.01
CE	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	20	8:02:00 AM	9.05	8.09	31.68	27.45	2.62	2.50	<0.1	<0.01
CF	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	9.17	8.26	31.10	27.51	2.41	3.00	<0.1	<0.01
CF	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	11:14:00 AM	9.05	8.28	31.06	27.53	2.43	6.00	<0.1	<0.01
CF	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	11:15:00 AM	9.05	8.28	31.06	27.58	2.38	5.00	<0.1	<0.01
CF	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	10	11:15:00 AM	9.10	8.31	31.01	27.55	2.41	5.00	<0.1	<0.01
CF	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	11:16:00 AM	9.14	8.31	31.10	27.50	2.26	4.00	<0.1	<0.01
CF	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	19	11:16:00 AM	9.05	8.30	31.10	27.54	2.19	3.00	<0.1	<0.01
WSR01	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:52:00 AM	9.11	8.11	31.89	27.40	1.93	3.00	<0.1	<0.01
WSR01	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:52:00 AM	9.08	8.14	31.77	27.47	1.95	3.00	<0.1	<0.01
WSR01	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:53:00 AM	9.13	8.13	31.77	27.43	1.95	4.00	<0.1	<0.01
WSR01	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:53:00 AM	9.16	8.12	31.80	27.44	1.97	3.00	<0.1	<0.01
WSR01	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:54:00 AM	9.15	8.10	31.86	27.41	1.96	3.00	<0.1	<0.01
WSR01	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:54:00 AM	9.09	8.12	31.84	27.39	1.93	6.00	<0.1	<0.01
WSR02	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:33:00 AM	9.12	8.10	32.51	27.55	1.44	4.00	<0.1	<0.01
WSR02	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:33:00 AM	9.11	8.08	32.55	27.46	1.43	3.00	<0.1	<0.01
WSR02	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:34:00 AM	9.08	8.08	32.45	27.46	1.48	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR02	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	10:34:00 AM	9.02	8.11	32.53	27.47	1.45	4.00	<0.1	<0.01
WSR02	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:35:00 AM	8.96	8.07	32.46	27.49	1.46	3.00	<0.1	<0.01
WSR02	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	8	10:35:00 AM	9.06	8.10	32.56	27.55	1.48	5.00	<0.1	<0.01
WSR03	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:15:00 AM	8.69	8.26	32.28	27.57	2.16	3.00	<0.1	<0.01
WSR03	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:15:00 AM	8.67	8.24	32.33	27.62	2.18	5.00	<0.1	<0.01
WSR03	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:16:00 AM	8.55	8.23	32.21	27.56	2.18	5.00	<0.1	<0.01
WSR03	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	10:16:00 AM	8.55	8.26	32.25	27.57	2.14	5.00	<0.1	<0.01
WSR03	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:17:00 AM	8.52	8.21	32.29	27.59	2.18	3.00	<0.1	<0.01
WSR03	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	10:17:00 AM	8.53	8.25	32.25	27.54	2.15	5.00	<0.1	<0.01
WSR04	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	10:00:00 AM	8.98	8.24	31.64	27.22	1.41	4.00	<0.1	<0.01
WSR04	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	12:00:00 AM	8.89	8.22	31.62	27.22	1.50	4.00	<0.1	<0.01
WSR04	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:01:00 AM	8.98	8.24	31.72	27.18	1.53	3.00	<0.1	<0.01
WSR04	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	12:01:00 AM	9.02	8.23	31.64	27.18	1.45	4.00	<0.1	<0.01
WSR04	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:02:00 AM	8.98	8.20	31.64	27.21	1.46	6.00	<0.1	<0.01
WSR04	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	12:02:00 AM	8.97	8.21	31.63	27.21	1.43	4.00	<0.1	<0.01
WSR16	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:23:00 AM	8.59	8.16	31.51	27.42	2.15	2.50	<0.1	<0.01
WSR16	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:23:00 AM	8.50	8.20	31.45	27.40	2.13	3.00	<0.1	<0.01
WSR16	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	9	8:24:00 AM	8.59	8.16	31.51	27.41	2.08	3.00	<0.1	<0.01
WSR16	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	9	8:24:00 AM	8.56	8.21	31.45	27.42	2.04	6.00	<0.1	<0.01
WSR16	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	16	8:25:00 AM	8.51	8.19	31.55	27.42	2.03	4.00	<0.1	<0.01
WSR16	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	16	8:25:00 AM	8.53	8.20	31.57	27.46	2.11	3.00	<0.1	<0.01
WSR33	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:43:00 AM	8.55	8.28	31.98	27.55	1.87	3.00	<0.1	<0.01
WSR33	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:43:00 AM	8.45	8.30	31.95	27.54	1.82	5.00	<0.1	<0.01
WSR33	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:44:00 AM	8.38	8.30	31.89	27.62	1.85	5.00	<0.1	<0.01
WSR33	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:44:00 AM	8.41	8.33	31.91	27.58	1.86	5.00	<0.1	<0.01
WSR33	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:45:00 AM	8.57	8.31	31.97	27.59	1.82	3.00	<0.1	<0.01
WSR33	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:45:00 AM	8.48	8.29	31.98	27.62	1.83	5.00	<0.1	<0.01
WSR36	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:27:00 AM	8.31	8.14	31.60	27.37	1.80	3.00	<0.1	<0.01
WSR36	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:27:00 AM	8.34	8.13	31.62	27.35	1.76	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)	Turbidity (NTU)	SS (mg/L)	Iron (mg/L)	Total Residual Chlorine (mg/L)
WSR36	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:28:00 AM	8.35	8.09	31.51	27.33	1.77	3.00	<0.1	<0.01
WSR36	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:28:00 AM	8.30	8.12	31.64	27.32	1.77	3.00	<0.1	<0.01
WSR36	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:28:00 AM	8.33	8.14	31.54	27.35	1.78	4.00	<0.1	<0.01
WSR36	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	6	9:28:00 AM	8.34	8.10	31.65	27.38	1.76	5.00	<0.1	<0.01
WSR37	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:19:00 AM	8.50	8.25	32.79	27.33	1.96	6.00	<0.1	<0.01
WSR37	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:19:00 AM	8.65	8.24	32.87	27.33	1.94	5.00	<0.1	<0.01
WSR37	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:20:00 AM	8.51	8.27	32.82	27.28	1.94	6.00	<0.1	<0.01
WSR37	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	4	9:20:00 AM	8.68	8.24	32.89	27.30	1.93	5.00	<0.1	<0.01
WSR37	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:21:00 AM	8.59	8.28	32.79	27.31	1.93	4.00	<0.1	<0.01
WSR37	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	7	9:21:00 AM	8.66	8.24	32.90	27.28	1.96	4.00	<0.1	<0.01
NF1	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:45:00 AM	8.18	8.05	31.47	27.28	1.86	3.00	<0.1	<0.01
NF1	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	8:45:00 AM	8.24	8.03	31.40	27.31	1.88	6.00	<0.1	<0.01
NF1	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	8:46:00 AM	8.07	8.01	31.44	27.26	1.86	4.00	<0.1	<0.01
NF1	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	7	8:46:00 AM	8.16	8.04	31.45	27.32	1.83	4.00	<0.1	<0.01
NF1	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	8:47:00 AM	8.10	8.02	31.41	27.26	1.84	5.00	<0.1	<0.01
NF1	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	13	8:47:00 AM	8.10	8.06	31.48	27.34	1.86	4.00	<0.1	<0.01
NF2	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:01:00 AM	9.19	8.32	31.79	27.36	1.34	2.50	<0.1	<0.01
NF2	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:01:00 AM	9.19	8.29	31.82	27.35	1.37	2.50	<0.1	<0.01
NF2	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:02:00 AM	9.14	8.30	31.72	27.38	1.53	2.50	<0.1	<0.01
NF2	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	5	9:02:00 AM	9.25	8.34	31.70	27.32	1.38	2.50	<0.1	<0.01
NF2	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	9:03:00 AM	9.18	8.32	31.82	27.32	1.36	4.00	<0.1	<0.01
NF2	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	9	9:03:00 AM	9.27	8.32	31.76	27.32	1.34	5.00	<0.1	<0.01
NF3	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:11:00 AM	8.23	8.14	31.60	27.58	1.91	6.00	<0.1	<0.01
NF3	30/07/2024	Cloudy	Mid-Ebb	Moderate	S	1	9:11:00 AM	8.11	8.12	31.60	27.52	1.89	6.00	<0.1	<0.01
NF3	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:12:00 AM	8.24	8.16	31.60	27.61	1.89	4.00	<0.1	<0.01
NF3	30/07/2024	Cloudy	Mid-Ebb	Moderate	M	6	9:12:00 AM	8.20	8.12	31.59	27.52	1.88	5.00	<0.1	<0.01
NF3	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:13:00 AM	8.15	8.12	31.54	27.52	1.93	7.00	<0.1	<0.01
NF3	30/07/2024	Cloudy	Mid-Ebb	Moderate	B	11	9:13:00 AM	8.16	8.14	31.56	27.58	1.91	5.00	<0.1	<0.01



Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/01/2024 12:00 AM	50.54	7.14	26.1	0.04
07/01/2024 02:00 AM	51.68	7.65	26.8	0.01
07/01/2024 04:00 AM	50.58	7.13	26.4	0.01
07/01/2024 06:00 AM	50.68	7.25	26.1	0.01
07/01/2024 08:00 AM	51.36	7.58	25.9	0.06
07/01/2024 10:00 AM	52.68	7.18	26.3	0.04
07/01/2024 12:00 PM	51.68	7.10	26.6	0.06
07/01/2024 02:00 PM	50.31	7.17	26.1	0.05
07/01/2024 04:00 PM	51.55	6.20	26.0	0.01
07/01/2024 06:00 PM	50.31	7.92	25.6	0.03
07/01/2024 08:00 PM	51.54	6.58	25.0	0.05
07/01/2024 10:00 PM	52.68	8.14	25.3	0.07
07/02/2024 12:00 AM	53.54	7.73	26.4	0.06
07/02/2024 02:00 AM	52.14	6.19	26.9	0.01
07/02/2024 04:00 AM	50.36	6.28	26.9	0.07
07/02/2024 06:00 AM	50.98	6.80	25.2	0.05
07/02/2024 08:00 AM	50.12	6.64	26.7	0.04
07/02/2024 10:00 AM	51.56	6.36	26.0	0.03
07/02/2024 12:00 PM	50.68	8.01	25.5	0.07
07/02/2024 02:00 PM	52.68	6.95	25.2	0.05
07/02/2024 04:00 PM	50.36	6.80	25.6	0.01
07/02/2024 06:00 PM	51.23	6.55	26.3	0.02
07/02/2024 08:00 PM	51.98	7.05	25.9	0.02
07/02/2024 10:00 PM	52.36	8.00	25.6	0.06
07/03/2024 12:00 AM	53.68	6.46	25.2	0.02
07/03/2024 02:00 AM	52.48	7.30	25.7	0.07
07/03/2024 04:00 AM	51.36	6.38	25.3	0.05
07/03/2024 06:00 AM	50.38	6.62	26.7	0.03
07/03/2024 08:00 AM	51.58	8.06	26.5	0.01
07/03/2024 10:00 AM	54.58	8.01	25.6	0.06
07/03/2024 12:00 PM	53.84	7.44	25.3	0.07
07/03/2024 02:00 PM	56.57	6.82	25.1	0.04
07/03/2024 04:00 PM	51.68	6.25	26.1	0.02
07/03/2024 06:00 PM	56.87	6.24	26.9	0.02
07/03/2024 08:00 PM	53.48	7.03	25.8	0.04
07/03/2024 10:00 PM	58.47	7.67	25.9	0.05
07/04/2024 12:00 AM	56.65	6.47	26.4	0.07
07/04/2024 02:00 AM	58.12	6.16	26.8	0.02
07/04/2024 04:00 AM	53.54	7.98	26.1	0.04
07/04/2024 06:00 AM	51.89	6.33	26.2	0.04
07/04/2024 08:00 AM	53.21	7.59	26.5	0.04
07/04/2024 10:00 AM	54.21	7.60	26.7	0.01
07/04/2024 12:00 PM	58.65	6.86	25.8	0.06
07/04/2024 02:00 PM	54.17	7.20	25.6	0.02
07/04/2024 04:00 PM	53.27	6.16	26.9	0.07
07/04/2024 06:00 PM	52.54	7.81	26.9	0.01
07/04/2024 08:00 PM	53.54	7.10	26.5	0.05
07/04/2024 10:00 PM	48.25	7.82	26.5	0.04

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/05/2024 12:00 AM	58.31	7.82	25.4	0.01
07/05/2024 02:00 AM	56.65	7.82	25.5	0.02
07/05/2024 04:00 AM	55.21	7.82	26.3	0.04
07/05/2024 06:00 AM	55.36	7.82	25.9	0.03
07/05/2024 08:00 AM	54.12	7.82	26.0	0.04
07/05/2024 10:00 AM	49.87	7.82	25.8	0.05
07/05/2024 12:00 PM	51.36	7.82	25.0	0.06
07/05/2024 02:00 PM	52.10	7.82	25.2	0.08
07/05/2024 04:00 PM	51.01	7.82	26.2	0.04
07/05/2024 06:00 PM	50.25	7.72	26.3	0.05
07/05/2024 08:00 PM	49.36	7.72	25.8	0.03
07/05/2024 10:00 PM	53.21	7.72	25.6	0.01
07/06/2024 12:00 AM	51.36	7.72	25.5	0.02
07/06/2024 02:00 AM	51.00	7.72	26.1	0.01
07/06/2024 04:00 AM	49.87	7.72	25.3	0.03
07/06/2024 06:00 AM	49.63	7.72	26.0	0.06
07/06/2024 08:00 AM	52.21	7.72	26.5	0.05
07/06/2024 10:00 AM	53.32	7.62	26.3	0.04
07/06/2024 12:00 PM	51.47	7.72	25.0	0.03
07/06/2024 02:00 PM	50.36	7.62	26.9	0.02
07/06/2024 04:00 PM	52.48	7.72	26.4	0.02
07/06/2024 06:00 PM	49.68	7.72	25.4	0.02
07/06/2024 08:00 PM	53.21	7.62	25.9	0.02
07/06/2024 10:00 PM	52.36	7.62	26.8	0.02
07/07/2024 12:00 AM	53.69	7.62	26.2	0.02
07/07/2024 02:00 AM	52.14	7.62	25.2	0.02
07/07/2024 04:00 AM	52.10	7.72	25.5	0.02
07/07/2024 06:00 AM	51.21	7.62	26.8	0.02
07/07/2024 08:00 AM	50.36	7.62	25.4	0.02
07/07/2024 10:00 AM	54.68	7.62	26.3	0.02
07/07/2024 12:00 PM	53.24	7.62	25.5	0.02
07/07/2024 02:00 PM	55.68	7.72	26.0	0.02
07/07/2024 04:00 PM	54.68	7.62	25.1	0.02
07/07/2024 06:00 PM	56.31	7.62	26.6	0.02
07/07/2024 08:00 PM	58.65	7.62	26.3	0.02
07/07/2024 10:00 PM	57.64	7.62	25.8	0.02
07/08/2024 12:00 AM	57.31	7.62	26.4	0.02
07/08/2024 02:00 AM	57.01	7.62	26.5	0.02
07/08/2024 04:00 AM	57.09	7.62	26.9	0.02
07/08/2024 06:00 AM	58.12	7.62	26.6	0.02
07/08/2024 08:00 AM	58.36	7.62	26.1	0.02
07/08/2024 10:00 AM	57.21	7.62	25.5	0.02
07/08/2024 12:00 PM	56.32	7.61	26.5	0.07
07/08/2024 02:00 PM	60.21	7.73	25.3	0.06
07/08/2024 04:00 PM	58.54	7.73	26.8	0.03
07/08/2024 06:00 PM	57.68	7.73	26.8	0.06
07/08/2024 08:00 PM	58.22	7.73	26.8	0.07
07/08/2024 10:00 PM	57.36	7.73	26.4	0.03

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/09/2024 12:00 AM	56.32	7.73	26.4	0.07
07/09/2024 02:00 AM	57.14	7.73	25.8	0.04
07/09/2024 04:00 AM	58.36	7.63	25.5	0.03
07/09/2024 06:00 AM	54.11	7.73	26.2	0.07
07/09/2024 08:00 AM	53.02	7.63	26.7	0.05
07/09/2024 10:00 AM	58.36	7.63	25.0	0.02
07/09/2024 12:00 PM	59.31	7.73	25.1	0.04
07/09/2024 02:00 PM	58.36	7.73	25.2	0.06
07/09/2024 04:00 PM	57.14	7.63	25.2	0.05
07/09/2024 06:00 PM	56.31	7.63	25.6	0.06
07/09/2024 08:00 PM	55.36	7.63	26.3	0.04
07/09/2024 10:00 PM	54.21	7.53	25.2	0.03
07/10/2024 12:00 AM	53.20	7.63	25.7	0.02
07/10/2024 02:00 AM	55.36	7.63	25.7	0.03
07/10/2024 04:00 AM	54.07	7.53	26.8	0.02
07/10/2024 06:00 AM	53.68	7.63	26.0	0.01
07/10/2024 08:00 AM	52.21	7.53	26.9	0.03
07/10/2024 10:00 AM	58.35	7.64	25.6	0.07
07/10/2024 12:00 PM	54.35	7.63	26.3	0.02
07/10/2024 02:00 PM	55.14	7.63	26.1	0.07
07/10/2024 04:00 PM	56.38	7.53	25.0	0.02
07/10/2024 06:00 PM	57.14	7.63	25.2	0.02
07/10/2024 08:00 PM	52.21	7.63	25.0	0.02
07/10/2024 10:00 PM	51.02	7.52	25.7	0.05
07/11/2024 12:00 AM	53.68	7.63	25.7	0.02
07/11/2024 02:00 AM	55.21	7.63	26.7	0.02
07/11/2024 04:00 AM	53.68	7.63	26.3	0.06
07/11/2024 06:00 AM	54.38	7.63	25.6	0.05
07/11/2024 08:00 AM	55.01	7.63	25.9	0.02
07/11/2024 10:00 AM	56.36	7.53	26.9	0.04
07/11/2024 12:00 PM	56.84	7.53	26.7	0.03
07/11/2024 02:00 PM	56.87	7.53	25.8	0.06
07/11/2024 04:00 PM	55.32	7.63	25.3	0.06
07/11/2024 06:00 PM	54.01	7.53	25.9	0.03
07/11/2024 08:00 PM	55.36	7.53	25.0	0.07
07/11/2024 10:00 PM	58.64	7.53	25.9	0.01
07/12/2024 12:00 AM	59.24	7.30	26.3	0.01
07/12/2024 02:00 AM	58.11	7.26	25.2	0.07
07/12/2024 04:00 AM	55.21	7.30	26.5	0.04
07/12/2024 06:00 AM	54.01	6.14	25.0	0.01
07/12/2024 08:00 AM	56.37	7.54	26.0	0.04
07/12/2024 10:00 AM	57.14	7.17	25.1	0.06
07/12/2024 12:00 PM	53.14	6.41	25.6	0.04
07/12/2024 02:00 PM	57.48	7.30	26.6	0.07
07/12/2024 04:00 PM	56.21	6.72	25.7	0.07
07/12/2024 06:00 PM	53.24	7.62	25.2	0.07
07/12/2024 08:00 PM	55.14	7.57	26.2	0.03
07/12/2024 10:00 PM	54.25	8.01	26.2	0.07

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/13/2024 12:00 AM	56.32	8.06	25.4	0.05
07/13/2024 02:00 AM	55.86	7.15	25.9	0.03
07/13/2024 04:00 AM	54.16	6.63	25.6	0.07
07/13/2024 06:00 AM	56.32	7.05	25.7	0.03
07/13/2024 08:00 AM	58.54	6.39	25.3	0.03
07/13/2024 10:00 AM	57.10	6.14	26.1	0.03
07/13/2024 12:00 PM	56.36	8.10	26.4	0.01
07/13/2024 02:00 PM	55.21	7.75	26.7	0.01
07/13/2024 04:00 PM	54.36	7.95	26.7	0.01
07/13/2024 06:00 PM	55.20	7.62	26.6	0.05
07/13/2024 08:00 PM	54.39	7.62	26.7	0.04
07/13/2024 10:00 PM	60.25	7.62	26.8	0.04
07/14/2024 12:00 AM	58.54	7.52	26.3	0.05
07/14/2024 02:00 AM	57.44	7.62	25.9	0.03
07/14/2024 04:00 AM	52.58	7.62	26.2	0.06
07/14/2024 06:00 AM	54.36	7.62	26.0	0.02
07/14/2024 08:00 AM	55.14	7.62	25.6	0.02
07/14/2024 10:00 AM	58.45	7.62	25.6	0.01
07/14/2024 12:00 PM	56.98	7.62	25.7	0.02
07/14/2024 02:00 PM	55.27	7.62	25.4	0.05
07/14/2024 04:00 PM	54.65	7.62	26.8	0.01
07/14/2024 06:00 PM	53.12	7.62	25.8	0.05
07/14/2024 08:00 PM	60.59	7.62	26.3	0.07
07/14/2024 10:00 PM	59.74	7.52	25.2	0.02
07/15/2024 12:00 AM	59.43	7.62	26.7	0.04
07/15/2024 02:00 AM	58.22	7.62	26.3	0.04
07/15/2024 04:00 AM	56.95	7.62	26.0	0.05
07/15/2024 06:00 AM	56.88	7.62	25.7	0.02
07/15/2024 08:00 AM	56.35	7.52	25.0	0.02
07/15/2024 10:00 AM	64.59	7.50	26.4	0.06
07/15/2024 12:00 PM	64.32	7.50	26.4	0.04
07/15/2024 02:00 PM	65.32	7.50	26.4	0.01
07/15/2024 04:00 PM	61.36	7.50	26.1	0.07
07/15/2024 06:00 PM	62.33	7.50	26.3	0.07
07/15/2024 08:00 PM	60.36	7.50	26.4	0.05
07/15/2024 10:00 PM	59.54	7.50	26.1	0.02
07/16/2024 12:00 AM	59.57	7.50	25.3	0.04
07/16/2024 02:00 AM	59.21	7.50	26.9	0.05
07/16/2024 04:00 AM	58.36	7.50	26.8	0.03
07/16/2024 06:00 AM	60.32	7.50	26.2	0.01
07/16/2024 08:00 AM	61.25	7.50	25.2	0.05
07/16/2024 10:00 AM	60.02	7.50	26.7	0.04
07/16/2024 12:00 PM	59.68	7.12	25.9	0.05
07/16/2024 02:00 PM	59.47	7.05	25.9	0.04
07/16/2024 04:00 PM	58.21	7.03	26.9	0.06
07/16/2024 06:00 PM	61.32	7.69	26.6	0.03
07/16/2024 08:00 PM	61.36	7.69	26.6	0.07
07/16/2024 10:00 PM	60.25	7.69	25.0	0.02

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/17/2024 12:00 AM	62.58	7.69	25.5	0.04
07/17/2024 02:00 AM	63.55	7.69	26.7	0.06
07/17/2024 04:00 AM	63.12	7.69	26.1	0.04
07/17/2024 06:00 AM	59.36	7.69	25.9	0.07
07/17/2024 08:00 AM	64.21	7.69	25.4	0.04
07/17/2024 10:00 AM	63.21	7.69	25.4	0.02
07/17/2024 12:00 PM	47.89	7.74	26.5	0.03
07/17/2024 02:00 PM	46.49	7.74	25.1	0.02
07/17/2024 04:00 PM	46.40	7.74	26.5	0.02
07/17/2024 06:00 PM	44.37	7.74	25.7	0.04
07/17/2024 08:00 PM	44.26	7.74	26.0	0.01
07/17/2024 10:00 PM	44.36	7.74	25.4	0.06
07/18/2024 12:00 AM	44.25	7.74	25.0	0.02
07/18/2024 02:00 AM	44.53	7.74	26.2	0.01
07/18/2024 04:00 AM	44.59	7.74	26.1	0.03
07/18/2024 06:00 AM	44.71	7.74	25.3	0.06
07/18/2024 08:00 AM	44.98	7.74	26.9	0.04
07/18/2024 10:00 AM	45.23	7.74	26.4	0.04
07/18/2024 12:00 PM	43.40	7.65	25.8	0.03
07/18/2024 02:00 PM	43.12	7.76	25.9	0.07
07/18/2024 04:00 PM	42.80	7.76	26.7	0.02
07/18/2024 06:00 PM	42.02	7.74	26.6	0.03
07/18/2024 08:00 PM	41.92	7.74	25.6	0.06
07/18/2024 10:00 PM	42.36	7.74	25.0	0.03
07/19/2024 12:00 AM	42.49	7.74	26.0	0.07
07/19/2024 02:00 AM	42.59	7.74	26.8	0.01
07/19/2024 04:00 AM	43.11	7.74	25.5	0.05
07/19/2024 06:00 AM	43.14	7.74	26.5	0.01
07/19/2024 08:00 AM	43.51	7.74	25.7	0.04
07/19/2024 10:00 AM	43.15	7.74	25.2	0.06
07/19/2024 12:00 PM	42.12	7.74	26.3	0.07
07/19/2024 02:00 PM	41.95	7.64	25.2	0.03
07/19/2024 04:00 PM	41.59	7.64	26.9	0.03
07/19/2024 06:00 PM	41.68	7.64	25.5	0.03
07/19/2024 08:00 PM	41.65	7.64	25.6	0.07
07/19/2024 10:00 PM	41.66	7.64	25.5	0.06
07/20/2024 12:00 AM	41.67	7.64	26.0	0.06
07/20/2024 02:00 AM	39.61	7.64	25.6	0.06
07/20/2024 04:00 AM	41.24	7.64	26.3	0.01
07/20/2024 06:00 AM	45.32	8.06	26.2	0.07
07/20/2024 08:00 AM	45.12	8.06	25.6	0.05
07/20/2024 10:00 AM	46.85	7.76	25.9	0.02
07/20/2024 12:00 PM	45.71	7.66	25.6	0.02
07/20/2024 02:00 PM	46.22	7.66	25.6	0.02
07/20/2024 04:00 PM	46.22	7.66	26.1	0.02
07/20/2024 06:00 PM	46.24	7.66	26.2	0.07
07/20/2024 08:00 PM	46.19	7.66	25.1	0.01
07/20/2024 10:00 PM	46.18	7.66	25.3	0.01

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/21/2024 12:00 AM	46.08	7.66	26.2	0.04
07/21/2024 02:00 AM	46.08	7.66	25.2	0.02
07/21/2024 04:00 AM	45.98	7.66	24.5	0.02
07/21/2024 06:00 AM	45.87	7.66	25.3	0.02
07/21/2024 08:00 AM	45.63	7.66	25.8	0.02
07/21/2024 10:00 AM	45.64	7.66	26.3	0.02
07/21/2024 12:00 PM	45.54	7.66	25.1	0.02
07/21/2024 02:00 PM	45.43	7.66	25.3	0.06
07/21/2024 04:00 PM	45.36	7.66	25.2	0.06
07/21/2024 06:00 PM	45.35	7.66	25.3	0.06
07/21/2024 08:00 PM	45.25	7.66	25.1	0.06
07/21/2024 10:00 PM	45.25	7.66	25.8	0.06
07/22/2024 12:00 AM	45.15	7.76	26.2	0.06
07/22/2024 02:00 AM	45.05	7.76	25.8	0.06
07/22/2024 04:00 AM	44.94	7.76	25.1	0.06
07/22/2024 06:00 AM	44.84	7.76	26.3	0.06
07/22/2024 08:00 AM	44.74	7.76	26.2	0.06
07/22/2024 10:00 AM	44.64	7.76	26.1	0.06
07/22/2024 12:00 PM	44.26	7.76	26.2	0.06
07/22/2024 02:00 PM	44.17	7.76	26.0	0.06
07/22/2024 04:00 PM	43.98	7.76	26.3	0.06
07/22/2024 06:00 PM	43.72	7.76	25.8	0.06
07/22/2024 08:00 PM	43.70	7.76	25.1	0.06
07/22/2024 10:00 PM	43.59	7.76	25.8	0.06
07/23/2024 12:00 AM	43.49	7.76	25.4	0.03
07/23/2024 02:00 AM	43.28	7.76	26.2	0.03
07/23/2024 04:00 AM	43.07	7.76	26.1	0.03
07/23/2024 06:00 AM	42.87	7.76	25.8	0.03
07/23/2024 08:00 AM	43.38	7.76	25.4	0.03
07/23/2024 10:00 AM	43.38	7.66	25.3	0.03
07/23/2024 12:00 PM	43.27	7.66	25.2	0.03
07/23/2024 02:00 PM	43.17	7.66	25.1	0.03
07/23/2024 04:00 PM	42.90	7.66	26.2	0.03
07/23/2024 06:00 PM	42.72	7.66	26.1	0.03
07/23/2024 08:00 PM	42.65	7.76	26.0	0.03
07/23/2024 10:00 PM	42.35	7.76	26.9	0.03
07/24/2024 12:00 AM	42.14	7.76	25.1	0.03
07/24/2024 02:00 AM	41.94	7.76	25.3	0.03
07/24/2024 04:00 AM	42.09	7.76	24.0	0.03
07/24/2024 06:00 AM	41.88	7.76	25.1	0.03
07/24/2024 08:00 AM	42.05	7.76	25.8	0.03
07/24/2024 10:00 AM	42.15	7.76	25.3	0.03
07/24/2024 12:00 PM	41.94	7.76	26.8	0.03
07/24/2024 02:00 PM	41.74	7.76	25.4	0.03
07/24/2024 04:00 PM	41.77	7.76	24.3	0.03
07/24/2024 06:00 PM	41.53	7.76	25.8	0.03
07/24/2024 08:00 PM	41.32	7.76	25.4	0.03
07/24/2024 10:00 PM	40.98	7.76	25.3	0.03

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/25/2024 12:00 AM	41.08	7.76	24.1	0.03
07/25/2024 02:00 AM	40.88	7.76	25.2	0.03
07/25/2024 04:00 AM	41.04	7.76	25.3	0.03
07/25/2024 06:00 AM	41.04	7.76	25.6	0.03
07/25/2024 08:00 AM	40.94	7.76	25.7	0.03
07/25/2024 10:00 AM	40.74	7.76	25.6	0.03
07/25/2024 12:00 PM	46.89	8.05	26.0	0.05
07/25/2024 02:00 PM	47.22	8.05	25.7	0.04
07/25/2024 04:00 PM	47.34	8.05	26.1	0.06
07/25/2024 06:00 PM	47.34	8.05	26.0	0.01
07/25/2024 08:00 PM	47.38	8.05	24.1	0.02
07/25/2024 10:00 PM	47.43	8.05	24.1	0.07
07/26/2024 12:00 AM	47.51	8.05	25.1	0.06
07/26/2024 02:00 AM	47.57	8.05	25.3	0.04
07/26/2024 04:00 AM	47.72	8.05	25.8	0.01
07/26/2024 06:00 AM	47.70	8.05	25.1	0.01
07/26/2024 08:00 AM	47.67	8.05	26.1	0.07
07/26/2024 10:00 AM	47.81	8.05	25.7	0.05
07/26/2024 12:00 PM	47.92	7.97	25.1	0.02
07/26/2024 02:00 PM	47.93	7.97	25.1	0.05
07/26/2024 04:00 PM	48.07	7.97	25.7	0.04
07/26/2024 06:00 PM	48.20	7.97	26.6	0.03
07/26/2024 08:00 PM	48.29	7.97	25.6	0.02
07/26/2024 10:00 PM	48.44	7.87	25.8	0.01
07/27/2024 12:00 AM	48.57	7.87	26.1	0.06
07/27/2024 02:00 AM	48.70	7.85	26.3	0.05
07/27/2024 04:00 AM	48.85	7.85	25.2	0.04
07/27/2024 06:00 AM	48.95	7.85	25.8	0.05
07/27/2024 08:00 AM	48.98	7.85	25.2	0.02
07/27/2024 10:00 AM	49.10	7.85	25.4	0.02
07/27/2024 12:00 PM	49.25	7.85	25.6	0.02
07/27/2024 02:00 PM	49.39	7.85	25.8	0.02
07/27/2024 04:00 PM	49.45	7.85	25.4	0.02
07/27/2024 06:00 PM	49.54	7.85	25.9	0.02
07/27/2024 08:00 PM	49.60	7.85	26.3	0.02
07/27/2024 10:00 PM	49.84	7.85	25.1	0.02
07/28/2024 12:00 AM	49.86	7.85	24.1	0.02
07/28/2024 02:00 AM	50.03	7.85	25.7	0.02
07/28/2024 04:00 AM	50.26	7.85	25.8	0.02
07/28/2024 06:00 AM	50.38	7.85	25.8	0.02
07/28/2024 08:00 AM	50.38	7.85	25.7	0.02
07/28/2024 10:00 AM	50.55	7.85	25.8	0.02
07/28/2024 12:00 PM	50.64	7.85	25.1	0.02
07/28/2024 02:00 PM	50.74	7.85	25.3	0.02
07/28/2024 04:00 PM	50.84	7.85	26.2	0.02
07/28/2024 06:00 PM	51.04	7.85	26.1	0.02
07/28/2024 08:00 PM	50.90	7.85	25.1	0.02

Date & Time	Sal (ppt)	pH	Temp (°C)	Total Residual Chlorine (mg/L)
07/28/2024 10:00 PM	51.04	7.85	25.1	0.02
07/29/2024 12:00 AM	51.18	7.85	26.3	0.02
07/29/2024 02:00 AM	51.28	7.85	25.1	0.02
07/29/2024 04:00 AM	51.43	7.85	25.1	0.02
07/29/2024 06:00 AM	51.46	7.85	25.6	0.02
07/29/2024 08:00 AM	51.59	7.85	25.1	0.02
07/29/2024 10:00 AM	51.24	7.85	25.1	0.02
07/29/2024 12:00 PM	51.23	7.85	25.1	0.02
07/29/2024 02:00 PM	51.54	7.85	25.8	0.02
07/29/2024 04:00 PM	51.17	7.85	25.6	0.02
07/29/2024 06:00 PM	51.60	7.85	25.1	0.02
07/29/2024 08:00 PM	51.91	7.85	25.1	0.02
07/29/2024 10:00 PM	52.38	7.85	25.1	0.02
07/30/2024 12:00 AM	52.71	7.85	25.4	0.02
07/30/2024 02:00 AM	53.06	7.85	25.3	0.02
07/30/2024 04:00 AM	53.33	7.75	26.1	0.02
07/30/2024 06:00 AM	53.37	7.75	25.3	0.02
07/30/2024 08:00 AM	52.64	7.75	25.7	0.02
07/30/2024 10:00 AM	52.85	7.75	25.8	0.02
07/30/2024 12:00 PM	52.03	7.75	25.6	0.03
07/30/2024 02:00 PM	52.50	7.75	25.6	0.02
07/30/2024 04:00 PM	51.87	7.75	25.1	0.02
07/30/2024 06:00 PM	51.84	7.75	25.1	0.03
07/30/2024 08:00 PM	52.07	7.75	26.7	0.04
07/30/2024 10:00 PM	52.11	7.71	25.8	0.05
07/31/2024 12:00 AM	52.33	7.69	26.1	0.06
07/31/2024 02:00 AM	52.33	7.69	26.2	0.06
07/31/2024 04:00 AM	52.43	7.72	26.3	0.05
07/31/2024 06:00 AM	52.33	7.72	25.3	0.04
07/31/2024 08:00 AM	52.27	7.72	25.0	0.03
07/31/2024 10:00 AM	52.20	7.72	25.2	0.02
07/31/2024 12:00 PM	52.27	7.72	25.1	0.01
07/31/2024 02:00 PM	52.29	7.72	25.5	0.02
07/31/2024 04:00 PM	52.37	7.62	26.9	0.06
07/31/2024 06:00 PM	51.40	7.72	26.8	0.05
07/31/2024 08:00 PM	51.37	7.72	26.8	0.03
07/31/2024 10:00 PM	51.05	7.72	24.5	0.02

Date & Time	Suspended Solids (mg/L)	Total Inorganic Nitrogen (mg/L)	Total Phosphorus (mg/L)	Sodium Metabisulphite (mg/L)	Iron (mg/L)
1/07/2024	<2	0.42	0.01	<2	<0.10
2/07/2024	4	0.38	<0.01	<2	<0.10
3/07/2024	<2	0.39	<0.01	<2	<0.10
4/07/2024	<2	0.45	<0.01	<2	<0.10
5/07/2024	<2	0.46	<0.01	<2	<0.10
6/07/2024	<2	0.39	<0.01	<2	<0.10
7/07/2024	<2	0.42	<0.01	<2	<0.10
8/07/2024	<2	0.51	0.03	<2	<0.10
9/07/2024	<2	0.40	<0.01	<2	<0.10
10/07/2024	<2	0.50	0.05	<2	<0.10
11/07/2024	<2	0.49	<0.01	<2	<0.10
12/07/2024	2	0.55	<0.01	<2	<0.10
13/07/2024	<2	0.50	0.01	<2	<0.10
14/07/2024	<2	0.52	0.01	<2	<0.10
15/07/2024	<2	0.68	<0.01	<2	<0.10
16/07/2024	<2	0.64	<0.01	<2	<0.10
17/07/2024	<2	0.70	0.02	<2	<0.10
18/07/2024	<2	0.70	0.02	<2	<0.10
19/07/2024	<2	0.82	0.02	<2	<0.10
20/07/2024	<2	0.69	0.03	<2	<0.10
21/07/2024	<2	0.73	0.03	<2	<0.10
22/07/2024	<2	0.67	0.02	<2	<0.10
23/07/2024	<2	0.68	<0.01	<2	<0.10
24/07/2024	<2	0.52	0.02	<2	<0.10
25/07/2024	<2	0.61	<0.01	<2	<0.10
26/07/2024	<2	0.62	<0.01	<2	<0.10
27/07/2024	<2	0.52	<0.01	<2	<0.10
28/07/2024	<2	0.52	<0.01	<2	<0.10
29/07/2024	<2	0.37	<0.01	<2	<0.10
30/07/2024	<2	0.45	<0.01	<2	<0.10
31/07/2024	<2	0.4	<0.01	<2	<0.10



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



Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of site: Tseung Kwan O Desalination Plant Phase 1

Sampling equipment used:	Dates calibrated
Airtek, 22/16x	23/4/24

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	19/7/24	14:00	cloudy	0	0	0.02	20.8	31	1007	
MH1-Base	19/7/24	14:15	cloudy	0	0	0.01	20.9	30	1008	
MH2-Mid	19/7/24	14:30	cloudy	0	0	0	20.8	31	1009	
MH2-Base	19/7/24	14:45	cloudy	0	0	0.01	20.7	31	1004	
MH3-Mid	19/7/24	15:15	cloudy	0	0	0	20.7	31	1007	
MH3-Base	19/7/24	15:30	cloudy	0	0	0.02	20.8	31	1007	
MH4-Mid	19/7/24	16:00	cloudy	0	0	0.01	20.7	31	1007	
MH4-Base	19/7/24	16:15	cloudy	0	0	0	20.7	31	1009	
MH5-Mid	19/7/24	16:25	cloudy	0	0	0.01	20.7	31	1008	
MH5-Base	19/7/24	16:35	cloudy	0	0	0.03	20.8	31	1007	
MH6-Mid	19/7/24	16:50	cloudy	0	0	0.01	20.8	31	1008	

Prepared by field operator: Norman Kwok  
Checked by: Tommy Law

Name & Designation  
Signature  
Date  
19/7/24  
19/7/24

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



Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of site: Tseung Kwan O Desalination Plant Phase 1

Sampling equipment used:	Dates calibrated
MHAir 5X, 221/6X	23/4/24

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							Remark
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp °C	Pressure mBar	
MH6 - Base	19/7/24	17:00	cloudy	0	0	0.02	20.8	30.8	1007	
MH7 - Mid	19/7/24	17:10	cloudy	0	0	0.01	20.9	31	1009	
MH7 - Base	19/7/24	17:20	cloudy	0	0	0.03	20.7	30.8	1007	
MH8 - Base	19/7/24	18:40	cloudy	0	0	0.01	20.9	30.8	1006	
MH8 - Mid	19/7/24	18:00	cloudy	0	0	0	20.9	30.8	1006	
MH9 - Base	19/7/24	18:10	cloudy	0	0	0.02	20.8	30.8	1007	
MH9 - Mid	19/7/24	18:28	cloudy	0	0	0.03	20.8	30.8	1008	
MH10 - Base	19/7/24	18:40	cloudy	0	0	0.01	20.7	30.8	1008	
MH10 - Mid	19/7/24	19:00	cloudy	0	0	0.01	20.8	31	1008	
MH11 - Mid	19/7/24	19:15	cloudy	0	0	0.02	20.8	31	1007	
MH11 - Base	19/7/24	19:25	cloudy	0	0	0	20.8	31	1009	

Prepared by field operator: Name & Designation

Checked by:

Signature

Date

Norman Kuo

Bh

19/7/24

Tommy Lam

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19/7/24



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



Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of site: Tseung Kwan O Desalination Plant Phase 1

Sampling equipment used:	Dates calibrated
Altair 5X, 22/1/65	23/4/24

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							Remark
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp °C	Pressure mBar	
MU12-Base	19/7/24	0900	cloudy	0	0	0.01	20.7	31	1008	
MU12-Mid	19/7/24	0920	cloudy	0	0	0.01	20.9	32	1007	
MU13-Base	19/7/24	0940	cloudy	0	0	0.02	20.8	31	1007	
MU13-Mid	19/7/24	10:10	cloudy	0	0	0.02	20.7	32	1009	
MU14-Base	19/7/24	10:28	cloudy	0	0	0.02	20.8	31	1006	
MU14-Mid	19/7/24	10:48	cloudy	0	0	0.03	20.7	31	1004	
MU15-Mid	19/7/24	11:00	cloudy	0	0	0.01	20.9	30	1009	
MU15-Base	19/7/24	11:18	cloudy	0	0	0.02	20.7	31	1007	
MU16-Base	19/7/24	11:30	cloudy	0	0	0.02	20.8	30	1006	
MU16-Mid	19/7/24	11:48	cloudy	0	0	0.02	20.8	31	1004	
MU17-Base	19/7/24	12:00	cloudy	0	0	0.03	20.9	31	1007	

Prepared by field operator:

Name & Designation  
Norman Kiro

Signature  
[Signature]

Date  
19/7/24

Checked by:

[Signature]

[Signature]

19/7/24

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



Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of site: Tseung Kwan O Desalination Plant Phase 1

Sampling equipment used:	Dates calibrated
Altair 5X, 22/1/15	23/4/24

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	19/7/24	12:20	Cloudy	0	0	0.02	20.9	31	1008	
132 Kv Substation	18/7/24	14:00	Rain	0	0	0.01	20.8	31	1007	
Treated Water	18/7/24	14:20	Rain	0	0	0.02	20.7	31	1009	
Pumping station	<del>18/7/24</del>									
Treated Water Tank	18/7/24	14:38	Rain	0	0	0.01	20.9	31	1007	
Chlorine control tank	18/7/24	14:58	Rain	0	0	0	20.8	31	1009	
Switch Room	18/7/24	18:08	Rain	0	0	0.01	20.8	31	1007	
Stand By Generator	18/7/24	18:30	Rain	0	0	0.02	20.9	31	1008	
Switchgear Room										

Prepared by field operator: Norman Chow  
Checked by: Tommy Leung

Name & Designation  
Signature  
Date  
18/7/24  
18/7/24

# 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

W

Monthly Summary Waste Flow Table for 2024 (year)

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	49.190	0.000	0.000	0.000	49.190	0.000	0.000	0.000	0.002	0.000	60.780
Sub-total	27818.971	0.000	0.000	26550.751	1268.220	0.000	0.000	0.000	0.002	0.000	368.970
Jul	60378.440	0.000	0.000	0.000	60378.440	0.000	0.000	0.000	0.000	0.000	42.820
Aug											
Sep											
Oct											
Nov											
Dec											
Total	88197.411	0.000	0.000	26550.751	61646.660	0.000	0.000	0.000	0.002	0.000	411.790

- 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 & Fishery) 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 on 13 October 2023 to verify the validity of the previous EIA findings as well as to provide updated coral data for impact monitoring during the construction and operational 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 till the end of the first year of the plant 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**

<b>Parameter</b>	<b>Action Level Definition</b>	<b>Limit Level Definition</b>
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**

<b>Event</b>	<b>Action</b>			
	<b>ET Leader</b>	<b>IEC</b>	<b>SOR</b>	<b>Contractor</b>
Action Level Exceedance	<ol style="list-style-type: none"> <li>1. Check monitoring data</li> <li>2. Inform the IEC, SOR and Contractor of the findings;</li> <li>3. Increase the monitoring to at least once a month to confirm findings;</li> <li>4. Propose mitigation measures for consideration</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss monitoring with the ET and the Contractor;</li> <li>2. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise the SOR accordingly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET;</li> <li>2. Make agreement on the measures to be implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the SOR and confirm notification of the non-compliance in writing;</li> <li>2. Discuss with the ET and the IEC and propose measures to the IEC and the SOR;</li> <li>3. Implement the agreed measures.</li> </ol>

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

### 3. Result

3.1 The July 2024 operation phase monitoring were performed on 18<sup>th</sup> July 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 July 2024 Operation Phase Monitoring**

Date	Condition	Average Underwater Visibility
18 <sup>th</sup> July 2024	<ul style="list-style-type: none"><li>- Southwest force 4 to 5,</li><li>- Cloudy</li></ul>	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 July 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 July 2024 Coral Monitoring Survey**

Tag #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline	18-Jul	Baseline	18-Jul	Baseline	18-Jul
1	<i>Favites pentagona</i>	66	Good	0	0	0	0	0	0
2	<i>Porites lutea</i>	58	Good	0	0	0	0	0	0
3	<i>Plesiastrea versipora</i>	31	Good	0	0	0	0	0	0
4	<i>Platygyra carnosus</i>	30	Good	0	0	0	0	0	0
5	<i>Acropora solitaryensis</i>	32	Good	0	0	0	0	0	0
6	<i>Plesiastrea versipora</i>	27	Good	0	0	0	0	0	0
7	<i>Porites lutea</i>	39	Good	0	0	0	0	0	0
8	<i>Favites pentagona</i>	20	Good	0	0	0	0	0	0
9	<i>Platygyra carnosus</i>	26	Good	0	0	0	0	0	0
10	<i>Acropora solitaryensis</i>	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 July 2024 Coral Monitoring Survey**

Tag #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline	18-Jul	Baseline	18-Jul	Baseline	18-Jul
1	<i>Porites lutea</i>	21	Good	0	0	0	0	0	0
2	<i>Favites abdita</i>	43	Good	0	0	0	0	0	0
3	<i>Duncanopsammia peltata</i>	45	Good	0	0	0	0	0	0
4	<i>Dipsastraea veroni</i>	20	Good	0	0	0	0	0	0
5	<i>Favites pentagona</i>	19	Good	0	0	0	0	0	0
6	<i>Plesiastrea versipora</i>	21	Good	0	0	0	0	0	0
7	<i>Dipsastraea rotumana</i>	21	Good	0	0	0	0	0	0
8	<i>Dipsastraea speciosa</i>	20	Good	0	0	0	0	0	0
9	<i>Porites lutea</i>	37	Good	0	0	0	0	0	0
10	<i>Porites lutea</i>	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 July 2024 Coral Monitoring Survey**

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

19	<i>Duncanopsammia peltata</i>	29	Good	0	0	0	0	0	0
20	<i>Platygyra carnosus</i>	23	Good	0	0	0	0	0	0

**#newly tagged coral colony**

#### **4. Discussion and Conclusion**

- 4.1 The July 2024 coral monitoring survey were carried out in the indirect impact area (C2 and C3) and control site (C8) on 18<sup>th</sup> July 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 Construction Phase

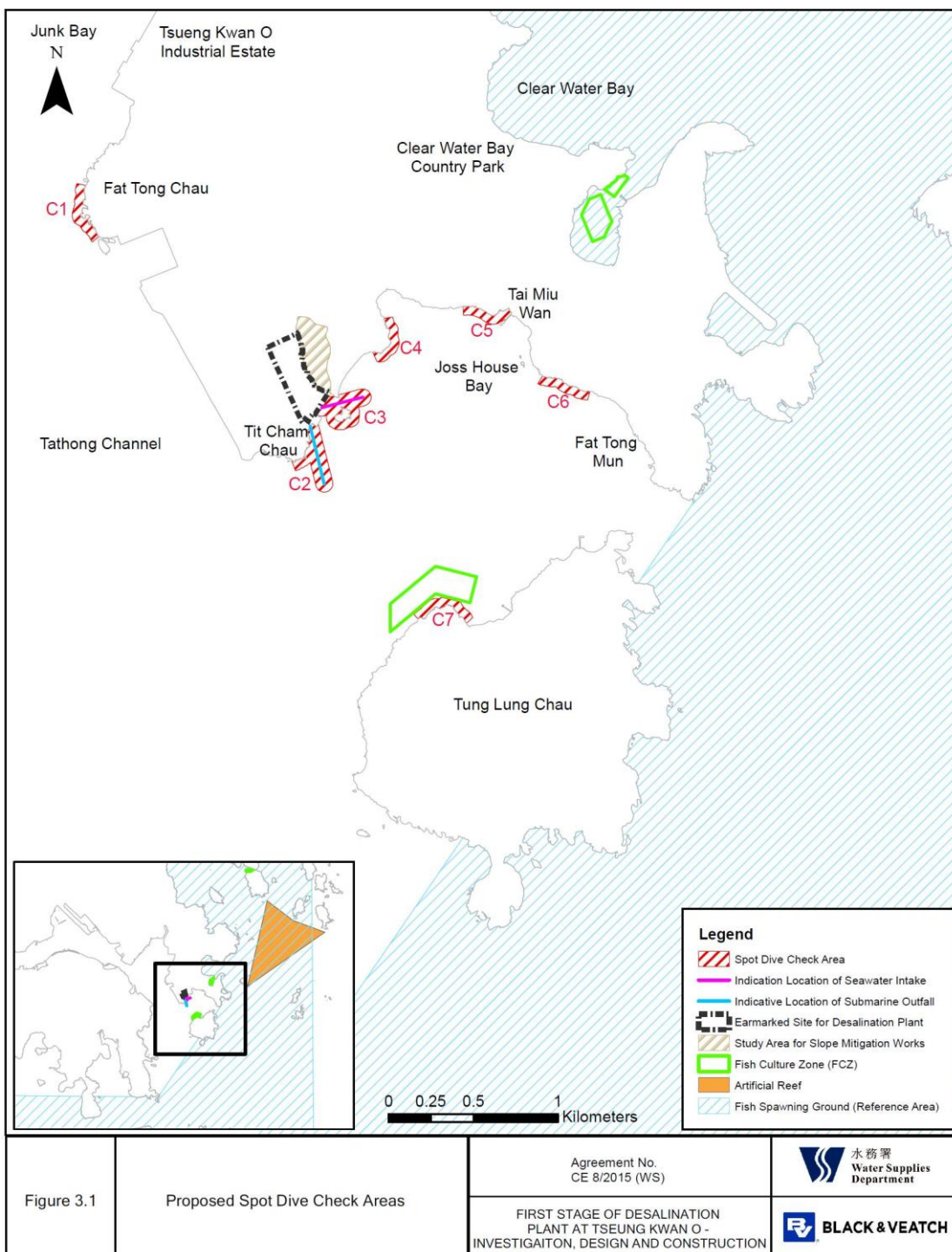



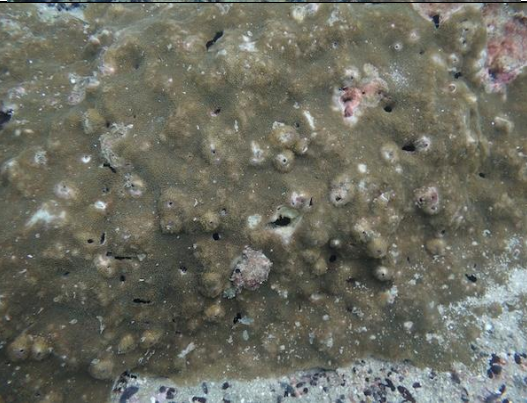


Figure 2 Proposed Control Site (C8) during Construction Phase









**APPENDIX A**  
**TAGGED CORAL PHOTO**

**Photo Plate A Tagged Corals at Control Site C8**

Tag #	18 <sup>th</sup> July 2024
#1	
#2	
#3	
#4	

#5			
#6			
#7			
#8			












#9			
#10			




Photo Plate B Tagged Corals at Indirect Impact Site C2





Tag #	18 <sup>th</sup> July 2024		
#1			
#2			
#3			
#4			








#5			
#6			
#7			
#8			
#9			

#10			
-----	--	--	--

**Photo Plate C Tagged Corals at Indirect Impact Site C3**

Tag #	18 <sup>th</sup> July 2024		
#11			
#12			
#13			
#14			

#15			
#16			
#17			
#18			
#19			



#20





THE END

# Appendix I

## Site Inspection Proforma

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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 02/07/2024 Inspected by: ET: Toby Wan SO: Derek Lai WSD: \_\_\_\_\_  
 Contractor: Tommy Law IEC: \_\_\_\_\_  
 Inspection Time: 14:30

<b>Weather</b>	
Condition	<input checked="" type="checkbox"/> Sunny <input type="checkbox"/> Fine <input type="checkbox"/> Overcast <input type="checkbox"/> Drizzle <input type="checkbox"/> Rain <input type="checkbox"/> Storm <input type="checkbox"/> Hazy
Temperature	<input type="text" value="31"/> °C         Humidity <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low
Wind	<input checked="" type="checkbox"/> Calm <input type="checkbox"/> Light <input type="checkbox"/> Breeze <input type="checkbox"/> Strong

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

**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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.11	S8.5.2	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.13	S8.5.2	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S8.5.2	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.15	S8.5.2	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.16	S8.5.2	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.17	S8.5.2	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.18	S8.5.2	Is the dewatered sludge met the minimum dry solid content (30%) in the to be disposed of at landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.19	S8.5.2	Is a dumping license obtained to deliver public fill to public filling areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Landscape and Visual</b>				
3.01	S11.10 & 11.11	Are Is site hoarding provided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S11.10 & 11.11	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S11.10 & 11.11	Are excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Landfill Gas Hazard</b>				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>		<b>Overall</b>				
5.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



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: 2 July 2024

No major observation was found during site inspection.

**Signatures:**

ET  
Representative

(Name: Toby Wan)

Contractor's  
Representative

(Name: Tony Lu)

Supervising Officer's  
Representative

(Name: Raymond  
Koh)

IEC's  
Representative

(Name: )

WSD's  
Representative

(Name: )

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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 09/07/2024 Inspected by: ET: Toby Wan SO: Derek Lai WSD: \_\_\_\_\_  
 Contractor: Tommy Law IEC: \_\_\_\_\_

Inspection Time: 14:30

<b>Weather</b>	
Condition	<input checked="" type="checkbox"/> Sunny <input type="checkbox"/> Fine <input type="checkbox"/> Overcast <input type="checkbox"/> Drizzle <input type="checkbox"/> Rain <input type="checkbox"/> Storm <input type="checkbox"/> Hazy
Temperature	<input type="text" value="30"/> °C         Humidity <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low
Wind	<input checked="" type="checkbox"/> Calm <input type="checkbox"/> Light <input type="checkbox"/> Breeze <input type="checkbox"/> Strong

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

**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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.11	S8.5.2	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.13	S8.5.2	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S8.5.2	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.15	S8.5.2	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.16	S8.5.2	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.17	S8.5.2	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.18	S8.5.2	Is the dewatered sludge met the minimum dry solid content (30%) in the to be disposed of at landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.19	S8.5.2	Is a dumping license obtained to deliver public fill to public filling areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Landscape and Visual</b>				
3.01	S11.10 & 11.11	Are Is site hoarding provided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S11.10 & 11.11	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S11.10 & 11.11	Are excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Landfill Gas Hazard</b>				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>		<b>Overall</b>				
5.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

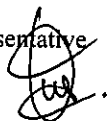
**Contract no. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant**

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

Site inspection date: 9 July 2024  
No major observation was found during site inspection.

**Signatures:**

ET  
Representative



(Name: Toby Wan )

Contractor's  
Representative



(Name: Amy W )

Supervising Officer's  
Representative



(Name: David Lai )

IEC's  
Representative

(Name: )

WSD's  
Representative

(Name: )



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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 16/07/2024 Inspected by: ET: Toby Wan SO: Alan Lung WSD: \_\_\_\_\_  
 Contractor: Tommy Law IEC: \_\_\_\_\_  
 Inspection Time: 14:30

<b>Weather</b>	
Condition	<input checked="" type="checkbox"/> Sunny <input type="checkbox"/> Fine <input type="checkbox"/> Overcast <input type="checkbox"/> Drizzle <input type="checkbox"/> Rain <input type="checkbox"/> Storm <input type="checkbox"/> Hazy
Temperature	<input type="text" value="29"/> °C         Humidity <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low
Wind	<input checked="" type="checkbox"/> Calm <input type="checkbox"/> Light <input type="checkbox"/> Breeze <input type="checkbox"/> Strong

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

**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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.11	S8.5.2	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.13	S8.5.2	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S8.5.2	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.15	S8.5.2	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.16	S8.5.2	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.17	S8.5.2	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.18	S8.5.2	Is the dewatered sludge met the minimum dry solid content (30%) in the to be disposed of at landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.19	S8.5.2	Is a dumping license obtained to deliver public fill to public filling areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Landscape and Visual</b>				
3.01	S11.10 & 11.11	Are Is site hoarding provided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S11.10 & 11.11	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S11.10 & 11.11	Are excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Landfill Gas Hazard</b>				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>		<b>Overall</b>				
5.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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: 16 July 2024 .

No major observation was found during site inspection ,

**Signatures:**

ET  
Representative

(Name: *Toby Wan* )

Contractor's  
Representative

(Name: *Long Lu* )

Supervising Officer's  
Representative

(Name: *Lung Wai Lun* )

IEC's  
Representative

(Name: )

WSD's  
Representative

(Name: )

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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 23/07/2024 Inspected by: ET: Toby Wan SO: Derek Lai WSD: \_\_\_\_\_  
 Contractor: Tommy Law IEC: \_\_\_\_\_  
 Inspection Time: 14:30

<b>Weather</b>	
Condition	<input checked="" type="checkbox"/> Sunny <input type="checkbox"/> Fine <input type="checkbox"/> Overcast <input type="checkbox"/> Drizzle <input type="checkbox"/> Rain <input type="checkbox"/> Storm <input type="checkbox"/> Hazy
Temperature	<input type="text" value="31"/> °C         Humidity <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low
Wind	<input checked="" type="checkbox"/> Calm <input type="checkbox"/> Light <input type="checkbox"/> Breeze <input type="checkbox"/> Strong

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



**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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.11	S8.5.2	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.13	S8.5.2	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S8.5.2	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.15	S8.5.2	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.16	S8.5.2	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.17	S8.5.2	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.18	S8.5.2	Is the dewatered sludge met the minimum dry solid content (30%) in the to be disposed of at landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.19	S8.5.2	Is a dumping license obtained to deliver public fill to public filling areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Landscape and Visual</b>				
3.01	S11.10 & 11.11	Are Is site hoarding provided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S11.10 & 11.11	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S11.10 & 11.11	Are excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Landfill Gas Hazard</b>				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>		<b>Overall</b>				
5.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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 July 2024

No major observation was found during site inspection.

**Signatures:**

ET  
Representative

(Name: Toby Wan)

Contractor's  
Representative

(Name: Tony Kwok)

Supervising Officers  
Representative

(Name: David Lee)

IEC's  
Representative

(Name: )

WSD's  
Representative

(Name: )

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

**WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST**

Inspection Date: 29/07/2024 Inspected by: ET: Toby Wan SO: David Wong WSD: W.P. Ho  
 Contractor: Tommy Law IEC: Serena Shek  
 Inspection Time: 9:30

<b>Weather</b>	
Condition	<input checked="" type="checkbox"/> Sunny <input type="checkbox"/> Fine <input type="checkbox"/> Overcast <input type="checkbox"/> Drizzle <input type="checkbox"/> Rain <input type="checkbox"/> Storm <input type="checkbox"/> Hazy
Temperature	<input type="text" value="27"/> °C         Humidity <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low
Wind	<input checked="" type="checkbox"/> Calm <input type="checkbox"/> Light <input type="checkbox"/> Breeze <input type="checkbox"/> Strong

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

**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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.11	S8.5.2	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.13	S8.5.2	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	S8.5.2	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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2.16	S8.5.2	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.17	S8.5.2	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.18	S8.5.2	Is the dewatered sludge met the minimum dry solid content (30%) in the to be disposed of at landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.19	S8.5.2	Is a dumping license obtained to deliver public fill to public filling areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>3.00</b>		<b>Landscape and Visual</b>				
3.01	S11.10 & 11.11	Are Is site hoarding provided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	S11.10 & 11.11	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	S11.10 & 11.11	Is construction light oriented away from the sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.04	S11.10 & 11.11	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.05	S11.10 & 11.11	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	S11.10 & 11.11	Are excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.07	S11.10 & 11.11	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	S11.10 & 11.11	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4.00</b>		<b>Landfill Gas Hazard</b>				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	S12.7	Are the gas detection equipment and precautions being used during trenching and excavation as well as creation of confined spaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



**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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.06	S12.7	Is the monitoring of landfill gas being undertaken in all excavations, manholes, chambers and any confined spaces?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.08	S12.7	Is the drilling proceeded with adequate care and precautions against the potential hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.12	S12.7	Are the warning signs of the hazards of landfill gas and its possible presence on site posted in prominent places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>5.00</b>		<b>Overall</b>				
5.01		Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**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 : 29 July 2024

No major observation was found during site inspection.

**Signatures:**

ET  
Representative

(Name: Tony Wan)

Contractor's  
Representative

(Name: Tony Wan)

Supervising Officer's  
Representative

(Name: David Wong)

IEC's  
Representative

(Name: Selena Shek)

WSD's  
Representative

(Name: Hui Wai Yau)

# Appendix J

## Complaint Log

Statistical Summary of Environmental Complaints

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

Statistical Summary of Environmental Summons

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

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 – 31 July 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)
02/07/2024	NF1	Flood	Suspended Solid (SS)	--	--	5.83	5.00	8.00	6.00	8.67	Action Level	N	N	✓	✓	✓	✓	✓	✓	✓
	NF2	Flood	Suspended Solid (SS)	--	--	5.33	5.00	8.00	6.00	8.67	Action Level	N	N	✓	✓	✓	✓	✓	✓	✓
	NF3	Flood	Suspended Solid (SS)	--	--	5.83	5.00	8.00	6.00	8.67	Action Level	N	N	✓	✓	✓	✓	✓	✓	✓
04/07/2024	WSR1	Ebb	Suspended Solid (SS)	--	--	9.33	5.00	8.00	6.00	8.67	Action Level	N	N		✓	✓		✓	✓	✓
	WSR2	Ebb	Suspended Solid (SS)	--	--	7.83	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR3	Ebb	Suspended Solid (SS)	--	--	7.83	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR4	Ebb	Suspended Solid (SS)	--	--	6.50	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR16	Ebb	Suspended Solid (SS)	--	--	8.17	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR33	Ebb	Suspended Solid (SS)	--	--	8.33	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR36	Ebb	Suspended Solid (SS)	--	--	8.33	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR37	Ebb	Suspended Solid (SS)	--	--	8.50	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	NF1	Ebb	Suspended Solid (SS)	--	--	9.83	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
	NF2	Ebb	Suspended Solid (SS)	--	--	7.17	5.00	5.40	6.00	5.85	Limit Level	N	N		✓	✓		✓	✓	✓
06/07/2024	WSR4	Ebb	Suspended Solid (SS)	--	--	4.83	5.00	8.00	6.00	8.67	Limit Level	N	N		✓	✓	✓	✓	✓	✓
	WSR36	Ebb	Suspended Solid (SS)	--	--	3.58	5.00	8.00	6.00	8.67	Limit Level	N	N		✓	✓	✓	✓	✓	✓
08/07/2024	WSR1	Flood	Suspended Solid (SS)	--	--	5.50	5.00	9.80	6.00	10.62	Action Level	N	N	✓	✓		✓	✓	✓	✓
	WSR16	Flood	Suspended Solid (SS)	--	--	6.83	5.00	9.80	6.00	10.62	Limit Level	N	N	✓	✓		✓	✓	✓	✓
	WSR33	Flood	Suspended Solid (SS)	--	--	8.17	5.00	9.80	6.00	10.62	Limit Level	N	N	✓	✓		✓	✓	✓	✓
	WSR36	Flood	Suspended Solid (SS)	--	--	6.33	5.00	9.80	6.00	10.62	Limit Level	N	N	✓	✓		✓	✓	✓	✓
	NF1	Flood	Suspended Solid (SS)	--	--	7.83	5.00	9.80	6.00	10.62	Limit Level	N	N	✓	✓		✓	✓	✓	✓
	NF2	Flood	Suspended Solid (SS)	--	--	7.83	5.00	9.80	6.00	10.62	Limit Level	N	N	✓	✓		✓	✓	✓	✓
	NF3	Flood	Suspended Solid (SS)	--	--	7.67	5.00	9.80	6.00	10.62	Limit Level	N	N	✓	✓		✓	✓	✓	✓
10/07/2024	WSR1	Flood	Suspended Solid (SS)	--	--	7.17	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	WSR2	Flood	Suspended Solid (SS)	--	--	6.67	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	WSR3	Flood	Suspended Solid (SS)	--	--	6.17	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	WSR4	Flood	Suspended Solid (SS)	--	--	6.33	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	WSR16	Flood	Suspended Solid (SS)	--	--	6.50	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	WSR33	Flood	Suspended Solid (SS)	--	--	6.17	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓

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)
	WSR36	Flood	Suspended Solid (SS)	--	--	6.33	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	WSR37	Flood	Suspended Solid (SS)	--	--	6.17	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	NF1	Flood	Suspended Solid (SS)	--	--	6.67	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	NF2	Flood	Suspended Solid (SS)	--	--	7.83	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
	NF3	Flood	Suspended Solid (SS)	--	--	6.67	5.00	8.40	6.00	9.10	Limit Level	N	N	✓	✓	✓		✓	✓	✓
13/07/2024	WSR3	Flood	Suspended Solid (SS)	--	--	5.17	5.00	5.80	6.00	6.28	Action 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) Water quality mitigation measures were observed maintained / implemented properly (double silt curtain).

Conclusion:

During water quality monitoring on 2, 4, 6, 8, 10 and 13 July 2024, five (5) Action Level and seventeen (17) Limit Level exceedances were recorded during mid-flood tide and one (1) Action Level and twelve (12) Limit Level exceedances were recorded during mid-ebb. Total six (6) Action Level and twenty-nine (29) Limit Level exceedances for SS of impact water quality monitoring were recorded between 1 July to 15 July 2024.

The marine construction works were completed on 1 September 2023. The operation 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:










2 July 2024	4 July 2024
<ul style="list-style-type: none"><li>Production of desalinated water</li><li>Water sampling and analysis</li><li>Actidaff backwash</li></ul>	<ul style="list-style-type: none"><li>Production of desalinated water</li><li>Water sampling and analysis</li><li>Actidaff backwash</li></ul>
6 July 2024	8 July 2024
<ul style="list-style-type: none"><li>Production of desalinated water</li><li>Water sampling and analysis</li><li>Actidaff backwash</li></ul>	<ul style="list-style-type: none"><li>Production of desalinated water</li><li>Water sampling and analysis</li><li>Actidaff backwash</li></ul>
10 July 2024	13 July 2024
<ul style="list-style-type: none"><li>Production of desalinated water</li><li>Water sampling and analysis</li></ul>	<ul style="list-style-type: none"><li>Production of desalinated water</li><li>Water sampling and analysis</li></ul>














Supporting Photo:

Date of exceedance	Monitoring station(s)			
02/07/2024				
	NF1	NF2	NF3	
04/07/2024				
	WSR1	WSR2	WSR3	WSR4
				
	WSR16	WSR33	WSR36	WSR37







Date of exceedance	Monitoring station(s)			
				
	NF1	NF2	NF3	
06/07/2024				
	WSR4	WSR36		
08/07/2024				
	WSR1	WSR16	WSR33	WSR36

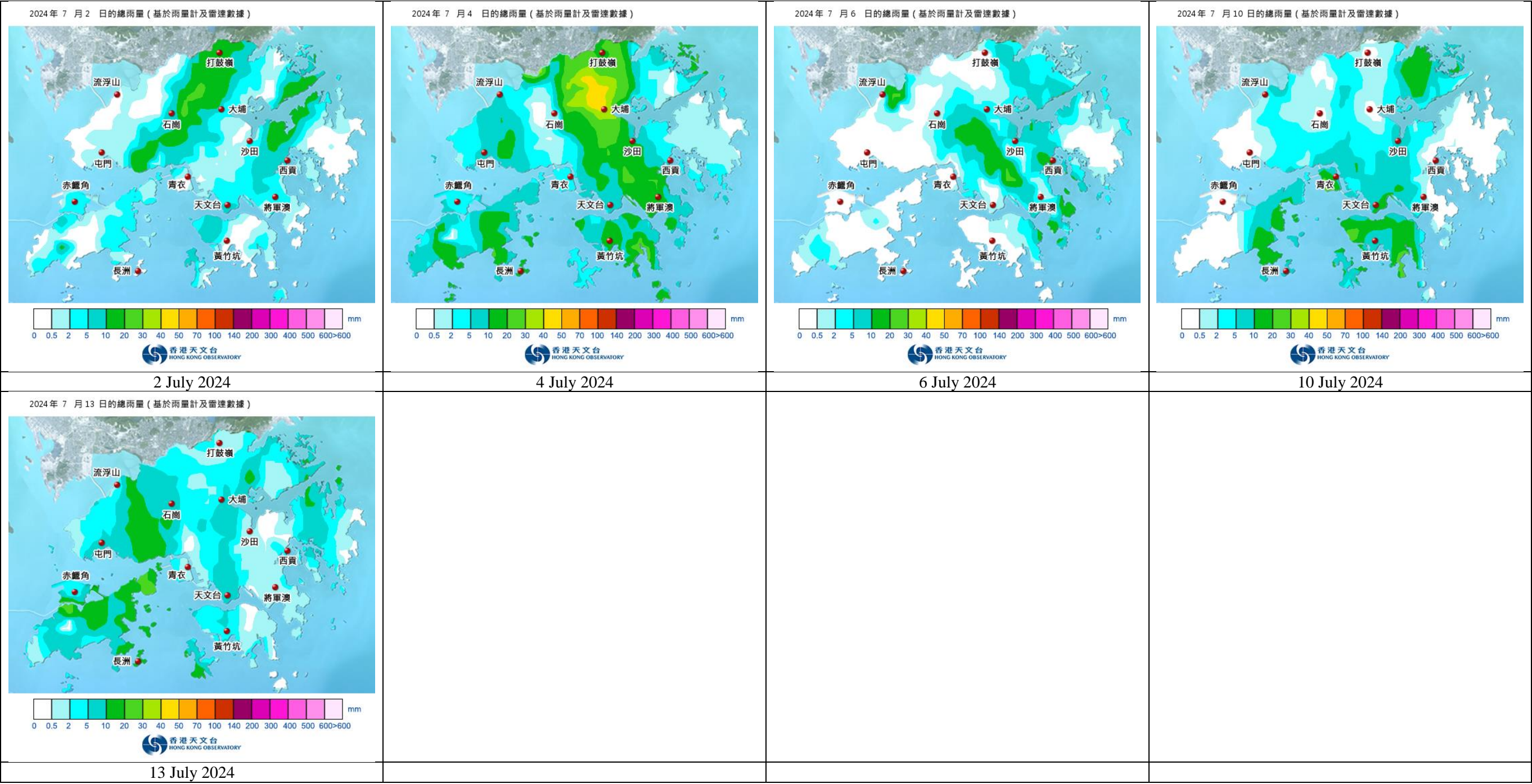


Date of exceedance	Monitoring station(s)			
				
	NF1	NF2	NF3	
10/07/2024				
	WSR1	WSR2	WSR3	WSR4
				
	WSR16	WSR33	WSR36	WSR37



Date of exceedance	Monitoring station(s)			
				
	NF1	NF2	NF3	
13/07/2024				
	WSR3			





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)
16/07/2024	WSR1	Ebb	Suspended Solid (SS)	--	--	6.00	5.00	4.40	6.00	4.77	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR2			--	--	5.50					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR3			--	--	5.33					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR16			--	--	5.33					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR33			--	--	5.00					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR37			--	--	6.33					Limit Level	N	N		✓	✓		✓	✓	✓
	NF1			--	--	5.17					Limit Level	N	N		✓	✓		✓	✓	✓
	NF2			--	--	5.00					Limit Level	N	N		✓	✓		✓	✓	✓
	NF3			--	--	6.83					Limit Level	N	N		✓	✓		✓	✓	✓
18/07/2024	WSR3	Ebb	Suspended Solid (SS)	--	--	5.83	5.00	4.80	6.00	5.20	Limit Level	N	N		✓	✓		✓	✓	✓
	WSR4			--	--	5.17					Action Level	N	N		✓	✓		✓	✓	✓
	WSR16			--	--	5.33					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR33			--	--	5.83					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR36			--	--	7.17					Limit Level	N	N		✓	✓		✓	✓	✓
	WSR37			--	--	5.83					Limit Level	N	N		✓	✓		✓	✓	✓
	NF1			--	--	5.50					Limit Level	N	N		✓	✓		✓	✓	✓
	NF2			--	--	5.83					Limit Level	N	N		✓	✓		✓	✓	✓
	NF3			--	--	6.50					Limit Level	N	N		✓	✓		✓	✓	✓
20/07/2024	NF1	Ebb	Suspended Solid (SS)	--	--	4.83	5.00	4.30	6.00	4.66	Limit Level	N	N		✓	✓	✓	✓	✓	✓
30/07/2024	WSR37	Ebb	Suspended Solid (SS)	--	--	5.00	5.00	4.40	6.00	4.77	Limit Level	N	N		✓	✓		✓	✓	✓
	NF3			--	--	5.50					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 from 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) Water quality mitigation measures were observed maintained / implemented properly (double silt curtain).

Conclusion:

During water quality monitoring on 16, 18, 20, and 30 July 2024, one (1) Action Level exceedances and twenty (20) Limit Level exceedance were recorded during mid-ebb tide. Total one (1) Action Level and twenty (20) Limit Level exceedances for SS of impact water quality monitoring were recorded between 16 June to 31 July 2024.

The marine construction works were completed on 1 September 2023. The operation 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:

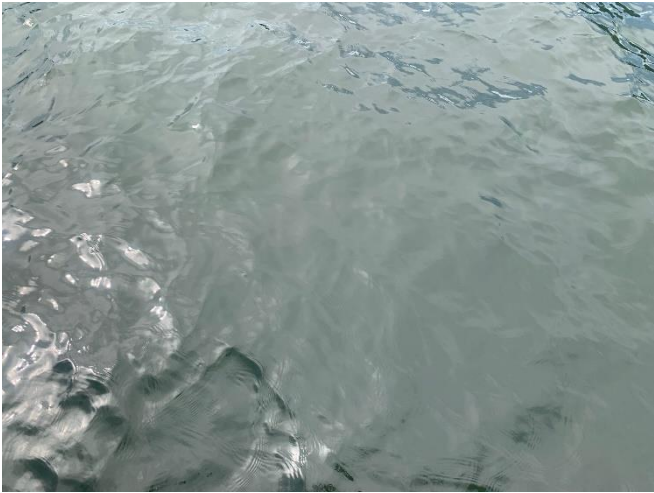








16 July 2024	18 July 2024
<ul style="list-style-type: none"><li>• Production of desalinated water</li><li>• Water sampling and analysis</li></ul>	<ul style="list-style-type: none"><li>• Production of desalinated water</li><li>• Water sampling and analysis</li><li>• Actidaff backwashing</li></ul>
20 July 2024	30 July 2024
<ul style="list-style-type: none"><li>• Production of desalinated water</li><li>• Water sampling and analysis</li><li>• Actidaff backwashing</li></ul>	<ul style="list-style-type: none"><li>• Production of desalinated water</li><li>• Water sampling and analysis</li><li>Actidaff backwashing</li></ul>






Supporting Photo:

Date of exceedance	Monitoring station(s)			
16/07/2024				
	WSR1	WSR2	WSR3	WSR16
				
	WSR33	WSR37	NF1	NF2
				
	NF3			



Date of exceedance	Monitoring station(s)			
18/07/2024				
	WSR3	WSR4	WSR16	WSR33
				
	WSR36	WSR37	NF1	NF2
				
	NF3			



Date of exceedance	Monitoring station(s)			
20/07/2024				
	NF1			
30/07/2024				
	WSR37	NF3		

