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## Baseline Monitoring Report

0120/20/ED/0262 05

April 2021

**Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1**

Ref.: DSDYLSTWEM00\_0\_0092L.21

6 May 2021

By E-mail

AECOM  
12/F Grand Central Plaza, Tower 2  
138 Shatin Rural Committee Road  
Shatin, Hong Kong.

Attention: Mr YEUNG H. M. Simon

Dear Mr YEUNG,

**Re: Contract No. SPW 08/2020  
Independent Environmental Checker for  
Construction of Yuen Long Effluent Polishing Plant Stage 1  
Baseline Monitoring Report**

Reference is made to the ET's Baseline Monitoring Report with document No. 0120/20/ED/262 05 dated April 2021 (the Baseline Monitoring Report), which was received via e-mail on 26 April 2021.

We have no further comments on the Baseline Monitoring Report and herewith verify that the report has complied with the requirements as set out in the EM&A Manual.

Please contact the undersigned (Tel. 3465 2805) or our Mr. Y.H. Hui (Tel. 3465 2850) should you have any questions on the matter.

Yours sincerely,

For and on behalf of  
Ramboll Hong Kong Limited



Wong Fu Nam  
Independent Environmental Checker

c.c.

DSD  
Fugro

Mr LAM Yu Wang  
Mr David Hung

# Document Control

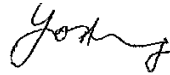


## Document Information

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## Client Information

Client	Drainage Services Department
Client Address	45/F, Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong
Client Contact	Mr. LAM Yu Wang

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## EXECUTIVE SUMMARY

- i. Drainage Services Department (DSD) is the Project Proponent and the Permit Holder of the Project for construction of Yuen Long Effluent Polishing Plant (hereinafter referred as “the Project”), which is a Designated Project to be implemented under Environmental Permit number EP-565/2019 (EP).
- ii. Fugro Technical Services Limited (FTS) has been commissioned as the Environmental Team (ET) to perform relevant Environmental Monitoring and Audit (EM&A) programme for baseline environmental monitoring in accordance with the EM&A Manual approved under the Environmental Impact Assessment Ordinance (EIAO).
- iii. According to the Environmental Monitoring and Audit (EM&A) Manual air quality monitoring, noise monitoring and water quality monitoring should be required to be monitored during the baseline phase of the Project. Moreover, baseline environmental monitoring is required to be conducted prior to commencement of the construction works/activities under the Project.
- iv. Baseline air quality monitoring and noise monitoring was conducted between 1 December 2020 and 14 December 2020. Baseline water quality monitoring was conducted between 1 December 2020 and 26 December 2020. During the baseline monitoring period, no construction activities under the Project were observed by ET.
- v. A proposal of relocation of water quality monitoring locations was submitted to EPD on 22 September 2020 in accordance with Section 4.5.7 of the EM&A Manual, the monitoring location E2, E3 and E5 are proposed to be relocated by alternative monitoring location E2a, E3a and E5a. EPD’s approval letter is given in **Appendix I**.
- vi. This document presents the baseline monitoring requirements, methodologies and results of baseline measurements in accordance with the requirements accordance with the requirements of the approved EM&A Manual and as stipulated in the Environmental Permit (EP) (EP No. EP-565/2019).
- vii. The Action and Limit Levels for impact air quality monitoring are summarized in **Table I**. The baseline noise monitoring results and Action and Limit Levels for impact noise monitoring are summarized in **Table II**. The Action and Limit Levels for impact water quality monitoring are summarized in **Table III**. The Action and Limit Levels for impact monitoring were derived based on the criteria adopted from the approved EM&A Manual.

Table I – Action and Limit Levels for Impact Air Quality Monitoring

Parameter	Monitoring Station	Action Level	Limit Level
1-hr TSP (average)	AM1	291	500µg/m <sup>3</sup>
	AM2	296	

Table II – Summary of Noise Baseline Monitoring Results and Action and Limit Levels for Impact Noise Monitoring

Frequency and Period	Location	Corrected L <sub>Aeq</sub>		Action	Limit
		Range	Average		
0700-1900 in normal weekdays L <sub>Aeq</sub> (30min)	CM1	40-74 dB(A)	56 dB(A)	When one documented complaint is received	75 dB(A)
	CM2	39-77 dB(A)	56 dB(A)		
	CM3	50-67 dB(A)	58 dB(A)		

Table III – Action and Limit Levels for Impact Water Quality Monitoring

Monitoring Location	Monitoring Level	DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
		AL	LL	AL (95%-ile)	LL (99%-ile)	AL (95%-ile)	LL (99%-ile)
M1	*S&M	2.25	1.91	48.4	50.4	59	68
	B	NA	NA				
M2	*S&M	1.88	1.79	43.0	52.4	81	112
	B	NA	NA				
M3	*S&M	3.28	3.14	74.3	78.0	104	167
	B	NA	NA				
E1	**S&M	3.25	2.60	45.2	47.2	62	83
	B	2.38	2.00 <sup>b</sup>				
E2a	*S&M	3.86	3.72	44.1	45.5	63	65
	B	NA	NA				
E3a	*S&M	7.26	4.00 <sup>a</sup>	27.5	29.8	45	61
	B	NA	NA				
E4	*S&M	3.23	2.74	38.2	40.2	51	66
	B	NA	NA				
E5a	S&M	2.01	1.88	36.7	39.8	59	63
	B	5.65	2.00 <sup>b</sup>				
DB1	*S&M	7.52	4.00 <sup>a</sup>	17.7	27.4	41	78
	B	NA	NA				
SP1	*S&M	1.31	1.22	52.1	52.5	66	150
	B	NA	NA				
KT1	S&M	2.80	2.34	42.6	44.7	56	72
	B	5.29	2.00 <sup>b</sup>				

Notes:

1. The values are calculated and presented in depth-average, except for DO;
2. Monitoring level: S&M – Surface and Middle; B – Bottom  
 (\* For M1, M2, M3, E2a, E3a, DB1 and SP1 the water depth is less than 3m, only value at the middle was taken in the baseline monitoring; \*\* For E1 the water depth is between 3m to 6m, only value at Surface was taken in the baseline monitoring.)
3. NA refers to "Not Applicable" as monitoring is not applicable for that water level;
  - a. Four (4) mg/L will be adopted as the Limit Level (LL) of DO (S&M) at E3a and DB1 since the 1%-ile of baseline data for surface and middle layer is greater than 4 mg/L;
  - b. Two (2) mg/L will be adopted as the Limit Level (LL) of DO (B) at E1, E5a and KT1 since the 1%-ile of baseline data for bottom layer is greater than 2 mg/L.



# 1. Introduction

## 1.1 Background

- 1.1.1 The existing Yuen Long Sewage Treatment Works (YLSTW) is a secondary sewage treatment works, located at Yuen Long Industrial Estate serves Yuen Long Town, Yuen Long Industrial Estate and Kam Tin areas with a design capacity of 70,000 m<sup>3</sup> per day. Based on the latest planning data, the volume of sewage generation from the YLSTW catchment is estimated to increase to 150,000 m<sup>3</sup> per day after 20 years. In addition, since YLSTW has been operating for over 30 years and most of its facilities are of out-dated design and reaching the end of their design life, the environmental facilities of the plant will also be upgraded and hence improving the adjacent environment through upgrading the YLSTW to Yuen Long Effluent Polishing Plant (YLEPP). The layout for construction of Yuen Long Effluent Polishing Plant (hereinafter referred as "the Project") is given in **Figure 1**.
- 1.1.2 YLSTW will be reconstructed in two stages to increase its capacity to 150,000 m<sup>3</sup> per day. The proposed works, as Stage 1 of the project, will firstly increase the treatment capacity to 100,000 m<sup>3</sup> per day. In the course of Stage 1 construction, about half of the existing facilities of YLSTW would be demolished, while the other half would be kept in operation to maintain the sewage treatment service for Yuen Long area. The updated construction programme was presented in **Appendix K**.
- 1.1.3 The Project is a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499) for which Environmental Impact Assessment (EIA) report and Environmental Monitoring and Audit (EM&A) Manual was approved by EPD (Register No.: AEIAR-220/2019) on 25 April 2019. The Environmental Permit (EP) (EP No. EP-565/2019) was issued by EPD on 26 April 2019.
- 1.1.4 Fugro Technical Services Limited (FTS) has been appointed as the Environmental Team (ET) by Drainage Services Department (DSD) to undertake the Environmental Team services for the Project and implement the EM&A works under the Contract No. DC/2019/10 Yuen Long Effluent Polishing Plant -Main Works for Stage 1 (hereinafter referred as "the Contract").

## 1.2 Purpose of this Report

- 1.2.1 This purpose of this baseline report is to determine the ambient conditions of the air quality, water quality and the noise levels, and to establish the Action Levels (AL) and Limit Levels (LL) for impact monitoring during the Project implementation period. This report presents the baseline monitoring requirements, methodologies and results of baseline measurements in accordance with the requirements of the approved EM&A Manual and as stipulated in the Environmental Permit (EP) (EP No. EP-565/2019).
- 1.2.2 The baseline monitoring for air and noise were conducted between 1 December and 14 December 2020. The baseline monitoring for water was conducted between 1 December and 26 December 2020.

## 2. Air Quality Monitoring

### 2.1 Monitoring Requirement

- 2.1.1 With reference to Section 2.2.25 of the EM&A manual, the baseline air quality monitoring shall be carried out for at least 14 consecutive days prior to the commissioning of the construction works. 1-hour TSP sampling shall be done at least 3 times per day at each monitoring station. During the baseline monitoring. There should not be any construction or dust generating activities in the vicinity of the monitoring stations.
- 2.1.2 As permission of access and 220V AC power supply could not be obtained from the designated dust monitoring locations, a direct reading dust meter is proposed to measure 1-hour TSP levels in accordance with Section 2.2.10 of the EM&A manual.

### 2.2 Monitoring Locations

- 2.2.1 In accordance with Section 2 of the EM&A Manual, air quality monitoring should be carried out at 2 designated monitoring locations. The air quality monitoring stations summarised in **Table 2.1** and shown in **Figure 2**.

Table 2.1 – Air Quality Monitoring Locations

Monitoring Station ID	Location
AM1	Topfine Machinery (China) Co. Ltd.
AM2	Squatter house at the west of Yuen Long STW

### 2.3 Monitoring Equipment

- 2.3.1 Portable Laser Particle Photometer Monitors (Sibata Model LD-3B / 5R) complete with appropriate sampling inlets are employed for 1-hour TSP measurement.

#### Measuring Procedures

- Pulling up the air sampling inlet cover
- Changing the Mode 0 to BG
- Pressing Start/Stop switch
- Turning the knob to SENSI.ADJ and press it
- Pressing Start/Stop switch again
- Returning the knob to the position MEASURE slowly
- Pressing the timer set switch to set measuring time
- Removing the cap and start the measurement

#### Equipment Calibration

1-hour dust meter should be calibrated at 1 year intervals. The calibration certificates are presented in **Appendix A**.

2.3.2 The model of the air quality monitoring equipment used is summarized in **Table 2.2**.

Table 2.2 – Air Quality Monitoring Equipment

Item	Location	Brand	Model	Equipment	Serial No.
1	AM1	Sibata	Model LD-5R	Sibata Portable TSP Monitors	761105
2	AM2		Model LD-5R		882149
3		Global Water	GL500-7-2	Wind Station	WS-02

## 2.4 Results and Observations

2.4.1 The baseline monitoring work was conducted between 1 December 2020 and 14 December 2020. The baseline monitoring schedule is provided in **Appendix F**.

2.4.2 During the baseline monitoring, at AM1, road traffic along Wang Lee Street was observed in the surroundings. At AM2, road traffic from squatter house at the west of Yuen Long STW was observed during the baseline monitoring.

2.4.3 The monitoring data are summarized in **Table 2.3**. Detailed air quality monitoring data are presented in **Appendix B** and wind data are presented in **Appendix H**.

Table 2.3 – Summary of Air Quality Monitoring Results

Monitoring Station	Average 1 -hour TSP ( $\mu\text{g}/\text{m}^3$ )	Range of the 1-hour TSP ( $\mu\text{g}/\text{m}^3$ )
AM1	63	14-135
AM2	70	14-179

## 2.5 Action and Limit Levels for Air Quality Monitoring

2.5.1 The Action and Limit (A/L) Levels to be used for determining the construction dust are summarized in **Table 2.4**.

Table 2.4 – Determination of Action and Limit Levels for Construction Dust Impact Monitoring

Parameter	Action Level	Limit Level
1-hr TSP (average)	$\text{BL} \leq 384 \mu\text{g}/\text{m}^3$ , $\text{AL} = (\text{BL} \times 1.3 + \text{LL})/2$ $\text{BL} > 384 \mu\text{g}/\text{m}^3$ , $\text{AL} = \text{LL}$	$500 \mu\text{g}/\text{m}^3$

2.5.2 Following the above guidelines, the Action and Limit Levels for air quality impact monitoring have been set, as presented in **Table 2.5**.

Table 2.5 – Action and Limit Levels for 1-hr TSP

Parameter	Monitoring Station	Action Level	Limit Level
1-hr TSP (average)	AM1	291	$500 \mu\text{g}/\text{m}^3$
	AM2	296	

## 2.6 Event and Action Plan

2.6.1 The Event and Action Plan for Air Quality are given in **Appendix E**.

### 3. Noise Monitoring

#### 3.1 Monitoring Requirement

- 3.1.1 With reference to Section 3.5.1 of the EM&A manual, the baseline noise monitoring shall be carried out for at least 2 weeks prior to the commissioning of the construction works. During the baseline monitoring, there shall not be any construction activities in the vicinity of the monitoring stations.
- 3.1.2 The baseline noise monitoring parameters and frequencies are presents in **Table 3.1**.

Table 3.1 – Baseline Monitoring Parameters and Frequencies of Noise Monitoring

Parameter	Frequency and Period
LAeq (30 min) (L 10 and L90 will be recorded for reference)	Continuously throughout the measurement period (Daytime: 0700-1900) for 14 consecutive days

#### 3.2 Monitoring Locations

- 3.2.1 In accordance with Section 3 of the EM&A Manual, noise monitoring should be carried out at 3 designated monitoring locations.
- 3.2.2 The noise monitoring stations are summarised in **Table 3.2** and shown in **Figure 3**.

Table 3.2 – Noise Monitoring Locations

Monitoring Station ID	Location	Measurements
CM1	Squatter house at the north of Yuen Long STW	Free Field
CM2	Squatter house at the west of Yuen Long STW	Free Field
CM3	Squatter house at the east of Yuen Long STW	Free Field

Note: Correction of +3 dB(A) shall be made to the free field measurements.

#### 3.3 Monitoring Equipment

- 3.3.1 As referred to the requirements of the Technical Memorandum (TM) issued under the NCO, the sound level meters in compliance with the International Electro technical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications should be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement, the accuracy of the sound level meter should be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. The measurements may be accepted as valid only if the difference between calibration levels obtained before and after the noise measurement is less than 1.0 dB.

3.3.2 The model of the noise monitoring equipment used is summarized in **Table 3.3**.

Table 3.3 – Noise Monitoring Equipment

Item	Location	Brand	Model	Equipment	Serial No.
1	CM1	Casella	CEL-63X Series	Integrating Sound Level Meter	1488304
2	CM2	Casella	CEL-63X Series	Integrating Sound Level Meter	0873573
3	CM3	Casella	CEL-63X Series	Integrating Sound Level Meter	1488295
4		Casella	CEL-120/1	Calibrator	5230758
5		Benetech	GM816	Anemometer	WS-08

3.3.3 The ET is responsible for the provision of the monitoring equipment and should ensure that sufficient noise measuring equipment and associated instrumentation are available for carrying out the baseline monitoring, regular impact monitoring and ad hoc monitoring. All the equipment and associated instrumentation should be clearly labelled.

3.3.4 The monitoring procedures are as follows:

- The monitoring station will set at a point 1m from the exterior of the sensitive receivers building façade and set at a position 1.2m above the ground.
- The battery condition was checked to ensure good functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time will set as follows:
  - frequency weighting : A
  - time weighting : Fast
  - measurement time : continuous 5 minutes interval
- Prior to and after noise measurement, the meter shall be calibrated using the calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement will considered invalid and repeat of noise measurement is required after re-calibration or repair of the equipment.
- Noise measurement should be paused during periods of high intrusive noise if possible and observation shall be recorded when intrusive noise is not avoided.
- Noise measurements shall not be made in 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. Calibration certificate of the anemometer is provided in **Appendix A**.

3.3.5 Maintenance and Calibration procedures are as follows:

- The microphone head of the sound level meter and calibrator should be cleaned with a soft cloth at quarterly intervals.
- The sound level meter and calibrator should be calibrated annually by a HOKLAS laboratory.
- Relevant calibration certificates are provided in **Appendix A**.



### 3.4 Results and Observations

- 3.4.1 Baseline noise monitoring was conducted at three monitoring stations between 1 December 2020 and 14 December 2020. The baseline monitoring schedule is provided in **Appendix F**. With reference to the Hong Kong Observatory data and site observation, no rainy or windy (over 5m/s average wind speed) weather was observed. The weather condition in the monitoring period is provided in **Appendix G**.
- 3.4.2 During the baseline monitoring, at CM1, road traffic noise along the road near the squatter house at the north of Yuen Long STW was observed during the baseline monitoring.
- 3.4.3 At CM2, road traffic noise along the road near squatter house at the west of Yuen Long STW was observed in the surroundings, and the contributed to the occasional high noise levels (over 75dB (A)).
- 3.4.4 At CM3, road traffic noise along the Nam Sang Wai Road was observed during the baseline monitoring.
- 3.4.5 The monitoring data are summarized in **Table 3.4**. Detailed noise monitoring data are presented in **Appendix C**.

Table 3.4 – Summary of Noise Monitoring Results

Frequency and Period	Location	Corrected L <sub>Aeq</sub>	
		Range (dB(A))	Average (dB(A))
0700-1900 in normal weekdays L <sub>Aeq</sub> (30min)	CM1	40-74	56
	CM2	39-77	56
	CM3	50-67	58
0700-1900 other than normal weekday L <sub>Aeq</sub> (5min)	CM1	40-69	52
	CM2	40-67	52
	CM3	46-63	54

### 3.5 Action and Limit Level

- 3.5.1 The Action and Limit Levels were established in accordance with the EM&A Manual. The baseline noise level shall be referenced during the compliance check in the impact noise monitoring period. The action and limit levels for construction noise were presents in **Table 3.5**.

Table 3.5 – Action and Limit Levels for Construction Noise

Time Period	Location	Action	Limit
0700-1900 in normal weekdays	CM1	When one documented complaint is received	75 dB(A)
	CM2		
	CM3		

### 3.6 Event and Action Plan

- 3.6.1 The Event and Action Plan for Noise are given in **Appendix E**.

## 4. Water Quality Monitoring

### 4.1 Monitoring Requirement

- 4.1.1 With reference to Section 4.6.2 of the EM&A manual, the baseline water quality shall be carried out once per day for 3 days per week, for a period of 4 weeks prior to the commencement of construction works. The interval between two sets of monitoring shall not be less than 36 hours.
- 4.1.2 There shall not be any major construction activities in the vicinity of the stations during the baseline monitoring.

### 4.2 Monitoring Locations

- 4.2.1 In accordance with Section 4 of the EM&A Manual, water quality monitoring should be carried out at 11 designated monitoring locations (3 stations for construction phase and 8 stations for operation phase).
- 4.2.2 A proposal of relocation of water quality monitoring locations was submitted to EPD on 22 September 2020 in accordance with Section 4.5.7 of the EM&A Manual, the monitoring location E2, E3 and E5 are proposed to be relocated by alternative monitoring location E2a, E3a and E5a. EPD's approval letter is given in **Appendix I**.
- 4.2.3 The water quality monitoring locations are shown in **Figure 4**.
- 4.2.4 The coordinates of the monitoring location stated in the EM&A Manual is summarised in **Table 4.1**.

Table 4.1 – Coordinates of Water Quality Monitoring Locations

Sampling Location		Easting	Northing
M1	Serve as the control station at upstream location of construction site (Flood Tide) / Serve as the impact station at downstream location of construction site (Ebb Tide)	821 086	836 656
M2	Serve as the impact station at downstream location of construction site (Flood Tide)/ Serve as the control station at upstream location of construction site (Ebb Tide)	820 996	836 246
M3	Serve as the impact station at downstream location of construction site (Flood Tide) / Serve as the control station at upstream location of construction site (Ebb Tide)	820 645	836 335
E1	Ma Po Marshes SSSI	821 036	837 913
E2a	Mai Po Inner Deep Bay Ramsar Site / Inner Deep Bay SSSI	819 561	838 823
E3a	Oyster Culture Area	815 921	837 288
E4	Mangroves (Inner Deep Bay)	820 238	838 028
E5a	Mangroves along Shan Pui River	821 083	836 600
DB1	Inner Deep Bay	814 631	836 460
SP1	Shan Pui River, upstream of discharge point	821 192	835 933
KT1	Kam Tin River, upstream of discharge point	821 526	836 682

### 4.3 Monitoring Parameters

4.3.1 Parameters for each monitoring station for both in-situ measurement and laboratory analysis are summarised in **Table 4.2**.

Table 4.2 – Water Quality Monitoring Parameters

ID	In-situ Measurement					Laboratory Analysis									
	pH	Temperature	Salinity	Turbidity	Dissolved Oxygen/ Dissolved Oxygen %	Suspended Solids	Biochemical Oxygen Demand	Ammonia Nitrogen	Nitrite Nitrogen	Nitrate Nitrogen	Total Inorganic Nitrogen	Total Kjeldahl Nitrogen	Total Nitrogen	Total Phosphorus	E.coli
M1	O	O	O	O	O	O	-	-	-	-	-	-	-	-	-
M2	O	O	O	O	O	O	-	-	-	-	-	-	-	-	-
M3	O	O	O	O	O	O	-	-	-	-	-	-	-	-	-
E1	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
E2a	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
E3a	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
E4	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
E5a	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
DB1	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
SP1	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
KT1	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O

### 4.4 Monitoring Equipment

4.4.1 The following equipment and facilities shall be used for the monitoring of water quality impacts:

Dissolved Oxygen and Temperature Measuring Equipment

4.4.1.1 The instrument shall be a portable and weatherproof DO measuring instrument complete with cable and sensor, and use a DC power source. The equipment shall be capable of measuring:

- a DO level in the range of 0 – 20 mg L-1 and 0 – 200% saturation; and
- a temperature of 0 - 45 degree Celsius.

4.4.1.2 It shall have a membrane electrode with automatic temperature compensation complete with a cable. Sufficient stocks of spare electrodes and cables shall be available for replacement where necessary.

4.4.1.3 Shall salinity compensation not be built-in to the DO equipment, in-situ salinity shall be measured to calibrate the DO equipment prior to each DO measurement.

### Turbidity Measurement Instrument

- 4.4.1.4 Turbidity shall be measured in-situ by the nephelometric method. The instrument shall be portable and weatherproof turbidity measuring instrument using a DC power source complete with cable, sensor and comprehensive operation manuals. It shall have a photoelectric sensor capable of measuring turbidity between 0 - 1000 NTU (for example, Hach model 2100P or an approved similar instrument). The cable shall not be less than 25m in length. The meter shall be calibrated to establish the relationship between NTU units and the levels of suspended solids. The correlation between Turbidity (NTU) & Suspended Solids (mg/L) which was established in the baseline monitoring under the project are shown in **Appendix A**.

### Sampler

- 4.4.1.5 A water sampler is required. It shall comprise a transparent Polyvinyl Chloride (PVC) cylinder, with a capacity of not less than 2 liters, which can be effectively sealed with latex cups at both ends. The sampler shall have 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 (for example, Kahlsico Water Sampler or an approved similar instrument).

### Water Depth Detector

- 4.4.1.6 A portable, battery-operated echo sounder shall be used for the determination of water depth at each designated monitoring station. This unit can either be hand held or affixed to the bottom of the work boat, if the same vessel is to be used throughout the monitoring programme.

### Salinity

- 4.4.1.7 A portable salinometer capable of measuring salinity in the range of 0 - 40 parts per thousand (ppt) shall be provided for measuring salinity of the water at each monitoring location.

### pH

- 4.4.1.8 The instrument shall consist of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device. It shall be readable to 0.1 pH in a range of 0 to 14. Standard buffer solutions of at least pH 7 and pH 10 shall be used for calibration of the instrument before and after use. Details of the method shall comply with American Public Health Association (APHA), 19th ed. 4500-HTB.

### Sample Containers and Storage

- 4.4.1.9 Water samples shall be stored in high density polythene bottles with no preservative added, packed in ice (cooled to 4°C without being frozen) and delivered to the laboratory and analyzed within 24 hours after collection. Sufficient volume of samples shall be collected to achieve the required detection limit.

The container types for holding water samples are presented in **Table 4.3**.

Table 4.3 – Container Types for Holding Water Samples

Test Parameter	Container Type (Preservation)
TSS, BOD <sub>5</sub> , Ammonia Nitrogen, Total Inorganic Nitrogen, Total Kjeldahl Nitrogen, Total Nitrogen	1 x 2L Plastic Bottle (none)
Total Phosphorus	1 x 180 mL Plastic Bottle (none)
E.coli	1 x 250 mL Sterilized Plastic Bottle (Sodium Thiosulfate)

#### 4.4.1.10 Monitoring Position Equipment

A hand-held or boat-fixed type digital Differential Global Positioning System (DGPS) with way point bearing indication or other equipment instrument of similar accuracy, shall be provided and used during marine water monitoring to ensure the monitoring vessel is at the correct location before taking measurements.

#### 4.4.1.11 Current Velocity and Direction

Valeport Model 106 is proposed for monitoring the current velocity and direction except at M3 where the vessel cannot be accessed and River Surveyor M9 is proposed to be used for current velocity and direction.

4.4.2 The equipment employed for the monitoring and sampling and their specifications are presented in **Table 4.4**.

Table 4.4 – Water Quality Monitoring and Sampling Equipment

Parameter	Equipment	Model	Range	Equipment Accuracy	Serial No.
Temperature, Dissolved Oxygen, Salinity, pH, Turbidity	Water Quality Monitoring Device	Xylem EXO 3	Temp: -5 to 50°C DO: 0-50mg/L DO%: 0-500% Sal: 0 to 70ppt pH: 0 to 14 pH units Turb: 0-4000NTU	Temp: ±0.2°C DO: ±0.1mg/L or 1% for 0-20mg/L; ±5% for 20-50mg/L Sal: ±2% of the reading or 0.2 ppt (whichever greater) pH: ±0.2 units Turb: ±3% or 0.3NTU (FNU) (whichever greater)	19E100634
					19A105807
		In-situ Aqua TROLL 600	Temp: -5 to 50°C DO: 0-50mg/L DO%: 0-500% Sal: 0 to 350 psu (ppt) pH: 0 to 14 pH units Turb: 0-4000NTU	Temp: ±0.1°C DO: ±0.1mg/L for 0-8mg/L; ±0.2mg/L for 8-20mg/L; ±10% for 20-50mg/L Sal: resolution: 0.1psu (ppt) pH: ±0.1 units Turb: ±2% or ±2NTU (whichever greater)	NA

Parameter	Equipment	Model	Range	Equipment Accuracy	Serial No.
Current Velocity and Direction	Current Meter	Valeport Model 106	Speed: 0.03 to 5 m/s Direction: 0 to 360	Speed: $\pm 1.5\%$ of reading above 0.15m/s, $\pm 0.004$ m/s below 0.15m/s Direction: $\pm 2.5\sigma$	67738
		River Surveyor M9	Water Depth: 0-80m	Water Depth: 1% Current speed: $\pm 0.25\%$ of measured velocity or $\pm 0.2$ cm/s Current direction: $\pm 2$ degree magnetic	5906
Water Sampling	Water Sampler	Acrylic Beta Water Bottle Kit, Horizontal, 3.2L / 4.2L	NA	NA	NA
Positioning	DGPS	Simrad MX521B Smart Antenna with Simrad MX610 CDU	NA	GPS: $\pm 1$ m	NA
Water Depth	Echo Sounder	Garmin ECHO 101	Maximum depth: 457.2 m	0.1 m	NA

## 4.5 Equipment Calibration

- 4.5.1 All in-situ monitoring instruments shall be checked, calibrated and certified by a laboratory accredited under HOKLAS before use and subsequently re-calibrated at three monthly intervals throughout all stages of the water quality monitoring programme. Responses of sensors and electrodes shall be checked with certified standard solutions before each use. Wet bulb calibration for a DO meter shall be carried out before measurement at each monitoring location.
- 4.5.2 Sufficient stocks of spare parts shall be maintained for replacements when necessary. Backup monitoring equipment shall also be made available so that monitoring is uninterrupted even when some equipment is under maintenance or calibration etc.

## 4.6 Monitoring Operation

- 4.6.1 The position of water monitoring station will be located by the Differential Global Positioning System (DGPS) or equivalent. The water depth of water monitoring station will be determined by the echo sounder affixed to the bottom of the monitoring vessel or a portable echo sounder depth detector.
- 4.6.2 Once the location and water depth are confirmed, water samples shall be collected at 3 depths (1m below the surface, mid-depth, and 1m above the seabed) of the water column at each location, except where water depth is less than 6m, the mid-depth will be omitted and if the

water depth is less than 3m only the mid-depth station will be monitored. Duplicate marine samples will be collected in each sampling event. The water samples are decanted from the water sampler into the water sample bottles. The bottles are labelled, tightly sealed, placed into a cool-box and packed with ice ready for delivery to the laboratory.

- 4.6.3 Two consecutive measurements of water quality data, including pH, salinity, dissolved oxygen and turbidity will be recorded according to the monitoring locations. Separate deployment of the monitoring instruments and water samplers will be conducted for the consecutive measurements or samplings. The monitoring location / position, time, water depth, sampling depth, tidal stages, weather conditions, sea condition and any special phenomena or work underway nearby shall also be recorded. If the difference in value between the first and second measurement of DO or turbidity parameters is more than 25% of the value of the first reading, the reading shall be discarded and further readings should be taken.

## 4.7 Laboratory Measurement / Analysis

### Background

- 4.7.1 Fugro Technical Services Limited (HOKLAS Reg: No.015) has been appointed to conduct the laboratory measurement or analysis of water sample in this project. The certificate of accreditation are shown in **Appendix J**.

### Quality Assurance / Quality Control

- 4.7.2 The laboratory incorporates a variety of QA/QC monitoring programme into their testing system. Where applicable or available, the quality of the analysis will be monitored by conducting the following QC analysis:

For each batch of 20 samples:

- A minimal of 1 laboratory method blank will be analyzed;
- A minimal of 1 sample duplicate will be analyzed;
- A minimal of 1 sample matrix spike will be analyzed.

- 4.7.3 QA/QC records is provided in **Appendix D**.

## 4.8 Results and Observations

- 4.8.1 Baseline water quality monitoring was conducted at 11 designated monitoring locations between 1 December 2020 and 26 December 2020. The baseline monitoring schedule is given in **Appendix F**.

- 4.8.2 No major construction activities were observed during the period of baseline monitoring. The weather condition in the monitoring period is provided in **Appendix G**.

- 4.8.3 A summary of the in-situ baseline water quality monitoring results is given in **Table 4.5**. Results of laboratory analysis of baseline water quality are presented in **Table 4.6**. Detailed water quality monitoring results is provided in **Appendix D**.

Table 4.5 – Summary of in-situ Baseline Water Quality Monitoring Results

Monitoring Location	Water Depth (m)	Monitoring Level*	DO (mg/L)			pH			Salinity (ppt)			Temperature (degree C)			Turbidity (NTU)		
			Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean
M1	1.1 – 2.8	*S&M	1.83	6.88	4.46	6.94	8.12	7.25	7.22	11.63	9.38	16.50	22.49	19.84	17.8	50.7	30.6
		B	NA	NA	NA												
M2	0.6 – 2.5	*S&M	1.77	6.68	3.86	7.02	8.14	7.21	7.70	11.51	9.36	16.48	22.74	19.89	19.1	54.8	29.8
		B	NA	NA	NA												
M3	0.1 – 0.7	*S&M	3.12	6.31	5.01	7.12	8.05	7.62	0.97	10.40	5.30	19.33	26.12	22.43	14.4	79.1	46.9
		B	NA	NA	NA												
E1	3.3 – 5.6	**S&M	2.42	8.07	5.08	7.03	8.17	7.28	7.40	21.71	11.39	16.20	22.59	19.61	15.4	47.6	27.9
		B	2.31	7.85	4.72												
E2a	1.3 – 2.8	*S&M	3.69	8.79	6.57	7.15	8.28	7.45	8.30	19.96	13.57	16.06	22.28	19.54	15.4	45.7	27.1
		B	NA	NA	NA												
E3a	1.1 – 2.7	*S&M	7.19	8.80	7.92	7.49	8.20	7.73	19.55	26.96	24.07	15.80	21.93	19.22	4.6	30.3	14.9
		B	NA	NA	NA												
E4	1.5 – 2.9	*S&M	2.60	8.95	6.09	7.05	8.25	7.40	7.48	16.73	11.67	16.56	22.52	19.57	15.9	40.7	24.7
		B	NA	NA	NA												
E5a	1.6 – 3.5	S&M	1.85	7.08	4.26	6.98	8.17	7.25	7.14	11.13	9.23	16.41	22.84	19.79	19.1	40.7	27.3
		B	5.63	5.98	5.81												
DB1	1.8 – 2.9	*S&M	7.32	9.38	8.02	7.57	7.97	7.76	22.40	28.38	25.65	16.35	21.84	19.26	3.2	30.2	10.2
		B	NA	NA	NA												
SP1	1.6 – 2.9	*S&M	1.20	6.05	3.56	7.02	7.95	7.19	7.70	11.32	9.18	16.53	22.72	19.96	13.9	52.6	31.2
		B	NA	NA	NA												
KT1	1.6 – 3.1	S&M	2.22	6.82	4.43	7.07	8.09	7.26	5.90	11.63	9.01	15.88	22.52	19.64	13.3	45.3	27.4
		B	5.63	5.98	5.81												

Notes:

- The values are calculated and presented in depth-average, except for DO
  - Monitoring level: S&M – Surface and Middle; B – Bottom
  - NA refers to “Not Applicable” as monitoring is not applicable for that water level
- (\* For M1, M2, M3, E2a, E3a, DB1 and SP1 the water depth is less than 3m, only value at the middle was taken in the baseline monitoring;  
 \*\* For E1 the water depth is between 3m to 6m, only value at Surface was taken in the baseline monitoring.)





Table 4.6 – Summary of Laboratory Analysis of Baseline Water Quality Monitoring Results

Monitoring Location	Total Suspended Solids (mg/L)			BOD5 (mg/L)			UIA (mg/L-N)			Total Kjeldahl Nitrogen (mg/L-N)			Total Nitrogen (mg/L-N)			Ammonical Nitrogen (mg/L)			Total Inorganic nitrogen (mg/L)			Total Phosphorus (mg/L)			<i>E.coli</i> (cfu/100mL)			
	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	
M1	24	71	42	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M2	28	120	45	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M3	23	185	58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E1	26	89	38	1.5	4.5	2.5	0.006	0.063	0.020	1.5	7.6	4.1	2.1	7.8	5.1	0.60	6.23	2.88	1.8	6.4	3.9	0.25	0.99	0.54	1497	40478	7243	
E2a	17	66	39	1.5	3.5	2.1	0.001	0.056	0.014	0.9	6.5	2.3	1.5	6.8	3.4	0.20	6.20	1.44	0.4	6.4	2.5	0.14	0.66	0.35	27	24000	2788	
E3a	2	66	26	1.5	3.3	1.7	0.002	0.031	0.008	0.2	2.8	0.9	0.3	5.8	1.6	0.15	2.25	0.45	0.2	4.3	1.1	0.09	0.46	0.18	10	13000	112	
E4	25	71	37	1.5	4.0	2.6	0.008	0.065	0.018	1.4	6.6	3.0	1.7	6.9	4.1	0.87	5.55	2.08	1.4	5.9	3.1	0.17	0.87	0.42	894	31417	5821	
E5a	23	64	42	1.5	4.5	2.7	0.007	0.098	0.027	2.3	15.0	5.5	3.5	16.0	6.7	1.09	14.00	3.93	2.4	15.0	5.0	0.01	1.20	0.63	1579	57498	10821	
DB1	12	89	24	1.5	4.5	1.7	0.002	0.075	0.012	0.2	4.0	0.9	0.3	5.7	1.5	0.11	3.40	0.57	0.2	5.4	1.2	0.07	0.53	0.16	2	353	26	
SP1	27	175	47	1.5	5.0	2.9	0.008	0.073	0.023	2.9	12.5	5.9	3.6	13.0	6.6	1.60	11.00	3.91	2.3	11.0	4.6	0.24	1.25	0.68	1673	214942	19178	
KT1	19	77	39	1.5	6.0	3.2	0.006	0.073	0.026	1.7	14.5	5.5	3.3	14.5	6.4	0.98	13.00	3.90	2.1	13.0	4.8	0.25	1.25	0.69	1428	27276	7247	

Notes:

1. The values are calculated and presented in depth-average;
2. Depth Average of *E.coli* is calculated by taking geometric mean of the monitoring results of the surface, middle and bottom levels;
3. NA refers to "Not Applicable" as monitoring is not applicable for that parameter.
4. Un-ionized Ammonia in Saltwater:

$$f(NH_3) = \frac{1}{1 + 10^{[pK_a + 0.0324(298 - T) + \frac{(0.0415)P}{T} - pH]}}$$

Where,

$$f(x) = \text{fraction of un-ionized ammonia}$$

$$I = \frac{19.9273(S)}{1000 - 1.005109(S)}$$

$$pK_a = 9.245 + 0.116(I)$$

S= Salinity (ppt)  
 T= Temperature (°K)  
 P=pressure(assumed to be 1 atm)



## 4.9 Action and Limit Level

4.9.1 The Action and Limit Levels in construction phase water quality monitoring were determined in accordance with the EM&A Manual, as shown in **Table 4.7**. Action and Limit Levels are used to determine whether operational modifications are necessary to mitigate impacts to water quality.

Table 4.7 – Determination of Action and Limit Levels for Water Quality

Parameters	Action Levels	Limit Levels
<i>Construction Phase Water Quality Monitoring</i>		
DO in mg/L (Surface, Middle & Bottom) <sup>2</sup>	<p><u>Surface &amp; Middle</u> 5%-ile of baseline data for surface and middle layer.</p> <p><u>Bottom</u> 5%-ile of baseline data for bottom layer.</p>	<p><u>Surface &amp; Middle</u> 4 mg/L or 1%-ile of baseline data for surface and middle layer.</p> <p><u>Bottom</u> 2 mg/L or 1%-ile of baseline data for bottom layer.</p>
SS in mg/L (depth-averaged <sup>1</sup> ) <sup>3</sup>	95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day	99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day
Turbidity in NTU (depth-averaged <sup>1</sup> ) <sup>3</sup>	95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day	99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day

Notes:

1. "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths;
2. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits;
3. For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

4.9.2 The Action Levels (AL) and Limit Levels (LL) of water quality are determined from the baseline monitoring data and are shown in **Table 4.8**.

Table 4.8 – The Action and Limit Levels for Water Quality

Monitoring Location	Monitoring Level	DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
		AL	LL	AL (95%-ile)	LL (99%-ile)	AL (95%-ile)	LL (99%-ile)
M1	*S&M	2.25	1.91	48.4	50.4	59	68
	B	NA	NA				
M2	*S&M	1.88	1.79	43.0	52.4	81	112
	B	NA	NA				
M3	*S&M	3.28	3.14	74.3	78.0	104	167
	B	NA	NA				
E1	**S&M	3.25	2.60	45.2	47.2	62	83
	B	2.38	2.00 <sup>b</sup>				
E2a	*S&M	3.86	3.72	44.1	45.5	63	65
	B	NA	NA				
E3a	*S&M	7.26	4.00 <sup>a</sup>	27.5	29.8	45	61
	B	NA	NA				
E4	*S&M	3.23	2.74	38.2	40.2	51	66
	B	NA	NA				
E5a	S&M	2.01	1.88	36.7	39.8	59	63
	B	5.65	2.00 <sup>b</sup>				
DB1	*S&M	7.52	4.00 <sup>a</sup>	17.7	27.4	41	78
	B	NA	NA				
SP1	*S&M	1.31	1.22	52.1	52.5	66	150
	B	NA	NA				
KT1	S&M	2.80	2.34	42.6	44.7	56	72
	B	5.29	2.00 <sup>b</sup>				

Notes:

1. The values are calculated and presented in depth-average, except for DO;
2. Monitoring level: S&M – Surface and Middle; B – Bottom;  
 (\* For M1, M2, M3, E2a, E3a, DB1 and SP1 the water depth is less than 3m, only value at the middle was taken in the baseline monitoring;  
 \*\* For E1 the water depth is between 3m to 6m, only value at Surface was taken in the baseline monitoring.)
3. NA refers to “Not Applicable” as monitoring is not applicable for that water level;
  - a. Four (4) mg/L will be adopted as the Limit Level (LL) of DO (S&M) at E3a and DB1 since the 1%-ile of baseline data for surface and middle layer is greater than 4 mg/L;
  - b. Two (2) mg/L will be adopted as the Limit Level (LL) of DO (B) at E1, E5a and KT1 since the 1%-ile of baseline data for bottom layer is greater than 2 mg/L.

## 4.10 Event and Action Plan

4.10.1 The Event and Action Plan for Water Quality are given in **Appendix E**.

## 5. Revisions for Inclusion in the EM&A Manual

- 5.1.1 The baseline monitoring for air quality, noise and water quality were conducted in accordance with the requirements as set out in the EM&A Manual. The monitoring methodology and parameters monitored are all in line with the EM&A Manual.

## 6. Comments and Conclusions

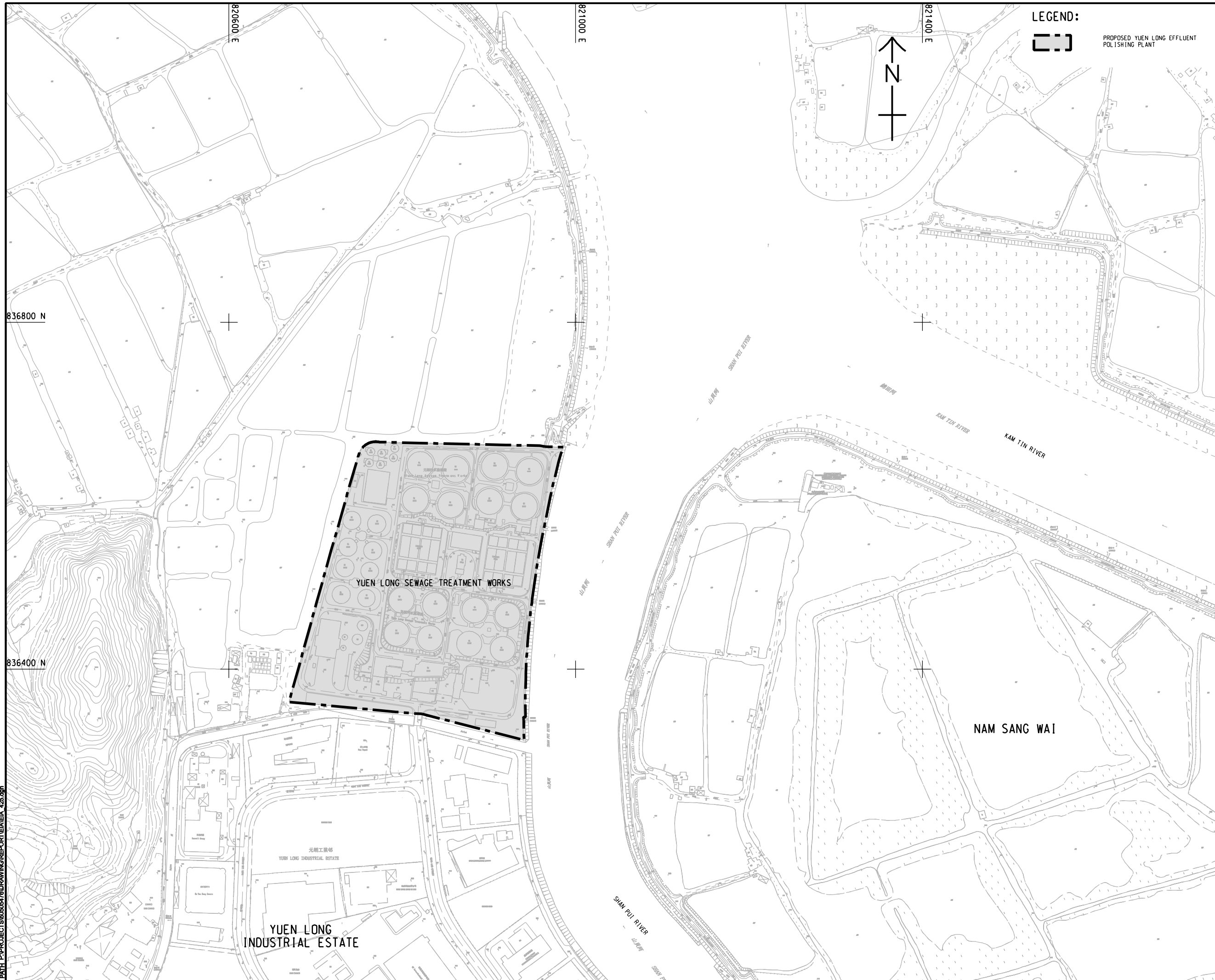
- 6.1.1 Baseline air quality monitoring and noise monitoring was conducted between 1 December 2020 and 14 December 2020. Baseline water quality monitoring was conducted between 1 December 2020 and 26 December 2020.
- 6.1.2 The baseline monitoring were carried out in accordance with the EM&A Manual, in respect of the methodology, equipment, location and monitoring parameters.
- 6.1.3 The Action and Limit Levels were derived based on the baseline monitoring results, impact monitoring will be conducted in the construction phase based on the established Action and Limit Levels.

# Figure 1

---

General Layout of the Proposed Yuen  
Long Effluent Polishing Plant

ISO A1 594mm x 841mm  
Approved:  
Checked:  
Designer:  
Project Management Initials:  
836800 N  
836400 N  
Plot File by: SongYN 2018/02/27  
PATH: P:\PROJECTS\6050578\DRAWINGS\REPORT\EA\EA\_025.dgn



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Drainage Services Department

SHEET TITLE  
LOCATION OF PROPOSED  
YUEN LONG EFFLUENT  
POLISHING PLANT

FIGURE 1

## Figure 2

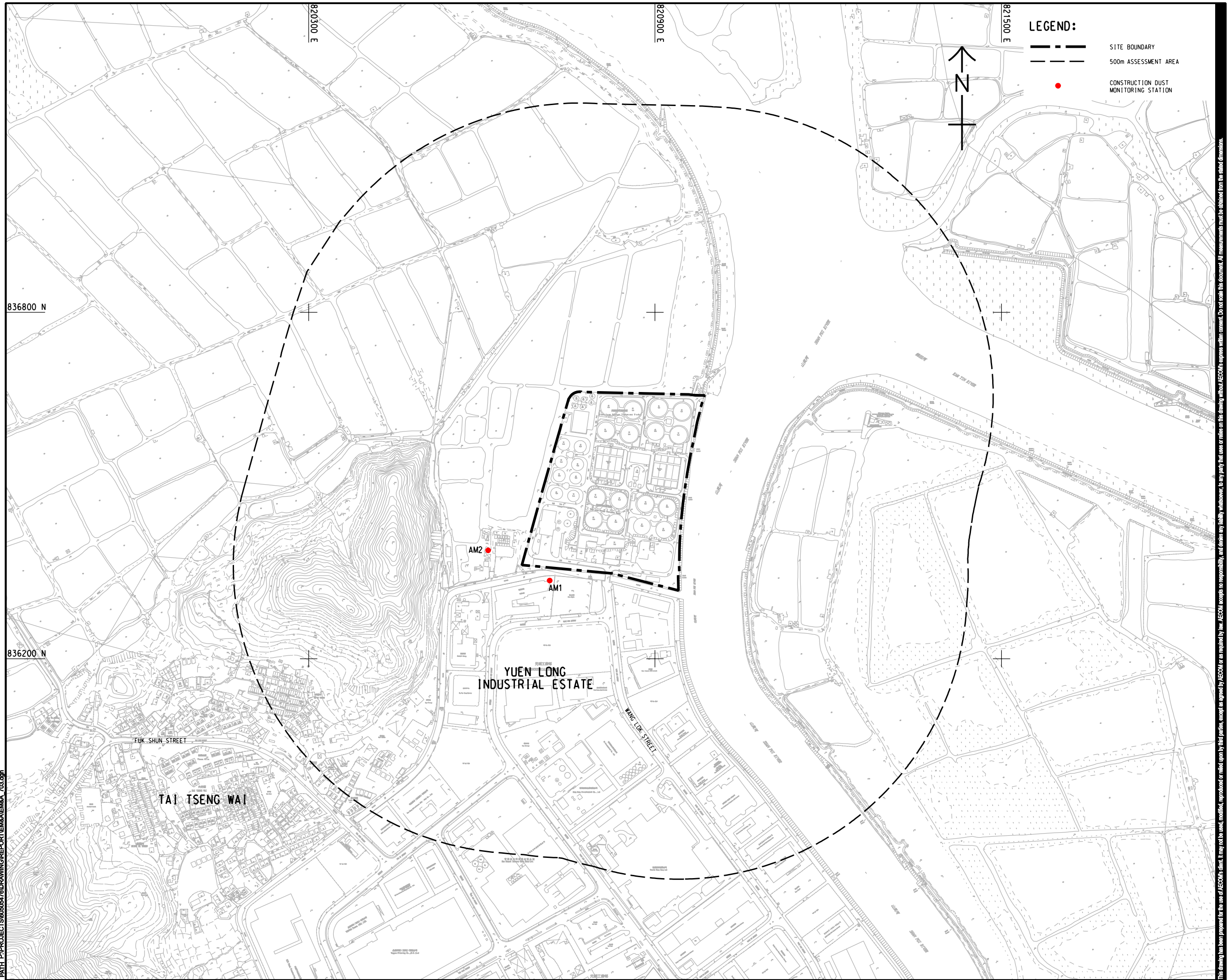
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Air Quality Monitoring Locations



836800 N

836200 N



LEGEND:

- SITE BOUNDARY
- 500m ASSESSMENT AREA
- CONSTRUCTION DUST MONITORING STATION

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渠務署  
Drainage Services Department

SHEET TITLE  
圖紙名稱  
LOCATION OF CONSTRUCTION DUST MONITORING STATIONS

FIGURE 2

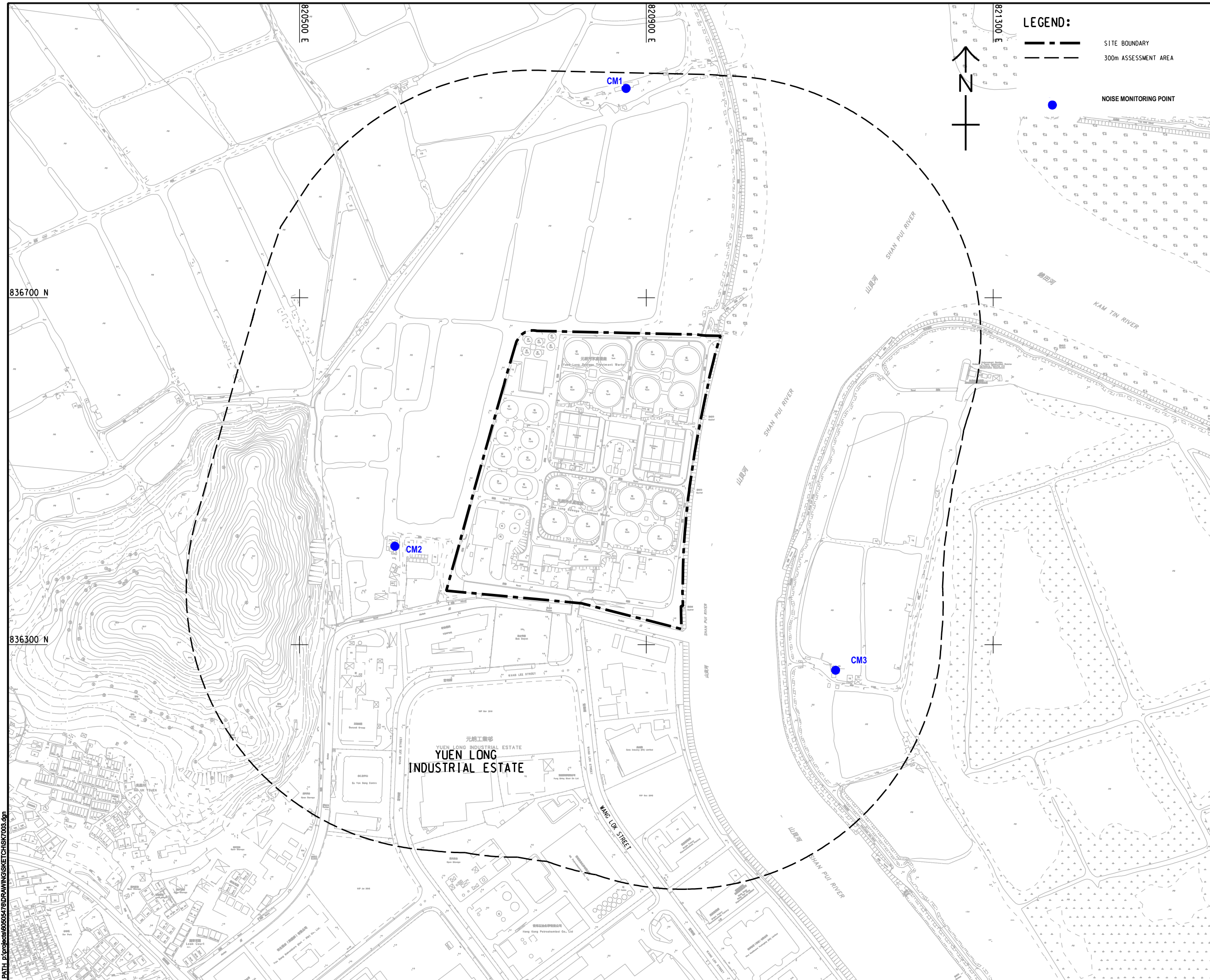
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## Figure 3

---

Noise Monitoring Locations





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Drainage Services Department

SHEET TITLE  
圖紙名稱  
LOCATIONS OF NOISE MONITORING POINTS

FIGURE 3

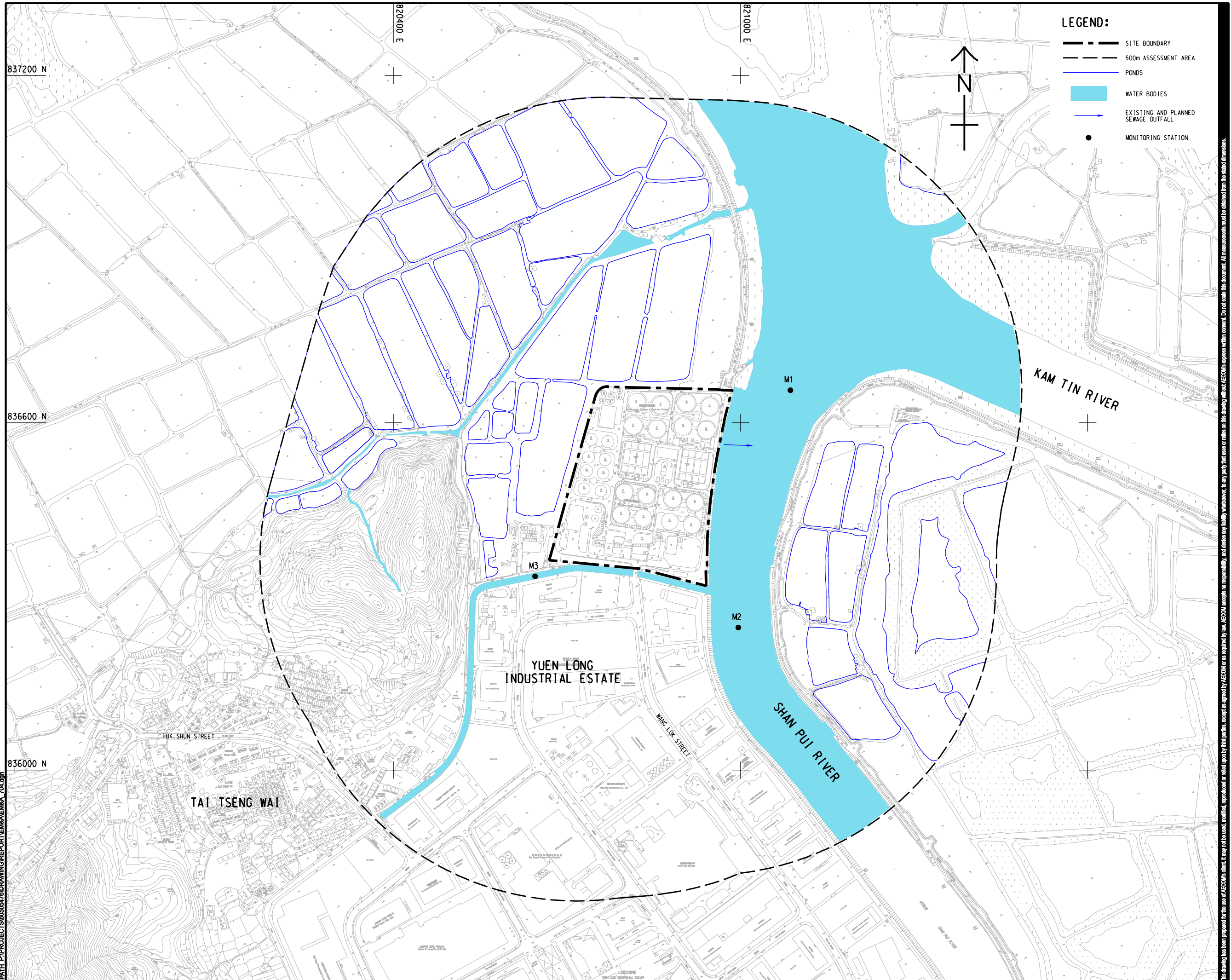
## Figure 4

---

Water Quality Monitoring Locations



ISO A1 594mm x 841mm  
Approved:  
Checked:  
Designer:  
Project Management Initials:  
Plot File by: GaoYU 12/18  
PATH: P:\PROJECTS\6050578\DRAINING\REPORT\EM&A\EM&A\_T04.dgn



- LEGEND:**
- SITE BOUNDARY
  - - - 500m ASSESSMENT AREA
  - PONDS
  - WATER BODIES
  - EXISTING AND PLANNED SEWAGE OUTFALL
  - MONITORING STATION

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渠務署  
Drainage Services Department

**SHEET TITLE**  
LOCATIONS OF WATER QUALITY MONITORING STATIONS FOR CONSTRUCTION PHASE

**FIGURE 4**  
1 of 2

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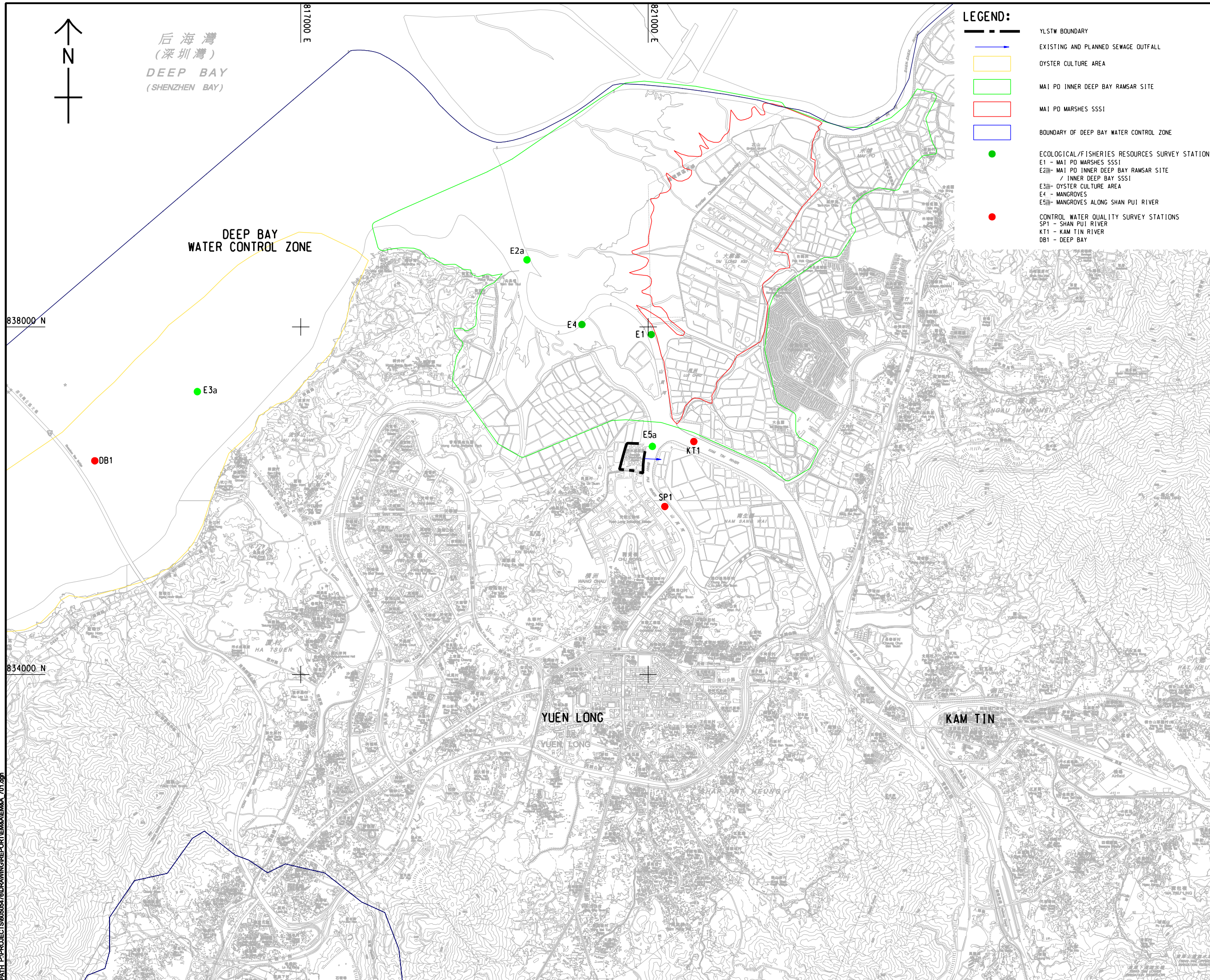


ISO A1 594mm x 841mm  
 Approved:  
 Checked:  
 Designer:  
 Project Management Initials:  
 2019/1/23  
 PATH: P:\PROJECTS\6050578\DRAWING\REPORT\EM&A\EM&A\_T01.dgn



后海湾  
 (深圳湾)  
 DEEP BAY  
 (SHENZHEN BAY)

DEEP BAY  
 WATER CONTROL ZONE



**LEGEND:**

- YLSTW BOUNDARY
- EXISTING AND PLANNED SEWAGE OUTFALL
- OYSTER CULTURE AREA
- MAI PO INNER DEEP BAY RAMSAR SITE
- MAI PO MARSHES SSSI
- BOUNDARY OF DEEP BAY WATER CONTROL ZONE
- ECOLOGICAL/FISHERIES RESOURCES SURVEY STATIONS  
 E1 - MAI PO MARSHES SSSI  
 E2 - MAI PO INNER DEEP BAY RAMSAR SITE / INNER DEEP BAY SSSI  
 E3 - OYSTER CULTURE AREA  
 E4 - MANGROVES  
 E5 - MANGROVES ALONG SHAN PUI RIVER
- CONTROL WATER QUALITY SURVEY STATIONS  
 SP1 - SHAN PUI RIVER  
 KT1 - KAM TIN RIVER  
 DB1 - DEEP BAY

**CLIENT**  
 渠務署  
 Drainage Services Department

**SHEET TITLE**  
 圖紙名稱  
 LOCATIONS OF WATER QUALITY  
 MONITORING STATIONS FOR  
 OPERATION PHASE

**FIGURE 4**  
 2 of 2

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# Appendix A

---

Calibration Certificates of the  
Monitoring Equipment

# Air Quality Monitoring Equipment



Report no. : 940891CA202730(1)

Page 1 of 1

## CALIBRATION CERTIFICATE OF DUST METER

Client : Fugro Technical Services Limited

Project : Calibration Services

### Client Supplied Information

Details of Unit Under Test, UUT

Description : Laser dust monitor  
 Manufacturer : SIBATA  
 Model No. : LD-5R  
 Serial No. : 761105  
 Specification Limit : NA  
 Next Calibration Date : 22-Nov-2021

### Laboratory Information

Description : 1. Balance 2. TSP high volume air sampler  
 Equipment ID. / Serial no. : 1. C-065-5 2. 4350  
 Date of Calibration : 23-Nov-2020 Ambient Temperature : 25 ± 10 °C  
 Calibration Location : General Chemical Laboratory of FTS and Ma Wan A1 Site Boundary  
 Method Used : By direct comparison the weight of dust particle trapped in a filter paper using high volume sampler (TSP method) for a certain period, with the reading of the UUT. They should be placed at the same location and powered on and off at the same time.

### Calibration Results :

Reference concentration (mg/m <sup>3</sup> )	Total count for 1 hour	CPM (Count per minute)
0.0915	3647	60.78
0.0469	3027	50.45
0.1172	3861	64.35

### Remarks:

1. The equipment being used in this calibration is traceable to recognized National Standards.
2. The interpolation equation : Concentration (mg/m<sup>3</sup>) = K x [ UUT reading (CPM) ], where K = 0.001456
3. Correlation coefficient (r) : 0.9928

Checked by : Cammy Date : 15-12-2020 Certified by : K.T. Leung Date : 15-12-2020

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

\*\* End of Report \*\*



**TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET**

Location : MaWTF, Ma Wan	Date of Calibration: 23-Oct-20
Location ID: A1 Site Boundary	Next Calibration Date: 22-Jan-21
	Technician: Felix

**CONDITIONS**

Sea Level Pressure (hPa):	1011.40	Corrected Pressure (mm Hg):	759
Temperature (°C):	24	Temperature (K):	297

**CALIBRATION ORIFICE**

Make: Tisch	Qstd Slope: 2.11508
Model: TE-5025A	Qstd Intercept: -0.02962
Calibration Date: 11/9/2020	Expiry Date: 11/9/2021

**CALIBRATIONS**

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m <sup>3</sup> /min)	I (chart)	IC (corrected)	LINEAR REGRESSION
18	5.40	-6.00	11.400	1.613	61.00	61.10	Slope = 32.5454
13	4.30	-4.70	9.000	1.435	54.00	54.09	Intercept = 8.0074
10	3.30	-3.70	7.000	1.267	49.00	49.08	Corr. coeff.: 0.9991
7	2.00	-2.50	4.500	1.019	41.00	41.07	
5	1.10	-1.60	2.700	0.792	34.00	34.05	

**Calculations:**

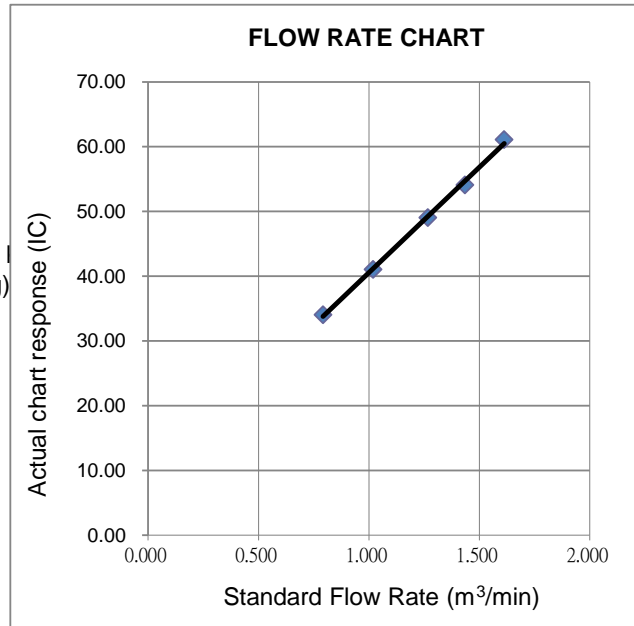
$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate  
 IC = corrected chart response  
 I = actual chart response  
 m = calibrator Qstd slope  
 b = calibrator Qstd intercept  
 Ta = actual temperature during calibration (deg K)  
 Pa = actual pressure during calibration (mm Hg)  
 Tstd = 298 deg K  
 Pstd = 760 mm Hg

**For subsequent calculation of sampler flow:**  
 $1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)]-b)$

m = sampler slope  
 b = sampler intercept  
 I = chart response  
 Tav = daily average temperature  
 Pav = daily average pressure



# FUGRO TECHNICAL SERVICES LIMITED

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Website : www.fugro.com

# MaterialLab

Report no. : 921436CA195379

Page 1 of 2



## CALIBRATION CERTIFICATE OF SINGLE-PAN BALANCE

### Client Supplied Information

Client : Fugro Technical Services Ltd.

Address : 5 Lok Yi Street, 17 M.S. Castle Peak Road, Tai Lam, Tuen Mun, N.T.

Manufacturer : Sartorius Capacity : 150 ( g )

Model no. : LA130S-F Discrimination : 0.0001 ( g )

Serial no. : 90104309 Operating range : 149.9999 ( g )

Equipment ID. : C-065-5 Type : Without Built-in Mass

Location : General Chemical Laboratory of FTS

Next calibration due date : Full Check : 08-Apr-2021 Repeatability Check : 08-Oct-2019

### Laboratory Information

Equipment ID. of weight set : R-030-29

Class of weight set : E2

Equipment ID. of psychrometer : R-067-67

Date of calibration : 09-Apr-2019

Temperature during test : 25 - 25 °C Relative humidity during test : 62 - 60 %

Method used : In house method R-C-082

COPY

### Calibration results:

#### Departure from nominal value

Reading ( g )	Correction ( g )
5.0001	-0.0001
15.0000	0.0000
30.0001	-0.0001
45.0001	-0.0001
60.0003	-0.0003
75.0002	-0.0002
90.0003	-0.0003
105.0004	-0.0005
120.0003	-0.0004
135.0002	-0.0003
150.0002	-0.0003
--	--

Note:

When the sign of the correction is positive (+) the amount should be added to the balance reading to give the correct value and when negative (-) subtracted from it.

### Repeatability of reading

Reading ( g )	Standard deviation of reading ( g )	Max. difference between successive reading ( g )
5.0001	0.00010	0.0002
75.0002	0.00008	0.0002
150.0002	0.00007	0.0002

CA-R-124 (12/12/2008)

The Hong Kong Accreditation Service (HKAS) has accredited Fugro Technical Services Limited (Reg. No. HOKLAS 015) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories. Such terms of accreditation stipulate that the results shall be traceable to the International System of Units (S.I.) or recognised measurement standards. The copyright of this report is owned by Fugro Technical Services Limited. It shall not be reproduced except with prior written approval from the issuing laboratory.

CAL29/0717

# FUGRO TECHNICAL SERVICES LIMITED

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# MaterialLab

Report no. : 921436CA195379

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## Effect of off-centre loading

A mass of approximately 50 ( g ) was placed at various positions of the weighing pan. The differences in balance readings are given in the table.

Centre	Front	Rear	Left	Right	Maximum difference ( g )
0.0000	0.0002	-0.0001	-0.0002	0.0005	0.0007

## Hysteresis

Load ( g )	Hysteresis ( g )
100.0001	less than 0.0002

## Tare check

Tare load ( g )	Balance reading with 99.9999 ( g )	Error ( g )
50.0000	100.0000	0.0001

**Uncertainty of weighing (correction is applied) =  $\pm 0.0004$  g** at 95% confidence level, with a coverage factor of **2.09**

The uncertainty of weighing is the tolerance band within which 95% balance readings will fall after appropriate correction is applied

**Limit of performance for the balance (no correction is applied) =  $\pm 0.0010$  g**

The limit of performance is the tolerance band within which 95% balance readings will fall.

## Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The reported hysteresis value is an average from three trials. In each trial, an extra mass was added to bring the balance reading close to full capacity after the specified load was placed on the pan. Hysteresis value is the difference of the readings of the specified load, before the extra mass was added and after it has been removed.
3. The uncertainty for departure from nominal value is  $\pm 0.0004$  g

Checked by : Hung Date : 13-4-2019 Approved Signatory : E.T. Young Date : 13-4-2019  
CA-R-124 (12/12/2008) Leung Kwok Tai (Assistant Manager)

\*\* End of Report \*\*



Report No. : 921436CA202374

Page 1 of 3

## WORKSHEET FOR REPEATABILITY TEST OF BALANCE

### Client Supplied Information

Client : Fugro Technical Services Limited

Calibration Item -	Description	: BALANCE
	Manufacturer	: Sartorius
	Model No.	: LA130S-F
	Serial No.	: 90104309
	Equipment ID.	: C-065-5
	Capacity	: 150 ( g )
	Discrimination	: 0.0001 ( g )
	Type	: [ <input checked="" type="checkbox"/> ] Top Loading [ <input type="checkbox"/> ] Analytical

COPY

### Laboratory Information

Calibrating Equipment -	Description	: Masses
	Equipment ID.	: R-030-29

Data of calibration : 25-Nov-2020 / Ambient Temperature : 24 °C Relative Humidity : 57 %

Calibration Location : General Chemical Laboratory of FTS

Method Used : CSIRO Publication "The Calibration of Balances" by David B. Prowse

In-house testing procedure no. : R-C-082

### 1. Results of Previous Calibration (Last Full Check)

Report No. of last full check : 921436CA195379

Calibration date of last full check : 09-Apr-2019

Value of  $\sigma_1$  : 0.000103 ( g )

( $\sigma_1$  is the maximum standard deviation found on the repeatability tests in the last full check)



**2. Repeatability test**

2.1 Repeatability of reading near to zero

M, near to zero = 5.0000 ( g )

No.	Pan load	Reading ( g )		Difference, mi - zi ( g )	No.	Pan load	Reading ( g )		Difference, mi - zi ( g )
1	O	z <sub>1</sub> =	0.0000	5.0001	6	O	z <sub>6</sub> =	0.0000	5.0000
	M	m <sub>1</sub> =	5.0001			M	m <sub>6</sub> =	5.0000	
2	O	z <sub>2</sub> =	0.0000	5.0001	7	O	z <sub>7</sub> =	0.0000	5.0000
	M	m <sub>2</sub> =	5.0001			M	m <sub>7</sub> =	5.0000	
3	O	z <sub>3</sub> =	0.0000	5.0000	8	O	z <sub>8</sub> =	0.0000	5.0001
	M	m <sub>3</sub> =	5.0000			M	m <sub>8</sub> =	5.0001	
4	O	z <sub>4</sub> =	0.0000	5.0001	9	O	z <sub>9</sub> =	0.0000	5.0000
	M	m <sub>4</sub> =	5.0001			M	m <sub>9</sub> =	5.0000	
5	O	z <sub>5</sub> =	0.0000	5.0001	10	O	z <sub>10</sub> =	0.0000	5.0001
	M	m <sub>5</sub> =	5.0001			M	m <sub>10</sub> =	5.0001	

2.2 Repeatability of reading at half capacity

M, at half capacity = 75.0000 ( g )

No.	Pan load	Reading ( g )		Difference, mi - zi ( g )	No.	Pan load	Reading ( g )		Difference, mi - zi ( g )
1	O	z <sub>1</sub> =	0.0000	75.0005	6	O	z <sub>6</sub> =	0.0000	75.0005
	M	m <sub>1</sub> =	75.0005			M	m <sub>6</sub> =	75.0005	
2	O	z <sub>2</sub> =	0.0000	75.0005	7	O	z <sub>7</sub> =	0.0000	75.0005
	M	m <sub>2</sub> =	75.0005			M	m <sub>7</sub> =	75.0005	
3	O	z <sub>3</sub> =	0.0000	75.0004	8	O	z <sub>8</sub> =	0.0000	75.0004
	M	m <sub>3</sub> =	75.0004			M	m <sub>8</sub> =	75.0004	
4	O	z <sub>4</sub> =	0.0000	75.0005	9	O	z <sub>9</sub> =	0.0000	75.0004
	M	m <sub>4</sub> =	75.0005			M	m <sub>9</sub> =	75.0004	
5	O	z <sub>5</sub> =	0.0000	75.0005	10	O	z <sub>10</sub> =	0.0000	75.0003
	M	m <sub>5</sub> =	75.0005			M	m <sub>10</sub> =	75.0003	



Report No. : 921436CA202374

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**2. Repeatability test**

**2.3 Repeatability of reading at full capacity**

M, at full capacity = 149.9999 ( g )

No.	Pan load	Reading ( g )		Difference, mi - zi ( g )	No.	Pan load	Reading ( g )		Difference, mi - zi ( g )
1	○	z <sub>1</sub> =	0.0000	150.0005	6	○	z <sub>6</sub> =	0.0000	150.0006
	M	m <sub>1</sub> =	150.0005			M	m <sub>6</sub> =	150.0006	
2	○	z <sub>2</sub> =	0.0000	150.0005	7	○	z <sub>7</sub> =	0.0000	150.0006
	M	m <sub>2</sub> =	150.0005			M	m <sub>7</sub> =	150.0006	
3	○	z <sub>3</sub> =	0.0000	150.0006	8	○	z <sub>8</sub> =	0.0000	150.0005
	M	m <sub>3</sub> =	150.0006			M	m <sub>8</sub> =	150.0005	
4	○	z <sub>4</sub> =	0.0000	150.0005	9	○	z <sub>9</sub> =	0.0000	150.0005
	M	m <sub>4</sub> =	150.0005			M	m <sub>9</sub> =	150.0005	
5	○	z <sub>5</sub> =	0.0000	150.0006	10	○	z <sub>10</sub> =	0.0000	150.0006
	M	m <sub>5</sub> =	150.0006			M	m <sub>10</sub> =	150.0006	

**3. Results of repeatability test**

σ of readings near to zero : 0.000052 g      σ<sub>1</sub> in last full check : 0.000103 g

σ of readings at half capacity : 0.000071 g

σ of readings at full capacity : 0.000053 g

Maximum value of σ is greater than σ<sub>1</sub> :  No.

Yes - carry out a full check

σ = [ Σ(r<sub>i</sub>-r)<sup>2</sup> / (n-1) ]<sup>1/2</sup> , where i = 1, ..., 10 , r = mean value in the column "Difference".

or minimum σ = dx/n<sup>1/2</sup> , where n=10 and dx is the discrimination of balance.

Note :

A full check should be carried out at least once every three years.

A full check must be carried out if the value of σ was increased in a repeatability test.

A repeatability test was carried out once every six months.

Pass	<input checked="" type="checkbox"/>
Fail	<input type="checkbox"/>
N/A	<input type="checkbox"/>

**Remarks:**

1. The equipment used in this calibration has traceable accuracy to National Primary Standards.

2  Recommended next calibration date : 24-May-2021

3.  The balance was recommended to carry out a full check.

Tick the appropriate.

Tested by: R. Anasco Date: 25-NOV-2020 Checked by: C. ... Date: 1-DEC-2020

CA-W-85 (25/04/97)

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## CALIBRATION REPORT OF WIND METER

<b>Project:</b> Contract No. SPW 07/2020 <b>Location:</b> Yuen Long Sewage Treatment Works	<b>Date of Calibration:</b> 19-Nov-2020 <b>Next Calibration Date:</b> 18-Apr-2021 <b>Technician:</b> Sam Fong
<b>Brand:</b> Global Water <b>Model:</b> GL500-7-2	<b>Equipment ID:</b> WS-02
<b>Anemometer</b>	
<b>Brand:</b> Benetech <b>Model:</b> GM816	<b>Equipment ID:</b> WS-08
<b>Procedures:</b>	
1.	<b>Wind Still Test:</b> The wind speed sensor was held by hand until stabilized.
2.	<b>Wind Speed Test:</b> The wind meter was calibrated in-situ and compared with the Anemometer.
3.	<b>Wind Direction Test:</b> The wind meter was calibrated in-situ and compared with a marine compass from four directions.

**Wind Still Test:**

Wind Speed (m/s)
0.00

**Wind Speed Test:**

Global Water (m/s)	Anemometer (m/s)
1.0	1.5
3.0	3.4
2.6	2.8

**Wind Direction Test:**

	Marine Compass (o)
0	358
66	63
248	246
87	86



Wan Ka Ho  
Project Consultant

**Report Date:** 21/11/2020

# Noise Monitoring Equipment

Report no.: 203258CA202302(2)

Page 1 of 1

## CALIBRATION CERTIFICATE OF SOUND LEVEL METER

**Client Supplied Information**

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Details of Unit Under Test, UUT

 Description : Sound Level Meter  
 Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No.	CEL-63X	CE-251	CEL-495
Serial No.	1488304	03876	002752

Equipment ID : N-62

Next Calibration Date : 29-Oct-2021

Specification Limit : EN 61672-1: 2003 Class 1

**Laboratory Information**

Details of Reference Equipment -

 Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)  
 Equipment ID. : R-108-1

Date of Calibration : 30-Oct-2020

Calibration Location : Calibration Laboratory of FTS      Ambient Temperature : 20±2 °C

Method Used : By direct comparison      Relative Humidity : &lt;80% R.H.

**Calibration Results :**

Parameters	Mean Value (dB)	Specification Limit(dB)
A-weighting frequency response	4000Hz	1.5      2.6 to -0.6
	2000Hz	1.3      2.8 to -0.4
	1000Hz	-0.1      1.1 to -1.1
	500Hz	-3.5      -1.8 to -4.6
	250Hz	-8.9      -7.2 to -10.0
	125Hz	-16.4      -14.6 to -17.6
	63Hz	-26.4      -24.7 to -27.7
	31.5Hz	-39.4      -37.4 to -41.4
Differential level linearity	94dB-104dB	0.0      ± 0.6
	104dB-114dB	0.0      ± 0.6

**Remarks :**

- The equipment used in this calibration is traceable to recognized National Standards.
- The mean value is the average of four measurements.
- For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast.
- The UUT does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
- The values given in this Calibration Certificate only relate to the values at the time of the test and any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

 Checked by : William      Date : 4-11-2020      Certified by : K.T. Leung      Date : 4-11-2020  
 CA-R-297 (22/07/2009)      Leung Kwok Tai (Assistant Manager)

\*\* End of Report \*\*

Report no.: 183057CA200482(1)

## CALIBRATION CERTIFICATE OF SOUND LEVEL METER

### Client Supplied Information

Client : Fugro Technical Services Limited

Project : Calibration Services

Details of Unit Under Test, UUT

Description : Sound Level Meter  
 Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No. :	CEL-63X	CE-251	CEL-495
Serial No. :	0873573	01163	004064

Equipment ID : N-43  
 Next Calibration Date : 22-Mar-2021  
 Specification Limit : EN 61672-1: 2003 Class 1

### Laboratory Information

Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)  
 Equipment ID. : R-108-1  
 Date of Calibration : 23-Mar-2020      Ambient Temperature : 22 °C  
 Calibration Location : Calibration Laboratory of FTS  
 Method Used : By direct comparison

### Calibration Results :

Parameters		Mean Value (dB)	Specification Limit(dB)
A-weighting frequency response	4000Hz	2.0	2.6 to -0.6
	2000Hz	1.5	2.8 to -0.4
	1000Hz	-0.1	1.1 to -1.1
	500Hz	-3.6	-1.8 to -4.6
	250Hz	-8.9	-7.2 to -10.0
	125Hz	-16.3	-14.6 to -17.6
	63Hz	-26.4	-24.7 to -27.7
	31.5Hz	-39.4	-37.4 to -41.4
Differential level linearity	94dB-104dB	0.0	± 0.6
	104dB-114dB	0.1	± 0.6

### Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighing is fast
4. The equipment does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
5. The values given in this Calibration Certificate only relate to the unit-under-test and the values measured at the time of the test. Any uncertainties quoted will not include allowances for the environmental changes, variation and shock during transportation, or the capability of any other laboratory to repeat the measurement.

Checked by : William      Date : 27-3-2020      Certified by : K.T. Leung      Date : 27-3-2020  
 CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

\*\* End of Report \*\*



Report no.: 203258CA202302(1)

Page 1 of 1

## CALIBRATION CERTIFICATE OF SOUND LEVEL METER

### Client Supplied Information

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Details of Unit Under Test, UUT

Description	: Sound Level Meter												
Manufacturer	: Casella												
Model No.	: <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td>Meter</td> <td>Microphone</td> <td>Preamplifier</td> </tr> <tr> <td>CEL-63X</td> <td>CE-251</td> <td>CEL-495</td> </tr> <tr> <td>Serial No.</td> <td>1488295</td> <td>02795</td> </tr> <tr> <td>Equipment ID</td> <td>N-54</td> <td>003538</td> </tr> </table>	Meter	Microphone	Preamplifier	CEL-63X	CE-251	CEL-495	Serial No.	1488295	02795	Equipment ID	N-54	003538
Meter	Microphone	Preamplifier											
CEL-63X	CE-251	CEL-495											
Serial No.	1488295	02795											
Equipment ID	N-54	003538											
Next Calibration Date	: 29-Oct-2021												
Specification Limit	: EN 61672-1: 2003 Class 1												

### Laboratory Information

Details of Reference Equipment -

Description	: B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)
Equipment ID.	: R-108-1
Date of Calibration	: 30-Oct-2020
Calibration Location	: Calibration Laboratory of FTS
Method Used	: By direct comparison
Ambient Temperature	: 20±2 °C
Relative Humidity	: <80% R.H.

### Calibration Results :

Parameters	Mean Value (dB)	Specification Limit(dB)
A-weighting frequency response	4000Hz	1.0
	2000Hz	-0.2
	1000Hz	0.0
	500Hz	-3.3
	250Hz	-8.7
	125Hz	-16.2
	63Hz	-26.1
	31.5Hz	-38.7
Differential level linearity	94dB-104dB	± 0.6
	104dB-114dB	± 0.6

### Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast.
4. The UUT does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
5. The values given in this Calibration Certificate only relate to the values at the time of the test and any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

 Checked by : William Date : 4-11-2020 Certified by : K.T. Leung Date : 4-11-2020  
 CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

**\*\* End of Report \*\***

Report no.: 203258CA201298(3)

Page 1 of 1

## CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

### Client Supplied Information

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Details of Unit Under Test, UUT

Description : Sound Calibrator  
 Manufacturer : Casella (Model CEL-120/1)  
 Serial No. : 5230758  
 Equipment ID : N/A  
 Next Calibration Date : 13-Jul-2021  
 Specification Limit : EN 60942: 2003 Type 1

### Laboratory Information

Description : Reference Sound level meter  
 Equipment ID. : R-119-1  
 Date of Calibration : 14-Jul-2020 Ambient Temperature : 20±2 °C  
 Calibration Location : Calibration Laboratory of FTS  
 Method Used : By direct comparison

### Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	-0.3 dB	±0.4dB
114dB	-0.3 dB	

### Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The equipment does comply with the specification limit.
4. The values given in this Calibration Certificate only relate to the values at the time of the test and any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : William Date : 21-7-2020 Certified by : E. J. Leung Date : 21-7-2020  
 CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

\*\* End of Report \*\*

Report No. : 183057CA200894(3)

Page 1 of 1

**CALIBRATION CERTIFICATE OF ANEMOMETER**

**Client Supplied Information**

Client : Fugro Technical Services Ltd.

Project : Calibration Services

**Details of Unit Under Test, UUT**

Description : Anemometer

Manufacturer : Benetech

Model No. : GM816

Serial No. : N/A

Equipment ID : WS-08

Next Calibration Date : 14-Jun-2021

**Laboratory Information**

Details of Reference Equipment –

Description : Reference Anemometer

Equipment ID : R-101-4

Date of Calibration : 15-Jun-2020 Ambient Temperature : 22 °C

Calibration Location : Calibration Laboratory of FTS

Method Used : R-C-279

**Calibration Results :**

Reference Reading (m/s)	UUT Reading (m/s)	Error (m/s)
2.02	2.0	0.0
4.15	4.1	-0.1
6.27	6.0	-0.3
8.43	8.0	-0.4
10.75	10.1	-0.7

**Remark :**

1. The equipment being used in this calibration is traceable to recognized National Standards.
2. The reported readings in this calibration are an average from 10 trials.

Checked by : William Date : 20-6-2020 Certified by : Kit Young Date : 20-6-2020

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

\*\* End of Report \*\*

Water Quality Monitoring Equipment





Report No. : 142626WA201910



Page 1 of 3

**Report on Calibration of YSI EXO-3 Multi-parameter Water Quality Meter****Information Supplied by Client**

Client : Fugro Technical Services Limited (MCL)

Client's address : Rm. 723-726, 7/F, Profit Industrial Building, No. 1-15, Kwai Fung Crescent, Kwai Chung, N.T.

Sample description : One YSI EXO-3 Multi-parameter Water Quality Meter

Client sample ID : Serial No. 19E100634

Test required : Calibration of the YSI EXO-3 Multi-parameter Water Quality Meter

**Laboratory Information**

Lab. sample ID : WA201910/1

Date sample received : 03/10/2020

Date of calibration : 10/10/2020

Next calibration date : 09/01/2021

Test method used : In-house comparison method

*Note : This report refers only to the sample(s) tested.*

Report No. : 142626WA201910

Page 2 of 3

**Results :**
**A. pH calibration**

pH reading at 20°C for Q.C. solution(6.86) and at 20°C for Q.C. solution(9.18)		
Theoretical	Measured	Deviation
9.18	9.12	-0.06
6.86	6.81	-0.05

**B. Salinity calibration**

Salinity, ppt			
Theoretical	Measured	Deviation	Maximum acceptable Deviation
10	9.89	-0.11	± 0.5
20	19.75	-0.25	± 1.0
30	30.02	+0.02	± 1.5
40	39.60	-0.40	± 2.0

**C. Dissolved Oxygen calibration**

Trial No.	Dissolved oxygen content, mg/L	
	By Titration	By D.O. meter
1	8.17	8.34
2	8.17	8.31
3	8.20	8.34
Average	8.18	8.33

Differences of D.O. Content between Wrinkler Titration and D.O. meter should be less than 0.2 mg/L

 Certified by : 

 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

27/10/2020

*Note : This report refers only to the sample(s) tested.*

Report No. : 142626WA201910

Page 3 of 3

**Results :**

**D. Temperature calibration**

Thermometer reading, °C	Meter reading, °C
22.1	21.97

**E. Turbidity calibration**

Turbidity, N.T.U.			
Theoretical	Measured	Deviation	Maximum acceptable Deviation
4	3.91	-0.09	± 0.6
8	8.25	+0.25	± 0.8
40	39.60	-0.40	± 3.0
80	79.90	-0.10	± 4.0

**F. Chlorophyll calibration**

Chlorophyll reading at 24.4°C for Std. solution (62.5ug/L)		
Theoretical (ug/L) (Temp.-compensated)	Measured	Deviation
63.5	62.2	-1.3

Certified by :   
Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories

Date : 27/10/2020

**\*\* End of Report \*\***

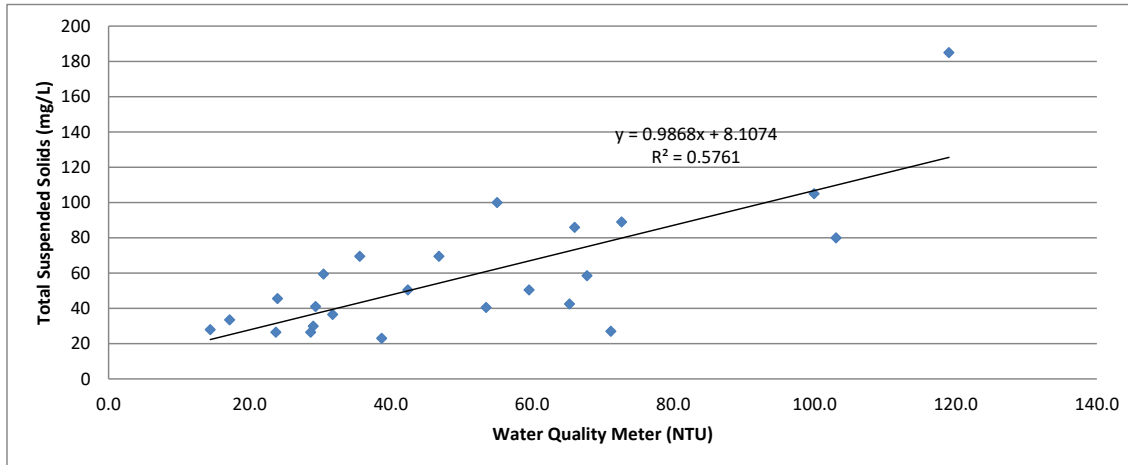
*Note : This report refers only to the sample(s) tested.*

### Correlation between NTU & Suspended Solids

#### EXO-3 Multi-parameter Water Quality Meter Information

Model: YSI EXO-3 Multi-parameter Water Quality Meter

Serial No: 19E100634



#### Remarks:

1. Correlation coefficient (r) = 0.5761
2. Sampling Location: M3
3. Turbidity (NTU) & Suspended Solids (mg/L) which was established in the baseline monitoring under the Project.

Report No. : 142626WA201910(2)



Page 1 of 3

**Report on Calibration of YSI EXO-3 Multi-parameter Water Quality Meter****Information Supplied by Client**

Client : Fugro Technical Services Limited (MCL)

Client's address : Rm. 723-726, 7/F, Profit Industrial Building, No. 1-15, Kwai Fung Crescent, Kwai Chung, N.T.

Sample description : One YSI EXO-3 Multi-parameter Water Quality Meter

Client sample ID : Serial No. 19A105807

Test required : Calibration of the YSI EXO-3 Multi-parameter Water Quality Meter

**Laboratory Information**

Lab. sample ID : WA201910/3

Date sample received : 03/10/2020

Date of calibration : 10/10/2020

Next calibration date : 09/01/2021

Test method used : In-house comparison method

*Note : This report refers only to the sample(s) tested.*

Report No. : 142626WA201910(2)

Page 2 of 3

**Results :**

**A. pH calibration**

pH reading at 20°C for Q.C. solution(6.86) and at 20°C for Q.C. solution(9.18)		
Theoretical	Measured	Deviation
9.18	9.16	-0.02
6.86	6.91	+0.05

**B. Salinity calibration**

Salinity, ppt			
Theoretical	Measured	Deviation	Maximum acceptable Deviation
10	9.93	-0.07	± 0.5
20	19.84	-0.16	± 1.0
30	29.99	-0.01	± 1.5
40	39.45	-0.55	± 2.0

**C. Dissolved Oxygen calibration**

Trial No.	Dissolved oxygen content, mg/L	
	By Titration	By D.O. meter
1	8.45	8.49
2	8.45	8.51
3	8.48	8.58
Average	8.46	8.53

Differences of D.O. Content between Wrinkler Titration and D.O. meter should be less than 0.2 mg/L

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 27/10/2020

*Note : This report refers only to the sample(s) tested.*

Report No. : 142626WA201910(2)

Page 3 of 3

**Results :**

**D. Temperature calibration**

Thermometer reading, °C	Meter reading, °C
21.8	21.42

**E. Turbidity calibration**

Turbidity, N.T.U.			
Theoretical	Measured	Deviation	Maximum acceptable Deviation
4	4.16	+0.16	± 0.6
8	7.87	-0.13	± 0.8
40	37.90	-2.10	± 3.0
80	77.47	-2.53	± 4.0

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 27/10/2020  
 \*\* End of Report \*\*

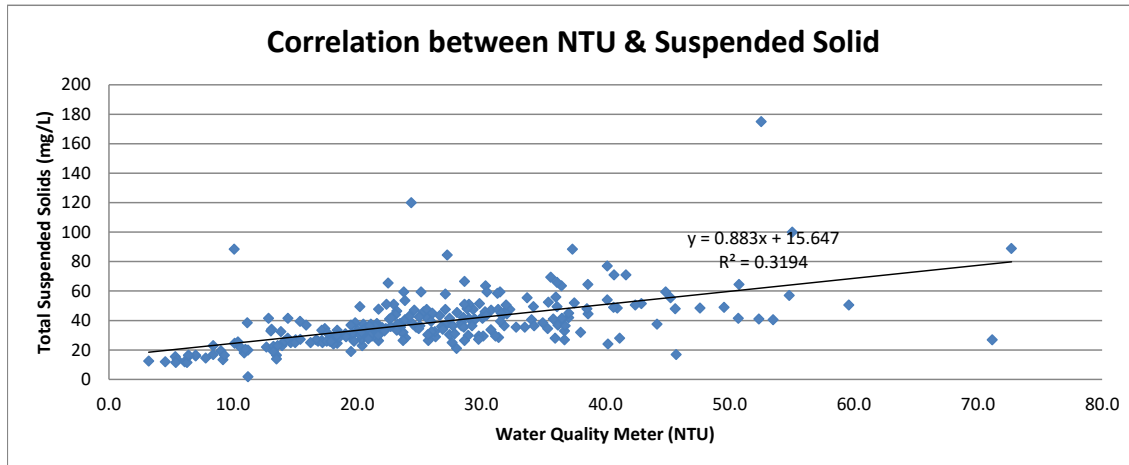
*Note : This report refers only to the sample(s) tested.*

### Correlation between NTU & Suspended Solids

#### EXO-3 Multi-parameter Water Quality Meter Information

Model: YSI EXO-3 Multi-parameter Water Quality Meter

Serial No: 19A105807



#### Remarks:

1. Correlation coefficient ( $r$ ) = 0.3194
2. Sampling Location: M1, M2, E1, E2a, E3a, E4, E5a, SP1, DB1, KT1
3. Turbidity (NTU) & Suspended Solids (mg/L) which was established in the baseline monitoring under the Project.



# CALIBRATION CERTIFICATE

This document certifies that the instrument detailed below has been calibrated according to Valeport Limited's Standard Procedures, using equipment with calibrations traceable to UKAS or National Standards.

**Calibration Certificate Number:**

**61134**

**Instrument Type:**

**MODEL 106**

**Instrument Serial Number:**

**67738**

**Calibrated By:**

**N.PADDON**

**Date:**

**11<sup>TH</sup> NOVEMBER 2019**

**Signed:**

*N. Paddon*

Full details of the results from the calibration procedure applied to each fitted sensor are available, on request, via email. This summary certificate should be kept with the instrument.

A large, stylized number '50' in a bold, sans-serif font, with a small square graphic element at the top right of the '0'.

**Valeport Limited**  
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VAT No. CB 165 8753 67  
Registered in England No. 1950444





a xylem brand

9940 Summers Ridge Road  
San Diego, CA 92121  
Tel: (858) 546-8327  
support@sontek.com

## Certificate of Calibration

### TEST REPORT

Serial Number	5906
System Type	M9
System Orientation	Down
Compass Type	Sontek
Compass Offset (degrees)	N/A
Communications Output	RS232
Recorder Size (GB)	14.9
Firmware Version	4.02
Date Tested	05/23/2017

### POWER TEST

Command Mode (W):	0.17	Range : 0.00 – 0.30
Sleep Mode (W):	N/A	Range : N/A
Ping Mode - 18V (W):	2.67	Range : 1.50 – 3.50
Power Check		PASS

### NOISE TEST

Beam 1 – 3.0 MHz (counts)	95
Beam 2 – 1.0 MHz (counts)	96
Beam 3 – 3.0 MHz (counts)	95
Beam 4 – 1.0 MHz (counts)	101
Beam 5 – 3.0 MHz (counts)	93
Beam 6 – 1.0 MHz (counts)	95
Beam 7 – 3.0 MHz (counts)	91
Beam 8 – 1.0 MHz (counts)	100
Beam Vertical – 500KHz (counts)	88
Noise Test	PASS

## VERIFICATION

Velocity Check	PASS
Transmit Output	PASS
Sensitivity	PASS
Temperature Sensor	PASS
Compass Heading Check	PASS
Compass Level Check	PASS
Burn-in (24 hrs)	PASS
Load Default Parameters	DONE

## OPTIONS

Bottom Track	Installed
SmartPulse HD <sup>TM</sup>	Enabled
Stationary	Disabled
GPS Compass Integration	Disabled
RiverSurveyor	Enabled
HydroSurveyor	Disabled

Verified by: **ainthasane**

This report was generated on 5/24/2017.

ATTENTION: New Warranty Terms as of March 4, 2013:

This system is covered under a two year limited warranty that extends to all parts and labor for any malfunction due to workmanship or errors in the manufacturing process. The warranty is valid only if you properly maintain and operate this system under normal use as outlined in the User's Manual. The warranty does not cover shortcomings that are due to the design, or any incidental damages as a result of errors in the measurements.

SonTek will repair and/or replace, at its sole option, any product established to be defective with a product of like type. CLAIMS FOR LABOR COSTS AND/OR OTHER CHARGES RESULTING FROM THE USE OF SonTek GOODS AND/OR PRODUCTS ARE NOT COVERED BY THIS LIMITED WARRANTY.

SonTek DISCLAIMS ALL EXPRESS WARRANTIES OTHER THAN THOSE CONTAINED ABOVE AND ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE. SonTek DISCLAIMS AND WILL NOT BE LIABLE, UNDER ANY CIRCUMSTANCE, IN CONTRACT, TORT OR WARRANTY, FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO LOST PROFITS, BUSINESS INTERRUPTION LOSSES, LOSS OF GOODWILL, OR LOSS OF BUSINESS OR CUSTOMER RELATIONSHIPS.

If your system is not functioning properly, first try to identify the source of the problem. If additional support is required, we encourage you to contact us immediately. We will work to resolve the problem as quickly as possible.

If the system needs to be returned to the factory, please contact SonTek to obtain a Service Request (SR) number. We reserve the right to refuse receipt of shipments without SRs. We require the system to be shipped back in the original shipping container using the original packing material with all delivery costs covered by the customer (including all taxes and duties). If the system is returned without appropriate packing, the customer will be required to cover the cost of a new packaging crate and material.

The warranty for repairs performed at an authorized SonTek Service Center is one year.

# Appendix B

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## Air Quality Monitoring Results

**AM1 Topfine Machinery (China) Co. Ltd.**

1-hour TSP ( $\mu\text{g}/\text{m}^3$ )					
Date	Start Time	1st hr	2nd hr	3rd hr	Weather
1-Dec-20	08:30	38	63	59	Fine
2-Dec-20	11:42	14	38	24	Fine
3-Dec-20	09:41	53	41	36	Fine
4-Dec-20	10:07	54	54	54	Fine
5-Dec-20	12:33	110	104	96	Fine
6-Dec-20	10:17	83	77	72	Fine
7-Dec-20	11:20	81	57	53	Fine
8-Dec-20	10:34	83	89	92	Fine
9-Dec-20	10:05	53	26	21	Fine
10-Dec-20	09:35	90	81	77	Fine
11-Dec-20	09:28	69	66	68	Fine
12-Dec-20	11:37	86	84	135	Fine
13-Dec-20	09:26	71	44	44	Fine
14-Dec-20	09:01	44	33	33	Fine
<b>Average</b>		63			
<b>Max</b>		135			
<b>Min</b>		14			

**AM2 Squatter house at the west of Yuen Long STW**

1-hour TSP ( $\mu\text{g}/\text{m}^3$ )					
Date	Start Time	1st hr	2nd hr	3rd hr	Weather
1-Dec-20	09:10	42	54	56	Fine
2-Dec-20	11:48	14	41	27	Fine
3-Dec-20	09:50	60	45	39	Fine
4-Dec-20	10:01	65	57	59	Fine
5-Dec-20	12:11	137	126	116	Fine
6-Dec-20	10:14	92	89	83	Fine
7-Dec-20	11:20	90	63	57	Fine
8-Dec-20	10:21	93	99	104	Fine
9-Dec-20	10:10	56	27	29	Fine
10-Dec-20	13:00	123	36	47	Fine
11-Dec-20	09:22	74	74	72	Fine
12-Dec-20	11:45	95	104	179	Fine
13-Dec-20	09:19	81	48	57	Fine
14-Dec-20	08:57	48	36	35	Fine
<b>Average</b>		70			
<b>Max</b>		179			
<b>Min</b>		14			

# Appendix C

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## Noise Monitoring Results

Noise Monitoring Results  
 CM1 Squatter house at the north of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
1/12/2020 07:00	51.2	48.2	53.5	46.5
1/12/2020 07:30	49.3	46.3	51.5	46.0
1/12/2020 08:00	56.2	53.2	49.0	44.5
1/12/2020 08:30	53.8	50.8	56.0	45.5
1/12/2020 09:00	53.6	50.6	56.5	44.5
1/12/2020 09:30	54.3	51.3	56.5	45.5
1/12/2020 10:00	54.5	51.5	57.0	46.0
1/12/2020 10:30	52.3	49.3	55.5	46.5
1/12/2020 11:00	56.5	53.5	59.0	46.5
1/12/2020 11:30	53.6	50.6	56.5	48.5
1/12/2020 12:00	60.8	57.8	58.5	48.5
1/12/2020 12:30	55.8	52.8	58.0	47.5
1/12/2020 13:00	59.6	56.6	64.0	49.0
1/12/2020 13:30	57.2	54.2	61.0	47.0
1/12/2020 14:00	54.6	51.6	57.5	47.0
1/12/2020 14:30	52.7	49.7	56.0	44.0
1/12/2020 15:00	52.0	49.0	54.5	43.5
1/12/2020 15:30	51.5	48.5	54.5	43.0
1/12/2020 16:00	56.9	53.9	59.0	45.0
1/12/2020 16:30	57.1	54.1	60.0	43.0
1/12/2020 17:00	58.1	55.1	62.0	43.0
1/12/2020 17:30	51.8	48.8	54.5	42.0
1/12/2020 18:00	51.0	48.0	53.5	44.0
1/12/2020 18:30	52.2	49.2	53.5	44.0
1/12/2020 19:00	48.6	45.6	48.5	44.5
2/12/2020 07:00	52.4	49.4	53.5	46.0
2/12/2020 07:30	47.8	44.8	48.5	46.0
2/12/2020 08:00	51.2	48.2	54.0	45.5
2/12/2020 08:30	52.2	49.2	52.5	46.0
2/12/2020 09:00	53.9	50.9	55.0	45.5
2/12/2020 09:30	53.8	50.8	54.5	45.5
2/12/2020 10:00	54.1	51.1	54.5	44.0
2/12/2020 10:30	52.9	49.9	53.0	44.0
2/12/2020 11:00	57.7	54.7	60.0	44.5
2/12/2020 11:30	53.6	50.6	55.5	44.0
2/12/2020 12:00	60.9	57.9	64.5	46.0
2/12/2020 12:30	56.1	53.1	60.0	43.5
2/12/2020 13:00	56.8	53.8	59.0	45.0
2/12/2020 13:30	54.7	51.7	59.0	44.0
2/12/2020 14:00	54.9	51.9	57.0	46.0
2/12/2020 14:30	58.9	55.9	62.0	50.0
2/12/2020 15:00	61.5	58.5	66.0	48.0
2/12/2020 15:30	60.6	57.6	66.0	43.5
2/12/2020 16:00	55.3	52.3	54.5	42.5
2/12/2020 16:30	55.9	52.9	51.5	39.0
2/12/2020 17:00	57.0	54.0	55.0	39.5
2/12/2020 17:30	52.6	49.6	53.5	40.5
2/12/2020 18:00	48.1	45.1	46.5	41.0
2/12/2020 18:30	53.4	50.4	53.0	42.0
2/12/2020 19:00	58.9	55.9	62.5	46.0
3/12/2020 07:00	49.6	46.6	51.5	46.0

Noise Monitoring Results  
 CM1 Squatter house at the north of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
3/12/2020 07:30	50.5	47.5	50.5	45.0
3/12/2020 08:00	49.6	46.6	52.0	44.5
3/12/2020 08:30	50.4	47.4	53.5	43.5
3/12/2020 09:00	53.4	50.4	56.0	47.5
3/12/2020 09:30	54.5	51.5	57.5	48.0
3/12/2020 10:00	53.3	50.3	56.0	48.0
3/12/2020 10:30	55.8	52.8	58.5	50.5
3/12/2020 11:00	54.4	51.4	57.0	50.0
3/12/2020 11:30	60.7	57.7	60.5	48.5
3/12/2020 12:00	52.9	49.9	54.5	46.0
3/12/2020 12:30	49.4	46.4	53.0	43.5
3/12/2020 13:00	50.1	47.1	52.5	45.0
3/12/2020 13:30	52.2	49.2	52.0	43.0
3/12/2020 14:00	51.1	48.1	53.5	43.0
3/12/2020 14:30	53.1	50.1	53.5	42.0
3/12/2020 15:00	54.8	51.8	54.0	42.0
3/12/2020 15:30	49.7	46.7	52.5	42.0
3/12/2020 16:00	48.0	45.0	51.0	41.5
3/12/2020 16:30	49.9	46.9	52.0	41.5
3/12/2020 17:00	48.7	45.7	51.0	40.5
3/12/2020 17:30	47.7	44.7	49.5	40.0
3/12/2020 18:00	46.8	43.8	49.0	43.5
3/12/2020 18:30	48.1	45.1	50.0	44.5
3/12/2020 19:00	46.8	43.8	48.0	45.5
4/12/2020 07:00	53.8	50.8	57.0	48.5
4/12/2020 07:30	52.2	49.2	55.0	48.5
4/12/2020 08:00	50.8	47.8	52.5	47.0
4/12/2020 08:30	50.5	47.5	53.0	45.5
4/12/2020 09:00	53.2	50.2	57.0	45.5
4/12/2020 09:30	52.6	49.6	53.5	46.5
4/12/2020 10:00	58.7	55.7	62.0	48.5
4/12/2020 10:30	54.6	51.6	54.5	47.0
4/12/2020 11:00	51.1	48.1	53.0	47.5
4/12/2020 11:30	53.6	50.6	55.5	47.0
4/12/2020 12:00	51.6	48.6	54.0	45.5
4/12/2020 12:30	58.9	55.9	57.0	47.5
4/12/2020 13:00	52.0	49.0	54.0	45.0
4/12/2020 13:30	56.6	53.6	60.5	46.5
4/12/2020 14:00	64.3	61.3	68.5	47.5
4/12/2020 14:30	56.0	53.0	58.5	47.5
4/12/2020 15:00	55.0	52.0	58.5	45.5
4/12/2020 15:30	51.1	48.1	52.5	42.0
4/12/2020 16:00	50.5	47.5	50.0	40.5
4/12/2020 16:30	50.6	47.6	50.0	39.5
4/12/2020 17:00	60.4	57.4	49.0	39.0
4/12/2020 17:30	51.0	48.0	51.5	40.5
4/12/2020 18:00	50.0	47.0	45.0	41.5
4/12/2020 18:30	50.5	47.5	48.5	43.5
4/12/2020 19:00	48.9	45.9	50.5	45.0
5/12/2020 07:00	49.0	46.0	50.0	45.0
5/12/2020 07:30	48.2	45.2	48.5	44.5

Noise Monitoring Results  
 CM1 Squatter house at the north of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
5/12/2020 08:00	48.7	45.7	49.0	43.5
5/12/2020 08:30	68.9	65.9	53.0	43.5
5/12/2020 09:00	48.6	45.6	50.5	44.0
5/12/2020 09:30	53.1	50.1	55.0	46.5
5/12/2020 10:00	51.7	48.7	53.0	46.0
5/12/2020 10:30	54.6	51.6	58.0	46.0
5/12/2020 11:00	53.7	50.7	55.0	46.5
5/12/2020 11:30	56.2	53.2	57.0	46.0
5/12/2020 12:00	57.1	54.1	59.0	46.5
5/12/2020 12:30	56.2	53.2	57.5	46.5
5/12/2020 13:00	49.7	46.7	52.0	44.5
5/12/2020 13:30	51.6	48.6	54.0	45.0
5/12/2020 14:00	52.6	49.6	55.0	46.0
5/12/2020 14:30	67.1	64.1	57.0	46.0
5/12/2020 15:00	58.2	55.2	59.0	44.5
5/12/2020 15:30	52.7	49.7	55.5	45.0
5/12/2020 16:00	54.3	51.3	57.5	44.5
5/12/2020 16:30	52.6	49.6	56.0	43.5
5/12/2020 17:00	56.3	53.3	55.0	44.0
5/12/2020 17:30	52.3	49.3	55.0	43.5
5/12/2020 18:00	51.2	48.2	51.5	43.5
5/12/2020 18:30	47.7	44.7	47.5	43.5
5/12/2020 19:00	47.2	44.2	47.5	43.5
6/12/2020 07:00	47.2	44.2	48.5	46.0
6/12/2020 07:05	48.2	45.2	49.5	46.0
6/12/2020 07:10	49.1	46.1	50.0	46.5
6/12/2020 07:15	49.4	46.4	52.5	46.0
6/12/2020 07:20	47.6	44.6	49.0	46.0
6/12/2020 07:25	47.5	44.5	49.0	45.5
6/12/2020 07:30	46.6	43.6	47.0	45.5
6/12/2020 07:35	46.4	43.4	47.0	45.5
6/12/2020 07:40	45.9	42.9	46.5	45.0
6/12/2020 07:45	46.7	43.7	47.5	45.0
6/12/2020 07:50	46.2	43.2	47.0	44.5
6/12/2020 07:55	49.1	46.1	48.5	44.5
6/12/2020 08:00	46.4	43.4	47.0	44.5
6/12/2020 08:05	52.1	49.1	53.5	44.5
6/12/2020 08:10	50.2	47.2	54.0	44.5
6/12/2020 08:15	45.8	42.8	46.5	43.5
6/12/2020 08:20	43.6	40.6	44.0	43.0
6/12/2020 08:25	44.3	41.3	45.5	43.0
6/12/2020 08:30	49.2	46.2	50.5	43.5
6/12/2020 08:35	56.7	53.7	51.0	43.5
6/12/2020 08:40	46.2	43.2	48.0	44.0
6/12/2020 08:45	44.9	41.9	46.0	43.5
6/12/2020 08:50	51.8	48.8	48.5	44.5
6/12/2020 08:55	45.5	42.5	46.5	44.0
6/12/2020 09:00	44.3	41.3	46.0	41.0
6/12/2020 09:05	45.0	42.0	45.5	41.5
6/12/2020 09:10	51.3	48.3	49.0	40.5
6/12/2020 09:15	42.5	39.5	44.0	40.5

Sunday

Noise Monitoring Results  
 CM1 Squatter house at the north of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
6/12/2020 09:20	43.1	40.1	45.0	40.5
6/12/2020 09:25	47.5	44.5	44.0	40.0
6/12/2020 09:30	40.5	37.5	42.0	39.0
6/12/2020 09:35	42.5	39.5	42.5	39.5
6/12/2020 09:40	43.7	40.7	45.5	39.0
6/12/2020 09:45	41.4	38.4	43.5	39.0
6/12/2020 09:50	41.8	38.8	43.5	39.5
6/12/2020 09:55	45.1	42.1	46.0	39.5
6/12/2020 10:00	41.7	38.7	44.0	39.0
6/12/2020 10:05	49.5	46.5	46.0	39.5
6/12/2020 10:10	51.4	48.4	51.5	39.5
6/12/2020 10:15	43.4	40.4	44.0	39.0
6/12/2020 10:20	40.9	37.9	42.5	38.5
6/12/2020 10:25	58.6	55.6	48.0	38.5
6/12/2020 10:30	53.1	50.1	52.5	39.0
6/12/2020 10:35	43.5	40.5	45.0	39.0
6/12/2020 10:40	44.9	41.9	44.5	39.0
6/12/2020 10:45	53.6	50.6	50.5	39.0
6/12/2020 10:50	45.2	42.2	45.5	40.0
6/12/2020 10:55	47.3	44.3	48.0	39.5
6/12/2020 11:00	50.7	47.7	53.0	41.0
6/12/2020 11:05	56.4	53.4	60.5	42.0
6/12/2020 11:10	53.4	50.4	51.5	41.0
6/12/2020 11:15	52.1	49.1	49.0	40.0
6/12/2020 11:20	48.7	45.7	49.0	39.5
6/12/2020 11:25	44.4	41.4	44.5	39.0
6/12/2020 11:30	44.9	41.9	47.5	39.0
6/12/2020 11:35	46.6	43.6	47.0	39.0
6/12/2020 11:40	52.3	49.3	50.5	39.5
6/12/2020 11:45	46.5	43.5	45.0	38.0
6/12/2020 11:50	49.3	46.3	53.0	38.0
6/12/2020 11:55	44.1	41.1	46.5	37.5
6/12/2020 12:00	49.0	46.0	50.5	38.0
6/12/2020 12:05	45.7	42.7	45.5	37.5
6/12/2020 12:10	52.0	49.0	55.5	37.5
6/12/2020 12:15	48.5	45.5	48.5	37.5
6/12/2020 12:20	55.1	52.1	54.5	41.0
6/12/2020 12:25	41.7	38.7	44.5	37.0
6/12/2020 12:30	56.6	53.6	54.0	37.5
6/12/2020 12:35	42.9	39.9	43.5	36.5
6/12/2020 12:40	54.9	51.9	56.0	38.0
6/12/2020 12:45	46.7	43.7	47.0	38.0
6/12/2020 12:50	59.7	56.7	52.5	37.5
6/12/2020 12:55	46.0	43.0	50.0	37.5
6/12/2020 13:00	50.1	47.1	54.0	39.5
6/12/2020 13:05	51.7	48.7	52.0	39.5
6/12/2020 13:10	45.9	42.9	47.0	39.5
6/12/2020 13:15	46.5	43.5	50.0	39.0
6/12/2020 13:20	67.0	64.0	67.5	41.5
6/12/2020 13:25	54.0	51.0	55.5	40.5
6/12/2020 13:30	57.3	54.3	60.0	40.5



Noise Monitoring Results  
 CM1 Squatter house at the north of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
6/12/2020 13:35	53.2	50.2	53.0	39.0
6/12/2020 13:40	46.8	43.8	48.0	39.0
6/12/2020 13:45	46.8	43.8	47.0	41.5
6/12/2020 13:50	44.6	41.6	44.5	40.0
6/12/2020 13:55	48.8	45.8	49.5	40.5
6/12/2020 14:00	48.0	45.0	50.5	41.0
6/12/2020 14:05	54.3	51.3	52.5	41.5
6/12/2020 14:10	47.0	44.0	50.5	41.0
6/12/2020 14:15	44.2	41.2	46.5	40.5
6/12/2020 14:20	45.0	42.0	47.5	40.5
6/12/2020 14:25	45.7	42.7	48.5	40.5
6/12/2020 14:30	46.7	43.7	49.5	39.5
6/12/2020 14:35	45.1	42.1	48.0	40.0
6/12/2020 14:40	49.8	46.8	52.0	39.0
6/12/2020 14:45	48.5	45.5	49.5	40.0
6/12/2020 14:50	48.0	45.0	51.5	41.5
6/12/2020 14:55	53.0	50.0	54.0	41.0
6/12/2020 15:00	47.3	44.3	50.5	40.0
6/12/2020 15:05	50.3	47.3	47.5	39.0
6/12/2020 15:10	49.9	46.9	54.5	39.0
6/12/2020 15:15	53.7	50.7	44.5	39.5
6/12/2020 15:20	50.9	47.9	55.5	40.5
6/12/2020 15:25	48.8	45.8	51.0	41.0
6/12/2020 15:30	44.6	41.6	46.5	40.0
6/12/2020 15:35	54.0	51.0	51.5	41.0
6/12/2020 15:40	49.7	46.7	46.5	40.5
6/12/2020 15:45	48.7	45.7	46.0	40.0
6/12/2020 15:50	55.8	52.8	57.5	39.5
6/12/2020 15:55	53.9	50.9	52.5	40.0
6/12/2020 16:00	44.6	41.6	45.0	40.5
6/12/2020 16:05	47.0	44.0	50.5	41.0
6/12/2020 16:10	49.4	46.4	46.5	40.0
6/12/2020 16:15	42.2	39.2	44.0	40.5
6/12/2020 16:20	41.6	38.6	43.5	39.5
6/12/2020 16:25	47.3	44.3	51.0	39.5
6/12/2020 16:30	52.9	49.9	51.0	41.0
6/12/2020 16:35	47.6	44.6	49.0	40.0
6/12/2020 16:40	45.8	42.8	42.5	39.0
6/12/2020 16:45	53.1	50.1	47.0	39.0
6/12/2020 16:50	42.7	39.7	44.0	38.5
6/12/2020 16:55	44.0	41.0	47.5	39.0
6/12/2020 17:00	41.5	38.5	42.5	39.0
6/12/2020 17:05	40.6	37.6	41.5	38.5
6/12/2020 17:10	49.6	46.6	42.5	38.5
6/12/2020 17:15	45.3	42.3	41.5	38.5
6/12/2020 17:20	49.5	46.5	52.5	39.0
6/12/2020 17:25	43.4	40.4	42.0	39.5
6/12/2020 17:30	42.7	39.7	43.5	39.5
6/12/2020 17:35	42.4	39.4	42.0	40.0
6/12/2020 17:40	43.3	40.3	42.5	40.0
6/12/2020 17:45	45.8	42.8	47.0	40.0

Noise Monitoring Results  
 CM1 Squatter house at the north of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
6/12/2020 17:50	49.1	46.1	52.0	40.5
6/12/2020 17:55	44.3	41.3	46.5	40.5
6/12/2020 18:00	58.4	55.4	62.5	40.5
6/12/2020 18:05	51.9	48.9	43.0	40.0
6/12/2020 18:10	42.6	39.6	42.0	40.0
6/12/2020 18:15	41.9	38.9	44.0	40.0
6/12/2020 18:20	45.1	42.1	43.0	40.5
6/12/2020 18:25	41.5	38.5	41.0	40.0
6/12/2020 18:30	53.2	50.2	53.5	40.0
6/12/2020 18:35	53.0	50.0	53.5	44.5
6/12/2020 18:40	49.7	46.7	47.5	45.0
6/12/2020 18:45	50.9	47.9	47.0	44.5
6/12/2020 18:50	47.4	44.4	47.5	45.0
6/12/2020 18:55	48.0	45.0	48.5	45.0
6/12/2020 19:00	47.2	44.2	48.0	45.0
7/12/2020 07:00	48.4	45.4	49.5	46.5
7/12/2020 07:30	47.7	44.7	48.5	46.0
7/12/2020 08:00	45.9	42.9	46.5	44.5
7/12/2020 08:30	49.2	46.2	47.5	44.5
7/12/2020 09:00	45.2	42.2	46.5	41.5
7/12/2020 09:30	44.0	41.0	45.5	41.0
7/12/2020 10:00	46.1	43.1	47.5	42.0
7/12/2020 10:30	47.9	44.9	48.5	44.5
7/12/2020 11:00	50.5	47.5	52.0	45.5
7/12/2020 11:30	Maintenance			
7/12/2020 12:00	49.6	46.6	53.0	41.5
7/12/2020 12:30	46.3	43.3	49.5	38.5
7/12/2020 13:00	48.8	45.8	51.0	40.0
7/12/2020 13:30	52.4	49.4	54.0	43.0
7/12/2020 14:00	52.9	49.9	56.0	46.0
7/12/2020 14:30	58.1	55.1	63.5	40.5
7/12/2020 15:00	45.7	42.7	48.0	37.0
7/12/2020 15:30	41.7	38.7	43.0	35.0
7/12/2020 16:00	46.0	43.0	43.5	35.0
7/12/2020 16:30	43.6	40.6	43.5	36.0
7/12/2020 17:00	55.0	52.0	42.5	36.5
7/12/2020 17:30	53.5	50.5	48.0	37.0
7/12/2020 18:00	45.9	42.9	45.0	41.0
7/12/2020 18:30	50.1	47.1	49.5	46.5
7/12/2020 19:00	48.5	45.5	48.0	46.5
8/12/2020 07:00	48.3	45.3	50.0	45.0
8/12/2020 07:30	50.2	47.2	50.0	44.5
8/12/2020 08:00	47.9	44.9	48.5	44.0
8/12/2020 08:30	47.6	44.6	48.0	40.0
8/12/2020 09:00	43.7	40.7	44.0	39.5
8/12/2020 09:30	46.5	43.5	49.0	39.5
8/12/2020 10:00	45.9	42.9	46.5	40.0
8/12/2020 10:30	50.6	47.6	54.5	40.5
8/12/2020 11:00	50.7	47.7	50.5	41.0
8/12/2020 11:30	45.0	42.0	46.0	38.5
8/12/2020 12:00	51.8	48.8	50.0	37.5

Noise Monitoring Results  
 CM1 Squatter house at the north of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
8/12/2020 12:30	50.3	47.3	51.0	38.0
8/12/2020 13:00	49.1	46.1	52.0	39.5
8/12/2020 13:30	Maintenance			
8/12/2020 14:00	56.5	53.5	58.5	40.0
8/12/2020 14:30	59.1	56.1	62.5	45.0
8/12/2020 15:00	60.1	57.1	64.5	44.0
8/12/2020 15:30	52.7	49.7	55.5	38.5
8/12/2020 16:00	57.3	54.3	53.5	39.5
8/12/2020 16:30	58.0	55.0	61.5	39.5
8/12/2020 17:00	59.1	56.1	60.0	40.0
8/12/2020 17:30	49.7	46.7	46.5	41.0
8/12/2020 18:00	51.2	48.2	47.0	44.0
8/12/2020 18:30	54.6	51.6	50.5	44.0
8/12/2020 19:00	61.3	58.3	59.5	45.0
9/12/2020 07:00	47.6	44.6	47.5	45.5
9/12/2020 07:30	46.2	43.2	47.0	45.0
9/12/2020 08:00	51.7	48.7	48.5	44.0
9/12/2020 08:30	47.9	44.9	49.5	41.5
9/12/2020 09:00	46.6	43.6	48.0	41.0
9/12/2020 09:30	44.1	41.1	45.0	41.0
9/12/2020 10:00	49.0	46.0	51.5	41.5
9/12/2020 10:30	54.0	51.0	52.5	45.0
9/12/2020 11:00	53.8	50.8	59.0	39.5
9/12/2020 11:30	57.5	54.5	57.0	38.5
9/12/2020 12:00	50.3	47.3	55.0	37.5
9/12/2020 12:30	47.0	44.0	48.5	38.0
9/12/2020 13:00	51.4	48.4	53.5	37.5
9/12/2020 13:30	50.8	47.8	52.0	37.0
9/12/2020 14:00	48.8	45.8	52.0	37.0
9/12/2020 14:30	45.7	42.7	44.0	37.5
9/12/2020 15:00	49.0	46.0	48.5	38.0
9/12/2020 15:30	53.0	50.0	54.5	37.5
9/12/2020 16:00	54.9	51.9	54.5	37.0
9/12/2020 16:30	55.1	52.1	55.5	37.0
9/12/2020 17:00	60.2	57.2	61.0	36.5
9/12/2020 17:30	57.7	54.7	52.5	38.0
9/12/2020 18:00	48.2	45.2	49.0	40.5
9/12/2020 18:30	49.6	46.6	51.5	44.0
9/12/2020 19:00	48.9	45.9	51.0	45.5
10/12/2020 07:00	50.5	47.5	51.5	46.5
10/12/2020 07:30	51.1	48.1	52.5	45.5
10/12/2020 08:00	54.2	51.2	51.0	44.5
10/12/2020 08:30	47.9	44.9	50.0	40.0
10/12/2020 09:00	57.3	54.3	49.0	39.5
10/12/2020 09:30	52.4	49.4	51.0	40.5
10/12/2020 10:00	55.5	52.5	52.0	39.0
10/12/2020 10:30	43.7	40.7	46.0	39.0
10/12/2020 11:00	51.7	48.7	51.5	39.0
10/12/2020 11:30	43.3	40.3	46.5	38.0
10/12/2020 12:00	46.8	43.8	45.0	37.0
10/12/2020 12:30	46.0	43.0	48.5	37.5

Noise Monitoring Results  
 CM1 Squatter house at the north of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
10/12/2020 13:00	65.2	62.2	57.0	38.0
10/12/2020 13:30	63.7	60.7	65.5	42.5
10/12/2020 14:00	51.7	48.7	53.0	38.5
10/12/2020 14:30	55.9	52.9	59.5	41.5
10/12/2020 15:00	53.2	50.2	52.5	38.0
10/12/2020 15:30	46.6	43.6	49.0	38.5
10/12/2020 16:00	46.0	43.0	49.5	39.0
10/12/2020 16:30	51.8	48.8	51.0	39.5
10/12/2020 17:00	47.6	44.6	50.0	40.0
10/12/2020 17:30	48.9	45.9	50.0	41.5
10/12/2020 18:00	47.9	44.9	47.0	43.0
10/12/2020 18:30	47.9	44.9	48.5	46.5
10/12/2020 19:00	51.0	48.0	48.5	46.5
11/12/2020 07:00	46.8	43.8	48.0	44.5
11/12/2020 07:30	50.1	47.1	51.5	44.0
11/12/2020 08:00	52.0	49.0	54.5	44.0
11/12/2020 08:30	49.1	46.1	50.5	39.0
11/12/2020 09:00	44.5	41.5	48.5	39.0
11/12/2020 09:30	45.7	42.7	49.5	39.0
11/12/2020 10:00	51.7	48.7	54.0	38.5
11/12/2020 10:30	47.0	44.0	49.0	38.5
11/12/2020 11:00	52.6	49.6	55.5	40.0
11/12/2020 11:30	48.5	45.5	49.5	36.0
11/12/2020 12:00	45.8	42.8	48.0	35.0
11/12/2020 12:30	61.5	58.5	59.5	37.0
11/12/2020 13:00	74.4	71.4	55.5	36.5
11/12/2020 13:30	50.0	47.0	52.0	36.5
11/12/2020 14:00	43.3	40.3	43.5	34.0
11/12/2020 14:30	44.8	41.8	45.5	35.5
11/12/2020 15:00	44.3	41.3	47.0	35.5
11/12/2020 15:30	55.3	52.3	57.0	38.0
11/12/2020 16:00	59.1	56.1	60.0	39.0
11/12/2020 16:30	45.8	42.8	43.5	38.0
11/12/2020 17:00	44.3	41.3	44.0	37.0
11/12/2020 17:30	41.5	38.5	41.0	37.0
11/12/2020 18:00	45.1	42.1	44.0	37.5
11/12/2020 18:30	43.0	40.0	42.5	41.5
11/12/2020 19:00	49.0	46.0	46.5	42.0
12/12/2020 07:00	46.6	43.6	47.5	43.5
12/12/2020 07:30	45.6	42.6	46.5	42.5
12/12/2020 08:00	55.0	52.0	50.0	42.0
12/12/2020 08:30	43.9	40.9	46.0	40.5
12/12/2020 09:00	44.3	41.3	45.0	39.0
12/12/2020 09:30	48.9	45.9	49.5	38.5
12/12/2020 10:00	47.1	44.1	48.5	38.0
12/12/2020 10:30	47.9	44.9	50.5	39.5
12/12/2020 11:00	54.4	51.4	48.0	38.5
12/12/2020 11:30	48.6	45.6	55.0	36.5
12/12/2020 12:00	47.0	44.0	49.0	35.5
12/12/2020 12:30	55.0	52.0	56.0	35.0
12/12/2020 13:00	62.1	59.1	55.0	35.5

Noise Monitoring Results  
 CM1 Squatter house at the north of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
12/12/2020 13:30	53.9	50.9	51.5	36.0
12/12/2020 14:00	46.7	43.7	50.0	36.0
12/12/2020 14:30	48.4	45.4	50.5	35.5
12/12/2020 15:00	47.7	44.7	50.0	36.0
12/12/2020 15:30	45.8	42.8	47.0	36.0
12/12/2020 16:00	48.0	45.0	47.0	36.0
12/12/2020 16:30	42.8	39.8	43.0	36.5
12/12/2020 17:00	41.3	38.3	42.0	37.5
12/12/2020 17:30	41.7	38.7	41.5	38.0
12/12/2020 18:00	40.9	37.9	41.0	37.0
12/12/2020 18:30	41.3	38.3	41.5	40.5
12/12/2020 19:00	40.4	37.4	41.0	40.0
13/12/2020 07:00	43.2	40.2	43.5	41.5
13/12/2020 07:05	44.6	41.6	46.0	42.0
13/12/2020 07:10	43.8	40.8	44.5	42.5
13/12/2020 07:15	42.6	39.6	43.5	41.5
13/12/2020 07:20	44.2	41.2	46.0	42.0
13/12/2020 07:25	45.2	42.2	44.5	42.0
13/12/2020 07:30	49.1	46.1	50.5	42.0
13/12/2020 07:35	43.9	40.9	45.0	41.5
13/12/2020 07:40	42.5	39.5	43.0	41.5
13/12/2020 07:45	45.6	42.6	48.0	42.0
13/12/2020 07:50	42.9	39.9	44.0	41.0
13/12/2020 07:55	42.9	39.9	43.5	41.5
13/12/2020 08:00	41.6	38.6	43.0	40.5
13/12/2020 08:05	42.0	39.0	43.0	41.0
13/12/2020 08:10	44.1	41.1	43.5	40.5
13/12/2020 08:15	40.8	37.8	41.5	39.5
13/12/2020 08:20	41.7	38.7	42.0	40.0
13/12/2020 08:25	44.5	41.5	49.0	39.5
13/12/2020 08:30	41.2	38.2	42.0	40.0
13/12/2020 08:35	43.1	40.1	43.5	39.5
13/12/2020 08:40	41.6	38.6	42.0	40.0
13/12/2020 08:45	50.1	47.1	47.0	40.5
13/12/2020 08:50	56.5	53.5	58.5	41.0
13/12/2020 08:55	55.5	52.5	53.5	38.5
13/12/2020 09:00	55.4	52.4	57.0	42.5
13/12/2020 09:05	45.2	42.2	47.0	41.5
13/12/2020 09:10	44.1	41.1	46.0	41.5
13/12/2020 09:15	44.1	41.1	45.5	41.5
13/12/2020 09:20	45.5	42.5	47.0	41.5
13/12/2020 09:25	48.2	45.2	50.5	43.5
13/12/2020 09:30	49.3	46.3	51.5	41.0
13/12/2020 09:35	50.0	47.0	50.0	41.5
13/12/2020 09:40	58.5	55.5	64.0	43.5
13/12/2020 09:45	52.2	49.2	58.0	41.5
13/12/2020 09:50	48.7	45.7	52.0	42.5
13/12/2020 09:55	45.6	42.6	45.0	40.0
13/12/2020 10:00	45.3	42.3	48.0	41.0
13/12/2020 10:05	47.7	44.7	49.5	40.5
13/12/2020 10:10	55.3	52.3	58.5	43.5

Sunday

Noise Monitoring Results  
 CM1 Squatter house at the north of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
13/12/2020 10:15	43.3	40.3	45.0	41.0
13/12/2020 10:20	46.7	43.7	47.0	40.5
13/12/2020 10:25	42.1	39.1	42.5	40.0
13/12/2020 10:30	43.8	40.8	46.0	41.0
13/12/2020 10:35	43.3	40.3	43.5	40.5
13/12/2020 10:40	43.3	40.3	45.0	40.0
13/12/2020 10:45	46.7	43.7	45.5	41.0
13/12/2020 10:50	45.0	42.0	43.5	40.5
13/12/2020 10:55	41.3	38.3	43.0	39.5
13/12/2020 11:00	42.9	39.9	43.5	39.5
13/12/2020 11:05	44.0	41.0	44.5	40.0
13/12/2020 11:10	48.2	45.2	49.0	40.0
13/12/2020 11:15	43.0	40.0	44.0	40.0
13/12/2020 11:20	56.2	53.2	55.0	41.0
13/12/2020 11:25	42.2	39.2	44.0	40.0
13/12/2020 11:30	45.0	42.0	44.0	40.0
13/12/2020 11:35	50.1	47.1	48.5	39.0
13/12/2020 11:40	44.4	41.4	45.0	38.0
13/12/2020 11:45	45.2	42.2	44.5	38.5
13/12/2020 11:50	57.0	54.0	54.5	40.5
13/12/2020 11:55	47.8	44.8	51.5	39.5
13/12/2020 12:00	40.2	37.2	41.5	38.5
13/12/2020 12:05	45.3	42.3	48.5	38.5
13/12/2020 12:10	48.6	45.6	46.0	39.0
13/12/2020 12:15	47.0	44.0	46.5	39.0
13/12/2020 12:20	59.4	56.4	64.0	39.5
13/12/2020 12:25	55.2	52.2	55.5	39.0
13/12/2020 12:30	55.4	52.4	47.5	39.0
13/12/2020 12:35	41.5	38.5	43.0	39.5
13/12/2020 12:40	40.8	37.8	42.5	39.0
13/12/2020 12:45	49.0	46.0	52.0	41.0
13/12/2020 12:50	45.4	42.4	47.0	41.0
13/12/2020 12:55	46.8	43.8	49.0	42.0
13/12/2020 13:00	47.3	44.3	50.0	41.5
13/12/2020 13:05	47.3	44.3	50.5	41.0
13/12/2020 13:10	47.3	44.3	49.0	40.0
13/12/2020 13:15	48.2	45.2	50.0	40.0
13/12/2020 13:20	49.6	46.6	49.5	40.5
13/12/2020 13:25	51.8	48.8	52.5	40.0
13/12/2020 13:30	41.8	38.8	43.0	40.0
13/12/2020 13:35	48.1	45.1	52.0	39.5
13/12/2020 13:40	42.7	39.7	44.5	38.5
13/12/2020 13:45	48.1	45.1	50.0	39.5
13/12/2020 13:50	44.8	41.8	43.5	38.5
13/12/2020 13:55	44.4	41.4	46.5	40.0
13/12/2020 14:00	43.2	40.2	46.5	38.5
13/12/2020 14:05	47.1	44.1	51.0	39.5
13/12/2020 14:10	46.3	43.3	47.5	40.0
13/12/2020 14:15	68.5	65.5	62.0	40.0
13/12/2020 14:20	45.0	42.0	44.0	39.5
13/12/2020 14:25	48.0	45.0	50.5	41.0

Noise Monitoring Results  
 CM1 Squatter house at the north of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
13/12/2020 14:30	55.1	52.1	59.0	41.0
13/12/2020 14:35	45.5	42.5	47.0	41.5
13/12/2020 14:40	46.0	43.0	47.0	40.5
13/12/2020 14:45	45.8	42.8	46.0	40.0
13/12/2020 14:50	45.0	42.0	47.5	41.5
13/12/2020 14:55	42.8	39.8	44.0	40.0
13/12/2020 15:00	53.1	50.1	55.5	42.0
13/12/2020 15:05	55.4	52.4	59.5	40.5
13/12/2020 15:10	48.5	45.5	51.5	39.5
13/12/2020 15:15	53.3	50.3	52.5	41.0
13/12/2020 15:20	44.5	41.5	46.0	39.5
13/12/2020 15:25	46.4	43.4	47.0	39.5
13/12/2020 15:30	44.5	41.5	45.5	39.5
13/12/2020 15:35	44.4	41.4	46.0	40.5
13/12/2020 15:40	57.0	54.0	57.0	40.0
13/12/2020 15:45	46.1	43.1	46.5	39.5
13/12/2020 15:50	59.3	56.3	62.5	40.5
13/12/2020 15:55	52.7	49.7	55.5	41.5
13/12/2020 16:00	46.2	43.2	49.0	39.0
13/12/2020 16:05	47.5	44.5	51.0	40.0
13/12/2020 16:10	57.2	54.2	53.0	39.5
13/12/2020 16:15	46.5	43.5	43.5	39.5
13/12/2020 16:20	52.2	49.2	53.5	40.0
13/12/2020 16:25	46.3	43.3	47.5	39.5
13/12/2020 16:30	45.6	42.6	47.5	39.5
13/12/2020 16:35	52.6	49.6	49.0	40.0
13/12/2020 16:40	41.8	38.8	44.5	39.0
13/12/2020 16:45	48.9	45.9	48.5	39.0
13/12/2020 16:50	44.5	41.5	47.0	39.5
13/12/2020 16:55	45.7	42.7	47.5	39.5
13/12/2020 17:00	43.1	40.1	46.0	39.5
13/12/2020 17:05	45.0	42.0	47.0	40.0
13/12/2020 17:10	43.8	40.8	46.0	40.5
13/12/2020 17:15	46.1	43.1	48.5	39.0
13/12/2020 17:20	56.4	53.4	49.0	40.0
13/12/2020 17:25	56.6	53.6	60.5	40.5
13/12/2020 17:30	49.0	46.0	52.5	40.5
13/12/2020 17:35	53.4	50.4	56.0	41.0
13/12/2020 17:40	48.8	45.8	52.5	42.0
13/12/2020 17:45	49.1	46.1	52.5	43.0
13/12/2020 17:50	44.7	41.7	45.0	41.5
13/12/2020 17:55	42.8	39.8	43.5	42.0
13/12/2020 18:00	45.3	42.3	48.0	42.0
13/12/2020 18:05	44.2	41.2	44.5	43.0
13/12/2020 18:10	44.0	41.0	44.5	43.0
13/12/2020 18:15	44.2	41.2	45.0	43.5
13/12/2020 18:20	47.6	44.6	46.5	44.5
13/12/2020 18:25	44.6	41.6	44.5	43.5
13/12/2020 18:30	50.0	47.0	49.5	43.5
13/12/2020 18:35	48.5	45.5	46.5	44.5
13/12/2020 18:40	45.9	42.9	46.5	45.5

Noise Monitoring Results  
 CM1 Squatter house at the north of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
13/12/2020 18:45	47.0	44.0	48.0	46.0
13/12/2020 18:50	46.7	43.7	47.5	46.0
13/12/2020 18:55	46.7	43.7	47.5	46.0
13/12/2020 19:00	46.0	43.0	46.5	45.5
14/12/2020 07:00	47.9	44.9	49.5	44.5
14/12/2020 07:30	48.5	45.5	48.0	43.0
14/12/2020 08:00	48.3	45.3	50.5	42.0
14/12/2020 08:30	48.3	45.3	51.5	42.5
14/12/2020 09:00	45.0	42.0	45.5	39.5
14/12/2020 09:30	43.5	40.5	45.0	39.5
14/12/2020 10:00	46.0	43.0	48.0	42.5
14/12/2020 10:30	49.4	46.4	50.0	42.5
14/12/2020 11:00	49.2	46.2	48.5	40.5
14/12/2020 11:30	45.9	42.9	47.5	41.0
14/12/2020 12:00	Maintenance			
14/12/2020 12:30	48.3	45.3	46.0	35.0
14/12/2020 13:00	40.1	37.1	40.5	34.5
14/12/2020 13:30	40.3	37.3	39.5	33.5
14/12/2020 14:00	47.8	44.8	49.5	32.0
14/12/2020 14:30	42.3	39.3	43.0	32.5
14/12/2020 15:00	43.1	40.1	44.0	33.5
14/12/2020 15:30	40.8	37.8	41.5	35.0
14/12/2020 16:00	44.0	41.0	44.0	35.0
14/12/2020 16:30	40.5	37.5	41.5	36.5
14/12/2020 17:00	39.9	36.9	40.0	35.0
14/12/2020 17:30	41.7	38.7	42.0	36.0
14/12/2020 18:00	40.8	37.8	43.0	36.0
14/12/2020 18:30	44.7	41.7	45.0	41.5
14/12/2020 19:00	43.2	40.2	42.5	40.5

Noise Monitoring Results  
CM2 Squatter house at the west of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
1/12/2020 07:00	49.3	46.3	50.0	44.0
1/12/2020 07:30	47.3	44.3	48.5	44.0
1/12/2020 08:00	50.9	47.9	52.0	45.5
1/12/2020 08:30	49.9	46.9	51.5	47.0
1/12/2020 09:00	57.0	54.0	58.5	48.0
1/12/2020 09:30	61.0	58.0	60.5	50.0
1/12/2020 10:00	64.0	61.0	68.0	50.5
1/12/2020 10:30	58.5	55.5	56.0	51.0
1/12/2020 11:00	53.4	50.4	54.0	49.0
1/12/2020 11:30	54.4	51.4	55.5	51.5
1/12/2020 12:00	51.9	48.9	53.0	50.5
1/12/2020 12:30	52.0	49.0	53.5	50.5
1/12/2020 13:00	52.5	49.5	53.5	50.5
1/12/2020 13:30	55.7	52.7	58.0	52.5
1/12/2020 14:00	59.1	56.1	60.5	58.0
1/12/2020 14:30	65.5	62.5	66.0	52.5
1/12/2020 15:00	59.0	56.0	60.0	48.5
1/12/2020 15:30	53.7	50.7	55.0	50.0
1/12/2020 16:00	54.0	51.0	55.0	49.5
1/12/2020 16:30	53.4	50.4	54.5	48.0
1/12/2020 17:00	51.1	48.1	53.0	46.0
1/12/2020 17:30	49.3	46.3	51.5	46.0
1/12/2020 18:00	48.8	45.8	50.5	45.0
1/12/2020 18:30	45.9	42.9	47.0	44.0
1/12/2020 19:00	45.6	42.6	46.5	43.5
2/12/2020 07:00	49.3	46.3	52.5	44.0
2/12/2020 07:30	50.4	47.4	53.0	45.0
2/12/2020 08:00	49.5	46.5	52.0	46.0
2/12/2020 08:30	49.5	46.5	51.5	47.0
2/12/2020 09:00	56.9	53.9	58.5	48.0
2/12/2020 09:30	55.2	52.2	57.0	53.0
2/12/2020 10:00	53.4	50.4	55.0	50.0
2/12/2020 10:30	53.4	50.4	54.0	50.0
2/12/2020 11:00	51.6	48.6	53.0	47.0
2/12/2020 11:30	59.2	56.2	64.0	47.0
2/12/2020 12:00	52.0	49.0	53.5	45.5
2/12/2020 12:30	48.0	45.0	49.5	45.0
2/12/2020 13:00	56.6	53.6	55.5	47.0
2/12/2020 13:30	51.7	48.7	52.5	50.0
2/12/2020 14:00	52.1	49.1	53.5	50.0
2/12/2020 14:30	51.2	48.2	52.0	50.0
2/12/2020 15:00	55.9	52.9	56.5	53.5
2/12/2020 15:30	52.2	49.2	55.0	48.0
2/12/2020 16:00	51.2	48.2	52.5	46.0
2/12/2020 16:30	49.1	46.1	50.5	46.0
2/12/2020 17:00	52.6	49.6	52.5	45.5
2/12/2020 17:30	50.6	47.6	49.5	44.0
2/12/2020 18:00	56.3	53.3	51.5	44.0
2/12/2020 18:30	58.5	55.5	61.0	44.5
2/12/2020 19:00	59.9	56.9	59.0	43.5
3/12/2020 07:00	52.7	49.7	56.0	44.5

Noise Monitoring Results  
CM2 Squatter house at the west of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
3/12/2020 07:30	47.9	44.9	49.5	44.5
3/12/2020 08:00	49.3	46.3	50.5	45.0
3/12/2020 08:30	54.2	51.2	56.5	46.5
3/12/2020 09:00	54.5	51.5	56.5	51.0
3/12/2020 09:30	58.2	55.2	59.5	52.0
3/12/2020 10:00	57.1	54.1	57.5	52.0
3/12/2020 10:30	58.1	55.1	59.0	52.0
3/12/2020 11:00	56.8	53.8	58.0	48.0
3/12/2020 11:30	51.8	48.8	54.0	47.5
3/12/2020 12:00	51.9	48.9	54.5	48.0
3/12/2020 12:30	49.5	46.5	52.0	46.5
3/12/2020 13:00	51.7	48.7	53.0	47.0
3/12/2020 13:30	53.9	50.9	56.5	49.5
3/12/2020 14:00	Maintenance			
3/12/2020 14:30	Maintenance			
3/12/2020 15:00	57.0	54.0	58.5	52.0
3/12/2020 15:30	54.3	51.3	57.0	49.0
3/12/2020 16:00	53.0	50.0	55.5	48.5
3/12/2020 16:30	53.0	50.0	55.5	47.5
3/12/2020 17:00	50.3	47.3	53.0	46.5
3/12/2020 17:30	48.6	45.6	50.5	45.0
3/12/2020 18:00	47.6	44.6	49.5	44.5
3/12/2020 18:30	46.5	43.5	48.0	44.0
3/12/2020 19:00	44.8	41.8	46.0	43.0
4/12/2020 07:00	53.5	50.5	56.0	48.0
4/12/2020 07:30	50.9	47.9	52.5	47.0
4/12/2020 08:00	51.0	48.0	52.5	47.5
4/12/2020 08:30	53.8	50.8	55.0	47.5
4/12/2020 09:00	54.0	51.0	56.0	49.0
4/12/2020 09:30	53.7	50.7	55.5	50.0
4/12/2020 10:00	54.9	51.9	57.5	50.0
4/12/2020 10:30	54.0	51.0	57.0	50.0
4/12/2020 11:00	51.5	48.5	53.5	47.5
4/12/2020 11:30	55.5	52.5	58.5	48.0
4/12/2020 12:00	52.3	49.3	54.0	48.0
4/12/2020 12:30	52.2	49.2	54.5	48.5
4/12/2020 13:00	56.4	53.4	60.0	51.0
4/12/2020 13:30	56.2	53.2	59.0	50.0
4/12/2020 14:00	64.4	61.4	65.5	51.0
4/12/2020 14:30	53.2	50.2	55.0	50.0
4/12/2020 15:00	52.2	49.2	54.0	49.0
4/12/2020 15:30	51.0	48.0	53.0	47.5
4/12/2020 16:00	53.1	50.1	54.0	47.0
4/12/2020 16:30	51.6	48.6	52.5	46.5
4/12/2020 17:00	48.6	45.6	49.5	45.0
4/12/2020 17:30	48.2	45.2	50.0	45.0
4/12/2020 18:00	47.0	44.0	48.5	44.5
4/12/2020 18:30	52.2	49.2	55.5	45.0
4/12/2020 19:00	53.9	50.9	57.0	45.5
5/12/2020 07:00	56.7	53.7	61.5	42.5
5/12/2020 07:30	48.1	45.1	50.5	43.0

Noise Monitoring Results  
 CM2 Squatter house at the west of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
5/12/2020 08:00	47.9	44.9	50.5	43.5
5/12/2020 08:30	47.4	44.4	49.0	44.5
5/12/2020 09:00	51.4	48.4	53.5	46.0
5/12/2020 09:30	55.1	52.1	56.0	47.0
5/12/2020 10:00	49.3	46.3	50.5	46.0
5/12/2020 10:30	54.6	51.6	54.5	46.0
5/12/2020 11:00	51.2	48.2	54.0	45.0
5/12/2020 11:30	51.0	48.0	53.5	45.5
5/12/2020 12:00	57.5	54.5	57.0	47.5
5/12/2020 12:30	52.2	49.2	51.5	46.5
5/12/2020 13:00	55.3	52.3	58.5	48.0
5/12/2020 13:30	51.2	48.2	53.0	47.5
5/12/2020 14:00	53.0	50.0	53.5	48.5
5/12/2020 14:30	55.2	52.2	56.0	49.5
5/12/2020 15:00	57.6	54.6	56.5	48.5
5/12/2020 15:30	53.2	50.2	55.0	46.5
5/12/2020 16:00	49.1	46.1	50.0	43.5
5/12/2020 16:30	51.5	48.5	51.5	43.5
5/12/2020 17:00	48.4	45.4	50.0	43.5
5/12/2020 17:30	51.6	48.6	49.5	43.0
5/12/2020 18:00	44.1	41.1	44.5	43.0
5/12/2020 18:30	47.6	44.6	46.5	43.0
5/12/2020 19:00	48.6	45.6	48.0	43.5
6/12/2020 07:00	55.9	52.9	61.0	44.0
6/12/2020 07:05	50.1	47.1	52.0	44.5
6/12/2020 07:10	51.4	48.4	54.5	44.0
6/12/2020 07:15	46.0	43.0	47.5	43.0
6/12/2020 07:20	46.5	43.5	49.5	42.5
6/12/2020 07:25	45.1	42.1	47.0	42.5
6/12/2020 07:30	46.7	43.7	48.5	42.5
6/12/2020 07:35	46.4	43.4	48.0	45.0
6/12/2020 07:40	47.7	44.7	48.5	45.0
6/12/2020 07:45	47.3	44.3	49.0	44.5
6/12/2020 07:50	46.7	43.7	49.0	44.5
6/12/2020 07:55	45.5	42.5	47.0	44.0
6/12/2020 08:00	44.5	41.5	45.5	43.5
6/12/2020 08:05	48.5	45.5	51.0	44.0
6/12/2020 08:10	49.4	46.4	52.0	44.5
6/12/2020 08:15	49.9	46.9	52.0	43.0
6/12/2020 08:20	49.7	46.7	52.5	43.0
6/12/2020 08:25	47.7	44.7	51.5	42.5
6/12/2020 08:30	51.0	48.0	54.0	45.0
6/12/2020 08:35	46.7	43.7	49.5	42.5
6/12/2020 08:40	44.6	41.6	46.5	42.5
6/12/2020 08:45	48.5	45.5	51.5	43.5
6/12/2020 08:50	45.8	42.8	46.5	43.5
6/12/2020 08:55	46.0	43.0	46.5	43.5
6/12/2020 09:00	46.2	43.2	48.5	43.5
6/12/2020 09:05	47.2	44.2	50.0	43.0
6/12/2020 09:10	47.5	44.5	50.5	43.5
6/12/2020 09:15	45.5	42.5	46.5	42.0

Sunday

Noise Monitoring Results  
 CM2 Squatter house at the west of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
6/12/2020 09:20	45.1	42.1	47.0	41.5
6/12/2020 09:25	44.4	41.4	45.5	42.0
6/12/2020 09:30	44.8	41.8	46.0	41.5
6/12/2020 09:35	44.0	41.0	45.5	42.5
6/12/2020 09:40	44.0	41.0	45.5	41.5
6/12/2020 09:45	53.4	50.4	48.0	43.5
6/12/2020 09:50	43.8	40.8	45.5	42.0
6/12/2020 09:55	44.3	41.3	46.5	42.5
6/12/2020 10:00	43.8	40.8	44.0	41.5
6/12/2020 10:05	47.0	44.0	48.5	42.0
6/12/2020 10:10	46.8	43.8	46.5	41.5
6/12/2020 10:15	46.0	43.0	48.0	43.0
6/12/2020 10:20	45.6	42.6	47.0	43.0
6/12/2020 10:25	44.1	41.1	45.5	42.0
6/12/2020 10:30	51.9	48.9	51.0	41.5
6/12/2020 10:35	45.4	42.4	48.0	41.5
6/12/2020 10:40	44.6	41.6	46.5	42.0
6/12/2020 10:45	43.8	40.8	45.0	42.5
6/12/2020 10:50	44.4	41.4	46.0	43.0
6/12/2020 10:55	48.5	45.5	47.0	42.5
6/12/2020 11:00	46.8	43.8	47.0	43.5
6/12/2020 11:05	45.3	42.3	47.0	43.5
6/12/2020 11:10	50.9	47.9	53.5	45.5
6/12/2020 11:15	48.5	45.5	48.0	42.5
6/12/2020 11:20	56.4	53.4	58.0	43.0
6/12/2020 11:25	49.3	46.3	53.0	44.0
6/12/2020 11:30	46.9	43.9	48.0	45.5
6/12/2020 11:35	56.0	53.0	58.5	43.0
6/12/2020 11:40	43.1	40.1	44.0	42.0
6/12/2020 11:45	43.5	40.5	45.0	42.0
6/12/2020 11:50	45.3	42.3	48.5	41.5
6/12/2020 11:55	48.7	45.7	47.5	42.5
6/12/2020 12:00	45.8	42.8	47.5	42.5
6/12/2020 12:05	46.1	43.1	46.0	42.0
6/12/2020 12:10	46.1	43.1	44.0	42.0
6/12/2020 12:15	42.0	39.0	43.0	41.0
6/12/2020 12:20	43.6	40.6	44.0	41.0
6/12/2020 12:25	54.6	51.6	53.0	43.5
6/12/2020 12:30	43.4	40.4	44.0	42.0
6/12/2020 12:35	45.1	42.1	46.5	42.5
6/12/2020 12:40	51.1	48.1	47.5	43.0
6/12/2020 12:45	44.5	41.5	46.5	41.0
6/12/2020 12:50	43.5	40.5	44.5	40.5
6/12/2020 12:55	43.8	40.8	46.5	41.0
6/12/2020 13:00	45.4	42.4	48.5	41.0
6/12/2020 13:05	42.7	39.7	45.5	39.0
6/12/2020 13:10	42.3	39.3	43.0	41.5
6/12/2020 13:15	44.5	41.5	45.5	42.0
6/12/2020 13:20	44.3	41.3	45.5	42.0
6/12/2020 13:25	42.5	39.5	42.5	41.5
6/12/2020 13:30	43.2	40.2	42.5	41.0

Noise Monitoring Results  
 CM2 Squatter house at the west of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
6/12/2020 13:35	46.6	43.6	49.0	41.0
6/12/2020 13:40	42.0	39.0	42.5	41.5
6/12/2020 13:45	47.8	44.8	52.0	41.5
6/12/2020 13:50	44.5	41.5	47.0	40.5
6/12/2020 13:55	43.3	40.3	44.0	40.5
6/12/2020 14:00	42.2	39.2	42.5	41.0
6/12/2020 14:05	46.4	43.4	48.0	41.5
6/12/2020 14:10	43.9	40.9	46.0	41.5
6/12/2020 14:15	45.3	42.3	46.5	42.0
6/12/2020 14:20	45.7	42.7	44.5	42.0
6/12/2020 14:25	52.1	49.1	54.0	41.5
6/12/2020 14:30	44.9	41.9	46.5	41.0
6/12/2020 14:35	48.9	45.9	52.0	42.0
6/12/2020 14:40	43.9	40.9	44.5	41.0
6/12/2020 14:45	45.8	42.8	46.0	40.5
6/12/2020 14:50	43.1	40.1	46.0	40.5
6/12/2020 14:55	45.4	42.4	47.5	41.5
6/12/2020 15:00	50.6	47.6	52.0	43.0
6/12/2020 15:05	48.2	45.2	52.0	42.0
6/12/2020 15:10	48.4	45.4	51.5	42.5
6/12/2020 15:15	43.8	40.8	44.5	43.0
6/12/2020 15:20	44.8	41.8	46.5	43.0
6/12/2020 15:25	47.6	44.6	51.5	42.0
6/12/2020 15:30	47.0	44.0	50.0	43.0
6/12/2020 15:35	51.1	48.1	53.5	42.5
6/12/2020 15:40	46.4	43.4	49.0	42.5
6/12/2020 15:45	44.6	41.6	45.5	42.5
6/12/2020 15:50	45.0	42.0	45.5	42.5
6/12/2020 15:55	44.9	41.9	47.0	42.5
6/12/2020 16:00	45.1	42.1	46.0	42.0
6/12/2020 16:05	44.4	41.4	46.5	42.0
6/12/2020 16:10	43.0	40.0	44.5	41.5
6/12/2020 16:15	43.9	40.9	45.0	41.5
6/12/2020 16:20	46.4	43.4	48.0	42.0
6/12/2020 16:25	45.1	42.1	45.5	40.5
6/12/2020 16:30	45.5	42.5	50.5	41.0
6/12/2020 16:35	42.8	39.8	43.5	40.5
6/12/2020 16:40	48.7	45.7	48.5	41.0
6/12/2020 16:45	42.5	39.5	43.5	40.5
6/12/2020 16:50	42.8	39.8	44.5	41.0
6/12/2020 16:55	42.7	39.7	43.5	41.0
6/12/2020 17:00	45.6	42.6	48.0	41.0
6/12/2020 17:05	46.9	43.9	48.5	43.0
6/12/2020 17:10	44.7	41.7	46.5	41.0
6/12/2020 17:15	61.7	58.7	59.0	41.5
6/12/2020 17:20	52.0	49.0	53.0	41.5
6/12/2020 17:25	45.3	42.3	43.5	41.5
6/12/2020 17:30	43.0	40.0	42.5	41.0
6/12/2020 17:35	44.1	41.1	46.0	41.0
6/12/2020 17:40	44.4	41.4	47.5	41.5
6/12/2020 17:45	43.4	40.4	44.0	41.5

Noise Monitoring Results  
 CM2 Squatter house at the west of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
6/12/2020 17:50	41.7	38.7	42.0	41.0
6/12/2020 17:55	43.8	40.8	43.5	41.5
6/12/2020 18:00	42.1	39.1	42.5	41.0
6/12/2020 18:05	42.1	39.1	42.5	41.5
6/12/2020 18:10	42.7	39.7	44.0	41.5
6/12/2020 18:15	44.1	41.1	46.0	43.0
6/12/2020 18:20	43.3	40.3	43.5	43.0
6/12/2020 18:25	44.6	41.6	44.5	42.5
6/12/2020 18:30	44.2	41.2	44.5	43.5
6/12/2020 18:35	42.7	39.7	43.5	42.0
6/12/2020 18:40	43.4	40.4	43.5	42.0
6/12/2020 18:45	46.5	43.5	50.5	42.5
6/12/2020 18:50	49.1	46.1	54.0	42.5
6/12/2020 18:55	48.3	45.3	53.5	42.5
6/12/2020 19:00	44.4	41.4	45.0	42.5
7/12/2020 07:00	50.8	47.8	53.0	44.5
7/12/2020 07:30	51.9	48.9	55.0	45.5
7/12/2020 08:00	47.9	44.9	50.0	45.5
7/12/2020 08:30	51.4	48.4	52.5	46.5
7/12/2020 09:00	53.2	50.2	52.0	46.0
7/12/2020 09:30	52.3	49.3	54.5	46.5
7/12/2020 10:00	50.5	47.5	51.0	47.5
7/12/2020 10:30	48.2	45.2	49.5	46.0
7/12/2020 11:00	49.0	46.0	50.0	46.0
7/12/2020 11:30	50.6	47.6	51.0	46.5
7/12/2020 12:00	Maintenance			
7/12/2020 12:30	Maintenance			
7/12/2020 13:00	49.8	46.8	52.5	45.5
7/12/2020 13:30	51.1	48.1	53.5	47.5
7/12/2020 14:00	49.2	46.2	52.5	45.5
7/12/2020 14:30	48.6	45.6	50.5	45.5
7/12/2020 15:00	49.2	46.2	51.5	45.5
7/12/2020 15:30	49.2	46.2	51.0	46.0
7/12/2020 16:00	50.6	47.6	53.0	46.0
7/12/2020 16:30	56.2	53.2	52.0	44.0
7/12/2020 17:00	45.4	42.4	47.0	42.5
7/12/2020 17:30	46.7	43.7	47.0	42.0
7/12/2020 18:00	43.7	40.7	43.0	41.0
7/12/2020 18:30	43.2	40.2	44.0	41.5
7/12/2020 19:00	43.4	40.4	44.0	41.0
8/12/2020 07:00	48.2	45.2	52.5	41.5
8/12/2020 07:30	49.7	46.7	51.0	42.0
8/12/2020 08:00	47.9	44.9	49.5	43.5
8/12/2020 08:30	48.9	45.9	51.5	44.5
8/12/2020 09:00	51.3	48.3	52.0	46.5
8/12/2020 09:30	54.2	51.2	55.0	46.0
8/12/2020 10:00	54.4	51.4	56.0	46.0
8/12/2020 10:30	53.7	50.7	54.5	47.5
8/12/2020 11:00	49.1	46.1	50.5	46.0
8/12/2020 11:30	49.5	46.5	51.0	46.5
8/12/2020 12:00	48.1	45.1	49.5	44.5

Noise Monitoring Results  
 CM2 Squatter house at the west of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
8/12/2020 12:30	47.9	44.9	49.5	45.5
8/12/2020 13:00	50.1	47.1	51.5	46.0
8/12/2020 13:30	56.8	53.8	53.0	45.5
8/12/2020 14:00	49.7	46.7	51.5	47.0
8/12/2020 14:30	50.6	47.6	52.5	46.5
8/12/2020 15:00	52.1	49.1	53.5	46.5
8/12/2020 15:30	49.4	46.4	51.5	45.5
8/12/2020 16:00	51.5	48.5	52.5	46.5
8/12/2020 16:30	61.3	58.3	63.5	45.5
8/12/2020 17:00	60.8	57.8	60.0	45.0
8/12/2020 17:30	47.8	44.8	50.0	44.5
8/12/2020 18:00	47.6	44.6	47.0	44.0
8/12/2020 18:30	57.8	54.8	48.5	43.5
8/12/2020 19:00	61.3	58.3	59.5	44.5
9/12/2020 07:00	48.6	45.6	50.0	41.5
9/12/2020 07:30	51.6	48.6	53.0	43.0
9/12/2020 08:00	53.9	50.9	55.5	44.0
9/12/2020 08:30	49.8	46.8	51.5	46.0
9/12/2020 09:00	51.2	48.2	52.5	46.5
9/12/2020 09:30	48.7	45.7	49.5	46.0
9/12/2020 10:00	57.0	54.0	53.0	49.5
9/12/2020 10:30	57.7	54.7	60.0	48.5
9/12/2020 11:00	52.7	49.7	53.0	49.5
9/12/2020 11:30	54.1	51.1	53.0	47.5
9/12/2020 12:00	54.5	51.5	56.0	49.5
9/12/2020 12:30	50.7	47.7	51.5	49.0
9/12/2020 13:00	50.6	47.6	52.0	46.5
9/12/2020 13:30	51.8	48.8	53.5	49.5
9/12/2020 14:00	53.4	50.4	54.5	48.0
9/12/2020 14:30	49.9	46.9	51.0	47.0
9/12/2020 15:00	50.2	47.2	51.0	47.5
9/12/2020 15:30	50.8	47.8	51.0	46.0
9/12/2020 16:00	51.6	48.6	52.0	46.0
9/12/2020 16:30	55.0	52.0	56.0	46.0
9/12/2020 17:00	57.1	54.1	58.5	44.0
9/12/2020 17:30	48.9	45.9	50.5	43.0
9/12/2020 18:00	45.1	42.1	47.0	41.0
9/12/2020 18:30	47.5	44.5	49.0	41.5
9/12/2020 19:00	47.7	44.7	45.5	42.0
10/12/2020 07:00	49.7	46.7	52.5	43.5
10/12/2020 07:30	47.9	44.9	51.0	44.0
10/12/2020 08:00	51.4	48.4	49.0	43.5
10/12/2020 08:30	49.8	46.8	51.5	44.5
10/12/2020 09:00	58.3	55.3	62.0	45.0
10/12/2020 09:30	48.8	45.8	51.0	45.0
10/12/2020 10:00	59.1	56.1	53.0	46.5
10/12/2020 10:30	49.2	46.2	51.0	46.0
10/12/2020 11:00	55.8	52.8	49.5	44.0
10/12/2020 11:30	51.9	48.9	55.0	45.5
10/12/2020 12:00	Maintenance			
10/12/2020 12:30	50.6	47.6	49.0	45.0

Noise Monitoring Results  
 CM2 Squatter house at the west of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
10/12/2020 13:00	54.0	51.0	54.0	45.5
10/12/2020 13:30	49.5	46.5	51.5	46.0
10/12/2020 14:00	52.8	49.8	55.0	47.0
10/12/2020 14:30	51.0	48.0	52.5	48.0
10/12/2020 15:00	48.8	45.8	49.5	46.0
10/12/2020 15:30	77.1	74.1	54.0	41.5
10/12/2020 16:00	44.0	41.0	45.5	41.0
10/12/2020 16:30	43.9	40.9	45.0	40.5
10/12/2020 17:00	41.9	38.9	43.0	39.5
10/12/2020 17:30	42.2	39.2	43.5	38.5
10/12/2020 18:00	40.7	37.7	40.5	39.5
10/12/2020 18:30	39.6	36.6	40.0	38.5
10/12/2020 19:00	44.9	41.9	41.0	38.0
11/12/2020 07:00	44.8	41.8	47.5	39.0
11/12/2020 07:30	46.5	43.5	49.5	40.0
11/12/2020 08:00	46.9	43.9	50.0	40.5
11/12/2020 08:30	46.8	43.8	49.5	42.5
11/12/2020 09:00	54.2	51.2	55.0	43.5
11/12/2020 09:30	54.1	51.1	56.0	50.0
11/12/2020 10:00	52.9	49.9	54.5	50.5
11/12/2020 10:30	52.8	49.8	54.0	51.0
11/12/2020 11:00	52.2	49.2	53.5	50.5
11/12/2020 11:30	52.8	49.8	54.0	51.0
11/12/2020 12:00	50.2	47.2	53.0	41.0
11/12/2020 12:30	46.5	43.5	47.5	40.5
11/12/2020 13:00	62.8	59.8	60.5	42.0
11/12/2020 13:30	55.1	52.1	53.5	44.0
11/12/2020 14:00	49.7	46.7	52.5	44.0
11/12/2020 14:30	52.1	49.1	54.5	48.0
11/12/2020 15:00	49.0	46.0	53.0	43.0
11/12/2020 15:30	47.2	44.2	49.5	42.5
11/12/2020 16:00	50.7	47.7	55.5	43.0
11/12/2020 16:30	48.7	45.7	50.5	42.5
11/12/2020 17:00	45.9	42.9	47.5	41.0
11/12/2020 17:30	52.3	49.3	49.0	40.5
11/12/2020 18:00	45.1	42.1	46.5	39.0
11/12/2020 18:30	44.6	41.6	42.5	39.0
11/12/2020 19:00	43.0	40.0	46.0	40.0
12/12/2020 07:00	47.4	44.4	48.0	41.0
12/12/2020 07:30	46.6	43.6	49.0	41.5
12/12/2020 08:00	47.8	44.8	50.5	42.5
12/12/2020 08:30	47.3	44.3	49.5	42.5
12/12/2020 09:00	48.2	45.2	50.5	43.0
12/12/2020 09:30	49.5	46.5	51.5	44.0
12/12/2020 10:00	47.9	44.9	49.0	43.0
12/12/2020 10:30	48.6	45.6	52.0	43.5
12/12/2020 11:00	48.2	45.2	51.0	44.5
12/12/2020 11:30	59.1	56.1	58.5	44.5
12/12/2020 12:00	54.9	51.9	56.0	44.5
12/12/2020 12:30	52.2	49.2	55.0	43.5
12/12/2020 13:00	52.2	49.2	50.0	43.5



Noise Monitoring Results  
 CM2 Squatter house at the west of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
12/12/2020 13:30	48.9	45.9	50.5	44.5
12/12/2020 14:00	60.1	57.1	53.5	45.0
12/12/2020 14:30	50.2	47.2	53.0	44.0
12/12/2020 15:00	58.9	55.9	61.0	45.5
12/12/2020 15:30	46.5	43.5	48.0	40.5
12/12/2020 16:00	45.4	42.4	47.0	40.5
12/12/2020 16:30	47.6	44.6	50.5	41.5
12/12/2020 17:00	46.7	43.7	47.5	41.0
12/12/2020 17:30	43.9	40.9	44.0	39.5
12/12/2020 18:00	42.4	39.4	44.5	39.0
12/12/2020 18:30	42.7	39.7	43.5	39.0
12/12/2020 19:00	43.5	40.5	44.0	39.0
13/12/2020 07:00	41.3	38.3	41.5	40.0
13/12/2020 07:05	40.5	37.5	41.5	39.5
13/12/2020 07:10	48.0	45.0	52.5	40.5
13/12/2020 07:15	46.6	43.6	51.5	40.0
13/12/2020 07:20	45.5	42.5	46.0	39.5
13/12/2020 07:25	42.4	39.4	44.5	39.5
13/12/2020 07:30	41.9	38.9	44.0	39.5
13/12/2020 07:35	42.6	39.6	44.5	39.0
13/12/2020 07:40	42.0	39.0	43.5	40.5
13/12/2020 07:45	45.1	42.1	48.5	41.0
13/12/2020 07:50	47.3	44.3	50.5	41.0
13/12/2020 07:55	45.4	42.4	48.5	41.0
13/12/2020 08:00	43.6	40.6	46.0	41.0
13/12/2020 08:05	42.2	39.2	43.5	40.5
13/12/2020 08:10	42.1	39.1	43.5	40.5
13/12/2020 08:15	43.6	40.6	45.5	41.0
13/12/2020 08:20	42.5	39.5	44.0	40.5
13/12/2020 08:25	41.0	38.0	42.5	39.5
13/12/2020 08:30	42.3	39.3	44.5	40.0
13/12/2020 08:35	44.9	41.9	47.0	40.0
13/12/2020 08:40	49.8	46.8	52.5	39.5
13/12/2020 08:45	46.7	43.7	46.5	40.5
13/12/2020 08:50	43.9	40.9	46.0	41.0
13/12/2020 08:55	43.0	40.0	45.5	39.5
13/12/2020 09:00	41.8	38.8	43.5	39.0
13/12/2020 09:05	40.9	37.9	42.5	38.5
13/12/2020 09:10	54.4	51.4	57.0	39.0
13/12/2020 09:15	47.0	44.0	49.0	44.5
13/12/2020 09:20	Maintenance			
13/12/2020 09:25	Maintenance			
13/12/2020 09:30	50.3	47.3	52.5	47.5
13/12/2020 09:35	50.1	47.1	52.5	47.0
13/12/2020 09:40	48.5	45.5	50.5	46.0
13/12/2020 09:45	48.3	45.3	50.0	46.0
13/12/2020 09:50	48.0	45.0	50.0	46.0
13/12/2020 09:55	48.6	45.6	50.0	46.5
13/12/2020 10:00	49.1	46.1	51.5	46.0
13/12/2020 10:05	51.4	48.4	54.0	46.5
13/12/2020 10:10	49.6	46.6	52.0	46.5

Sunday

Noise Monitoring Results  
 CM2 Squatter house at the west of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
13/12/2020 10:15	48.2	45.2	49.0	45.5
13/12/2020 10:20	49.5	46.5	52.0	45.5
13/12/2020 10:25	48.2	45.2	50.0	45.5
13/12/2020 10:30	47.5	44.5	49.0	45.5
13/12/2020 10:35	50.7	47.7	52.5	46.5
13/12/2020 10:40	48.4	45.4	49.0	46.5
13/12/2020 10:45	46.8	43.8	48.0	45.5
13/12/2020 10:50	47.4	44.4	48.5	46.0
13/12/2020 10:55	49.7	46.7	50.5	46.0
13/12/2020 11:00	45.8	42.8	47.0	44.0
13/12/2020 11:05	45.9	42.9	47.0	44.0
13/12/2020 11:10	45.4	42.4	46.5	44.0
13/12/2020 11:15	45.7	42.7	47.5	44.0
13/12/2020 11:20	45.8	42.8	47.5	44.0
13/12/2020 11:25	44.5	41.5	45.5	42.0
13/12/2020 11:30	45.0	42.0	45.0	43.0
13/12/2020 11:35	63.7	60.7	65.0	44.0
13/12/2020 11:40	64.9	61.9	65.0	64.5
13/12/2020 11:45	63.4	60.4	66.0	43.0
13/12/2020 11:50	65.8	62.8	66.0	65.5
13/12/2020 11:55	65.9	62.9	66.5	65.5
13/12/2020 12:00	65.9	62.9	66.5	65.5
13/12/2020 12:05	66.1	63.1	66.5	65.5
13/12/2020 12:10	66.0	63.0	66.5	65.5
13/12/2020 12:15	67.4	64.4	68.5	66.5
13/12/2020 12:20	62.1	59.1	66.5	55.0
13/12/2020 12:25	58.2	55.2	59.0	42.0
13/12/2020 12:30	44.4	41.4	47.5	38.5
13/12/2020 12:35	41.5	38.5	43.5	39.0
13/12/2020 12:40	40.8	37.8	42.5	39.0
13/12/2020 12:45	43.2	40.2	44.0	39.5
13/12/2020 12:50	41.3	38.3	43.0	39.5
13/12/2020 12:55	43.0	40.0	44.5	41.0
13/12/2020 13:00	46.8	43.8	48.0	41.0
13/12/2020 13:05	42.2	39.2	44.0	40.5
13/12/2020 13:10	41.1	38.1	42.0	39.5
13/12/2020 13:15	41.5	38.5	43.5	39.5
13/12/2020 13:20	40.9	37.9	42.0	39.5
13/12/2020 13:25	42.5	39.5	43.5	39.5
13/12/2020 13:30	41.9	38.9	44.0	39.5
13/12/2020 13:35	41.4	38.4	43.0	39.5
13/12/2020 13:40	44.2	41.2	43.5	40.0
13/12/2020 13:45	45.5	42.5	48.5	39.5
13/12/2020 13:50	42.2	39.2	43.5	39.5
13/12/2020 13:55	42.9	39.9	44.5	40.0
13/12/2020 14:00	43.9	40.9	45.5	41.0
13/12/2020 14:05	41.4	38.4	42.5	40.0
13/12/2020 14:10	41.4	38.4	42.0	39.5
13/12/2020 14:15	41.9	38.9	43.5	39.5
13/12/2020 14:20	42.6	39.6	45.5	39.5
13/12/2020 14:25	48.5	45.5	50.5	40.0

Noise Monitoring Results  
 CM2 Squatter house at the west of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
13/12/2020 14:30	46.8	43.8	46.0	39.5
13/12/2020 14:35	41.5	38.5	44.0	39.0
13/12/2020 14:40	43.8	40.8	47.5	39.0
13/12/2020 14:45	47.1	44.1	50.5	39.5
13/12/2020 14:50	47.4	44.4	51.5	39.5
13/12/2020 14:55	44.9	41.9	48.5	38.5
13/12/2020 15:00	42.3	39.3	44.5	39.5
13/12/2020 15:05	44.2	41.2	46.5	40.0
13/12/2020 15:10	44.4	41.4	47.5	39.5
13/12/2020 15:15	40.8	37.8	42.5	39.5
13/12/2020 15:20	50.8	47.8	53.0	40.0
13/12/2020 15:25	44.3	41.3	47.5	40.0
13/12/2020 15:30	42.6	39.6	46.0	40.0
13/12/2020 15:35	40.3	37.3	41.5	38.5
13/12/2020 15:40	41.6	38.6	44.5	38.5
13/12/2020 15:45	44.6	41.6	49.5	39.0
13/12/2020 15:50	42.4	39.4	45.0	39.0
13/12/2020 15:55	45.3	42.3	46.0	39.0
13/12/2020 16:00	47.4	44.4	50.5	42.5
13/12/2020 16:05	49.5	46.5	52.5	41.5
13/12/2020 16:10	51.8	48.8	54.0	38.5
13/12/2020 16:15	43.9	40.9	44.5	38.5
13/12/2020 16:20	45.8	42.8	50.0	39.5
13/12/2020 16:25	45.9	42.9	49.0	39.5
13/12/2020 16:30	46.3	43.3	49.5	39.5
13/12/2020 16:35	43.7	40.7	45.5	40.5
13/12/2020 16:40	47.8	44.8	50.5	40.0
13/12/2020 16:45	44.5	41.5	46.5	38.5
13/12/2020 16:50	45.9	42.9	49.5	39.0
13/12/2020 16:55	42.9	39.9	41.5	38.5
13/12/2020 17:00	44.7	41.7	48.0	39.0
13/12/2020 17:05	43.9	40.9	46.0	38.5
13/12/2020 17:10	44.8	41.8	47.5	39.5
13/12/2020 17:15	46.7	43.7	49.5	39.0
13/12/2020 17:20	50.4	47.4	52.5	47.0
13/12/2020 17:25	48.1	45.1	50.5	44.0
13/12/2020 17:30	45.1	42.1	47.0	42.0
13/12/2020 17:35	46.1	43.1	48.5	41.5
13/12/2020 17:40	48.4	45.4	50.5	45.0
13/12/2020 17:45	47.4	44.4	49.0	44.5
13/12/2020 17:50	47.9	44.9	50.0	44.5
13/12/2020 17:55	47.5	44.5	49.0	45.0
13/12/2020 18:00	48.7	45.7	52.5	39.0
13/12/2020 18:05	41.7	38.7	43.5	38.5
13/12/2020 18:10	40.0	37.0	41.5	38.5
13/12/2020 18:15	40.4	37.4	40.0	38.5
13/12/2020 18:20	41.2	38.2	43.5	38.5
13/12/2020 18:25	45.3	42.3	47.5	39.0
13/12/2020 18:30	39.5	36.5	40.5	38.5
13/12/2020 18:35	41.9	38.9	42.0	40.5
13/12/2020 18:40	41.0	38.0	42.0	39.0

Noise Monitoring Results  
 CM2 Squatter house at the west of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
13/12/2020 18:45	46.9	43.9	50.0	39.5
13/12/2020 18:50	42.2	39.2	42.5	39.5
13/12/2020 18:55	44.7	41.7	50.5	39.0
13/12/2020 19:00	44.3	41.3	45.5	39.5
14/12/2020 07:00	45.0	42.0	47.0	41.0
14/12/2020 07:30	48.6	45.6	50.5	42.0
14/12/2020 08:00	47.6	44.6	50.5	42.0
14/12/2020 08:30	53.9	50.9	54.5	44.0
14/12/2020 09:00	52.5	49.5	53.0	50.5
14/12/2020 09:30	52.3	49.3	53.5	50.5
14/12/2020 10:00	53.7	50.7	55.0	51.5
14/12/2020 10:30	55.2	52.2	54.5	51.5
14/12/2020 11:00	51.9	48.9	52.5	51.0
14/12/2020 11:30	52.1	49.1	53.0	50.5
14/12/2020 12:00	50.6	47.6	49.0	45.0
14/12/2020 12:30	50.9	47.9	55.0	44.0
14/12/2020 13:00	53.3	50.3	55.0	47.0
14/12/2020 13:30	51.9	48.9	51.5	41.0
14/12/2020 14:00	42.5	39.5	44.5	38.5
14/12/2020 14:30	43.6	40.6	45.0	40.5
14/12/2020 15:00	45.7	42.7	47.0	41.0
14/12/2020 15:30	45.6	42.6	46.0	41.0
14/12/2020 16:00	43.1	40.1	44.5	41.0
14/12/2020 16:30	43.0	40.0	45.0	38.0
14/12/2020 17:00	43.0	40.0	44.5	40.5
14/12/2020 17:30	39.5	36.5	41.0	37.0
14/12/2020 18:00	42.1	39.1	44.5	36.5
14/12/2020 18:30	41.1	38.1	42.5	38.0
14/12/2020 19:00	39.3	36.3	40.5	36.0

Noise Monitoring Results  
 CM3 Squatter house at the east of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
1/12/2020 07:00	53.3	50.3	54.0	47.0
1/12/2020 07:30	54.8	51.8	55.0	47.0
1/12/2020 08:00	52.9	49.9	53.0	46.5
1/12/2020 08:30	54.7	51.7	55.0	51.5
1/12/2020 09:00	54.6	51.6	55.5	51.5
1/12/2020 09:30	58.8	55.8	60.5	55.5
1/12/2020 10:00	58.5	55.5	60.5	55.5
1/12/2020 10:30	57.3	54.3	59.0	54.0
1/12/2020 11:00	57.7	54.7	59.5	54.5
1/12/2020 11:30	56.5	53.5	58.0	54.0
1/12/2020 12:00	55.8	52.8	57.0	54.0
1/12/2020 12:30	56.2	53.2	57.0	53.5
1/12/2020 13:00	56.2	53.2	57.0	54.0
1/12/2020 13:30	56.8	53.8	58.0	54.0
1/12/2020 14:00	58.8	55.8	60.5	56.0
1/12/2020 14:30	58.0	55.0	59.5	55.5
1/12/2020 15:00	58.7	55.7	60.5	56.0
1/12/2020 15:30	58.8	55.8	60.0	56.0
1/12/2020 16:00	58.8	55.8	60.5	56.0
1/12/2020 16:30	61.7	58.7	61.0	56.5
1/12/2020 17:00	59.2	56.2	61.0	56.5
1/12/2020 17:30	61.1	58.1	61.5	57.0
1/12/2020 18:00	58.8	55.8	60.5	57.0
1/12/2020 18:30	58.5	55.5	60.5	56.0
1/12/2020 19:00	57.5	54.5	58.0	56.5
2/12/2020 07:00	52.2	49.2	52.5	48.5
2/12/2020 07:30	55.5	52.5	54.5	48.0
2/12/2020 08:00	54.6	51.6	53.5	46.5
2/12/2020 08:30	54.0	51.0	54.5	51.0
2/12/2020 09:00	56.8	53.8	58.5	52.5
2/12/2020 09:30	55.1	52.1	56.0	52.5
2/12/2020 10:00	55.8	52.8	57.0	52.5
2/12/2020 10:30	57.1	54.1	59.0	52.5
2/12/2020 11:00	59.1	56.1	61.0	56.0
2/12/2020 11:30	60.6	57.6	63.0	55.5
2/12/2020 12:00	57.8	54.8	59.0	55.5
2/12/2020 12:30	57.3	54.3	59.0	55.0
2/12/2020 13:00	58.8	55.8	60.5	56.0
2/12/2020 13:30	59.3	56.3	59.5	55.0
2/12/2020 14:00	58.6	55.6	60.5	55.5
2/12/2020 14:30	58.6	55.6	60.5	55.5
2/12/2020 15:00	57.6	54.6	59.5	54.5
2/12/2020 15:30	59.4	56.4	60.0	54.5
2/12/2020 16:00	58.3	55.3	60.0	55.0
2/12/2020 16:30	58.8	55.8	60.5	56.0
2/12/2020 17:00	59.7	56.7	61.0	56.5
2/12/2020 17:30	58.4	55.4	60.0	56.0
2/12/2020 18:00	61.2	58.2	63.0	56.5
2/12/2020 18:30	62.9	59.9	65.0	56.5
2/12/2020 19:00	60.5	57.5	63.0	56.5
3/12/2020 07:00	54.2	51.2	56.0	49.0

Noise Monitoring Results  
 CM3 Squatter house at the east of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
3/12/2020 07:30	54.4	51.4	55.5	48.5
3/12/2020 08:00	54.1	51.1	54.5	47.0
3/12/2020 08:30	55.0	52.0	55.5	51.5
3/12/2020 09:00	56.2	53.2	57.5	54.0
3/12/2020 09:30	57.8	54.8	59.5	55.5
3/12/2020 10:00	57.9	54.9	60.0	55.5
3/12/2020 10:30	57.5	54.5	59.0	55.0
3/12/2020 11:00	60.2	57.2	62.0	55.5
3/12/2020 11:30	58.9	55.9	60.5	55.5
3/12/2020 12:00	56.8	53.8	58.5	54.0
3/12/2020 12:30	56.8	53.8	58.5	54.0
3/12/2020 13:00	58.8	55.8	60.5	55.0
3/12/2020 13:30	58.0	55.0	60.0	55.0
3/12/2020 14:00	59.2	56.2	61.0	55.5
3/12/2020 14:30	58.3	55.3	59.5	55.5
3/12/2020 15:00	58.7	55.7	60.5	56.0
3/12/2020 15:30	60.5	57.5	61.0	56.5
3/12/2020 16:00	58.9	55.9	60.5	56.5
3/12/2020 16:30	58.5	55.5	60.0	55.5
3/12/2020 17:00	58.6	55.6	60.0	56.0
3/12/2020 17:30	58.8	55.8	59.5	55.5
3/12/2020 18:00	57.2	54.2	58.5	55.0
3/12/2020 18:30	57.2	54.2	59.5	54.5
3/12/2020 19:00	56.6	53.6	57.5	55.0
4/12/2020 07:00	52.5	49.5	53.0	48.5
4/12/2020 07:30	53.3	50.3	52.5	48.0
4/12/2020 08:00	51.7	48.7	53.0	48.0
4/12/2020 08:30	53.4	50.4	54.0	51.0
4/12/2020 09:00	56.4	53.4	58.5	51.5
4/12/2020 09:30	60.6	57.6	61.5	52.0
4/12/2020 10:00	54.0	51.0	55.0	51.0
4/12/2020 10:30	52.9	49.9	53.5	50.0
4/12/2020 11:00	55.2	52.2	57.0	50.5
4/12/2020 11:30	56.1	53.1	58.0	52.5
4/12/2020 12:00	53.4	50.4	56.0	50.0
4/12/2020 12:30	54.8	51.8	57.0	51.5
4/12/2020 13:00	57.9	54.9	60.0	54.0
4/12/2020 13:30	59.2	56.2	59.5	56.5
4/12/2020 14:00	59.2	56.2	61.0	56.0
4/12/2020 14:30	61.4	58.4	62.5	56.5
4/12/2020 15:00	58.0	55.0	59.0	56.0
4/12/2020 15:30	64.2	61.2	64.0	55.5
4/12/2020 16:00	58.9	55.9	60.0	56.0
4/12/2020 16:30	59.0	56.0	61.0	56.5
4/12/2020 17:00	59.9	56.9	61.0	56.5
4/12/2020 17:30	59.2	56.2	61.0	56.5
4/12/2020 18:00	57.7	54.7	58.0	55.0
4/12/2020 18:30	57.2	54.2	59.5	55.0
4/12/2020 19:00	56.4	53.4	57.5	54.5
5/12/2020 07:00	51.9	48.9	52.5	47.5
5/12/2020 07:30	56.8	53.8	56.5	48.5

Noise Monitoring Results  
 CM3 Squatter house at the east of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
5/12/2020 08:00	52.8	49.8	53.5	47.5
5/12/2020 08:30	54.2	51.2	55.0	51.0
5/12/2020 09:00	54.8	51.8	55.5	51.0
5/12/2020 09:30	55.8	52.8	57.5	52.0
5/12/2020 10:00	57.9	54.9	57.5	51.0
5/12/2020 10:30	57.1	54.1	60.0	52.5
5/12/2020 11:00	59.6	56.6	61.5	56.5
5/12/2020 11:30	59.2	56.2	61.5	56.0
5/12/2020 12:00	58.6	55.6	59.5	55.5
5/12/2020 12:30	57.6	54.6	59.5	55.5
5/12/2020 13:00	59.0	56.0	61.0	56.5
5/12/2020 13:30	57.9	54.9	58.5	56.0
5/12/2020 14:00	58.8	55.8	60.5	56.5
5/12/2020 14:30	59.9	56.9	61.5	56.5
5/12/2020 15:00	59.4	56.4	61.5	56.5
5/12/2020 15:30	58.8	55.8	60.5	56.0
5/12/2020 16:00	59.7	56.7	61.5	56.5
5/12/2020 16:30	58.7	55.7	59.0	56.0
5/12/2020 17:00	60.8	57.8	61.5	57.0
5/12/2020 17:30	61.2	58.2	60.5	56.0
5/12/2020 18:00	57.6	54.6	58.5	56.0
5/12/2020 18:30	56.7	53.7	57.0	55.0
5/12/2020 19:00	55.3	52.3	56.0	54.0
6/12/2020 07:00	50.8	47.8	51.0	46.0
6/12/2020 07:05	51.3	48.3	51.0	46.0
6/12/2020 07:10	48.6	45.6	50.0	46.5
6/12/2020 07:15	54.7	51.7	50.5	46.0
6/12/2020 07:20	53.5	50.5	51.0	46.5
6/12/2020 07:25	52.1	49.1	52.0	47.0
6/12/2020 07:30	54.4	51.4	53.5	48.5
6/12/2020 07:35	54.0	51.0	52.5	48.5
6/12/2020 07:40	53.6	50.6	52.5	49.0
6/12/2020 07:45	61.1	58.1	57.5	48.0
6/12/2020 07:50	52.1	49.1	53.5	48.0
6/12/2020 07:55	50.4	47.4	51.5	47.5
6/12/2020 08:00	51.6	48.6	53.0	48.0
6/12/2020 08:05	55.4	52.4	55.5	48.5
6/12/2020 08:10	51.5	48.5	52.5	48.0
6/12/2020 08:15	51.3	48.3	53.5	47.0
6/12/2020 08:20	52.6	49.6	53.5	45.0
6/12/2020 08:25	52.2	49.2	52.0	46.0
6/12/2020 08:30	50.5	47.5	51.5	47.0
6/12/2020 08:35	51.9	48.9	53.5	47.0
6/12/2020 08:40	51.8	48.8	52.5	47.0
6/12/2020 08:45	52.5	49.5	53.0	46.0
6/12/2020 08:50	48.9	45.9	50.5	46.0
6/12/2020 08:55	52.2	49.2	54.5	47.0
6/12/2020 09:00	50.2	47.2	53.5	46.0
6/12/2020 09:05	51.7	48.7	52.5	46.0
6/12/2020 09:10	53.3	50.3	55.5	47.0
6/12/2020 09:15	52.4	49.4	53.5	46.5

Sunday

Noise Monitoring Results  
 CM3 Squatter house at the east of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
6/12/2020 09:20	53.1	50.1	52.0	45.5
6/12/2020 09:25	51.7	48.7	52.5	45.0
6/12/2020 09:30	51.0	48.0	51.0	45.5
6/12/2020 09:35	52.9	49.9	55.0	45.5
6/12/2020 09:40	50.7	47.7	52.0	45.5
6/12/2020 09:45	52.3	49.3	52.5	46.0
6/12/2020 09:50	51.8	48.8	52.0	46.0
6/12/2020 09:55	50.9	47.9	51.0	45.0
6/12/2020 10:00	50.2	47.2	51.5	45.0
6/12/2020 10:05	54.0	51.0	58.5	46.0
6/12/2020 10:10	52.2	49.2	53.5	45.5
6/12/2020 10:15	50.9	47.9	51.5	45.0
6/12/2020 10:20	48.9	45.9	50.5	46.0
6/12/2020 10:25	50.1	47.1	52.5	46.0
6/12/2020 10:30	51.6	48.6	52.5	46.5
6/12/2020 10:35	53.2	50.2	54.5	46.0
6/12/2020 10:40	50.3	47.3	51.0	46.0
6/12/2020 10:45	48.9	45.9	50.0	45.5
6/12/2020 10:50	48.6	45.6	50.5	46.0
6/12/2020 10:55	51.8	48.8	52.5	47.0
6/12/2020 11:00	50.8	47.8	50.0	45.5
6/12/2020 11:05	52.8	49.8	54.5	45.5
6/12/2020 11:10	50.2	47.2	51.0	46.0
6/12/2020 11:15	50.8	47.8	52.0	46.5
6/12/2020 11:20	61.8	58.8	58.0	46.0
6/12/2020 11:25	53.4	50.4	54.0	45.5
6/12/2020 11:30	49.8	46.8	52.0	46.0
6/12/2020 11:35	59.8	56.8	57.5	45.5
6/12/2020 11:40	51.4	48.4	51.5	45.5
6/12/2020 11:45	53.3	50.3	55.5	46.0
6/12/2020 11:50	52.8	49.8	52.5	45.5
6/12/2020 11:55	50.6	47.6	49.5	45.5
6/12/2020 12:00	59.6	56.6	57.0	46.0
6/12/2020 12:05	49.9	46.9	51.0	45.0
6/12/2020 12:10	52.8	49.8	54.5	45.0
6/12/2020 12:15	49.2	46.2	50.5	44.5
6/12/2020 12:20	52.2	49.2	51.0	45.0
6/12/2020 12:25	48.5	45.5	49.5	44.5
6/12/2020 12:30	51.1	48.1	53.5	45.0
6/12/2020 12:35	50.6	47.6	51.0	44.0
6/12/2020 12:40	51.6	48.6	54.0	45.0
6/12/2020 12:45	62.9	59.9	58.0	44.5
6/12/2020 12:50	55.4	52.4	54.5	43.0
6/12/2020 12:55	51.0	48.0	52.0	47.0
6/12/2020 13:00	54.3	51.3	55.5	47.5
6/12/2020 13:05	53.0	50.0	53.5	49.0
6/12/2020 13:10	53.5	50.5	54.0	46.0
6/12/2020 13:15	52.4	49.4	53.0	47.5
6/12/2020 13:20	54.9	51.9	57.0	49.5
6/12/2020 13:25	60.1	57.1	58.0	49.5
6/12/2020 13:30	52.8	49.8	54.0	49.5

Noise Monitoring Results  
 CM3 Squatter house at the east of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
6/12/2020 13:35	53.4	50.4	54.0	49.5
6/12/2020 13:40	50.9	47.9	52.5	49.0
6/12/2020 13:45	53.2	50.2	54.0	49.5
6/12/2020 13:50	53.6	50.6	54.5	50.0
6/12/2020 13:55	54.2	51.2	56.5	49.0
6/12/2020 14:00	61.2	58.2	62.0	49.5
6/12/2020 14:05	55.2	52.2	54.0	50.0
6/12/2020 14:10	55.9	52.9	58.0	50.0
6/12/2020 14:15	53.0	50.0	53.0	49.0
6/12/2020 14:20	56.9	53.9	60.5	51.0
6/12/2020 14:25	54.0	51.0	56.0	51.0
6/12/2020 14:30	53.9	50.9	54.0	50.5
6/12/2020 14:35	58.4	55.4	60.5	51.5
6/12/2020 14:40	54.0	51.0	55.0	51.0
6/12/2020 14:45	53.0	50.0	54.0	50.5
6/12/2020 14:50	54.7	51.7	54.5	51.0
6/12/2020 14:55	58.0	55.0	57.5	51.5
6/12/2020 15:00	60.6	57.6	58.0	52.0
6/12/2020 15:05	54.2	51.2	55.0	51.0
6/12/2020 15:10	54.3	51.3	55.0	50.5
6/12/2020 15:15	54.3	51.3	55.5	52.0
6/12/2020 15:20	57.8	54.8	57.5	52.5
6/12/2020 15:25	56.6	53.6	59.0	53.5
6/12/2020 15:30	58.5	55.5	61.0	53.5
6/12/2020 15:35	57.7	54.7	57.5	53.5
6/12/2020 15:40	54.6	51.6	55.5	53.0
6/12/2020 15:45	63.0	60.0	63.5	52.5
6/12/2020 15:50	55.7	52.7	57.0	54.0
6/12/2020 15:55	56.4	53.4	57.0	54.0
6/12/2020 16:00	56.9	53.9	58.5	54.0
6/12/2020 16:05	56.6	53.6	58.5	54.0
6/12/2020 16:10	56.3	53.3	58.0	53.5
6/12/2020 16:15	56.2	53.2	58.0	53.5
6/12/2020 16:20	55.4	52.4	57.0	53.5
6/12/2020 16:25	57.8	54.8	60.5	53.0
6/12/2020 16:30	55.8	52.8	57.0	53.0
6/12/2020 16:35	59.8	56.8	59.5	52.5
6/12/2020 16:40	55.3	52.3	56.5	52.0
6/12/2020 16:45	55.6	52.6	57.5	53.0
6/12/2020 16:50	55.9	52.9	57.5	54.0
6/12/2020 16:55	58.0	55.0	58.5	54.5
6/12/2020 17:00	56.4	53.4	58.0	54.0
6/12/2020 17:05	57.2	54.2	57.5	54.5
6/12/2020 17:10	56.4	53.4	57.5	53.5
6/12/2020 17:15	56.3	53.3	58.0	53.5
6/12/2020 17:20	56.9	53.9	58.5	54.0
6/12/2020 17:25	55.5	52.5	56.5	54.0
6/12/2020 17:30	61.8	58.8	58.5	53.5
6/12/2020 17:35	58.9	55.9	60.0	53.5
6/12/2020 17:40	59.3	56.3	62.0	54.0
6/12/2020 17:45	59.3	56.3	62.5	53.5

Noise Monitoring Results  
 CM3 Squatter house at the east of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
6/12/2020 17:50	58.7	55.7	63.0	53.5
6/12/2020 17:55	56.2	53.2	57.5	53.0
6/12/2020 18:00	55.6	52.6	56.0	53.0
6/12/2020 18:05	55.1	52.1	56.0	53.5
6/12/2020 18:10	55.2	52.2	56.0	53.0
6/12/2020 18:15	55.7	52.7	57.0	53.5
6/12/2020 18:20	55.1	52.1	55.5	53.5
6/12/2020 18:25	56.1	53.1	56.5	53.5
6/12/2020 18:30	55.3	52.3	55.0	53.0
6/12/2020 18:35	53.6	50.6	55.0	52.0
6/12/2020 18:40	56.2	53.2	54.0	51.0
6/12/2020 18:45	51.5	48.5	52.0	51.0
6/12/2020 18:50	51.8	48.8	52.5	51.0
6/12/2020 18:55	52.0	49.0	53.0	50.0
6/12/2020 19:00	48.9	45.9	49.5	48.5
7/12/2020 07:00	52.6	49.6	52.0	47.0
7/12/2020 07:30	52.7	49.7	54.0	48.0
7/12/2020 08:00	53.4	50.4	55.0	48.5
7/12/2020 08:30	56.0	53.0	57.5	52.5
7/12/2020 09:00	58.0	55.0	59.5	55.0
7/12/2020 09:30	56.5	53.5	57.5	54.0
7/12/2020 10:00	59.1	56.1	59.0	55.5
7/12/2020 10:30	57.2	54.2	58.0	55.5
7/12/2020 11:00	59.1	56.1	60.5	55.5
7/12/2020 11:30	58.7	55.7	60.5	55.5
7/12/2020 12:00	Maintenance			
7/12/2020 12:30	Maintenance			
7/12/2020 13:00	Maintenance			
7/12/2020 13:30	59.3	56.3	60.0	56.0
7/12/2020 14:00	57.6	54.6	59.5	55.0
7/12/2020 14:30	59.2	56.2	61.0	56.0
7/12/2020 15:00	58.3	55.3	59.5	56.0
7/12/2020 15:30	59.0	56.0	61.0	56.0
7/12/2020 16:00	59.5	56.5	61.0	58.0
7/12/2020 16:30	59.1	56.1	61.0	56.5
7/12/2020 17:00	58.8	55.8	60.0	57.0
7/12/2020 17:30	60.1	57.1	62.0	57.5
7/12/2020 18:00	58.2	55.2	60.0	56.5
7/12/2020 18:30	56.2	53.2	57.5	54.5
7/12/2020 19:00	54.2	51.2	55.0	53.5
8/12/2020 07:00	51.9	48.9	52.5	47.5
8/12/2020 07:30	51.5	48.5	52.0	47.0
8/12/2020 08:00	52.9	49.9	54.0	46.0
8/12/2020 08:30	53.4	50.4	54.0	51.5
8/12/2020 09:00	55.3	52.3	58.0	52.0
8/12/2020 09:30	57.7	54.7	60.0	53.5
8/12/2020 10:00	61.9	58.9	63.5	57.0
8/12/2020 10:30	60.0	57.0	62.0	57.0
8/12/2020 11:00	Maintenance			
8/12/2020 11:30	60.0	57.0	61.5	56.0
8/12/2020 12:00	59.6	56.6	60.5	55.5

Noise Monitoring Results  
 CM3 Squatter house at the east of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
8/12/2020 12:30	57.0	54.0	58.0	55.5
8/12/2020 13:00	58.6	55.6	60.5	56.0
8/12/2020 13:30	58.3	55.3	59.0	55.5
8/12/2020 14:00	60.6	57.6	62.5	56.0
8/12/2020 14:30	60.1	57.1	63.0	56.5
8/12/2020 15:00	60.9	57.9	63.0	56.0
8/12/2020 15:30	58.2	55.2	59.0	55.5
8/12/2020 16:00	59.9	56.9	60.5	56.0
8/12/2020 16:30	62.7	59.7	65.5	56.5
8/12/2020 17:00	61.6	58.6	65.0	56.0
8/12/2020 17:30	59.1	56.1	61.0	56.0
8/12/2020 18:00	58.5	55.5	59.5	55.5
8/12/2020 18:30	57.9	54.9	59.0	48.0
8/12/2020 19:00	60.9	57.9	65.0	47.0
9/12/2020 07:00	52.3	49.3	54.5	47.5
9/12/2020 07:30	52.2	49.2	54.0	47.5
9/12/2020 08:00	51.4	48.4	52.5	47.5
9/12/2020 08:30	57.8	54.8	60.0	54.0
9/12/2020 09:00	57.8	54.8	60.0	55.0
9/12/2020 09:30	57.4	54.4	59.5	55.0
9/12/2020 10:00	57.6	54.6	59.5	54.5
9/12/2020 10:30	57.9	54.9	60.0	55.0
9/12/2020 11:00	58.2	55.2	60.0	55.5
9/12/2020 11:30	58.9	55.9	60.5	54.5
9/12/2020 12:00	56.8	53.8	58.0	55.0
9/12/2020 12:30	57.0	54.0	58.5	55.0
9/12/2020 13:00	58.6	55.6	61.0	55.5
9/12/2020 13:30	58.9	55.9	61.0	56.0
9/12/2020 14:00	58.8	55.8	60.5	55.5
9/12/2020 14:30	59.7	56.7	61.0	55.5
9/12/2020 15:00	58.9	55.9	60.5	56.5
9/12/2020 15:30	59.5	56.5	61.0	56.0
9/12/2020 16:00	60.5	57.5	61.5	56.0
9/12/2020 16:30	60.9	57.9	63.0	57.0
9/12/2020 17:00	60.3	57.3	61.5	56.5
9/12/2020 17:30	60.0	57.0	62.0	57.0
9/12/2020 18:00	58.1	55.1	58.5	56.0
9/12/2020 18:30	57.6	54.6	60.0	55.0
9/12/2020 19:00	55.0	52.0	55.5	54.0
10/12/2020 07:00	54.8	51.8	57.0	49.5
10/12/2020 07:30	53.1	50.1	55.0	50.5
10/12/2020 08:00	53.5	50.5	55.0	49.5
10/12/2020 08:30	54.1	51.1	55.0	52.0
10/12/2020 09:00	55.1	52.1	57.5	52.0
10/12/2020 09:30	55.9	52.9	58.5	53.0
10/12/2020 10:00	60.2	57.2	58.0	53.0
10/12/2020 10:30	57.4	54.4	59.5	55.0
10/12/2020 11:00	59.9	56.9	59.5	55.0
10/12/2020 11:30	58.7	55.7	60.5	56.0
10/12/2020 12:00	57.0	54.0	58.0	55.0
10/12/2020 12:30	60.2	57.2	62.0	54.5

Noise Monitoring Results  
 CM3 Squatter house at the east of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
10/12/2020 13:00	58.2	55.2	60.0	56.0
10/12/2020 13:30	59.7	56.7	61.5	56.5
10/12/2020 14:00	58.5	55.5	60.0	56.0
10/12/2020 14:30	58.9	55.9	60.5	56.5
10/12/2020 15:00	59.3	56.3	61.5	56.5
10/12/2020 15:30	60.3	57.3	62.0	56.5
10/12/2020 16:00	59.4	56.4	61.5	57.5
10/12/2020 16:30	59.4	56.4	61.5	57.0
10/12/2020 17:00	58.5	55.5	59.0	57.5
10/12/2020 17:30	61.1	58.1	62.0	57.0
10/12/2020 18:00	59.7	56.7	61.5	57.5
10/12/2020 18:30	58.4	55.4	60.5	56.5
10/12/2020 19:00	57.2	54.2	57.5	56.0
11/12/2020 07:00	55.1	52.1	57.0	49.5
11/12/2020 07:30	53.5	50.5	55.0	50.0
11/12/2020 08:00	53.3	50.3	55.0	49.5
11/12/2020 08:30	66.7	63.7	71.0	49.0
11/12/2020 09:00	62.9	59.9	65.5	58.5
11/12/2020 09:30	61.1	58.1	63.0	56.5
11/12/2020 10:00	62.0	59.0	65.0	56.5
11/12/2020 10:30	58.8	55.8	60.5	56.0
11/12/2020 11:00	58.0	55.0	60.0	56.0
11/12/2020 11:30	60.4	57.4	61.5	56.5
11/12/2020 12:00	58.2	55.2	60.5	56.0
11/12/2020 12:30	57.6	54.6	59.0	55.5
11/12/2020 13:00	59.7	56.7	62.0	57.0
11/12/2020 13:30	60.4	57.4	60.5	56.0
11/12/2020 14:00	56.4	53.4	58.5	53.0
11/12/2020 14:30	56.3	53.3	58.0	53.0
11/12/2020 15:00	58.0	55.0	58.5	53.0
11/12/2020 15:30	58.9	55.9	60.0	55.5
11/12/2020 16:00	57.2	54.2	58.5	55.0
11/12/2020 16:30	57.3	54.3	59.0	55.5
11/12/2020 17:00	56.6	53.6	57.5	55.0
11/12/2020 17:30	58.6	55.6	59.5	53.0
11/12/2020 18:00	54.2	51.2	57.0	51.0
11/12/2020 18:30	52.9	49.9	53.5	51.5
11/12/2020 19:00	53.0	50.0	53.5	51.5
12/12/2020 07:00	52.1	49.1	51.0	46.5
12/12/2020 07:30	50.9	47.9	52.5	46.0
12/12/2020 08:00	50.6	47.6	52.5	46.0
12/12/2020 08:30	53.4	50.4	55.0	51.0
12/12/2020 09:00	56.2	53.2	58.0	53.5
12/12/2020 09:30	55.5	52.5	57.5	53.5
12/12/2020 10:00	55.4	52.4	57.0	53.0
12/12/2020 10:30	54.8	51.8	56.5	52.5
12/12/2020 11:00	55.6	52.6	57.0	53.0
12/12/2020 11:30	55.6	52.6	57.5	53.0
12/12/2020 12:00	56.3	53.3	57.0	52.5
12/12/2020 12:30	54.9	51.9	56.0	53.0
12/12/2020 13:00	56.3	53.3	58.0	54.0

Noise Monitoring Results  
 CM3 Squatter house at the east of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
12/12/2020 13:30	57.2	54.2	59.0	54.5
12/12/2020 14:00	64.5	61.5	69.5	55.5
12/12/2020 14:30	57.3	54.3	59.0	55.0
12/12/2020 15:00	57.6	54.6	59.5	55.5
12/12/2020 15:30	58.3	55.3	59.5	55.5
12/12/2020 16:00	56.8	53.8	58.0	54.5
12/12/2020 16:30	58.9	55.9	60.5	55.5
12/12/2020 17:00	59.1	56.1	61.0	55.5
12/12/2020 17:30	58.4	55.4	59.0	54.0
12/12/2020 18:00	57.0	54.0	57.0	54.0
12/12/2020 18:30	57.8	54.8	57.5	54.5
12/12/2020 19:00	53.1	50.1	55.5	46.5
13/12/2020 07:00	46.5	43.5	47.5	45.0
13/12/2020 07:05	48.9	45.9	47.5	44.5
13/12/2020 07:10	48.9	45.9	49.0	44.5
13/12/2020 07:15	46.0	43.0	47.0	44.0
13/12/2020 07:20	47.1	44.1	49.5	45.0
13/12/2020 07:25	49.0	46.0	51.0	45.5
13/12/2020 07:30	47.6	44.6	49.0	46.0
13/12/2020 07:35	61.4	58.4	66.0	49.0
13/12/2020 07:40	53.7	50.7	55.5	47.5
13/12/2020 07:45	53.5	50.5	53.5	47.0
13/12/2020 07:50	51.9	48.9	52.0	46.5
13/12/2020 07:55	49.1	46.1	50.5	46.0
13/12/2020 08:00	48.4	45.4	50.0	46.0
13/12/2020 08:05	49.6	46.6	51.5	46.5
13/12/2020 08:10	50.7	47.7	53.0	47.0
13/12/2020 08:15	47.6	44.6	49.5	45.5
13/12/2020 08:20	50.5	47.5	50.5	45.5
13/12/2020 08:25	50.7	47.7	50.5	45.5
13/12/2020 08:30	47.6	44.6	49.5	45.5
13/12/2020 08:35	50.6	47.6	51.0	46.0
13/12/2020 08:40	48.4	45.4	50.5	46.0
13/12/2020 08:45	50.9	47.9	53.0	47.0
13/12/2020 08:50	50.4	47.4	52.0	47.0
13/12/2020 08:55	52.8	49.8	53.0	47.0
13/12/2020 09:00	51.5	48.5	52.0	46.5
13/12/2020 09:05	49.2	46.2	49.0	45.0
13/12/2020 09:10	51.3	48.3	52.0	46.0
13/12/2020 09:15	50.7	47.7	52.5	46.0
13/12/2020 09:20	54.5	51.5	58.5	46.5
13/12/2020 09:25	52.1	49.1	54.0	47.0
13/12/2020 09:30	50.9	47.9	53.0	47.5
13/12/2020 09:35	53.3	50.3	55.0	46.5
13/12/2020 09:40	52.8	49.8	54.0	51.0
13/12/2020 09:45	54.8	51.8	56.0	52.0
13/12/2020 09:50	56.3	53.3	58.0	53.0
13/12/2020 09:55	56.0	53.0	58.0	53.0
13/12/2020 10:00	57.1	54.1	59.5	52.5
13/12/2020 10:05	56.0	53.0	57.5	53.0
14/12/2020 07:00	51.7	48.7	50.0	44.0

Sunday

Noise Monitoring Results  
 CM3 Squatter house at the east of Yuen Long STW

Start Date & Time	Corrected LAeq	LAeq	L10	L90
14/12/2020 07:30	49.7	46.7	52.0	45.5
14/12/2020 08:00	50.4	47.4	52.0	45.0
14/12/2020 08:30	54.0	51.0	55.5	49.5
14/12/2020 09:00	55.2	52.2	57.0	52.5
14/12/2020 09:30	55.0	52.0	56.0	52.5
14/12/2020 10:00	57.6	54.6	59.5	52.5
14/12/2020 10:30	55.8	52.8	57.0	52.5
14/12/2020 11:00	54.7	51.7	56.0	52.5
14/12/2020 11:30	56.0	53.0	57.0	53.0
14/12/2020 12:00	55.5	52.5	56.5	53.0
14/12/2020 12:30	55.6	52.6	57.0	52.5
14/12/2020 13:00	Maintenance			
14/12/2020 13:30	54.5	51.5	56.5	51.5
14/12/2020 14:00	55.3	52.3	57.0	52.5
14/12/2020 14:30	56.2	53.2	57.5	52.5
14/12/2020 15:00	61.3	58.3	60.0	52.5
14/12/2020 15:30	55.8	52.8	57.5	52.5
14/12/2020 16:00	55.6	52.6	57.5	52.5
14/12/2020 16:30	55.1	52.1	56.5	52.0
14/12/2020 17:00	55.8	52.8	56.5	53.0
14/12/2020 17:30	56.3	53.3	58.0	52.5
14/12/2020 18:00	54.4	51.4	56.0	52.5
14/12/2020 18:30	54.5	51.5	56.5	52.0
14/12/2020 19:00	53.6	50.6	54.5	51.5

# Appendix D

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## Water Quality Monitoring Results



Report No. : 181172WA202235



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**Test Report on Analysis of Water**

**Information Supplied by Client**

Client : Drainage Services Department  
Client's address : -  
Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1  
Sample description : Fifty-two samples of water taken by the staff of FTS on 01/12/2020  
Client sample ID : Refer to results pages  
Test required : Total suspended solids dried at 103°C - 105°C

**Laboratory Information**

Lab. sample ID : WA202235/1-52  
Date of receipt of sample : 01/12/2020  
Date test commenced : 02/12/2020  
Date test completed : 03/12/2020  
Test method used : APHA 17ed. 2540D

*Note : This report refers only to the sample(s) tested.*

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Report No. : 181172WA202235

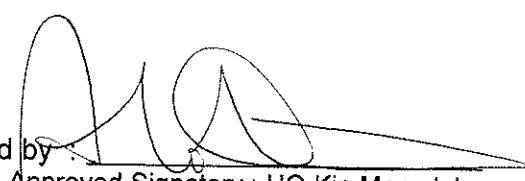
Page 2 of 2


**Results :**

Sample identification	Test result Total suspended solids dried at 103°C – 105°C, mg/L
1. M1F M	49
2. M1F M Dup	49
3. M2F M	28
4. M2F M Dup	29
5. E1F S	30
6. E1F S Dup	30
7. E1F B	43
8. E1F B Dup	43
9. E2aF M	31
10. E2aF M Dup	29
11. E3aF M	17
12. E3aF M Dup	16
13. E4F M	33
14. E4F M Dup	33
15. E5aF M	41
16. E5aF M Dup	42
17. DB1F M	23
18. DB1F M Dup	23
19. SP1F M	48
20. SP1F M Dup	47
21. KT1F M	51
22. KT1F M Dup	52

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date

: 15/11/2021

*Note : This report refers only to the sample(s) tested.*

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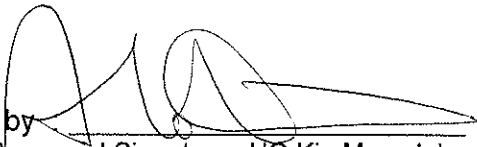
Report No. : 181172WA202235

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**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
23. M1E M	30
24. M1E M Dup	30
25. M2E M	48
26. M2E M Dup	47
27. E1E S	47
28. E1E S Dup	47
29. E1E B	50
30. E1E B Dup	50
31. E2aE M	51
32. E2aE M Dup	50
33. E3aE M	20
34. E3aE M Dup	20
35. E4E M	25
36. E4E M Dup	25
37. E5aE S	31
38. E5aE S Dup	30
39. E5aE B	34
40. E5aE B Dup	33
41. DB1E M	11
42. DB1E M Dup	13
43. SP1E M	30
44. SP1E M Dup	29

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

*Note : This report refers only to the sample(s) tested.*

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Report No. : 181172WA202235

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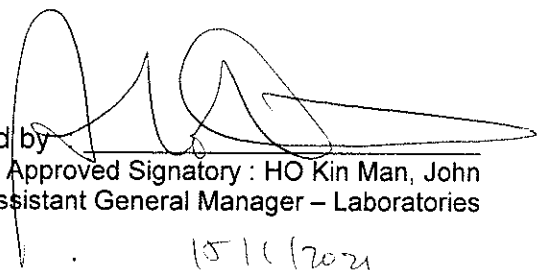


**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
45. KT1E S	23
46. KT1E S Dup	24
47. KT1E B	72
48. KT1E B Dup	72
49. M3F M	59
50. M3F M Dup	58
51. M3E M	26
52. M3E M Dup	28

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by

  
Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories

Date

: 15/11/2021

**\*\*End of Report\*\***


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**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

Total suspended solids dried at 103°C – 105°C, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1 mg/L	<1	100.96	29.0	29.8	2.72
	<1	100.00	24.7	24.7	0.00
	<1	100.90	12.7	13.3	4.62
	<1	99.60	58.3	57.7	1.03
	<1	102.86	28.3	28.7	1.40

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202235(1)



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**Test Report on Analysis of Water**

**Information Supplied by Client**

Client : Drainage Services Department  
 Client's address : -  
 Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1  
 Sample description : Fourty samples of water taken by the staff of FTS on 01/12/2020  
 Client sample ID : Refer to result pages  
 Tests required : Biochemical oxygen demand  
 Total Kjeldahl Nitrogen content  
 Total Nitrogen content  
 Ammonical Nitrogen content  
 Total Inorganic Nitrogen  
 Total phosphorus content  
 E. coli count

**Laboratory Information**

Lab. sample ID :	Chemical tests	Microbiological tests
	WA202235/5-22, 27-48	WA202235/5B-22B, 27B-48B

Sample condition :		Chemical tests	Microbiological tests
	Container	Fourty 2 L plastic bottles and fourty 0.18 mL plastic bottles	Fourty sterilized 250 ml plastic bottles with thiosulphate added
	Appearance	Colorless	
	Temperature	Cooled	

Date of receipt of sample : 01/12/2020

Date test commenced : 01/12/2020

Date test completed : 07/12/2020

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202235(1)

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Test methods used : Biochemical oxygen demand  
*BS 6068: Section 2.14: 1990*

Total Kjeldahl Nitrogen content  
*In house method E-T-037 & APHA 18ed. 4500-N<sub>org</sub> B & 4500-NH<sub>3</sub>E*

Total Nitrogen content  
*By Calculation*

Ammonical Nitrogen content  
*In house method E-T-095 Segmented flow-salicylate method*

Total Inorganic Nitrogen  
*By Calculation*

Total phosphorus content  
*APHA, 17th edition, 4500-PB5 (Digestion) &  
In house method E-T-056 (Determination)*

E. coli count  
*The Bacteriological Examination of Drinking Water Supplies  
1982, DoE (1983) Membrane Filtration Procedure: Sections 7.8,  
7.9.4.2 Bacterial Confirmation: Section 7.9.4.4 & in-situ urease  
test*

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202235(1)

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**Results :**

Test parameters	Sample identification							
	E1F S	E1F S Dup	E1F B	E1F B Dup	E2aF M	E2aF M Dup	E3aF M	E3aF M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	4.4	4.1	4.3	4.3	1.9	2.2	1.7	1.0
3. Total nitrogen content, mg/L	6.0	6.3	5.9	5.9	5.2	5.5	3.1	2.2
4. Ammonical nitrogen content, mg/L	2.7	2.5	2.5	2.6	1.0	0.44	0.28	0.29
5. Total Inorganic nitrogen, mg/L	4.2	4.7	4.1	4.2	4.4	3.7	1.7	1.4
6. Total phosphorus content, mgP/L	0.95	0.99	1.0	1.0	0.62	0.65	0.32	0.34
7. E. coli count, cfu/100ml	1.1 x 10 <sup>4</sup> (estimated)	9.9 x 10 <sup>3</sup>	9.8 x 10 <sup>3</sup>	1.1 x 10 <sup>4</sup> (estimated)	9.3 x 10 <sup>3</sup>	5.3 x 10 <sup>3</sup>	2.4 x 10	2.0 x 10

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.3°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 01/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 02/12/2020 16:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/1/2021

Note : This report refers only to the sample(s) tested.



Report No. : 181172WA202235(1)

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**Results :**

Test parameters	Sample identification							
	E4F M	E4F M Dup	E5aF M	E5aF M Dup	DB1F M	DB1F M Dup	SP1F M	SP1F M Dup
1. Biochemical oxygen demand, mg/L	2.0	2.0	2.0	2.5	<1.5	<1.5	2.0	2.5
2. Total Kjeldahl nitrogen content, mg/L	3.0	2.2	4.9	4.9	4.0	4.0	5.7	5.5
3. Total nitrogen content, mg/L	5.3	5.9	6.5	6.5	5.6	5.7	7.0	6.7
4. Ammonical nitrogen content, mg/L	1.4	1.5	2.9	2.2	3.2	3.6	4.3	3.7
5. Total Inorganic nitrogen, mg/L	3.6	5.2	4.5	3.8	4.8	5.3	5.5	4.9
6. Total phosphorus content, mgP/L	0.65	0.69	1.2	1.2	0.28	0.28	1.3	1.2
7. E. coli count, cfu/100ml	$7.3 \times 10^3$	$7.4 \times 10^3$	$1.0 \times 10^4$ (estimated)	$1.1 \times 10^4$ (estimated)	$1.6 \times 10$	$2.1 \times 10$	$1.7 \times 10^4$ (estimated)	$1.7 \times 10^4$ (estimated)

- Remark:
1. Disclaimer: Sampling is out of scope of accreditation.
  2. Temperature of ice-box when samples being received were 4.3°C
  3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.
  4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.
  5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.
  6. Detailed information for BOD<sub>5</sub> test :
    - i. Samples taken by staff of FTS on 01/12/2020
    - ii. Samples stored at 0-4°C refrigerator prior to testing.
    - iii. Date and hour of commencing BOD<sub>5</sub> test : 02/12/2020 16:00
    - iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.
    - v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.
    - vi. The samples were incubated at 19-21°C for 5 days

 Certified by : 

 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/11/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202235(1)

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**Results :**

Test parameters	Sample identification							
	KT1F M	KT1F M Dup	E1E S	E1E S Dup	E1E B	E1E B Dup	E2aE M	E2aE M Dup
1. Biochemical oxygen demand, mg/L	2.5	2.5	2.0	2.0	2.5	2.0	2.5	2.5
2. Total Kjeldahl nitrogen content, mg/L	5.0	4.9	2.7	3.0	2.8	2.9	1.3	1.5
3. Total nitrogen content, mg/L	6.6	6.4	5.8	6.0	6.1	6.0	4.2	4.0
4. Ammonical nitrogen content, mg/L	2.9	3.0	1.2	1.3	1.1	1.2	0.79	0.78
5. Total Inorganic nitrogen, mg/L	4.5	4.5	4.2	4.3	4.4	4.3	3.6	3.3
6. Total phosphorus content, mgP/L	1.3	1.2	0.70	0.75	0.60	0.55	0.51	0.49
7. E. coli count, cfu/100ml	1.2 x 10 <sup>4</sup> (estimated)	1.2 x 10 <sup>4</sup> (estimated)	1.0 x 10 <sup>4</sup> (estimated)	8.6 x 10 <sup>3</sup>	6.9 x 10 <sup>3</sup>	1.0 x 10 <sup>4</sup> (estimated)	3.7 x 10 <sup>3</sup>	5.1 x 10 <sup>3</sup>

- Remark:
1. Disclaimer: Sampling is out of scope of accreditation.
  2. Temperature of ice-box when samples being received were 4.3°C
  3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.
  4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.
  5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.
  6. Detailed information for BOD<sub>5</sub> test :
    - i. Samples taken by staff of FTS on 01/12/2020
    - ii. Samples stored at 0-4°C refrigerator prior to testing.
    - iii. Date and hour of commencing BOD<sub>5</sub> test : 02/12/2020 16:00
    - iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.
    - v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.
    - vi. The samples were incubated at 19-21°C for 5 days

 Certified by: 

 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/11/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202235(1)

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**Results :**

Test parameters	Sample identification							
	E3aE M	E3aE M Dup	E4E M	E4E M Dup	E5aE S	E5aE S Dup	E5aE B	E5aE B Dup
1. Biochemical oxygen demand, mg/L	2.5	2.5	3.5	3.5	4.0	4.0	4.0	4.0
2. Total Kjeldahl nitrogen content, mg/L	0.84	0.81	1.6	1.6	3.1	2.8	2.2	2.3
3. Total nitrogen content, mg/L	2.1	2.2	4.4	4.3	6.5	5.8	5.7	6.1
4. Ammonical nitrogen content, mg/L	0.1	0.19	1.1	1.1	1.8	1.9	1.4	1.4
5. Total Inorganic nitrogen, mg/L	1.3	1.6	3.8	3.7	5.2	4.8	4.8	5.3
6. Total phosphorus content, mgP/L	0.23	0.19	0.45	0.49	0.44	0.39	0.55	0.53
7. E. coli count, cfu/100ml	2.5 x 10	4 (estimated)	4.6 x 10 <sup>3</sup>	5.0 x 10 <sup>3</sup>	1.1 x 10 <sup>4</sup> (estimated)	1.2 x 10 <sup>4</sup> (estimated)	1.0 x 10 <sup>4</sup> (estimated)	9.3 x 10 <sup>3</sup>

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.3°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 01/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 02/12/2020 16:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by : 

Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

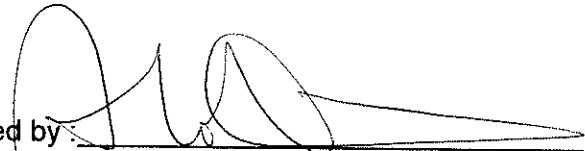
Report No. : 181172WA202235(1)

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**Results :**

Test parameters	Sample identification							
	DB1E M	DB1E M Dup	SP1E M	SP1E M Dup	KT1E S	KT1E S Dup	KT1E B	KT1E B Dup
1. Biochemical oxygen demand, mg/L	4.5	4.5	4.0	4.0	4.0	4.5	4.5	5.0
2. Total Kjeldahl nitrogen content, mg/L	2.4	2.4	2.8	3.0	3.6	3.6	2.9	3.3
3. Total nitrogen content, mg/L	5.7	5.6	4.5	4.8	6.6	6.6	5.7	6.8
4. Ammonical nitrogen content, mg/L	2.4	2.0	2.2	2.5	1.6	1.9	2.1	2.1
5. Total Inorganic nitrogen, mg/L	5.6	5.2	4.0	4.3	4.6	4.9	4.9	5.6
6. Total phosphorus content, mgP/L	0.19	0.21	0.49	0.46	0.44	0.45	0.62	0.66
7. E. coli count, cfu/100ml	2 (estimated)	3 (estimated)	$1.1 \times 10^4$ (estimated)	$8.5 \times 10^3$	$9.5 \times 10^3$	$7.0 \times 10^3$	$8.8 \times 10^3$	$8.3 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.3°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 01/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 02/12/2020 16:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

\*\* End of Report \*\*

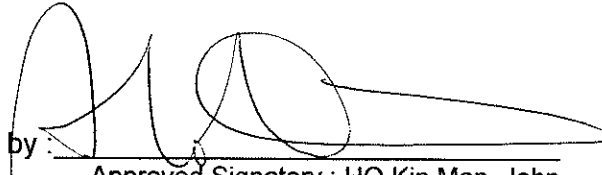
Note : This report refers only to the sample(s) tested.



**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

1. Biochemical oxygen demand, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1.5	<1.5	-	2.88	2.74	4.98
1.5	<1.5	-	3.03	2.85	6.12
2. Total Kjeldahl nitrogen content, mg/L (Colorimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.05	<0.05	100.70	2.04	1.99	2.48
0.05	<0.05	93.10	3.17	3.08	2.88
3. Total Kjeldahl nitrogen content, mg/L (Titrimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
5	<5	-	-	-	-

Certified by : 

Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories

Date : 15/1/2024

*Note : This report refers only to the sample(s) tested.*

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**


4. Ammonical nitrogen content, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.02	<0.02	105.55	1.83	1.91	4.28
0.02	<0.02	104.44	1.36	1.23	10.0

5. Total phosphorus content, mgP/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.01	<0.01	103.70	0.49	0.50	2.02
0.01	<0.01	99.36	0.47	0.46	2.15

6. E. coli count, cfu/100ml					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1	<1	-	$7.5 \times 10^3$	$7.0 \times 10^3$	6.90
1	<1	-	$4.4 \times 10^3$	$4.7 \times 10^3$	6.59

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202253



Page 1 of 2

**Test Report on Analysis of Water****Information Supplied by Client**

Client : Drainage Services Department

Client's address : -

Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Sample description : Fifty samples of water taken by the staff of FTS on 03/12/2020

Client sample ID : Refer to results pages

Test required : Total suspended solids dried at 103°C - 105°C

**Laboratory Information**

Lab. sample ID : WA202253/1-50

Date of receipt of sample : 03/12/2020

Date test commenced : 04/12/2020

Date test completed : 05/12/2020

Test method used : APHA 17ed. 2540D

*Note : This report refers only to the sample(s) tested.*

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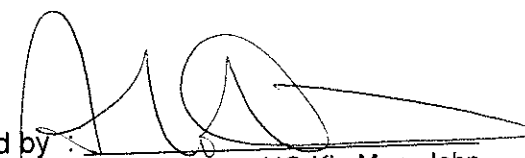
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**Results :**

Sample identification	Test result	
	Total suspended solids dried at 103°C – 105°C, mg/L	
1. M1F M		53
2. M1F M Dup		52
3. M2F M		41
4. M2F M Dup		41
5. E1F S		35
6. E1F S Dup		35
7. E1F B		39
8. E1F B Dup		39
9. E2aF M		52
10. E2aF M Dup		52
11. E3aF M		42
12. E3aF M Dup		41
13. E4F M		71
14. E4F M Dup		71
15. E5aF M		50
16. E5aF M Dup		49
17. DB1F M		34
18. DB1F M Dup		34
19. SP1F M		48
20. SP1F M Dup		47
21. KT1F M		77
22. KT1F M Dup		77

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :


 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021

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**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
23. M1E M	42
24. M1E M Dup	42
25. M2E M	43
26. M2E M Dup	40
27. E1E S	32
28. E1E S Dup	32
29. E1E B	35
30. E1E B Dup	36
31. E2aE M	54
32. E2aE M Dup	54
33. E3aE M	34
34. E3aE M Dup	35
35. E4E M	48
36. E4E M Dup	48
37. E5aE S	42
38. E5aE S Dup	41
39. E5aE B	61
40. E5aE B Dup	60
41. DB1E M	42
42. DB1E M Dup	41
43. SP1E M	38
44. SP1E M Dup	39

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date

15/11/2021

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**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
45. KT1E M	37
46. KT1E M Dup	37
47. M3F M	46
48. M3F M Dup	45
49. M3E M	41
50. M3E M Dup	40

Remark: Disclaimer: Sampling is out of scope of accreditation.

 Certified by : 

 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/11/2021

**\*\*End of Report\*\***
*Note : This report refers only to the sample(s) tested.*


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**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

Total suspended solids dried at 103°C – 105°C, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1 mg/L	<1	99.70	41.3	41.3	0.00
	<1	100.90	46.3	47.7	2.98
	<1	100.26	53.8	53.7	0.19
	<1	101.10	41.0	41.7	1.69
	<1	99.20	46.3	44.3	4.42

Certified by :   
Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories  
Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202253(1)



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**Test Report on Analysis of Water**

**Information Supplied by Client**

Client : Drainage Services Department  
 Client's address : -  
 Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1  
 Sample description : Thirty-eight samples of water taken by the staff of FTS on 03/12/2020  
 Client sample ID : Refer to result pages  
 Tests required : Biochemical oxygen demand  
 Total Kjeldahl Nitrogen content  
 Total Nitrogen content  
 Ammonical Nitrogen content  
 Total Inorganic Nitrogen  
 Total phosphorus content  
 E. coli count

**Laboratory Information**

Lab. sample ID :	Chemical tests	Microbiological tests
	WA202253/5-22, 27-46	WA202253/5B-22B, 27B-46B

Sample condition :		Chemical tests	Microbiological tests
	Container	Thirty-eight 2 L plastic bottles and thirty-eight 0.18 mL plastic bottles	Thirty-eight sterilized 250 ml plastic bottles with thiosulphate added
	Appearance	Colorless	
	Temperature	Cooled	

Date of receipt of sample : 03/12/2020  
 Date test commenced : 03/12/2020  
 Date test completed : 09/12/2020

*Note : This report refers only to the sample(s) tested.*

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Test methods used : Biochemical oxygen demand  
*BS 6068: Section 2.14: 1990*

Total Kjeldahl Nitrogen content  
*In house method E-T-037 & APHA 18ed. 4500-N<sub>org</sub> B & 4500-NH<sub>3</sub>E*

Total Nitrogen content  
*By Calculation*

Ammonical Nitrogen content  
*In house method E-T-095 Segmented flow-salicylate method*

Total Inorganic Nitrogen  
*By Calculation*

Total phosphorus content  
*APHA, 17th edition, 4500-PB5 (Digestion) &  
In house method E-T-056 (Determination)*

E. coli count  
*The Bacteriological Examination of Drinking Water Supplies  
1982, DoE (1983) Membrane Filtration Procedure: Sections 7.8,  
7.9.4.2 Bacterial Confirmation: Section 7.9.4.4 & in-situ urease  
test*

*Note : This report refers only to the sample(s) tested.*





























Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement											Laboratory Analysis																										
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)		BOD <sub>5</sub> (mg/L)		UIA (mg/L-N)		Total Kjeldahl Nitrogen (mg/L-N)		Total Nitrogen (mg/L-N)		Ammonical Nitrogen (mg/L)		Total Inorganic nitrogen (mg/L)		Total Phosphorus (mg/L)		E.coli (cfu/100mL)							
										Depth Ave.	Depth Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	S & M Ave.	Value	Ave.	Depth Ave.	Depth Ave.	Value	Ave.	Depth Ave.	Depth Ave.	Value	Ave.	Depth Ave.	Depth Ave.	Value	Ave.	Depth Ave.	Depth Ave.	Value	Ave.	Depth Ave.	Depth Ave.					
M1	15/12/2020	Mid-Flood	Fine	Moderate	09:50	1.9	S		1	0.339	70.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA											
M1	15/12/2020	Mid-Flood	Fine	Moderate	09:50	1.9	M	0.95	1			8.12	8.12	10.74	10.75	18.84	18.81	73.1	72.4	6.34	6.20	6.27	22.7	22.7	22.7	36	36	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA									
M1	15/12/2020	Mid-Flood	Fine	Moderate	09:50	1.9	M	0.95	2			8.11	8.12	10.75	10.75	18.77	18.81	71.7	72.4	6.20	6.27	6.27	22.7	22.7	22.7	36	36	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA								
M1	15/12/2020	Mid-Flood	Fine	Moderate	09:50	1.9	B		1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA										
M2	15/12/2020	Mid-Flood	Fine	Moderate	09:55	1.8	S		1	0.273	64.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA									
M2	15/12/2020	Mid-Flood	Fine	Moderate	09:55	1.8	M	0.9	1			8.14	8.14	10.29	10.29	19.13	19.15	62.5	62.1	5.33	5.34	5.34	31.5	31.9	31.7	43	44	44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA								
M2	15/12/2020	Mid-Flood	Fine	Moderate	09:55	1.8	M	0.9	2			8.13	8.14	10.28	10.29	19.16	19.15	61.7	62.1	5.34	5.34	5.34	31.9	31.9	31.7	44	44	44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
M3	15/12/2020	Mid-Flood	Fine	Moderate	10:15	0.2	S		1	0.000	104.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA								
M3	15/12/2020	Mid-Flood	Fine	Moderate	10:15	0.2	M	0.1	1			7.52	7.53	10.40	10.40	20.77	20.78	49.8	49.7	4.20	4.18	4.19	119.9	119.1	119.1	180	185	185	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
M3	15/12/2020	Mid-Flood	Fine	Moderate	10:15	0.2	M	0.1	2			7.53	7.53	10.40	10.40	20.79	20.78	49.6	49.7	4.18	4.18	4.19	118.2	119.1	119.1	190	185	185	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
E1	15/12/2020	Mid-Flood	Fine	Moderate	09:18	4.7	S		1	0.064	171.4	8.17	8.17	14.95	14.97	17.04	17.12	81.8	81.7	7.12	7.09	7.11	27.8	27.8	27.8	55	55	55	<1.5	1.5	0.049	0.043	2.6	2.3	4.6	4.2	1.20	1.05	3.2	2.9	0.39	0.41	5000	4848			
E1	15/12/2020	Mid-Flood	Fine	Moderate	09:18	4.7	S	1	2			8.16	8.17	14.99	14.97	17.20	17.12	81.5	81.7	7.09	7.11	7.11	27.8	27.8	27.8	54	55	55	<1.5	1.5	0.036	0.031	2.0	2.0	3.7	3.7	0.89	0.89	2.6	2.6	0.42	0.41	4700	4848			
E1	15/12/2020	Mid-Flood	Fine	Moderate	09:18	4.7	M	1	2			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
E1	15/12/2020	Mid-Flood	Fine	Moderate	09:18	4.7	B	3.7	1	8.14	8.13	15.90	15.87	17.54	17.53	77.2	77.0	6.71	6.66	6.69	49.9	49.4	48.8	75	75	75	<1.5	1.5	0.033	0.032	1.9	2.0	3.4	3.5	0.82	0.83	2.3	2.3	0.33	0.32	5500	5191					
E2a	15/12/2020	Mid-Flood	Fine	Moderate	08:54	1.7	S		1	0.109	311.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
E2a	15/12/2020	Mid-Flood	Fine	Moderate	08:54	1.7	M	0.85	1			7.74	7.75	19.97	19.94	18.32	18.33	84.4	84.4	7.01	7.02	7.02	21.5	21.5	21.5	34	34	34	<1.5	1.5	0.010	0.010	1.4	1.4	2.7	2.6	0.59	0.57	1.9	1.7	0.25	0.22	490	360	420	420	
E2a	15/12/2020	Mid-Flood	Fine	Moderate	08:54	1.7	B	1	2			7.75	7.75	19.91	19.94	18.33	18.33	84.3	84.3	7.02	7.02	7.02	21.5	21.5	21.5	34	34	34	<1.5	1.5	0.010	0.010	1.4	1.4	2.6	2.6	0.57	0.57	1.7	1.7	0.22	0.22	360	360	420	420	
E2a	15/12/2020	Mid-Flood	Fine	Moderate	08:54	1.7	B	1	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
E3a	15/12/2020	Mid-Flood	Fine	Moderate	08:28	1.9	S		1	0.235	211.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
E3a	15/12/2020	Mid-Flood	Fine	Moderate	08:28	1.9	M	0.95	1			7.69	7.65	25.48	25.45	19.03	19.04	95.8	95.8	7.69	7.65	7.65	13.2	13.3	13.3	22	23	23	<1.5	1.5	0.002	0.002	0.6	0.6	1.2	1.1	0.14	0.16	0.7	0.7	0.15	0.15	0.15	24	24	24	24
E3a	15/12/2020	Mid-Flood	Fine	Moderate	08:28	1.9	M	0.95	2			7.61	7.65	25.42	25.45	19.04	19.04	95.7	95.7	7.61	7.65	7.65	13.3	13.3	13.3	23	23	23	<1.5	1.5	0.002	0.002	0.6	0.6	1.0	1.0	0.17	0.17	0.6	0.6	0.14	0.14	0.14	24	24	24	24
E4	15/12/2020	Mid-Flood	Fine	Moderate	09:06	1.8	S		1	0.128	59.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
E4	15/12/2020	Mid-Flood	Fine	Moderate	09:06	1.8	M	0.9	1			8.25	8.25	15.14	15.16	17.07	17.10	85.5	85.2	7.48	7.46	7.46	27.6	28.1	28.1	46	46	46	<1.5	1.5	0.041	0.042	1.6	1.7	3.3	3.2	0.83	0.87	2.5	2.4	0.29	0.27	4200	3779	3779		
E4	15/12/2020	Mid-Flood	Fine	Moderate	09:06	1.8	M	0.9	2			8.24	8.25	15.17	15.16	17.12	17.10	84.9	85.2	7.43	7.43	7.43	28.5	28.5	28.5	45	46	46	<1.5	1.5	0.044	0.042	1.8	1.7	3.1	3.1	0.91	0.91	2.2	2.2	0.25	0.25	3400	3400	3779	3779	
E5a	15/12/2020	Mid-Flood	Fine	Moderate	09:43	1.8	S		1	0.164	24.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
E5a	15/12/2020	Mid-Flood	Fine	Moderate	09:43	1.8	M	0.9	1			8.16	8.17	10.72	10.73	18.51	18.51	74.4	73.8	6.44	6.39	6.39	25.9	25.9	25.9	43	44	44	<1.5	1.5	0.059	0.058	3.1	3.0	5.7	5.5	1.30	1.25	3.9	3.8	0.33	0.33	0.33	5000	4950	4950	
E5a	15/12/2020	Mid-Flood	Fine	Moderate	09:43	1.8	M	0.9	2			8.18	8.17	10.73	10.73	18.50	18.51	73.2	73.8	6.34	6.34	6.34	25.9	25.9	25.9	44	44	44	<1.5	1.5	0.057	0.057	2.9	2.9	5.3	5.3	1.20	1.20	3.6	3.6	0.32	0.32	0.32	4900	4900	4950	
DB1	15/12/2020	Mid-Flood	Fine	Moderate	08:09	2.0	S		1	0.217	74.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
DB1	15/12/2020	Mid-Flood	Fine	Moderate	08:09	2.0	M	1	2			7.96	7.97	26.85	26.85	19.23	19.23	97.2	97.2	7.66	7.66	7.66	10.1	10.1	10.1	25	25	25	<1.5	1.5	0.003	0.003	0.7	0.7	1.1	1.2	0.10	0.11	0.5	0.5	0.12	0.12	0.12	27	27	27	
DB1	15/12/2020	Mid-Flood	Fine	Moderate	08:09	2.0	B	1	2			7.97	7.97	26.84	26.84	19.23	19.23	97.1	97.1	7.65	7.65	7.65	10.1	10.1	10.1	24	24	24	<1.5	1.5	0.003	0.003	0.8	0.8	1.2	1.2	0.11	0.11	0.5	0.5	0.12	0.12	0.12	27	27	27	
SP1	15/12/2020	Mid-Flood	Fine	Moderate	10:03	2.0	S		1	0.058	221.4	NA																																			







Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement										Laboratory Analysis																						
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)		BOD <sub>5</sub> (mg/L)		UIA (mg/L-N)		Total Kjeldahl Nitrogen (mg/L-N)		Total Nitrogen (mg/L-N)		Ammonical Nitrogen (mg/L)		Total Inorganic nitrogen (mg/L)		Total Phosphorus (mg/L)		E.coli (cfu/100mL)		
										Depth Ave.	Depth Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	S & M Ave.	Value	Ave.	Depth Ave.	Depth Ave.	Value	Ave.	Depth Ave.	Depth Ave.	Value	Ave.	Depth Ave.	Depth Ave.	Value	Ave.	Depth Ave.	Depth Ave.	Value	Ave.	Depth Ave.	Depth Ave.
M1	19/12/2020	Mid-Flood	Fine	Moderate	12:13	1.9	S		1	0.109	327.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
M1	19/12/2020	Mid-Flood	Fine	Moderate	12:13	1.9	M	0.95	1			7.07	7.08	9.72	9.73	16.57	16.56	42.3	42.3	3.69	3.69	3.69	3.69	36.1	36.1	36.1	36.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
M1	19/12/2020	Mid-Flood	Fine	Moderate	12:13	1.9	M	0.95	2			7.08	7.08	9.73	9.73	16.54	16.54	42.2	42.3	3.68	3.69	3.68	3.69	36.1	36.1	36.1	36.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
M1	19/12/2020	Mid-Flood	Fine	Moderate	12:13	1.9	B		1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
M2	19/12/2020	Mid-Flood	Fine	Moderate	12:18	2.4	S		1	0.074	58.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
M2	19/12/2020	Mid-Flood	Fine	Moderate	12:18	2.4	M	1.2	1			7.12	7.12	9.47	9.46	16.35	16.48	45.5	45.2	4.13	4.10	4.10	4.10	30.0	29.9	29.9	29.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
M2	19/12/2020	Mid-Flood	Fine	Moderate	12:18	2.4	M	1.2	2			7.11	7.12	9.45	9.46	16.61	16.48	44.8	45.2	4.07	4.10	4.10	4.10	29.7	29.9	29.9	29.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
M2	19/12/2020	Mid-Flood	Fine	Moderate	12:18	2.4	B		1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
M2	19/12/2020	Mid-Flood	Fine	Moderate	12:18	2.4	B		2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
M3	19/12/2020	Mid-Flood	Fine	Moderate	11:48	0.2	S		1	0.000	27.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
M3	19/12/2020	Mid-Flood	Fine	Moderate	11:48	0.2	M	0.1	1			7.65	7.42	1.19	1.19	20.67	20.86	72.1	71.1	6.42	6.31	6.31	6.31	28.0	29.0	29.0	29.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
M3	19/12/2020	Mid-Flood	Fine	Moderate	11:48	0.2	M	0.1	2			7.18	7.42	1.18	1.18	21.05	20.86	70.0	70.0	6.20	6.31	6.31	6.31	30.0	30.0	30.0	30.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
M3	19/12/2020	Mid-Flood	Fine	Moderate	11:48	0.2	B		1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
M3	19/12/2020	Mid-Flood	Fine	Moderate	11:48	0.2	B		2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
E1	19/12/2020	Mid-Flood	Fine	Moderate	11:51	4.6	S		1	0.102	57.2	7.15	7.14	10.31	10.31	16.98	16.99	49.0	49.0	4.44	4.43	4.43	4.43	19.4	19.4	19.4	19.4	0.016	0.013	0.013	3.9	3.8	4.5	4.3	3.80	3.30	4.4	3.8	0.48	0.48	6500	7029
E1	19/12/2020	Mid-Flood	Fine	Moderate	11:51	4.6	S		2			7.13	7.13	10.30	10.31	16.99	16.99	48.9	49.0	4.42	4.43	4.43	4.43	19.4	19.4	19.4	19.4	0.011	0.013	0.013	3.6	3.8	4.0	4.3	2.80	3.30	3.2	3.8	0.47	0.48	7600	7029
E1	19/12/2020	Mid-Flood	Fine	Moderate	11:51	4.6	M		1			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.012	NA	0.012	NA	4.0	NA	NA	NA	NA	NA	NA	NA	0.47	NA
E1	19/12/2020	Mid-Flood	Fine	Moderate	11:51	4.6	M		2	7.10	7.10	10.61	10.62	16.83	16.83	40.7	40.6	3.67	3.66	3.66	3.66	22.2	22.3	22.3	22.3	0.010	0.010	0.010	4.3	4.3	4.7	4.8	2.60	2.70	3.0	3.2	0.45	0.46	5900	6380		
E2a	19/12/2020	Mid-Flood	Fine	Moderate	11:34	2.3	S		1	0.194	144.2	7.10	7.10	10.62	10.62	16.83	16.83	40.5	40.6	3.64	3.66	3.66	3.66	22.3	22.3	22.3	22.3	0.010	0.010	0.010	4.3	4.3	4.8	4.8	2.80	2.80	3.3	3.2	0.46	0.46	6900	6380
E2a	19/12/2020	Mid-Flood	Fine	Moderate	11:34	2.3	S		2			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
E2a	19/12/2020	Mid-Flood	Fine	Moderate	11:34	2.3	M	1.15	1			7.28	7.29	8.86	8.85	16.36	16.36	77.4	77.5	7.12	7.13	7.13	7.13	23.4	23.5	23.5	23.5	0.008	0.007	0.007	1.9	2.1	2.5	2.6	1.40	1.35	2.0	1.9	0.29	0.27	5100	5932
E2a	19/12/2020	Mid-Flood	Fine	Moderate	11:34	2.3	M	1.15	2	7.29	7.29	8.84	8.85	16.35	16.36	77.5	77.5	7.13	7.13	7.13	7.13	23.5	23.5	23.5	23.5	0.007	0.007	0.007	2.7	2.6	2.7	2.6	1.30	1.35	1.8	1.9	0.27	0.28	6900	5932		
E2a	19/12/2020	Mid-Flood	Fine	Moderate	11:34	2.3	B		1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
E2a	19/12/2020	Mid-Flood	Fine	Moderate	11:34	2.3	B		2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
E3a	19/12/2020	Mid-Flood	Fine	Moderate	11:10	1.1	S		1	0.419	121.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
E3a	19/12/2020	Mid-Flood	Fine	Moderate	11:10	1.1	S		2			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E3a	19/12/2020	Mid-Flood	Fine	Moderate	11:10	1.1	M	0.55	1			7.54	7.53	19.54	19.55	16.20	16.21	95.3	95.2	8.34	8.33	8.33	8.33	19.9	19.9	19.9	19.9	0.003	0.003	0.003	0.6	0.6	0.8	0.9	0.31	0.32	0.6	0.6	0.18	0.18	200	173
E3a	19/12/2020	Mid-Flood	Fine	Moderate	11:10	1.1	M	0.55	2	7.52	7.52	19.55	19.55	16.22	16.21	95.1	95.1	8.32	8.33	8.33	8.33	19.8	19.8	19.9	19.9	0.003	0.003	0.003	0.7	0.6	0.9	0.9	0.32	0.32	0.6	0.6	0.18	0.18	150	173		
E3a	19/12/2020	Mid-Flood	Fine	Moderate	11:10	1.1	B		1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
E3a	19/12/2020	Mid-Flood	Fine	Moderate	11:10	1.1	B		2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
E4	19/12/2020	Mid-Flood	Fine	Moderate	11:43	2.8	S		1	0.087	17.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
E4	19/12/2020	Mid-Flood	Fine	Moderate	11:43	2.8	S		2			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E4	19/12/2020	Mid-Flood	Fine	Moderate	11:43	2.8	M	1.4	1			7.26	7.27	8.43	8.44	16.97	16.97	72.4	72.0	6.58	6.54	6.54	6.54	29.5	29.5	29.5	29.5	0.008	0.008	0.008	2.9	2.6	3.6	3.3	1.50	1.50	2.2	2.2	0.26	0.30	6000	5639
E4	19/12/2020	Mid-Flood	Fine	Moderate	11:43	2.8	M	1.4	2	7.28	7.28	8.44	8.44																													

















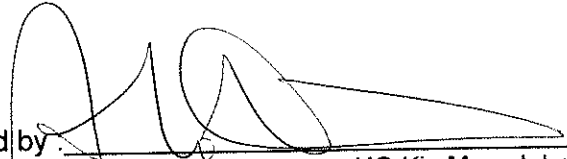
Report No. : 181172WA202253(1)

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**Results :**

Test parameters	Sample identification							
	E1F S	E1F S Dup	E1F B	E1F B Dup	E2aF M	E2aF M Dup	E3aF M	E3aF M Dup
1. Biochemical oxygen demand, mg/L	2.0	3.0	2.5	3.0	1.5	2.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	2.3	2.5	2.6	2.9	2.5	2.7	0.79	0.79
3. Total nitrogen content, mg/L	4.7	5.2	4.4	5.4	5.5	6.0	1.9	1.9
4. Ammonical nitrogen content, mg/L	1.9	1.9	2.2	1.8	1.2	1.2	0.32	0.3
5. Total Inorganic nitrogen, mg/L	4.2	4.5	4.0	4.4	4.2	4.4	1.5	1.4
6. Total phosphorus content, mgP/L	0.33	0.32	0.48	0.49	0.22	0.25	0.39	0.34
7. E. coli count, cfu/100ml	3.8 x 10 <sup>3</sup>	3.5 x 10 <sup>3</sup>	4.0 x 10 <sup>3</sup>	4.5 x 10 <sup>3</sup>	4.3 x 10 <sup>3</sup>	4.1 x 10 <sup>3</sup>	3.8 x 10	4.1 x 10

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 03/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 04/12/2020 16:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/1/2021

Note : This report refers only to the sample(s) tested.


Report No. : 181172WA202253(1)

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**Results :**

Test parameters	Sample identification							
	E4F M	E4F M Dup	E5aF M	E5aF M Dup	DB1F M	DB1F M Dup	SP1F M	SP1F M Dup
1. Biochemical oxygen demand, mg/L	3.0	3.5	4.0	3.0	1.5	<1.5	3.5	3.5
2. Total Kjeldahl nitrogen content, mg/L	1.4	1.6	2.4	2.1	2.7	2.6	2.9	3.3
3. Total nitrogen content, mg/L	4.4	4.5	4.1	3.6	4.1	3.8	3.9	4.2
4. Ammonical nitrogen content, mg/L	1.3	1.1	2.1	1.9	2.5	2.5	2.4	2.7
5. Total Inorganic nitrogen, mg/L	4.2	4.0	3.7	3.4	3.9	3.7	3.3	3.6
6. Total phosphorus content, mgP/L	0.49	0.44	0.38	0.35	0.26	0.25	0.79	0.78
7. E. coli count, cfu/100ml	$4.8 \times 10^3$	$3.4 \times 10^3$	$3.6 \times 10^3$	$1.2 \times 10^4$	$5.2 \times 10$	$5.5 \times 10$	$1.3 \times 10^4$	$6.5 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 03/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 04/12/2020 16:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories


Date : 15/11/2021

Note : This report refers only to the sample(s) tested.

**Results :**

Test parameters	Sample identification							
	KT1F M	KT1F M Dup	E1E S	E1E S Dup	E1E B	E1E B Dup	E2aE M	E2aE M Dup
1. Biochemical oxygen demand, mg/L	4.0	3.5	2.5	3.0	4.5	3.0	2.5	3.5
2. Total Kjeldahl nitrogen content, mg/L	3.0	3.6	2.0	2.0	1.9	2.0	2.2	1.9
3. Total nitrogen content, mg/L	4.4	5.1	4.6	5.2	5.0	4.3	4.6	4.4
4. Ammonical nitrogen content, mg/L	1.8	2.2	1.3	1.2	1.4	1.0	1.0	0.82
5. Total Inorganic nitrogen, mg/L	3.2	3.7	4.0	4.4	4.5	3.4	3.5	3.4
6. Total phosphorus content, mgP/L	0.84	0.83	0.44	0.49	0.46	0.49	0.57	0.54
7. E. coli count, cfu/100ml	$5.7 \times 10^3$	$7.3 \times 10^3$	$3.2 \times 10^3$	$3.8 \times 10^3$	$4.2 \times 10^3$	$3.3 \times 10^3$	$4.9 \times 10^3$	$3.1 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 03/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 04/12/2020 16:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021


Note : This report refers only to the sample(s) tested.



**Results :**

Test parameters	Sample identification							
	E3aE M	E3aE M Dup	E4E M	E4E M Dup	E5aE S	E5aE S Dup	E5aE B	E5aE B Dup
1. Biochemical oxygen demand, mg/L	2.0	<1.5	3.0	3.5	3.5	3.5	3.0	3.0
2. Total Kjeldahl nitrogen content, mg/L	0.96	0.80	2.0	2.2	3.7	3.6	3.2	3.3
3. Total nitrogen content, mg/L	2.1	1.9	4.6	4.4	6.0	5.9	5.3	5.7
4. Ammonical nitrogen content, mg/L	0.25	0.25	0.91	0.96	2.4	2.2	2.0	1.8
5. Total Inorganic nitrogen, mg/L	1.4	1.3	3.5	3.2	4.6	4.4	4.1	4.1
6. Total phosphorus content, mgP/L	0.18	0.20	0.45	0.49	0.36	0.34	0.42	0.41
7. E. coli count, cfu/100ml	5.5 x 10	2.6 x 10	3.4 x 10 <sup>3</sup>	3.6 x 10 <sup>3</sup>	3.2 x 10 <sup>3</sup>	3.1 x 10 <sup>3</sup>	4.7 x 10 <sup>3</sup>	4.0 x 10 <sup>3</sup>

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 03/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 04/12/2020 16:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

Note : This report refers only to the sample(s) tested.


Report No. : 181172WA202253(1)

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**Results :**

Test parameters	Sample identification					
	DB1E M	DB1E M Dup	SP1E M	SP1E M Dup	KT1E M	KT1E M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	2.5	3.0	3.0	3.0
2. Total Kjeldahl nitrogen content, mg/L	0.68	0.42	3.7	3.6	3.3	3.1
3. Total nitrogen content, mg/L	2.2	2.3	4.4	4.4	5.6	5.4
4. Ammonical nitrogen content, mg/L	0.19	0.18	2.6	2.5	1.5	1.8
5. Total Inorganic nitrogen, mg/L	1.7	2.0	3.3	3.3	3.9	4.1
6. Total phosphorus content, mgP/L	0.21	0.21	0.33	0.35	0.40	0.47
7. E. coli count, cfu/100ml	6 (estimated)	1 (estimated)	$5.4 \times 10^3$	$5.4 \times 10^3$	$3.9 \times 10^3$	$4.6 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
 i. Samples taken by staff of FTS on 03/12/2020  
 ii. Samples stored at 0-4°C refrigerator prior to testing.  
 iii. Date and hour of commencing BOD<sub>5</sub> test : 04/12/2020 16:00  
 iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
 v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
 vi. The samples were incubated at 19-21°C for 5 days

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

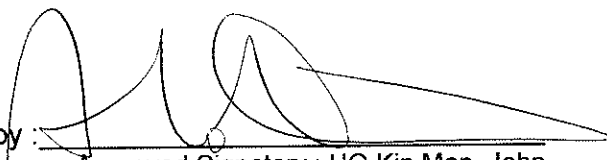
\*\* End of Report \*\*

Note : This report refers only to the sample(s) tested.

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

1. Biochemical oxygen demand, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1.5	<1.5	-	2.86	2.89	1.04
1.5	<1.5	-	2.84	2.87	1.05
2. Total Kjeldahl nitrogen content, mg/L (Colorimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.05	<0.05	104.90	1.91	1.80	5.93
0.05	<0.05	97.40	3.01	3.10	2.95
3. Total Kjeldahl nitrogen content, mg/L (Titrimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
5	<5	-	-	-	-

Certified by :

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

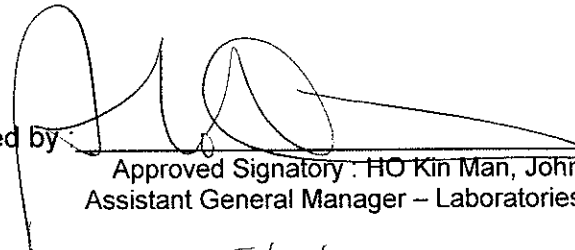
Date :

15/1/2021

*Note : This report refers only to the sample(s) tested.*

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

4. Ammonical nitrogen content, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.02	<0.02	84.58	2.02	2.10	3.88
0.02	<0.02	117.25	0.60	0.54	10.5
5. Total phosphorus content, mgP/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.01	<0.01	103.90	0.52	0.52	0.00
0.01	<0.01	103.26	0.35	0.36	2.82
6. E. coli count, cfu/100ml					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1	<1	-	$2.4 \times 10^3$	$1.7 \times 10^3$	34.1
1	<1	-	$1.4 \times 10^3$	$1.0 \times 10^3$	33.3

Certified by:   
 Approved Signatory: HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date: 15/1/2021

Note: This report refers only to the sample(s) tested.

Report No. : 181172WA202260



Page 1 of 2

**Test Report on Analysis of Water****Information Supplied by Client**

Client : Drainage Services Department

Client's address : -

Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Sample description : Fifty samples of water taken by the staff of FTS on 05/12/2020

Client sample ID : Refer to results pages

Test required : Total suspended solids dried at 103°C - 105°C

**Laboratory Information**

Lab. sample ID : WA202260/1-50

Date of receipt of sample : 05/12/2020

Date test commenced : 06/12/2020

Date test completed : 08/12/2020

Test method used : APHA 17ed. 2540D

*Note : This report refers only to the sample(s) tested.*

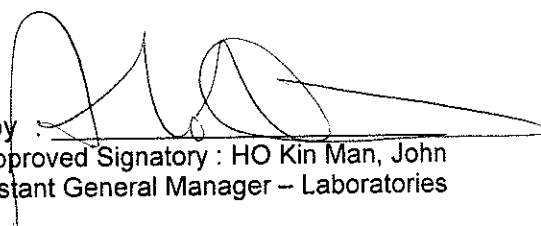
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**Results :**

Sample identification	Test result Total suspended solids dried at 103°C – 105°C, mg/L
1. M1F M	47
2. M1F M Dup	47
3. M2F M	37
4. M2F M Dup	37
5. E1F S	25
6. E1F S Dup	25
7. E1F B	32
8. E1F B Dup	34
9. E2aF M	40
10. E2aF M Dup	41
11. E3aF M	22
12. E3aF M Dup	22
13. E4F M	38
14. E4F M Dup	37
15. E5aF M	57
16. E5aF M Dup	59
17. DB1F M	20
18. DB1F M Dup	19
19. SP1F M	55
20. SP1F M Dup	56
21. KT1F M	28
22. KT1F M Dup	30

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :


 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2021

*Note : This report refers only to the sample(s) tested.*


Report No. : 181172WA202260

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**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
23. M1E M	29
24. M1E M Dup	30
25. M2E M	37
26. M2E M Dup	36
27. E1E S	42
28. E1E S Dup	43
29. E1E B	53
30. E1E B Dup	54
31. E2aE M	26
32. E2aE M Dup	24
33. E3aE M	16
34. E3aE M Dup	17
35. E4E M	29
36. E4E M Dup	31
37. E5aE S	58
38. E5aE S Dup	58
39. E5aE B	69
40. E5aE B Dup	69
41. DB1E M	88
42. DB1E M Dup	89
43. SP1E M	50
44. SP1E M Dup	52

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202260

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**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
45. KT1E M	45
46. KT1E M Dup	45
47. M3F M	43
48. M3F M Dup	42
49. M3E M	50
50. M3E M Dup	51

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by 

Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories

Date

: 15/1/2021

**\*\*End of Report\*\***

*Note : This report refers only to the sample(s) tested.*


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**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

Total suspended solids dried at 103°C – 105°C, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1 mg/L	<1	99.16	37.7	36.2	4.06
	<1	100.10	55.8	55.8	0.00
	<1	99.60	24.7	23.3	5.83
	<1	100.36	41.7	43.3	3.76
	<1	99.46	49.3	51.7	4.75

  
 Certified by : \_\_\_\_\_  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202260(1)



Page 1 of 7

**Test Report on Analysis of Water**

**Information Supplied by Client**

Client : Drainage Services Department  
 Client's address : -  
 Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1  
 Sample description : Thirty-eight samples of water taken by the staff of FTS on 05/12/2020  
 Client sample ID : Refer to result pages  
 Tests required : Biochemical oxygen demand  
 Total Kjeldahl Nitrogen content  
 Total Nitrogen content  
 Ammonical Nitrogen content  
 Total Inorganic Nitrogen  
 Total phosphorus content  
 E. coli count

**Laboratory Information**

Lab. sample ID :	Chemical tests	Microbiological tests
	WA202260/5-22, 27-46	WA202260/5B-22B, 27B-46B

Sample condition :	Chemical tests	Microbiological tests
Container	Thirty-eight 2 L plastic bottles and thirty-eight 0.18 mL plastic bottles	Thirty-eight sterilized 250 ml plastic bottles with thiosulphate added
Appearance	Colorless	
Temperature	Cooled	

Date of receipt of sample : 05/12/2020  
 Date test commenced : 05/12/2020  
 Date test completed : 13/12/2020

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202260(1)

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Test methods used : Biochemical oxygen demand  
*BS 6068: Section 2.14: 1990*

Total Kjeldahl Nitrogen content  
*In house method E-T-037 & APHA 18ed. 4500-N<sub>org</sub> B & 4500-NH<sub>3</sub>E*

Total Nitrogen content  
*By Calculation*

Ammonical Nitrogen content  
*In house method E-T-095 Segmented flow-salicylate method*

Total Inorganic Nitrogen  
*By Calculation*

Total phosphorus content  
*APHA, 17th edition, 4500-PB5 (Digestion) &  
In house method E-T-056 (Determination)*

E. coli count  
*The Bacteriological Examination of Drinking Water Supplies  
1982, DoE (1983) Membrane Filtration Procedure: Sections 7.8,  
7.9.4.2 Bacterial Confirmation: Section 7.9.4.4 & in-situ urease  
test*

*Note : This report refers only to the sample(s) tested.*

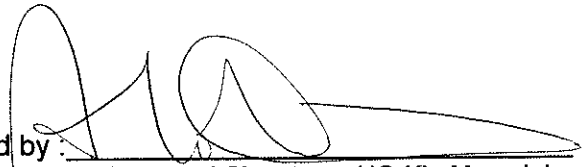
Report No. : 181172WA202260(1)

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**Results :**

Test parameters	Sample identification							
	E1F S	E1F S Dup	E1F B	E1F B Dup	E2aF M	E2aF M Dup	E3aF M	E3aF M Dup
1. Biochemical oxygen demand, mg/L	4.0	4.0	5.0	5.0	3.0	1.5	2.0	<1.5
2. Total Kjeldahl nitrogen content, mg/L	2.1	2.3	3.2	3.0	2.0	1.9	0.91	0.73
3. Total nitrogen content, mg/L	3.7	3.6	4.6	4.6	4.4	4.4	1.9	1.6
4. Ammonical nitrogen content, mg/L	2.1	2.1	1.3	1.6	0.76	0.6	0.45	0.45
5. Total Inorganic nitrogen, mg/L	3.6	3.4	2.8	3.1	3.2	3.1	1.5	1.3
6. Total phosphorus content, mgP/L	0.34	0.32	0.38	0.37	0.29	0.27	0.17	0.19
7. E. coli count, cfu/100ml	$1.4 \times 10^3$	$1.4 \times 10^3$	$1.6 \times 10^3$	$1.6 \times 10^3$	$1.9 \times 10^3$	$1.3 \times 10^3$	$9.8 \times 10$	$8.0 \times 10$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 3.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 05/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 05/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

Note : This report refers only to the sample(s) tested.


Report No. : 181172WA202260(1)

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**Results :**

Test parameters	Sample identification							
	E4F M	E4F M Dup	E5aF M	E5aF M Dup	DB1F M	DB1F M Dup	SP1F M	SP1F M Dup
1. Biochemical oxygen demand, mg/L	3.5	2.5	4.5	3.5	2.0	<1.5	5.0	4.5
2. Total Kjeldahl nitrogen content, mg/L	2.5	2.3	3.4	3.0	0.67	0.64	4.6	4.1
3. Total nitrogen content, mg/L	4.4	4.2	4.8	4.2	1.6	1.8	5.2	4.8
4. Ammonical nitrogen content, mg/L	1.3	1.4	1.8	1.8	0.28	0.26	1.5	1.7
5. Total Inorganic nitrogen, mg/L	3.1	3.3	3.2	3.0	1.2	1.4	2.1	2.4
6. Total phosphorus content, mgP/L	0.17	0.16	0.31	0.31	0.08	0.07	0.24	0.24
7. E. coli count, cfu/100ml	$8.0 \times 10^2$	$1.0 \times 10^3$	$3.3 \times 10^3$	$1.9 \times 10^3$	$2.4 \times 10$	$3.8 \times 10$	$3.1 \times 10^3$	$3.2 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 3.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 05/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 05/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

Note : This report refers only to the sample(s) tested.


Report No. : 181172WA202260(1)

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**Results :**

Test parameters	Sample identification							
	KT1F M	KT1F M Dup	E1E S	E1E S Dup	E1E B	E1E B Dup	E2aE M	E2aE M Dup
1. Biochemical oxygen demand, mg/L	5.0	4.0	3.5	3.0	4.0	3.0	2.5	1.5
2. Total Kjeldahl nitrogen content, mg/L	3.8	3.8	1.8	1.9	1.9	1.9	1.3	1.2
3. Total nitrogen content, mg/L	4.9	4.7	3.6	3.9	3.7	3.7	2.7	2.6
4. Ammonical nitrogen content, mg/L	2.7	2.7	0.57	0.75	0.53	0.53	0.72	0.76
5. Total Inorganic nitrogen, mg/L	3.8	3.6	2.5	2.7	2.3	2.4	2.2	2.2
6. Total phosphorus content, mgP/L	0.27	0.26	0.52	0.52	0.32	0.34	0.28	0.26
7. E. coli count, cfu/100ml	1.9 x 10 <sup>3</sup>	2.1 x 10 <sup>3</sup>	1.2 x 10 <sup>3</sup>	1.9 x 10 <sup>3</sup>	2.4 x 10 <sup>3</sup>	2.2 x 10 <sup>3</sup>	1.2 x 10 <sup>3</sup>	6.0 x 10 <sup>2</sup>

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.
2. Temperature of ice-box when samples being received were 3.1°C
3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.
4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.
5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.
6. Detailed information for BOD<sub>5</sub> test :
- Samples taken by staff of FTS on 05/12/2020
  - Samples stored at 0-4°C refrigerator prior to testing.
  - Date and hour of commencing BOD<sub>5</sub> test : 05/12/2020 17:00
  - The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.
  - Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.
  - The samples were incubated at 19-21°C for 5 days

Certified by : 

Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories

Date : 15/11/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202260(1)

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**Results :**

Test parameters	Sample identification							
	E3aE M	E3aE M Dup	E4E M	E4E M Dup	E5aE S	E5aE S Dup	E5aE B	E5aE B Dup
1. Biochemical oxygen demand, mg/L	2.0	<1.5	3.5	3.0	3.0	3.5	3.0	3.5
2. Total Kjeldahl nitrogen content, mg/L	0.53	0.52	1.4	1.7	2.8	3.0	3.4	2.7
3. Total nitrogen content, mg/L	1.1	1.1	2.7	3.3	4.1	4.3	4.8	4.1
4. Ammonical nitrogen content, mg/L	0.24	0.24	0.88	0.86	1.0	1.1	0.94	1.3
5. Total Inorganic nitrogen, mg/L	0.81	0.83	2.1	2.5	2.3	2.3	2.3	2.7
6. Total phosphorus content, mgP/L	0.11	0.13	0.25	0.23	0.31	0.29	0.33	0.32
7. E. coli count, cfu/100ml	1.4 x 10	1.8 x 10	1.0 x 10 <sup>3</sup>	1.1 x 10 <sup>3</sup>	1.8 x 10 <sup>3</sup>	1.2 x 10 <sup>3</sup>	2.4 x 10 <sup>3</sup>	1.2 x 10 <sup>3</sup>

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 3.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 05/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 05/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

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 Assistant General Manager – Laboratories

Date :

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*Note : This report refers only to the sample(s) tested.*

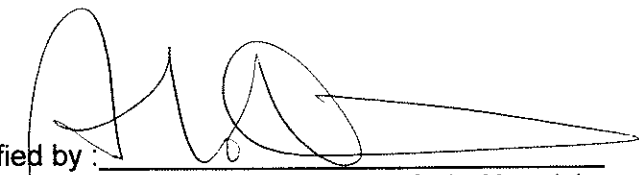
Report No. : 181172WA202260(1)

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**Results :**

Test parameters	Sample identification					
	DB1E M	DB1E M Dup	SP1E M	SP1E M Dup	KT1E M	KT1E M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	4.0	3.5	3.0	3.0
2. Total Kjeldahl nitrogen content, mg/L	0.40	0.36	4.1	4.4	3.2	3.1
3. Total nitrogen content, mg/L	1.4	1.4	4.5	4.8	4.3	4.2
4. Ammonical nitrogen content, mg/L	0.24	0.24	2.7	2.5	1.0	0.96
5. Total Inorganic nitrogen, mg/L	1.3	1.3	3.1	2.9	2.1	2.1
6. Total phosphorus content, mgP/L	0.09	0.09	0.39	0.39	0.38	0.35
7. E. coli count, cfu/100ml	3 (estimated)	4 (estimated)	$2.0 \times 10^3$	$1.4 \times 10^3$	$1.7 \times 10^3$	$1.2 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 3.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
 i. Samples taken by staff of FTS on 05/12/2020  
 ii. Samples stored at 0-4°C refrigerator prior to testing.  
 iii. Date and hour of commencing BOD<sub>5</sub> test : 05/12/2020 17:00  
 iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
 v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
 vi. The samples were incubated at 19-21°C for 5 days

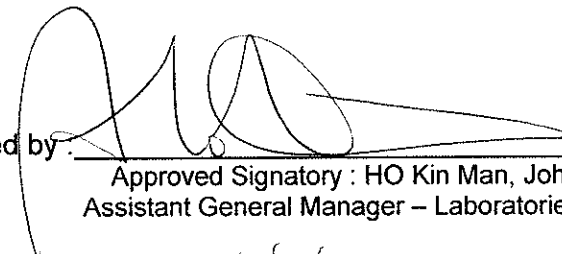
Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

**\*\* End of Report \*\***
*Note : This report refers only to the sample(s) tested.*



**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

1. Biochemical oxygen demand, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1.5	<1.5	-	2.86	2.89	1.04
1.5	<1.5	-	2.84	2.87	1.05
2. Total Kjeldahl nitrogen content, mg/L (Colorimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.05	<0.05	104.90	1.91	1.80	5.93
0.05	<0.05	97.40	3.01	3.10	2.95
3. Total Kjeldahl nitrogen content, mg/L (Titrimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
5	<5	-	-	-	-

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

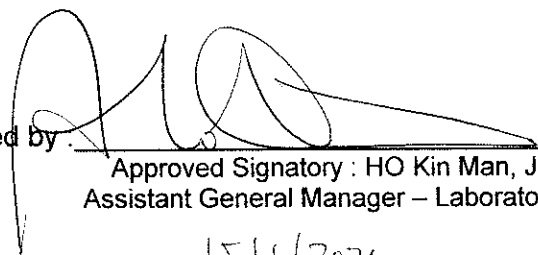
4. Ammonical nitrogen content, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.02	<0.02	84.58	2.02	2.10	3.88
0.02	<0.02	117.25	0.60	0.54	10.5

5. Total phosphorus content, mgP/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.01	<0.01	103.90	0.52	0.52	0.00
0.01	<0.01	103.26	0.35	0.36	2.82

6. E. coli count, cfu/100ml					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1	<1	-	2.4 x 10 <sup>3</sup>	1.7 x 10 <sup>3</sup>	34.1
1	<1	-	1.4 x 10 <sup>3</sup>	1.0 x 10 <sup>3</sup>	33.3

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202290



Page 1 of 2

**Test Report on Analysis of Water****Information Supplied by Client**

Client : Drainage Services Department

Client's address : -

Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Sample description : Forty-eight samples of water taken by the staff of FTS on 08/12/2020

Client sample ID : Refer to results pages

Test required : Total suspended solids dried at 103°C - 105°C

**Laboratory Information**

Lab. sample ID : WA202290/1-48

Date of receipt of sample : 08/12/2020

Date test commenced : 09/12/2020

Date test completed : 10/12/2020

Test method used : APHA 17ed. 2540D

*Note : This report refers only to the sample(s) tested.*

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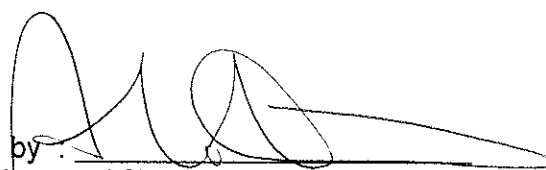
Page 2 of 2



**Results :**

Sample identification	Test result Total suspended solids dried at 103°C – 105°C, mg/L
1. M1F M	60
2. M1F M Dup	59
3. M2F M	84
4. M2F M Dup	85
5. E1F S	27
6. E1F S Dup	26
7. E1F B	30
8. E1F B Dup	30
9. E2aF M	26
10. E2aF M Dup	26
11. E3aF M	13
12. E3aF M Dup	14
13. E4F M	30
14. E4F M Dup	29
15. E5aF M	60
16. E5aF M Dup	59
17. DB1F M	14
18. DB1F M Dup	14
19. SP1F M	66
20. SP1F M Dup	67
21. KT1F M	26
22. KT1F M Dup	27

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

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**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
23. M1E M	42
24. M1E M Dup	41
25. M2E M	120
26. M2E M Dup	120
27. E1E S	27
28. E1E S Dup	26
29. E1E B	26
30. E1E B Dup	26
31. E2aE M	66
32. E2aE M Dup	66
33. E3aE M	19
34. E3aE M Dup	19
35. E4E M	39
36. E4E M Dup	37
37. E5aE M	30
38. E5aE M Dup	31
39. DB1E M	12
40. DB1E M Dup	11
41. SP1E M	33
42. SP1E M Dup	32
43. KT1E M	44
44. KT1E M Dup	44

Remark: Disclaimer: Sampling is out of scope of accreditation.

 Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/11/2021

*Note : This report refers only to the sample(s) tested.*

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Report No. : 181172WA202290


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**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
45. M3F M	87
46. M3F M Dup	85
47. M3E M	87
48. M3E M Dup	91

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

**\*\*End of Report\*\***

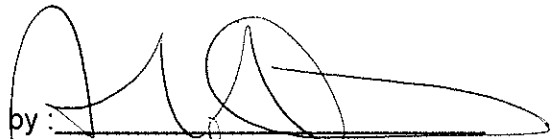
*Note : This report refers only to the sample(s) tested.*

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**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

Total suspended solids dried at 103°C – 105°C, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1 mg/L	<1	99.90	14.0	13.3	5.13
	<1	99.30	13.8	14.2	2.86
	<1	99.86	122	121	0.82
	<1	99.06	31.0	32.8	5.64
	<1	100.56	91.7	90.3	1.54

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202290(1)



Page 1 of 7

**Test Report on Analysis of Water**

**Information Supplied by Client**

Client : Drainage Services Department  
 Client's address : -  
 Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1  
 Sample description : Thirty-six samples of water taken by the staff of FTS on 08/12/2020  
 Client sample ID : Refer to result pages  
 Tests required : Biochemical oxygen demand  
 Total Kjeldahl Nitrogen content  
 Total Nitrogen content  
 Ammonical Nitrogen content  
 Total Inorganic Nitrogen  
 Total phosphorus content  
 E. coli count

**Laboratory Information**

Lab. sample ID :	Chemical tests	Microbiological tests
	WA202290/5-22, 27-44	WA202290/5B-22B, 27B-44B

Sample condition :	Chemical tests	Microbiological tests
Container	Thirty-six 2 L plastic bottles and Thirty-six 0.18 mL plastic bottles	Thirty-six sterilized 250 ml plastic bottles with thiosulphate added
Appearance	Colorless	
Temperature	Cooled	

Date of receipt of sample : 08/12/2020  
 Date test commenced : 09/12/2020  
 Date test completed : 14/12/2020

*Note : This report refers only to the sample(s) tested.*



Report No. : 181172WA202290(1)

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Test methods used : Biochemical oxygen demand  
*BS 6068: Section 2.14: 1990*

Total Kjeldahl Nitrogen content  
*In house method E-T-037 & APHA 18ed. 4500-N<sub>org</sub> B & 4500-NH<sub>3</sub> E*

Total Nitrogen content  
*By Calculation*

Ammonical Nitrogen content  
*In house method E-T-095 Segmented flow-salicylate method*

Total Inorganic Nitrogen  
*By Calculation*

Total phosphorus content  
*APHA, 17th edition, 4500-PB5 (Digestion) &  
In house method E-T-056 (Determination)*

E. coli count  
*The Bacteriological Examination of Drinking Water Supplies  
1982, DoE (1983) Membrane Filtration Procedure: Sections 7.8,  
7.9.4.2 Bacterial Confirmation: Section 7.9.4.4 & in-situ urease  
test*

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202290(1)

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**Results :**

Test parameters	Sample identification							
	E1F S	E1F S Dup	E1F B	E1F B Dup	E2aF M	E2aF M Dup	E3aF M	E3aF M Dup
1. Biochemical oxygen demand, mg/L	2.0	<1.5	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	5.1	5.9	5.0	4.8	3.1	3.3	0.78	0.85
3. Total nitrogen content, mg/L	5.8	6.6	5.5	5.4	3.8	4.1	1.3	1.3
4. Ammonical nitrogen content, mg/L	3.5	4.1	3.2	2.7	1.8	2.1	0.41	0.38
5. Total Inorganic nitrogen, mg/L	4.2	4.8	3.8	3.4	2.4	2.9	0.95	0.87
6. Total phosphorus content, mgP/L	0.55	0.57	0.54	0.57	0.38	0.36	0.11	0.12
7. E. coli count, cfu/100ml	$1.7 \times 10^4$	$1.7 \times 10^4$	$1.4 \times 10^4$ (estimated)	$1.5 \times 10^4$ (estimated)	$1.2 \times 10^4$ (estimated)	$1.3 \times 10^4$ (estimated)	$1.3 \times 10^2$ (estimated)	$1.3 \times 10^2$ (estimated)

- Remark:
1. Disclaimer: Sampling is out of scope of accreditation.
  2. Temperature of ice-box when samples being received were 4.6°C
  3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.
  4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.
  5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.
  6. Detailed information for BOD<sub>5</sub> test :
    - i. Samples taken by staff of FTS on 08/12/2020
    - ii. Samples stored at 0-4°C refrigerator prior to testing.
    - iii. Date and hour of commencing BOD<sub>5</sub> test : 09/12/2020 17:00
    - iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.
    - v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.
    - vi. The samples were incubated at 19-21°C for 5 days

Certified by :



 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202290(1)

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**Results :**

Test parameters	Sample identification							
	E4F M	E4F M Dup	E5aF M	E5aF M Dup	DB1F M	DB1F M Dup	SP1F M	SP1F M Dup
1. Biochemical oxygen demand, mg/L	2.5	2.5	2.0	2.5	<1.5	<1.5	3.0	1.5
2. Total Kjeldahl nitrogen content, mg/L	5.0	5.0	4.9	5.0	0.96	0.88	5.1	5.6
3. Total nitrogen content, mg/L	5.7	5.7	5.6	5.6	1.5	1.3	5.6	6.1
4. Ammonical nitrogen content, mg/L	2.9	3.0	3.4	3.9	0.66	0.63	4.2	4.0
5. Total Inorganic nitrogen, mg/L	3.6	3.7	4.0	4.5	1.2	1.1	4.7	4.6
6. Total phosphorus content, mgP/L	0.43	0.46	0.67	0.71	0.10	0.10	0.66	0.68
7. E. coli count, cfu/100ml	$1.3 \times 10^4$ (estimated)	$1.2 \times 10^4$ (estimated)	$2.5 \times 10^4$	$4.0 \times 10^4$	$5.2 \times 10$	$4.4 \times 10$	$8.6 \times 10^4$	$5.4 \times 10^4$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.6°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 08/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 09/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :



 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2021

Note : This report refers only to the sample(s) tested.


Report No. : 181172WA202290(1)

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**Results :**

Test parameters	Sample identification							
	KT1F M	KT1F M Dup	E1E S	E1E S Dup	E1E B	E1E B Dup	E2aE M	E2aE M Dup
1. Biochemical oxygen demand, mg/L	3.0	3.0	1.5	2.0	<1.5	3.0	3.0	2.5
2. Total Kjeldahl nitrogen content, mg/L	6.8	7.4	4.3	4.6	4.2	4.4	1.8	2.1
3. Total nitrogen content, mg/L	7.4	7.9	4.8	5.2	4.9	4.9	2.4	2.6
4. Ammonical nitrogen content, mg/L	5.6	4.9	2.4	2.7	2.5	2.4	0.88	0.97
5. Total Inorganic nitrogen, mg/L	6.2	5.4	2.9	3.2	3.2	2.9	1.4	1.5
6. Total phosphorus content, mgP/L	0.77	0.77	0.43	0.47	0.46	0.43	0.30	0.31
7. E. coli count, cfu/100ml	$1.6 \times 10^4$ (estimated)	$1.4 \times 10^4$ (estimated)	$3.8 \times 10^4$	$3.1 \times 10^4$	$5.3 \times 10^4$	$4.3 \times 10^4$	$5.5 \times 10^3$	$4.2 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.6°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 08/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 09/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

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 Assistant General Manager – Laboratories

Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202290(1)

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**Results :**

Test parameters	Sample identification							
	E3aE M	E3aE M Dup	E4E M	E4E M Dup	E5aE M	E5aE M Dup	DB1E M	DB1E M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	2.5	2.5	<1.5	1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	0.76	0.67	2.4	2.3	4.6	4.5	0.84	1.0
3. Total nitrogen content, mg/L	1.0	0.96	3.0	2.9	5.3	5.1	1.1	1.3
4. Ammonical nitrogen content, mg/L	0.35	0.36	1.3	1.3	3.9	2.8	0.61	0.66
5. Total Inorganic nitrogen, mg/L	0.62	0.65	1.9	1.8	4.5	3.4	0.84	0.90
6. Total phosphorus content, mgP/L	0.13	0.13	0.35	0.34	0.01	0.01	0.09	0.10
7. E. coli count, cfu/100ml	$1.3 \times 10^2$ (estimated)	$1.2 \times 10^2$ (estimated)	$1.5 \times 10^4$ (estimated)	$1.4 \times 10^4$ (estimated)	$5.7 \times 10^4$	$4.6 \times 10^4$	$1.1 \times 10^2$ (estimated)	$1.0 \times 10^2$ (estimated)

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.6°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
 i. Samples taken by staff of FTS on 08/12/2020  
 ii. Samples stored at 0-4°C refrigerator prior to testing.  
 iii. Date and hour of commencing BOD<sub>5</sub> test : 09/12/2020 17:00  
 iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
 v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
 vi. The samples were incubated at 19-21°C for 5 days

Certified by :

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202290(1)

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**Results :**

Test parameters	Sample identification			
	SP1E M	SP1E M Dup	KT1E M	KT1E M Dup
1. Biochemical oxygen demand, mg/L	2.0	1.5	2.5	3.0
2. Total Kjeldahl nitrogen content, mg/L	5.6	5.2	4.7	4.8
3. Total nitrogen content, mg/L	6.1	5.6	5.2	5.1
4. Ammonical nitrogen content, mg/L	3.3	3.3	3.7	3.8
5. Total Inorganic nitrogen, mg/L	3.8	3.8	4.1	4.2
6. Total phosphorus content, mgP/L	0.62	0.56	0.63	0.67
7. E. coli count, cfu/100ml	$7.6 \times 10^4$	$8.9 \times 10^4$	$3.0 \times 10^3$	$3.1 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.6°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 08/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 09/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

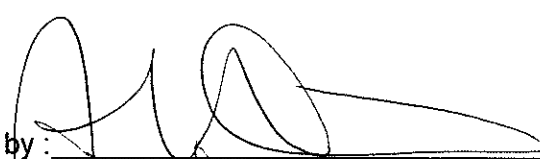
Date : 15/11/2021

**\*\* End of Report \*\***
*Note : This report refers only to the sample(s) tested.*

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

1. Biochemical oxygen demand, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1.5	<1.5	-	1.82	1.89	3.77
1.5	<1.5	-	2.77	2.68	3.30
2. Total Kjeldahl nitrogen content, mg/L (Colorimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.05	<0.05	97.40	4.68	4.52	3.48
0.05	<0.05	86.10	4.74	4.89	3.12
3. Total Kjeldahl nitrogen content, mg/L (Titrimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
5	<5	101.02	5.13	5.23	2.88

Certified by :

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021

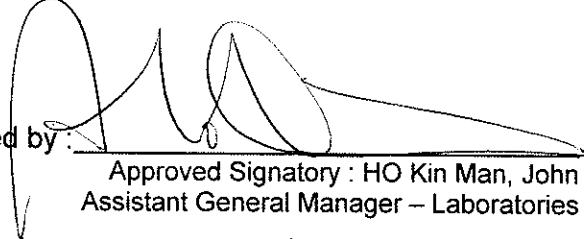
*Note : This report refers only to the sample(s) tested.*



**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

4. Ammonical nitrogen content, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.02	<0.02	102.42	3.57	3.51	1.69
0.02	<0.02	104.16	2.41	2.36	2.10
5. Total phosphorus content, mgP/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.01	<0.01	97.80	0.47	0.48	2.11
0.01	<0.01	115.50	0.66	0.69	4.44
6. E. coli count, cfu/100ml					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1	<1	-	1.5 x 10 <sup>4</sup>	1.3 x 10 <sup>4</sup>	11.3
1	<1	-	2.7 x 10 <sup>3</sup>	3.5 x 10 <sup>3</sup>	25.8

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

Note : This report refers only to the sample(s) tested.



Report No. : 181172WA202298



Page 1 of 2

**Test Report on Analysis of Water****Information Supplied by Client**

Client : Drainage Services Department

Client's address : -

Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Sample description : Forty-eight samples of water taken by the staff of FTS on 10/12/2020

Client sample ID : Refer to results pages

Test required : Total suspended solids dried at 103°C - 105°C

**Laboratory Information**

Lab. sample ID : WA202298/1-48

Date of receipt of sample : 10/12/2020

Date test commenced : 11/12/2020

Date test completed : 12/12/2020

Test method used : APHA 17ed. 2540D

*Note : This report refers only to the sample(s) tested.*

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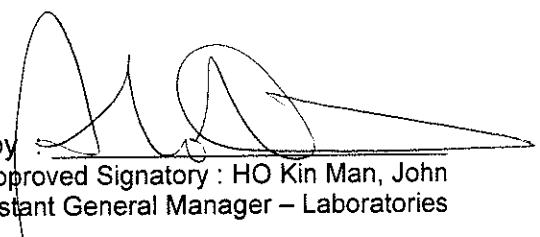
Page 2 of 2



**Results :**

Sample identification	Test result Total suspended solids dried at 103°C – 105°C, mg/L
1. M1F M	32
2. M1F M Dup	32
3. M2F M	35
4. M2F M Dup	36
5. E1F S	39
6. E1F S Dup	40
7. E1F B	51
8. E1F B Dup	50
9. E2aF M	43
10. E2aF M Dup	43
11. E3aF M	25
12. E3aF M Dup	25
13. E4F M	37
14. E4F M Dup	36
15. E5aF M	47
16. E5aF M Dup	48
17. DB1F M	18
18. DB1F M Dup	18
19. SP1F M	48
20. SP1F M Dup	49
21. KT1F M	27
22. KT1F M Dup	29

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

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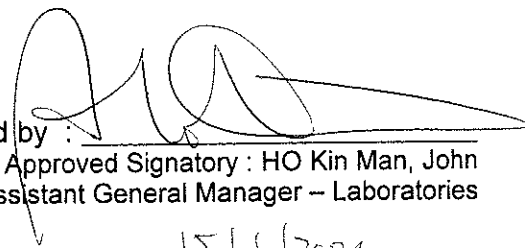
Page 2 of 2


**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
23. M1E M	42
24. M1E M Dup	43
25. M2E M	42
26. M2E M Dup	41
27. E1E S	37
28. E1E S Dup	36
29. E1E B	63
30. E1E B Dup	62
31. E2aE M	33
32. E2aE M Dup	34
33. E3aE M	33
34. E3aE M Dup	33
35. E4E M	31
36. E4E M Dup	30
37. E5aE M	45
38. E5aE M Dup	44
39. DB1E M	39
40. DB1E M Dup	38
41. SP1E M	38
42. SP1E M Dup	37
43. KT1E M	34
44. KT1E M Dup	35

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :


 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2021

*Note : This report refers only to the sample(s) tested.*

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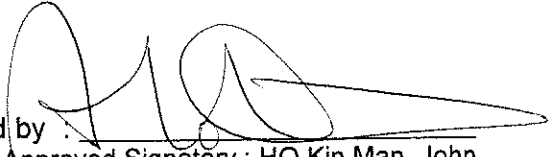
Page 2 of 2



**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
45. M3F M	110
46. M3F M Dup	100
47. M3E M	27
48. M3E M Dup	26

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

**\*\*End of Report\*\***

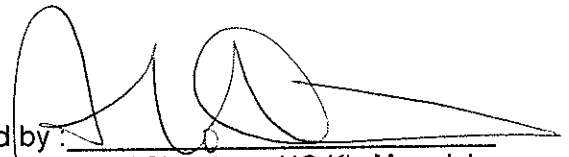
*Note : This report refers only to the sample(s) tested.*

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**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

Total suspended solids dried at 103°C – 105°C, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1 mg/L	<1	98.26	24.3	25.5	4.82
	<1	100.06	18.2	18.0	1.10
	<1	100.60	41.2	41.5	0.73
	<1	100.76	36.0	37.8	4.88
	<1	101.26	24.3	27.7	13.1

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202298(1)



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**Test Report on Analysis of Water**
**Information Supplied by Client**

Client : Drainage Services Department  
 Client's address : -  
 Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1  
 Sample description : Thirty-six samples of water taken by the staff of FTS on 10/12/2020  
 Client sample ID : Refer to result pages  
 Tests required : Biochemical oxygen demand  
 Total Kjeldahl Nitrogen content  
 Total Nitrogen content  
 Ammonical Nitrogen content  
 Total Inorganic Nitrogen  
 Total phosphorus content  
 E. coli count

**Laboratory Information**

Lab. sample ID :	Chemical tests	Microbiological tests
	WA202298/5-22, 27-44	WA202298/5B-22B, 27B-44B

Sample condition :	Chemical tests	Microbiological tests
Container	Thirty-six 2 L plastic bottles and Thirty-six 0.18 mL plastic bottles	Thirty-six sterilized 250 ml plastic bottles with thiosulphate added
Appearance	Colorless	
Temperature	Cooled	

Date of receipt of sample : 10/12/2020

Date test commenced : 10/12/2020

Date test completed : 16/12/2020

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202298(1)

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Test methods used : Biochemical oxygen demand  
*BS 6068: Section 2.14: 1990*

Total Kjeldahl Nitrogen content  
*In house method E-T-037 & APHA 18ed. 4500-N<sub>org</sub> B & 4500-NH<sub>3</sub>E*

Total Nitrogen content  
*By Calculation*

Ammonical Nitrogen content  
*In house method E-T-095 Segmented flow-salicylate method*

Total Inorganic Nitrogen  
*By Calculation*

Total phosphorus content  
*APHA, 17th edition, 4500-PB5 (Digestion) &  
In house method E-T-056 (Determination)*

E. coli count  
*The Bacteriological Examination of Drinking Water Supplies  
1982, DoE (1983) Membrane Filtration Procedure: Sections 7.8,  
7.9.4.2 Bacterial Confirmation: Section 7.9.4.4 & in-situ urease  
test*

*Note : This report refers only to the sample(s) tested.*


Report No. : 181172WA202298(1)

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**Results :**

Test parameters	Sample identification							
	E1F S	E1F S Dup	E1F B	E1F B Dup	E2aF M	E2aF M Dup	E3aF M	E3aF M Dup
1. Biochemical oxygen demand, mg/L	2.0	<1.5	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	3.5	4.1	2.8	2.8	1.3	1.1	0.44	0.50
3. Total nitrogen content, mg/L	3.9	4.5	3.2	3.2	1.6	1.4	0.52	0.58
4. Ammonical nitrogen content, mg/L	3.2	2.6	2.2	1.4	0.75	0.76	0.17	0.17
5. Total Inorganic nitrogen, mg/L	3.6	3.0	2.5	1.8	1.1	1.1	0.25	0.25
6. Total phosphorus content, mgP/L	0.47	0.53	0.48	0.51	0.25	0.25	0.09	0.09
7. E. coli count, cfu/100ml	$3.0 \times 10^3$	$4.1 \times 10^3$	$3.0 \times 10^3$	$3.5 \times 10^3$	$4.0 \times 10^2$	$4.0 \times 10^2$	$3.6 \times 10$	$4.6 \times 10$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.9°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 10/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 11/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/1/2021

Note : This report refers only to the sample(s) tested.




Report No. : 181172WA202298(1)

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**Results :**

Test parameters	Sample identification							
	E4F M	E4F M Dup	E5aF M	E5aF M Dup	DB1F M	DB1F M Dup	SP1F M	SP1F M Dup
1. Biochemical oxygen demand, mg/L	2.0	2.0	2.0	2.0	<1.5	<1.5	2.0	2.0
2. Total Kjeldahl nitrogen content, mg/L	1.4	1.3	3.3	4.1	0.49	0.44	6.0	5.7
3. Total nitrogen content, mg/L	1.7	1.7	3.7	4.4	0.65	0.57	6.7	6.1
4. Ammonical nitrogen content, mg/L	0.99	0.98	2.4	2.7	0.14	0.19	2.4	2.7
5. Total Inorganic nitrogen, mg/L	1.3	1.4	2.8	3.0	0.30	0.32	2.8	3.0
6. Total phosphorus content, mgP/L	0.33	0.33	0.64	0.67	0.07	0.06	0.82	0.81
7. E. coli count, cfu/100ml	$1.6 \times 10^3$	$1.7 \times 10^3$	$3.5 \times 10^3$	$3.8 \times 10^3$	$1.3 \times 10$	$1.0 \times 10$	$4.5 \times 10^3$	$3.9 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.9°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 10/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 11/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

Note : This report refers only to the sample(s) tested.


Report No. : 181172WA202298(1)

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**Results :**

Test parameters	Sample identification							
	KT1F M	KT1F M Dup	E1E S	E1E S Dup	E1E B	E1E B Dup	E2aE M	E2aE M Dup
1. Biochemical oxygen demand, mg/L	2.5	2.0	2.0	2.0	<1.5	<1.5	2.0	3.0
2. Total Kjeldahl nitrogen content, mg/L	4.6	3.9	5.7	4.5	3.6	3.7	3.7	3.7
3. Total nitrogen content, mg/L	5.0	4.2	6.0	4.8	3.9	4.0	4.0	4.0
4. Ammonical nitrogen content, mg/L	3.0	3.1	5.6	2.5	2.4	0.72	2.5	2.5
5. Total Inorganic nitrogen, mg/L	3.3	3.4	5.9	2.8	2.7	0.95	2.8	2.8
6. Total phosphorus content, mgP/L	0.60	0.60	0.54	0.74	0.49	0.52	0.51	0.55
7. E. coli count, cfu/100ml	$2.6 \times 10^3$	$2.8 \times 10^3$	$5.2 \times 10^3$	$4.5 \times 10^3$	$4.0 \times 10^3$	$2.7 \times 10^3$	$5.9 \times 10^3$	$5.4 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.9°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
 i. Samples taken by staff of FTS on 10/12/2020  
 ii. Samples stored at 0-4°C refrigerator prior to testing.  
 iii. Date and hour of commencing BOD<sub>5</sub> test : 11/12/2020 17:00  
 iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
 v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
 vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

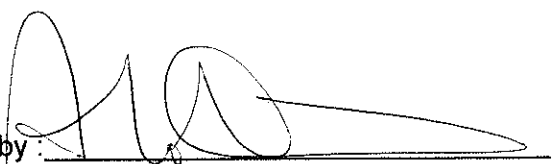
Report No. : 181172WA202298(1)

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**Results :**

Test parameters	Sample identification							
	E3aE M	E3aE M Dup	E4E M	E4E M Dup	E5aE M	E5aE M Dup	DB1E M	DB1E M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	3.0	3.0	2.0	2.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	0.39	0.38	5.6	5.4	8.3	9.4	0.70	0.72
3. Total nitrogen content, mg/L	0.48	0.47	6.0	5.8	9.6	11	0.78	0.79
4. Ammonical nitrogen content, mg/L	0.17	0.16	2.9	3.7	7.5	7.2	0.42	0.35
5. Total Inorganic nitrogen, mg/L	0.27	0.25	3.3	4.1	8.9	8.5	0.51	0.43
6. Total phosphorus content, mgP/L	0.11	0.11	0.68	0.63	1.0	1.0	0.08	0.09
7. E. coli count, cfu/100ml	2.6 x 10	3.2 x 10	5.6 x 10 <sup>3</sup>	6.9 x 10 <sup>3</sup>	1.2 x 10 <sup>4</sup>	1.3 x 10 <sup>4</sup>	6.5 x 10	8.3 x 10

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.9°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 10/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 11/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/11/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202298(1)

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**Results :**

Test parameters	Sample identification			
	SP1E M	SP1E M Dup	KT1E M	KT1E M Dup
1. Biochemical oxygen demand, mg/L	2.5	2.0	2.0	2.5
2. Total Kjeldahl nitrogen content, mg/L	7.8	6.5	8.3	7.3
3. Total nitrogen content, mg/L	8.1	6.8	8.6	7.7
4. Ammonical nitrogen content, mg/L	2.1	2.4	4.1	3.0
5. Total Inorganic nitrogen, mg/L	2.4	2.7	4.4	3.4
6. Total phosphorus content, mgP/L	0.86	0.88	0.85	0.83
7. E. coli count, cfu/100ml	$6.5 \times 10^4$	$6.0 \times 10^4$	$4.6 \times 10^3$	$5.3 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.9°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 10/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 11/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/11/2021

**\*\* End of Report \*\***
*Note : This report refers only to the sample(s) tested.*

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

1. Biochemical oxygen demand, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1.5	<1.5	-	2.22	2.17	2.28
1.5	<1.5	-	2.51	2.46	2.01
2. Total Kjeldahl nitrogen content, mg/L (Colorimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.05	<0.05	99.20	4.58	4.38	4.46
0.05	<0.05	99.90	0.73	0.71	2.78
3. Total Kjeldahl nitrogen content, mg/L (Titrimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
5	<5	99.22	7.24	7.39	2.05

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

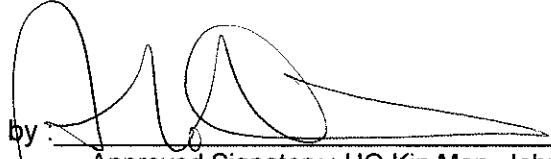
*Note : This report refers only to the sample(s) tested.*



**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

4. Ammonical nitrogen content, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.02	<0.02	113.95	3.17	3.20	0.94
0.02	<0.02	105.25	5.60	5.59	0.18
5. Total phosphorus content, mgP/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.01	<0.01	102.10	0.74	0.74	0.00
0.01	<0.01	103.10	0.83	0.84	1.20
6. E. coli count, cfu/100ml					
Reporting Limit1-	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1	<1	-	$2.7 \times 10^3$	$2.9 \times 10^3$	7.14
1	<1	-	$5.0 \times 10^3$	$5.5 \times 10^3$	9.52

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202299



Page 1 of 2

**Test Report on Analysis of Water****Information Supplied by Client**

Client : Drainage Services Department

Client's address : -

Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Sample description : Forty-eight samples of water taken by the staff of FTS on 12/12/2020

Client sample ID : Refer to results pages

Test required : Total suspended solids dried at 103°C - 105°C

**Laboratory Information**

Lab. sample ID : WA202299/1-48

Date of receipt of sample : 12/12/2020

Date test commenced : 12/12/2020

Date test completed : 15/12/2020

Test method used : APHA 17ed. 2540D

*Note : This report refers only to the sample(s) tested.*

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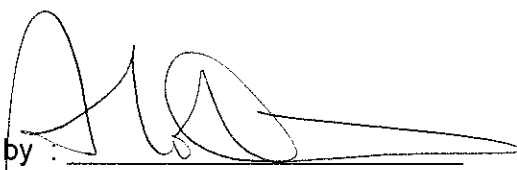
Report No. : 181172WA202299

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**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
1. M1F M	45
2. M1F M Dup	44
3. M2F M	48
4. M2F M Dup	46
5. E1F S	19
6. E1F S Dup	19
7. E1F B	34
8. E1F B Dup	34
9. E2aF M	39
10. E2aF M Dup	40
11. E3aF M	21
12. E3aF M Dup	21
13. E4F M	51
14. E4F M Dup	51
15. E5aF M	38
16. E5aF M Dup	35
17. DB1F M	34
18. DB1F M Dup	33
19. SP1F M	27
20. SP1F M Dup	27
21. KT1F M	27
22. KT1F M Dup	27

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

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Report No. : 181172WA202299

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**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
23. M1E M	57
24. M1E M Dup	60
25. M2E M	39
26. M2E M Dup	40
27. E1E S	37
28. E1E S Dup	38
29. E1E B	36
30. E1E B Dup	35
31. E2aE M	17
32. E2aE M Dup	17
33. E3aE M	66
34. E3aE M Dup	65
35. E4E M	32
36. E4E M Dup	33
37. E5aE M	40
38. E5aE M Dup	39
39. DB1E M	21
40. DB1E M Dup	22
41. SP1E M	37
42. SP1E M Dup	36
43. KT1E M	56
44. KT1E M Dup	55

Remark: Disclaimer: Sampling is out of scope of accreditation.

 Certified by : 

 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2024

*Note : This report refers only to the sample(s) tested.*

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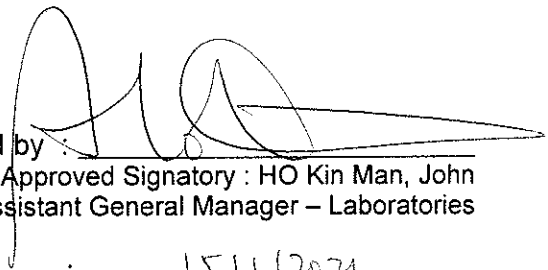
Page 2 of 2



**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
45. M3F M	36
46. M3F M Dup	37
47. M3E M	33
48. M3E M Dup	34

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2024

**\*\*End of Report\*\***


*Note : This report refers only to the sample(s) tested.*

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**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

Total suspended solids dried at 103°C – 105°C, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1 mg/L	<1	99.96	39.2	40.3	2.77
	<1	100.86	34.3	34.5	0.58
	<1	100.10	39.3	39.0	0.77
	<1	99.40	37.3	36.0	3.55
	<1	99.90	33.7	33.7	0.00

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202299(1)



Page 1 of 7

**Test Report on Analysis of Water**
**Information Supplied by Client**

Client : Drainage Services Department  
 Client's address : -  
 Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1  
 Sample description : Thirty-six samples of water taken by the staff of FTS on 12/12/2020  
 Client sample ID : Refer to result pages  
 Tests required : Biochemical oxygen demand  
 Total Kjeldahl Nitrogen content  
 Total Nitrogen content  
 Ammonical Nitrogen content  
 Total Inorganic Nitrogen  
 Total phosphorus content  
 E. coli count

**Laboratory Information**

Lab. sample ID :	Chemical tests	Microbiological tests
	WA202299/5-22, 27-44	WA202299/5B-22B, 27B-44B

Sample condition :		Chemical tests	Microbiological tests
	Container	Thirty-six 2 L plastic bottles and Thirty-six 0.18 mL plastic bottles	Thirty-six sterilized 250 ml plastic bottles with thiosulphate added
	Appearance	Colorless	
	Temperature	Cooled	

Date of receipt of sample : 12/12/2020

Date test commenced : 12/12/2020

Date test completed : 17/12/2020

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202299(1)

Page 2 of 7

Test methods used : Biochemical oxygen demand  
*BS 6068: Section 2.14: 1990*

Total Kjeldahl Nitrogen content  
*In house method E-T-037 & APHA 18ed. 4500-N<sub>org</sub> B & 4500-NH<sub>3</sub>E*

Total Nitrogen content  
*By Calculation*

Ammonical Nitrogen content  
*In house method E-T-095 Segmented flow-salicylate method*

Total Inorganic Nitrogen  
*By Calculation*

Total phosphorus content  
*APHA, 17th edition, 4500-PB5 (Digestion) &  
In house method E-T-056 (Determination)*

E. coli count  
*The Bacteriological Examination of Drinking Water Supplies  
1982, DoE (1983) Membrane Filtration Procedure: Sections 7.8,  
7.9.4.2 Bacterial Confirmation: Section 7.9.4.4 & in-situ urease  
test*

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202299(1)

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**Results :**

Test parameters	Sample identification							
	E1F S	E1F S Dup	E1F B	E1F B Dup	E2aF M	E2aF M Dup	E3aF M	E3aF M Dup
1. Biochemical oxygen demand, mg/L	1.5	2.5	2.5	3.0	<1.5	<1.5	2.0	2.5
2. Total Kjeldahl nitrogen content, mg/L	5.6	5.6	5.6	5.9	1.5	1.5	1.9	1.9
3. Total nitrogen content, mg/L	6.1	5.9	5.9	6.3	1.7	1.9	2.9	2.7
4. Ammonical nitrogen content, mg/L	4.8	3.4	3.5	3.4	0.2	0.2	0.98	1.0
5. Total Inorganic nitrogen, mg/L	5.3	3.8	3.8	3.8	0.47	0.51	2.0	1.8
6. Total phosphorus content, mgP/L	0.66	0.68	0.64	0.62	0.15	0.12	0.20	0.20
7. E. coli count, cfu/100ml	1.3 x 10 <sup>4</sup> (estimated)	1.4 x 10 <sup>4</sup> (estimated)	1.4 x 10 <sup>4</sup> (estimated)	1.4 x 10 <sup>4</sup> (estimated)	2.9 x 10 <sup>3</sup>	2.4 x 10 <sup>3</sup>	4.3 x 10	4.1 x 10

- Remark:
1. Disclaimer: Sampling is out of scope of accreditation.
  2. Temperature of ice-box when samples being received were 6.1°C
  3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.
  4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.
  5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.
  6. Detailed information for BOD<sub>5</sub> test :
    - i. Samples taken by staff of FTS on 12/12/2020
    - ii. Samples stored at 0-4°C refrigerator prior to testing.
    - iii. Date and hour of commencing BOD<sub>5</sub> test : 12/12/2020 17:00
    - iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.
    - v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.
    - vi. The samples were incubated at 19-21°C for 5 days

Certified by :

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202299(1)

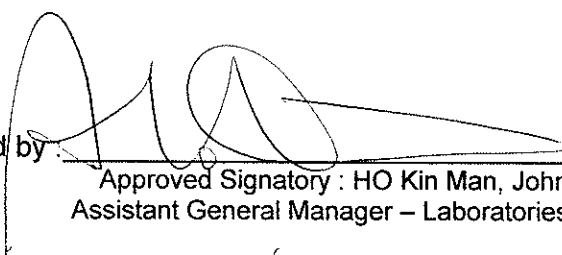
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**Results :**

Test parameters	Sample identification							
	E4F M	E4F M Dup	E5aF M	E5aF M Dup	DB1F M	DB1F M Dup	SP1F M	SP1F M Dup
1. Biochemical oxygen demand, mg/L	3.5	3.0	4.5	4.5	<1.5	1.5	4.0	4.0
2. Total Kjeldahl nitrogen content, mg/L	3.6	3.8	5.4	6.0	0.70	0.69	6.2	6.6
3. Total nitrogen content, mg/L	4.3	4.3	5.8	6.4	0.96	0.90	6.6	7.1
4. Ammonical nitrogen content, mg/L	2.4	2.6	3.5	3.9	0.21	0.2	2.6	2.4
5. Total Inorganic nitrogen, mg/L	3.1	3.1	3.9	4.3	0.47	0.41	2.9	2.8
6. Total phosphorus content, mgP/L	0.44	0.41	0.76	0.79	0.19	0.16	0.88	0.89
7. E. coli count, cfu/100ml	$9.0 \times 10^3$	$9.1 \times 10^3$	$1.2 \times 10^4$ (estimated)	$1.3 \times 10^4$ (estimated)	$1.7 \times 10^4$	$2.8 \times 10^4$	$1.4 \times 10^5$ (estimated)	$1.7 \times 10^5$ (estimated)

- Remark:
1. Disclaimer: Sampling is out of scope of accreditation.
  2. Temperature of ice-box when samples being received were 6.1°C
  3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.
  4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.
  5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.
  6. Detailed information for BOD<sub>5</sub> test :
    - i. Samples taken by staff of FTS on 12/12/2020
    - ii. Samples stored at 0-4°C refrigerator prior to testing.
    - iii. Date and hour of commencing BOD<sub>5</sub> test : 12/12/2020 17:00
    - iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.
    - v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.
    - vi. The samples were incubated at 19-21°C for 5 days

Certified by:


 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2021

Note : This report refers only to the sample(s) tested.

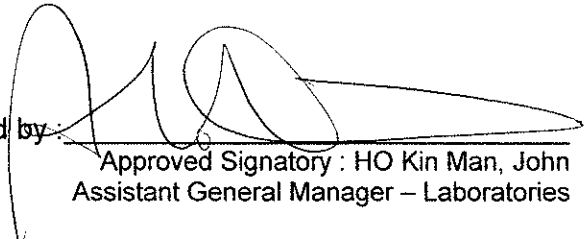
Report No. : 181172WA202299(1)

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**Results :**

Test parameters	Sample identification							
	KT1F M	KT1F M Dup	E1E S	E1E S Dup	E1E B	E1E B Dup	E2aE M	E2aE M Dup
1. Biochemical oxygen demand, mg/L	5.0	5.0	3.0	3.5	3.5	4.0	2.0	2.0
2. Total Kjeldahl nitrogen content, mg/L	6.9	6.0	5.4	5.1	5.4	5.4	1.60	1.80
3. Total nitrogen content, mg/L	7.2	6.3	5.9	5.5	5.8	5.9	1.8	1.9
4. Ammonical nitrogen content, mg/L	5.3	4.7	5.0	3.4	3.7	3.5	0.22	0.26
5. Total Inorganic nitrogen, mg/L	5.6	5.0	5.4	3.8	4.1	3.9	0.40	0.42
6. Total phosphorus content, mgP/L	0.91	0.88	0.66	0.63	0.59	0.63	0.14	0.13
7. E. coli count, cfu/100ml	$2.1 \times 10^4$ (estimated)	$1.9 \times 10^4$ (estimated)	$1.1 \times 10^4$ (estimated)	$1.3 \times 10^4$ (estimated)	$1.2 \times 10^4$ (estimated)	$1.1 \times 10^4$ (estimated)	2.2 x 10	3.3 x 10

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 12/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 12/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/1/2021

Note : This report refers only to the sample(s) tested.



Report No. : 181172WA202299(1)

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**Results :**

Test parameters	Sample identification							
	E3aE M	E3aE M Dup	E4E M	E4E M Dup	E5aE M	E5aE M Dup	DB1E M	DB1E M Dup
1. Biochemical oxygen demand, mg/L	4.0	2.5	4.0	4.0	4.0	4.0	1.5	2.0
2. Total Kjeldahl nitrogen content, mg/L	2.7	2.8	4.0	4.0	6.3	6.5	0.93	0.77
3. Total nitrogen content, mg/L	3.2	3.3	4.4	4.3	6.7	6.8	1.1	0.92
4. Ammonical nitrogen content, mg/L	2.3	2.2	2.9	3.5	3.6	3.4	0.26	0.20
5. Total Inorganic nitrogen, mg/L	2.8	2.6	3.4	3.9	4.0	3.7	0.42	0.36
6. Total phosphorus content, mgP/L	0.44	0.47	0.49	0.47	0.92	0.81	0.12	0.11
7. E. coli count, cfu/100ml	$5.9 \times 10^3$	$6.3 \times 10^3$	$9.6 \times 10^3$	$1.5 \times 10^4$ (estimated)	$3.3 \times 10^4$	$3.3 \times 10^4$	$2.5 \times 10$	$1.9 \times 10$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 12/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 12/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

 Certified by : 

 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

 Date : 15/11/2021

Note : This report refers only to the sample(s) tested.

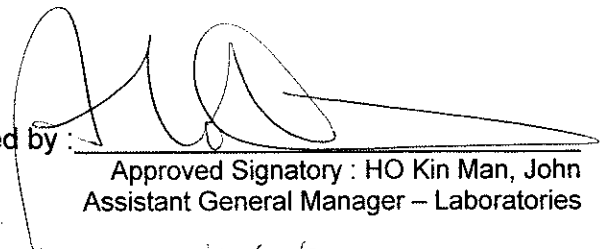
Report No. : 181172WA202299(1)

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**Results :**

Test parameters	Sample identification			
	SP1E M	SP1E M Dup	KT1E M	KT1E M Dup
1. Biochemical oxygen demand, mg/L	4.5	5.5	6.0	6.0
2. Total Kjeldahl nitrogen content, mg/L	6.8	6.9	6.6	6.8
3. Total nitrogen content, mg/L	7.1	7.3	6.9	7.1
4. Ammonical nitrogen content, mg/L	2.7	3.1	4.5	4.1
5. Total Inorganic nitrogen, mg/L	3.0	3.5	4.8	4.3
6. Total phosphorus content, mgP/L	0.76	0.80	0.93	1.0
7. E. coli count, cfu/100ml	2.1 x 10 <sup>5</sup> (estimated)	2.2 x 10 <sup>5</sup> (estimated)	1.5 x 10 <sup>4</sup>	1.4 x 10 <sup>4</sup>

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 12/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 12/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/1/2021

**\*\* End of Report \*\***
*Note : This report refers only to the sample(s) tested.*

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**


1. Biochemical oxygen demand, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1.5	<1.5	-	3.39	3.32	2.09
1.5	<1.5	-	6.07	5.98	1.49

2. Total Kjeldahl nitrogen content, mg/L (Colorimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.05	<0.05	100.40	1.74	1.80	3.39
0.05	<0.05	101.20	0.76	0.78	2.60

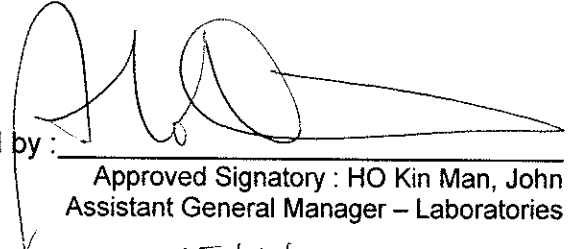
3. Total Kjeldahl nitrogen content, mg/L (Titrimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
5	<5	100.10	6.63	6.94	4.57

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

4. Ammonical nitrogen content, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.02	<0.02	96.60	4.81	4.80	0.21
0.02	<0.02	87.53	4.93	4.99	1.21
5. Total phosphorus content, mgP/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.01	<0.01	101.32	0.63	0.62	1.60
0.01	<0.01	101.52	1.01	0.99	2.00
6. E. coli count, cfu/100ml					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1	<1	-	1.9 x 10 <sup>4</sup>	1.9 x 10 <sup>4</sup>	0.00
1	<1	-	1.5 x 10 <sup>4</sup>	1.3 x 10 <sup>4</sup>	14.3

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202322



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**Test Report on Analysis of Water****Information Supplied by Client**

Client : Drainage Services Department

Client's address : -

Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Sample description : Forty-eight samples of water taken by the staff of FTS on 15/12/2020

Client sample ID : Refer to results pages

Test required : Total suspended solids dried at 103°C - 105°C

**Laboratory Information**

Lab. sample ID : WA202322/1-48

Date of receipt of sample : 15/12/2020

Date test commenced : 16/12/2020

Date test completed : 17/12/2020

Test method used : APHA 17ed. 2540D

*Note : This report refers only to the sample(s) tested.*

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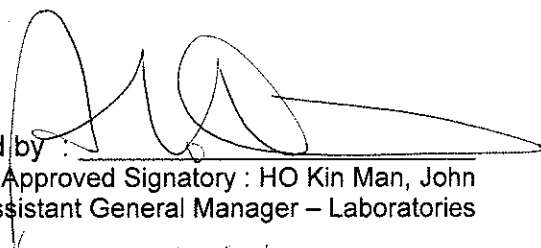
Page 2 of 2


**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
1. M1F M	36
2. M1F M Dup	36
3. M2F M	43
4. M2F M Dup	44
5. E1F S	55
6. E1F S Dup	54
7. E1F B	75
8. E1F B Dup	74
9. E2aF M	34
10. E2aF M Dup	34
11. E3aF M	22
12. E3aF M Dup	23
13. E4F M	46
14. E4F M Dup	45
15. E5aF M	43
16. E5aF M Dup	44
17. DB1F M	25
18. DB1F M Dup	24
19. SP1F M	41
20. SP1F M Dup	41
21. KT1F M	46
22. KT1F M Dup	46

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :


 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021

*Note : This report refers only to the sample(s) tested.*

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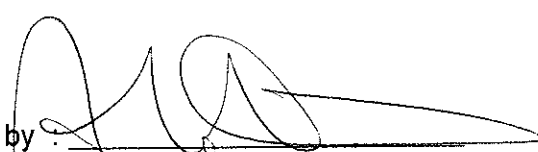
Report No. : 181172WA202322

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**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
23. M1E M	44
24. M1E M Dup	45
25. M2E M	38
26. M2E M Dup	37
27. E1E S	37
28. E1E S Dup	37
29. E1E B	140
30. E1E B Dup	140
31. E2aE M	58
32. E2aE M Dup	61
33. E3aE M	26
34. E3aE M Dup	26
35. E4E M	48
36. E4E M Dup	48
37. E5aE M	49
38. E5aE M Dup	49
39. DB1E M	15
40. DB1E M Dup	14
41. SP1E M	32
42. SP1E M Dup	32
43. KT1E M	45
44. KT1E M Dup	45

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

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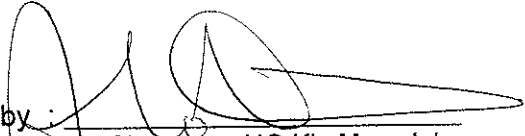


**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
45. M3F M	180
46. M3F M Dup	190
47. M3E M	59
48. M3E M Dup	60

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :

  
Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories

Date :

15/1/2024

**\*\*End of Report\*\***

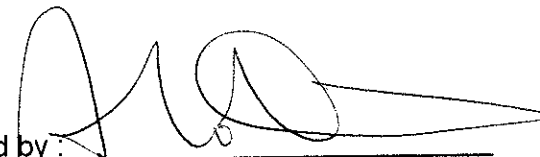
*Note : This report refers only to the sample(s) tested.*



**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

Total suspended solids dried at 103°C – 105°C, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1 mg/L	<1	100.20	43.5	43.5	0.00
	<1	99.06	41.7	40.5	2.92
	<1	99.76	25.0	26.5	5.83
	<1	99.70	14.5	13.8	4.95
	<1	101.46	58.7	61.0	3.84

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202322(1)



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**Test Report on Analysis of Water**

**Information Supplied by Client**

Client : Drainage Services Department  
 Client's address : -  
 Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1  
 Sample description : Thirty-six samples of water taken by the staff of FTS on 15/12/2020  
 Client sample ID : Refer to result pages  
 Tests required : Biochemical oxygen demand  
 Total Kjeldahl Nitrogen content  
 Total Nitrogen content  
 Ammonical Nitrogen content  
 Total Inorganic Nitrogen  
 Total phosphorus content  
 E. coli count

**Laboratory Information**

Lab. sample ID :	Chemical tests	Microbiological tests
	WA202322/5-22, 27-44	WA202322/5B-22B, 27B-44B

Sample condition :	Chemical tests	Microbiological tests
Container	Thirty-six 2 L plastic bottles and Thirty-six 0.18 mL plastic bottles	Thirty-six sterilized 250 ml plastic bottles with thiosulphate added
Appearance	Colorless	
Temperature	Cooled	

Date of receipt of sample : 15/12/2020  
 Date test commenced : 16/12/2020  
 Date test completed : 21/12/2020

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202322(1)

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Test methods used : Biochemical oxygen demand  
*BS 6068: Section 2.14: 1990*

Total Kjeldahl Nitrogen content  
*In house method E-T-037 & APHA 18ed. 4500-N<sub>org</sub> B & 4500-NH<sub>3</sub>E*

Total Nitrogen content  
*By Calculation*

Ammonical Nitrogen content  
*In house method E-T-095 Segmented flow-salicylate method*

Total Inorganic Nitrogen  
*By Calculation*

Total phosphorus content  
*APHA, 17th edition, 4500-PB5 (Digestion) &  
In house method E-T-056 (Determination)*

E. coli count  
*The Bacteriological Examination of Drinking Water Supplies  
1982, DoE (1983) Membrane Filtration Procedure: Sections 7.8,  
7.9.4.2 Bacterial Confirmation: Section 7.9.4.4 & in-situ urease  
test*

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202322(1)

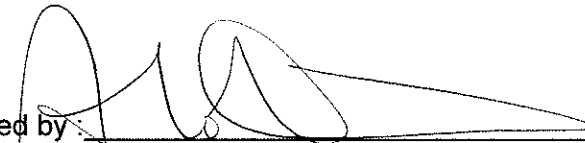
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**Results :**

Test parameters	Sample identification							
	E1F S	E1F S Dup	E1F B	E1F B Dup	E2aF M	E2aF M Dup	E3aF M	E3aF M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	2.6	2.0	1.9	2.0	1.4	1.4	0.62	0.59
3. Total nitrogen content, mg/L	4.6	3.7	3.4	3.5	2.7	2.6	1.2	1.0
4. Ammonical nitrogen content, mg/L	1.2	0.89	0.82	0.84	0.59	0.57	0.14	0.17
5. Total Inorganic nitrogen, mg/L	3.2	2.6	2.3	2.3	1.9	1.7	0.71	0.59
6. Total phosphorus content, mgP/L	0.39	0.42	0.33	0.31	0.25	0.22	0.15	0.14
7. E. coli count, cfu/100ml	$5.0 \times 10^3$	$4.7 \times 10^3$	$5.5 \times 10^3$	$4.9 \times 10^3$	$4.9 \times 10^2$	$3.6 \times 10^2$	$2.4 \times 10$	$2.4 \times 10$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 5.8°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 15/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 16/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2021
*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202322(1)

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**Results :**

Test parameters	Sample identification							
	E4F M	E4F M Dup	E5aF M	E5aF M Dup	DB1F M	DB1F M Dup	SP1F M	SP1F M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	1.6	1.8	3.1	2.9	0.69	0.80	3.2	2.5
3. Total nitrogen content, mg/L	3.3	3.1	5.7	5.3	1.1	1.2	4.9	4.3
4. Ammonical nitrogen content, mg/L	0.83	0.91	1.3	1.2	0.10	0.11	2.0	2.0
5. Total Inorganic nitrogen, mg/L	2.5	2.2	3.9	3.6	0.47	0.47	3.7	3.8
6. Total phosphorus content, mgP/L	0.29	0.25	0.33	0.32	0.12	0.12	0.29	0.33
7. E. coli count, cfu/100ml	$4.2 \times 10^3$	$3.4 \times 10^3$	$5.0 \times 10^3$	$4.9 \times 10^3$	$2.7 \times 10$	$2.7 \times 10$	$1.2 \times 10^4$	$6.8 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 5.8°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 15/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 16/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2021
*Note : This report refers only to the sample(s) tested.*

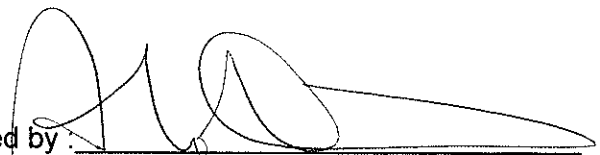
Report No. : 181172WA202322(1)

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**Results :**

Test parameters	Sample identification							
	KT1F M	KT1F M Dup	E1E S	E1E S Dup	E1E B	E1E B Dup	E2aE M	E2aE M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	<1.5	<1.5	1.5	2.0	<1.5	1.5
2. Total Kjeldahl nitrogen content, mg/L	1.8	1.6	1.9	1.7	2.0	1.8	1.3	1.2
3. Total nitrogen content, mg/L	4.3	4.0	4.5	3.6	4.0	3.3	2.7	2.9
4. Ammonical nitrogen content, mg/L	1.2	0.98	1.7	1.6	1.0	1.2	0.98	1.0
5. Total Inorganic nitrogen, mg/L	3.6	3.4	4.3	3.6	2.9	2.8	2.4	2.7
6. Total phosphorus content, mgP/L	0.28	0.32	0.27	0.29	0.44	0.44	0.37	0.36
7. E. coli count, cfu/100ml	$7.0 \times 10^3$	$7.4 \times 10^3$	$6.5 \times 10^3$	$6.9 \times 10^3$	$7.6 \times 10^3$	$7.1 \times 10^3$	$5.9 \times 10^3$	$5.8 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 5.8°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 15/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 16/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/12/2020

Note : This report refers only to the sample(s) tested.

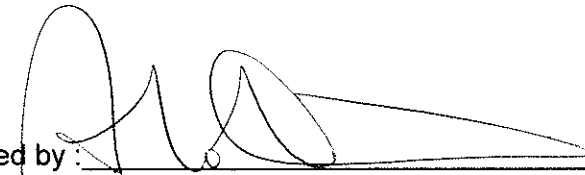
Report No. : 181172WA202322(1)

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**Results :**

Test parameters	Sample identification							
	E3aE M	E3aE M Dup	E4E M	E4E M Dup	E5aE M	E5aE M Dup	DB1E M	DB1E M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	<1.5	<1.5	2.0	1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	0.34	0.36	1.4	1.5	3.8	3.9	0.68	0.82
3. Total nitrogen content, mg/L	1.1	1.2	2.9	3.2	5.5	5.4	1.5	1.6
4. Ammonical nitrogen content, mg/L	0.17	0.18	1.3	1.2	2.3	2.2	0.27	0.28
5. Total Inorganic nitrogen, mg/L	0.92	1.1	2.8	3.0	4.0	3.7	1.1	1.1
6. Total phosphorus content, mgP/L	0.16	0.17	0.31	0.33	0.49	0.47	0.14	0.14
7. E. coli count, cfu/100ml	5.5 x 10	7.2 x 10	4.6 x 10 <sup>3</sup>	5.6 x 10 <sup>3</sup>	1.8 x 10 <sup>4</sup>	8.4 x 10 <sup>3</sup>	1.9 x 10	1.5 x 10

- Remark:
1. Disclaimer: Sampling is out of scope of accreditation.
  2. Temperature of ice-box when samples being received were 5.8°C
  3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.
  4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.
  5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.
  6. Detailed information for BOD<sub>5</sub> test :
    - i. Samples taken by staff of FTS on 15/12/2020
    - ii. Samples stored at 0-4°C refrigerator prior to testing.
    - iii. Date and hour of commencing BOD<sub>5</sub> test : 16/12/2020 17:00
    - iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.
    - v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.
    - vi. The samples were incubated at 19-21°C for 5 days

Certified by : 

Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories

Date : 15/11/2021

Note : This report refers only to the sample(s) tested.

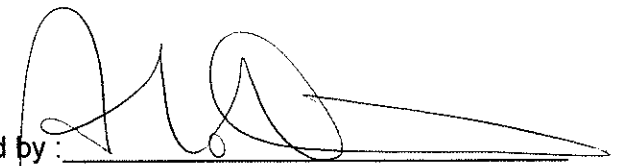
Report No. : 181172WA202322(1)

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**Results :**

Test parameters	Sample identification			
	SP1E M	SP1E M Dup	KT1E M	KT1E M Dup
1. Biochemical oxygen demand, mg/L	2.0	2.0	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	4.2	4.8	3.4	3.5
3. Total nitrogen content, mg/L	5.5	6.1	5.1	5.4
4. Ammonical nitrogen content, mg/L	3.0	3.2	1.5	1.8
5. Total Inorganic nitrogen, mg/L	4.4	4.5	3.3	3.4
6. Total phosphorus content, mgP/L	0.44	0.44	0.39	0.45
7. E. coli count, cfu/100ml	$5.6 \times 10^4$	$5.0 \times 10^4$	$1.3 \times 10^4$	$9.1 \times 10^3$

- Remark:
1. Disclaimer: Sampling is out of scope of accreditation.
  2. Temperature of ice-box when samples being received were 5.8°C
  3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.
  4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.
  5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.
  6. Detailed information for BOD<sub>5</sub> test :
    - i. Samples taken by staff of FTS on 15/12/2020
    - ii. Samples stored at 0-4°C refrigerator prior to testing.
    - iii. Date and hour of commencing BOD<sub>5</sub> test : 16/12/2020 17:00
    - iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.
    - v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.
    - vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date : 15/11/2021

**\*\* End of Report \*\***
*Note : This report refers only to the sample(s) tested.*



**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

1. Biochemical oxygen demand, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1.5	<1.5	-	1.42	1.45	2.09
1.5	<1.5	-	1.44	1.40	2.82
2. Total Kjeldahl nitrogen content, mg/L (Colorimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.05	<0.05	102.30	1.66	1.84	10.3
0.05	<0.05	105.20	3.70	3.39	8.74
3. Total Kjeldahl nitrogen content, mg/L (Titrimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
5	<5	-	-	-	-

Certified by: 

Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories

Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**


4. Ammonical nitrogen content, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.02	<0.02	114.48	1.18	1.15	2.58
0.02	<0.02	112.41	1.72	1.70	1.17

5. Total phosphorus content, mgP/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.01	<0.01	101.00	0.30	0.29	3.39
0.01	<0.01	100.36	0.45	0.46	2.20

6. E. coli count, cfu/100ml					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1	<1	-	$7.3 \times 10^3$	$7.5 \times 10^3$	2.70
1	<1	-	$9.3 \times 10^3$	$8.8 \times 10^3$	5.52

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202351



Page 1 of 2

**Test Report on Analysis of Water****Information Supplied by Client**

Client : Drainage Services Department

Client's address : -

Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Sample description : Forty-eight samples of water taken by the staff of FTS on 17/12/2020

Client sample ID : Refer to results pages

Test required : Total suspended solids dried at 103°C - 105°C

**Laboratory Information**

Lab. sample ID : WA202351/1-48

Date of receipt of sample : 17/12/2020

Date test commenced : 18/12/2020

Date test completed : 19/12/2020

Test method used : APHA 17ed. 2540D

*Note : This report refers only to the sample(s) tested.*

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Report No. : 181172WA202351

Page 2 of 2



**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
1. M1F M	70
2. M1F M Dup	72
3. M2F M	59
4. M2F M Dup	60
5. E1F S	31
6. E1F S Dup	31
7. E1F B	39
8. E1F B Dup	40
9. E2aF M	63
10. E2aF M Dup	64
11. E3aF M	46
12. E3aF M Dup	46
13. E4F M	46
14. E4F M Dup	47
15. E5aF M	51
16. E5aF M Dup	51
17. DB1F M	23
18. DB1F M Dup	23
19. SP1F M	170
20. SP1F M Dup	180
21. KT1F M	56
22. KT1F M Dup	56

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :

Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories

Date

: 15/11/2021

*Note : This report refers only to the sample(s) tested.*

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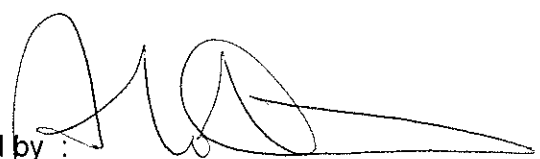
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**Results :**

Sample identification	Test result Total suspended solids dried at 103°C – 105°C, mg/L
23. M1E M	34
24. M1E M Dup	35
25. M2E M	34
26. M2E M Dup	35
27. E1E S	33
28. E1E S Dup	32
29. E1E B	41
30. E1E B Dup	39
31. E2aE M	25
32. E2aE M Dup	25
33. E3aE M	21
34. E3aE M Dup	20
35. E4E M	29
36. E4E M Dup	28
37. E5aE M	43
38. E5aE M Dup	42
39. DB1E M	16
40. DB1E M Dup	16
41. SP1E M	42
42. SP1E M Dup	40
43. KT1E M	31
44. KT1E M Dup	29

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2024

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202351

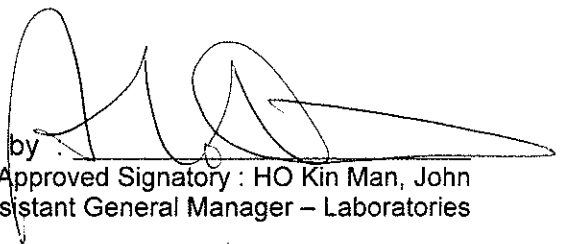
Page 2 of 2



**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
45. M3F M	41
46. M3F M Dup	41
47. M3E M	25
48. M3E M Dup	28

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by   
Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories  
Date : 15/1/2021

**\*\*End of Report\*\***


*Note : This report refers only to the sample(s) tested.*

The Hong Kong Accreditation Service (HKAS) has accredited Fugro Technical Services Limited (Reg. No. HOKLAS 015) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories. The copyright of this report is owned by Fugro Technical Services Limited. This report shall not be reproduced except in full.

**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

Total suspended solids dried at 103°C – 105°C, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1 mg/L	<1	100.06	59.0	60.1	1.85
	<1	100.70	178	175	1.70
	<1	100.06	20.5	20.0	2.47
	<1	99.66	16.2	15.7	3.13
	<1	100.76	41.7	41.3	0.96

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202351(1)



Page 1 of 7

**Test Report on Analysis of Water**

**Information Supplied by Client**

Client : Drainage Services Department  
 Client's address : -  
 Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1  
 Sample description : Thirty-six samples of water taken by the staff of FTS on 17/12/2020  
 Client sample ID : Refer to result pages  
 Tests required : Biochemical oxygen demand  
 Total Kjeldahl Nitrogen content  
 Total Nitrogen content  
 Ammonical Nitrogen content  
 Total Inorganic Nitrogen  
 Total phosphorus content  
 E. coli count

**Laboratory Information**

Lab. sample ID :	Chemical tests	Microbiological tests
	WA202351/5-22, 27-44	WA202351/5B-22B, 27B-44B

Sample condition :		Chemical tests	Microbiological tests
	Container	Thirty-six 2 L plastic bottles and Thirty-six 0.18 mL plastic bottles	Thirty-six sterilized 250 ml plastic bottles with thiosulphate added
	Appearance	Colorless	
	Temperature	Cooled	

Date of receipt of sample : 17/12/2020

Date test commenced : 18/12/2020

Date test completed : 23/12/2020

*Note : This report refers only to the sample(s) tested.*



Report No. : 181172WA202351(1)

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Test methods used : Biochemical oxygen demand  
*BS 6068: Section 2.14: 1990*

Total Kjeldahl Nitrogen content  
*In house method E-T-037 & APHA 18ed. 4500-N<sub>org</sub> B & 4500-NH<sub>3</sub>E*

Total Nitrogen content  
*By Calculation*

Ammonical Nitrogen content  
*In house method E-T-095 Segmented flow-salicylate method*

Total Inorganic Nitrogen  
*By Calculation*

Total phosphorus content  
*APHA, 17th edition, 4500-PB5 (Digestion) &  
In house method E-T-056 (Determination)*

E. coli count  
*The Bacteriological Examination of Drinking Water Supplies  
1982, DoE (1983) Membrane Filtration Procedure: Sections 7.8,  
7.9.4.2 Bacterial Confirmation: Section 7.9.4.4 & in-situ urease  
test*

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202351(1)

Page 3 of 7

**Results :**

Test parameters	Sample identification							
	E1F S	E1F S Dup	E1F B	E1F B Dup	E2aF M	E2aF M Dup	E3aF M	E3aF M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	4.0	4.5	3.8	3.3	2.4	2.3	0.74	0.80
3. Total nitrogen content, mg/L	5.5	5.2	4.7	4.2	4.5	3.9	1.6	1.4
4. Ammonical nitrogen content, mg/L	3.3	3.1	3.0	2.9	1.6	1.6	0.65	0.72
5. Total Inorganic nitrogen, mg/L	4.8	3.8	3.9	3.8	3.7	3.2	1.5	1.4
6. Total phosphorus content, mgP/L	0.40	0.36	0.41	0.41	0.30	0.29	0.18	0.21
7. E. coli count, cfu/100ml	$9.9 \times 10^3$	$8.8 \times 10^3$	$1.1 \times 10^4$ (estimated)	$1.4 \times 10^4$ (estimated)	$6.6 \times 10^3$	$5.9 \times 10^3$	$4.5 \times 10^2$	$3.5 \times 10^2$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.0°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 17/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 18/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

 Certified by : 

 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

 Date : 15/11/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202351(1)

Page 4 of 7

**Results :**

Test parameters	Sample identification							
	E4F M	E4F M Dup	E5aF M	E5aF M Dup	DB1F M	DB1F M Dup	SP1F M	SP1F M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	1.5	2.0	<1.5	<1.5	2.5	3.5
2. Total Kjeldahl nitrogen content, mg/L	2.7	2.9	4.6	4.9	0.65	0.77	6.3	6.2
3. Total nitrogen content, mg/L	4.5	4.3	7.0	7.4	2.3	2.4	8.7	8.5
4. Ammonical nitrogen content, mg/L	1.8	1.8	3.6	3.4	0.28	0.29	4.5	4.6
5. Total Inorganic nitrogen, mg/L	3.7	3.2	6.0	5.9	1.9	2.0	6.9	6.9
6. Total phosphorus content, mgP/L	0.29	0.31	0.58	0.58	0.16	0.15	0.74	0.72
7. E. coli count, cfu/100ml	$6.9 \times 10^3$	$7.9 \times 10^3$	$1.5 \times 10^4$	$1.4 \times 10^4$	$9.8 \times 10$	$9.8 \times 10$	$1.9 \times 10^4$	$1.5 \times 10^4$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.0°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 17/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 18/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2021
*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202351(1)


Page 5 of 7

**Results :**

Test parameters	Sample identification							
	KT1F M	KT1F M Dup	E1E S	E1E S Dup	E1E B	E1E B Dup	E2aE M	E2aE M Dup
1. Biochemical oxygen demand, mg/L	2.5	2.0	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	5.0	5.0	1.8	2.1	1.8	1.8	0.84	0.95
3. Total nitrogen content, mg/L	7.6	7.5	3.4	3.4	3.0	2.8	2.2	1.8
4. Ammonical nitrogen content, mg/L	3.9	3.5	1.6	1.1	1.1	1.2	0.78	0.88
5. Total Inorganic nitrogen, mg/L	6.5	5.9	3.1	2.6	2.2	2.3	2.2	1.8
6. Total phosphorus content, mgP/L	0.54	0.57	0.24	0.23	0.26	0.27	0.22	0.25
7. E. coli count, cfu/100ml	$1.7 \times 10^4$	$1.6 \times 10^4$	$4.2 \times 10^3$	$5.0 \times 10^3$	$4.7 \times 10^3$	$4.5 \times 10^3$	$3.8 \times 10^3$	$2.3 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.0°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 17/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 18/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202351(1)

Page 6 of 7

**Results :**

Test parameters	Sample identification							
	E3aE M	E3aE M Dup	E4E M	E4E M Dup	E5aE M	E5aE M Dup	DB1E M	DB1E M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	<1.5	<1.5	1.5	1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	0.47	0.48	1.4	1.4	6.5	6.3	0.37	0.39
3. Total nitrogen content, mg/L	1.7	1.6	2.2	2.2	7.7	7.3	0.59	0.62
4. Ammonical nitrogen content, mg/L	0.37	0.41	1.1	0.98	3.4	3.2	0.33	0.34
5. Total Inorganic nitrogen, mg/L	1.6	1.6	1.8	1.7	4.6	4.4	0.55	0.57
6. Total phosphorus content, mgP/L	0.14	0.17	0.25	0.25	0.75	0.68	0.13	0.13
7. E. coli count, cfu/100ml	7.5 x 10	5.4 x 10	5.0 x 10 <sup>3</sup>	4.5 x 10 <sup>3</sup>	9.0 x 10 <sup>3</sup>	7.0 x 10 <sup>3</sup>	2.7 x 10	2.8 x 10

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.0°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 17/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 18/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202351(1)

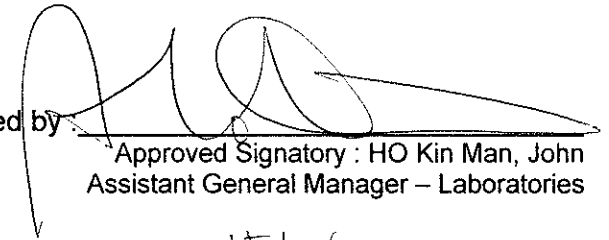
Page 7 of 7

**Results :**

Test parameters	Sample identification			
	SP1E M	SP1E M Dup	KT1E M	KT1E M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	3.0	2.7	2.5	2.8
3. Total nitrogen content, mg/L	3.7	3.4	3.6	3.8
4. Ammonical nitrogen content, mg/L	2.1	1.8	1.3	1.4
5. Total Inorganic nitrogen, mg/L	2.8	2.4	2.4	2.3
6. Total phosphorus content, mgP/L	0.31	0.35	0.25	0.25
7. E. coli count, cfu/100ml	$6.3 \times 10^3$	$6.0 \times 10^3$	$5.4 \times 10^3$	$5.5 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.0°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 17/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 18/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:



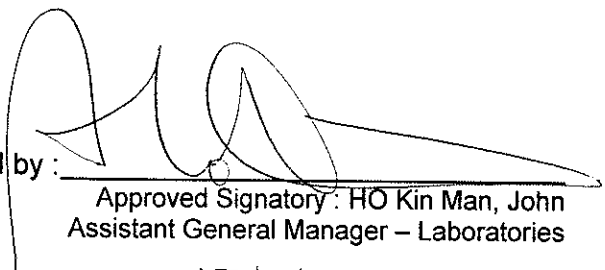
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2021
**\*\* End of Report \*\***
*Note : This report refers only to the sample(s) tested.*

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

1. Biochemical oxygen demand, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1.5	<1.5	-	1.14	0.98	15.1
1.5	<1.5	-	1.22	1.32	7.87
2. Total Kjeldahl nitrogen content, mg/L (Colorimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.05	<0.05	99.60	1.97	2.13	7.80
0.05	<0.05	100.80	2.90	2.71	6.77
3. Total Kjeldahl nitrogen content, mg/L (Titrimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
5	<5	99.82	6.18	6.33	2.40

Certified by :   
 Approved Signatory: HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

Note : This report refers only to the sample(s) tested.

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

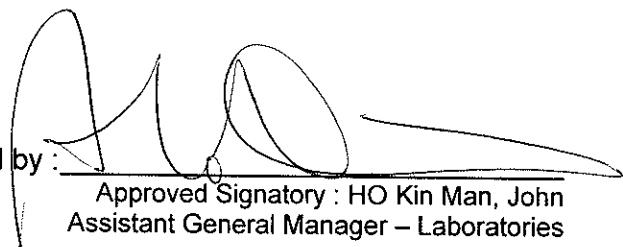
4. Ammonical nitrogen content, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.02	<0.02	113.91	3.30	3.27	0.91
0.02	<0.02	108.51	1.57	1.54	1.93

5. Total phosphorus content, mgP/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.01	<0.01	98.90	0.23	0.23	0.00
0.01	<0.01	99.10	0.25	0.24	4.08

6. E. coli count, cfu/100ml					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1	<1	-	1.6 x 10 <sup>4</sup>	1.5 x 10 <sup>4</sup>	6.45
1	<1	-	6.0 x 10 <sup>3</sup>	4.9 x 10 <sup>3</sup>	20.2

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

Note : This report refers only to the sample(s) tested.



Report No. : 181172WA202352



Page 1 of 2

**Test Report on Analysis of Water****Information Supplied by Client**

Client : Drainage Services Department

Client's address : -

Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Sample description : Forty-eight samples of water taken by the staff of FTS on 19/12/2020

Client sample ID : Refer to results pages

Test required : Total suspended solids dried at 103°C - 105°C

**Laboratory Information**

Lab. sample ID : WA202352/1-48

Date of receipt of sample : 19/12/2020

Date test commenced : 19/12/2020

Date test completed : 22/12/2020

Test method used : APHA 17ed. 2540D

*Note : This report refers only to the sample(s) tested.*

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Report No. : 181172WA202352

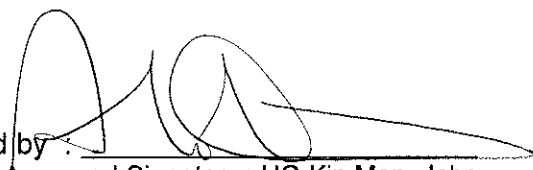
Page 2 of 2


**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
1. M1F M	49
2. M1F M Dup	50
3. M2F M	52
4. M2F M Dup	51
5. E1F S	31
6. E1F S Dup	30
7. E1F B	30
8. E1F B Dup	30
9. E2aF M	38
10. E2aF M Dup	38
11. E3aF M	38
12. E3aF M Dup	39
13. E4F M	41
14. E4F M Dup	41
15. E5aF M	46
16. E5aF M Dup	45
17. DB1F M	30
18. DB1F M Dup	29
19. SP1F M	64
20. SP1F M Dup	65
21. KT1F M	35
22. KT1F M Dup	35

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :


 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021

*Note : This report refers only to the sample(s) tested.*

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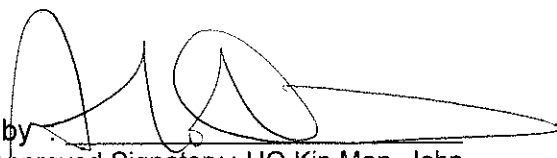
Page 2 of 2



**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
23. M1E M	33
24. M1E M Dup	33
25. M2E M	45
26. M2E M Dup	45
27. E1E S	36
28. E1E S Dup	36
29. E1E B	33
30. E1E B Dup	31
31. E2aE M	38
32. E2aE M Dup	37
33. E3aE M	23
34. E3aE M Dup	23
35. E4E M	36
36. E4E M Dup	36
37. E5aE M	33
38. E5aE M Dup	34
39. DB1E M	17
40. DB1E M Dup	16
41. SP1E M	42
42. SP1E M Dup	42
43. KT1E M	31
44. KT1E M Dup	31

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202352

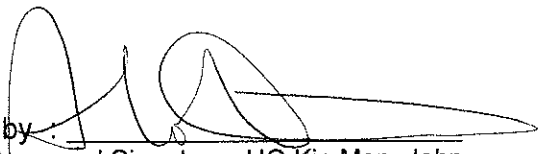
Page 2 of 2



**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
45. M3F M	29
46. M3F M Dup	31
47. M3E M	52
48. M3E M Dup	49

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

**\*\*End of Report\*\***

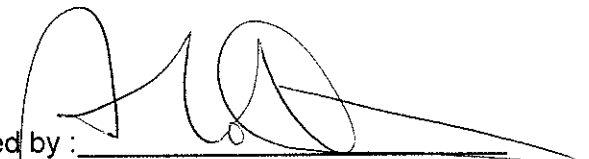
*Note : This report refers only to the sample(s) tested.*

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**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

Total suspended solids dried at 103°C – 105°C, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1 mg/L	<1	101.10	49.2	50.8	3.2
	<1	98.90	51.0	51.3	0.59
	<1	99.06	32.7	32.5	0.61
	<1	99.66	44.8	46.0	2.64
	<1	99.90	49.0	49.7	1.42

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15 / 1 / 2024

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202352(1)



**Test Report on Analysis of Water**

**Information Supplied by Client**

Client : Drainage Services Department  
 Client's address : -  
 Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1  
 Sample description : Thirty-six samples of water taken by the staff of FTS on 19/12/2020  
 Client sample ID : Refer to result pages  
 Tests required : Biochemical oxygen demand  
 Total Kjeldahl Nitrogen content  
 Total Nitrogen content  
 Ammonical Nitrogen content  
 Total Inorganic Nitrogen  
 Total phosphorus content  
 E. coli count

**Laboratory Information**

Lab. sample ID :	Chemical tests	Microbiological tests
	WA202352/5-22, 27-44	WA202352/5B-22B, 27B-44B

Sample condition :		Chemical tests	Microbiological tests
	Container	Thirty-six 2 L plastic bottles and Thirty-six 0.18 mL plastic bottles	Thirty-six sterilized 250 ml plastic bottles with thiosulphate added
	Appearance	Colorless	
	Temperature	Cooled	

Date of receipt of sample : 19/12/2020

Date test commenced : 20/12/2020

Date test completed : 27/12/2020

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202352(1)

Page 2 of 7

Test methods used : Biochemical oxygen demand  
*BS 6068: Section 2.14: 1990*

Total Kjeldahl Nitrogen content  
*In house method E-T-037 & APHA 18ed. 4500-N<sub>org</sub> B & 4500-NH<sub>3</sub>E*

Total Nitrogen content  
*By Calculation*

Ammonical Nitrogen content  
*In house method E-T-095 Segmented flow-salicylate method*

Total Inorganic Nitrogen  
*By Calculation*

Total phosphorus content  
*APHA, 17th edition, 4500-PB5 (Digestion) &  
In house method E-T-056 (Determination)*

E. coli count  
*The Bacteriological Examination of Drinking Water Supplies  
1982, DoE (1983) Membrane Filtration Procedure: Sections 7.8,  
7.9.4.2 Bacterial Confirmation: Section 7.9.4.4 & in-situ urease  
test*

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202352(1)

Page 3 of 7

**Results :**

Test parameters	Sample identification							
	E1F S	E1F S Dup	E1F B	E1F B Dup	E2aF M	E2aF M Dup	E3aF M	E3aF M Dup
1. Biochemical oxygen demand, mg/L	2.0	2.5	2.5	2.0	<1.5	<1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	3.9	3.6	4.3	4.3	1.9	2.3	0.57	0.65
3. Total nitrogen content, mg/L	4.5	4.0	4.7	4.8	2.5	2.7	0.81	0.89
4. Ammonical nitrogen content, mg/L	3.8	2.8	2.6	2.8	1.4	1.3	0.31	0.32
5. Total Inorganic nitrogen, mg/L	4.4	3.2	3.0	3.3	2.0	1.8	0.55	0.56
6. Total phosphorus content, mgP/L	0.48	0.47	0.45	0.46	0.29	0.27	0.18	0.18
7. E. coli count, cfu/100ml	$6.5 \times 10^3$	$7.6 \times 10^3$	$5.9 \times 10^3$	$6.9 \times 10^3$	$5.1 \times 10^3$	$6.9 \times 10^3$	$2.0 \times 10^2$	$1.5 \times 10^2$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 5.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
 i. Samples taken by staff of FTS on 19/12/2020  
 ii. Samples stored at 0-4°C refrigerator prior to testing.  
 iii. Date and hour of commencing BOD<sub>5</sub> test : 20/12/2020 17:00  
 iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
 v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
 vi. The samples were incubated at 19-21°C for 5 days

Certified by :



 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021
*Note : This report refers only to the sample(s) tested.*



Report No. : 181172WA202352(1)


Page 4 of 7

**Results :**

Test parameters	Sample identification							
	E4F M	E4F M Dup	E5aF M	E5aF M Dup	DB1F M	DB1F M Dup	SP1F M	SP1F M Dup
1. Biochemical oxygen demand, mg/L	<1.5	1.5	2.5	3.0	<1.5	<1.5	4.0	4.5
2. Total Kjeldahl nitrogen content, mg/L	2.9	2.3	4.4	4.6	0.36	0.32	5.6	5.5
3. Total nitrogen content, mg/L	3.6	3.0	5.1	5.2	0.51	0.48	6.3	6.1
4. Ammonical nitrogen content, mg/L	1.5	1.5	3.1	3.7	0.31	0.30	4.5	4.5
5. Total Inorganic nitrogen, mg/L	2.2	2.1	3.8	4.3	0.46	0.46	5.2	5.1
6. Total phosphorus content, mgP/L	0.26	0.33	0.50	0.55	0.17	0.17	0.56	0.64
7. E. coli count, cfu/100ml	$6.0 \times 10^3$	$5.3 \times 10^3$	$1.5 \times 10^4$	$1.2 \times 10^4$	$8.4 \times 10$	$6.7 \times 10$	$1.7 \times 10^4$	$1.7 \times 10^4$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 5.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 19/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 20/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202352(1)

Page 5 of 7

**Results :**

Test parameters	Sample identification							
	KT1F M	KT1F M Dup	E1E S	E1E S Dup	E1E B	E1E B Dup	E2aE M	E2aE M Dup
1. Biochemical oxygen demand, mg/L	3.5	4.0	<1.5	1.5	<1.5	2.0	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	6.2	5.8	1.5	1.2	1.9	1.4	1.3	1.3
3. Total nitrogen content, mg/L	6.6	6.5	2.1	1.7	2.5	2.0	1.7	1.7
4. Ammonical nitrogen content, mg/L	3.8	4.0	1.4	1.1	1.1	1.0	1.0	0.99
5. Total Inorganic nitrogen, mg/L	4.3	4.6	2.0	1.7	1.7	1.7	1.4	1.4
6. Total phosphorus content, mgP/L	0.59	0.62	0.25	0.26	0.25	0.23	0.25	0.26
7. E. coli count, cfu/100ml	$1.3 \times 10^4$	$1.3 \times 10^4$	$4.3 \times 10^3$	$4.8 \times 10^3$	$4.3 \times 10^3$	$4.1 \times 10^3$	$1.8 \times 10^3$	$1.6 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 5.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 19/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 20/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :



 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202352(1)

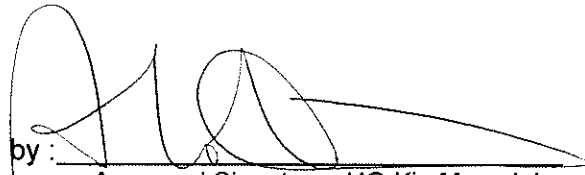
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**Results :**

Test parameters	Sample identification							
	E3aE M	E3aE M Dup	E4E M	E4E M Dup	E5aE M	E5aE M Dup	DB1E M	DB1E M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	2.0	<1.5	1.5	<1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	0.30	0.31	1.9	1.7	2.8	3.2	0.55	0.53
3. Total nitrogen content, mg/L	0.42	0.44	2.4	2.2	3.3	3.7	0.65	0.62
4. Ammonical nitrogen content, mg/L	0.20	0.18	0.94	0.96	1.8	2.1	0.21	0.21
5. Total Inorganic nitrogen, mg/L	0.32	0.31	1.4	1.4	2.3	2.6	0.31	0.31
6. Total phosphorus content, mgP/L	0.14	0.14	0.24	0.24	0.30	0.32	0.13	0.12
7. E. coli count, cfu/100ml	3.7 x 10	3.8 x 10	7.5 x 10 <sup>3</sup>	4.0 x 10 <sup>3</sup>	5.5 x 10 <sup>3</sup>	4.4 x 10 <sup>3</sup>	2.3 x 10	1.9 x 10

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 5.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 19/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 20/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date

15/1/2021

*Note : This report refers only to the sample(s) tested.*

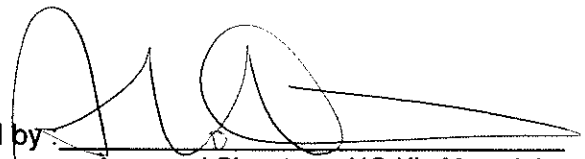
Report No. : 181172WA202352(1)

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**Results :**

Test parameters	Sample identification			
	SP1E M	SP1E M Dup	KT1E M	KT1E M Dup
1. Biochemical oxygen demand, mg/L	2.0	2.0	1.5	1.5
2. Total Kjeldahl nitrogen content, mg/L	3.8	4.9	2.7	2.8
3. Total nitrogen content, mg/L	4.2	5.4	3.2	3.3
4. Ammonical nitrogen content, mg/L	2.9	3.1	1.6	1.8
5. Total Inorganic nitrogen, mg/L	3.3	3.6	2.1	2.3
6. Total phosphorus content, mgP/L	0.41	0.42	0.33	0.32
7. E. coli count, cfu/100ml	6.9 x 10 <sup>3</sup>	5.3 x 10 <sup>3</sup>	6.5 x 10 <sup>3</sup>	5.6 x 10 <sup>3</sup>

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 5.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 19/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 20/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

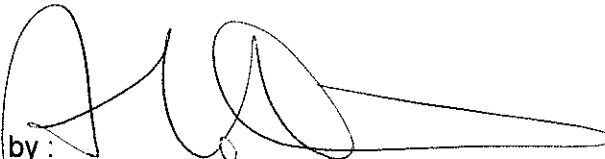
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 Assistant General Manager – Laboratories

Date : 15/1/2021

**\*\* End of Report \*\***
*Note : This report refers only to the sample(s) tested.*

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

1. Biochemical oxygen demand, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1.5	<1.5	-	1.67	1.73	3.53
1.5	<1.5	-	1.52	1.68	10.0
2. Total Kjeldahl nitrogen content, mg/L (Colorimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.05	<0.05	101.60	1.18	1.22	3.33
0.05	<0.05	100.20	2.77	2.78	0.36
3. Total Kjeldahl nitrogen content, mg/L (Titrimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
5	<5	99.24	5.88	5.74	2.41

Certified by :   
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 Assistant General Manager – Laboratories  
 Date : 15/11/2021

Note : This report refers only to the sample(s) tested.

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

4. Ammonical nitrogen content, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.02	<0.02	109.92	3.81	3.79	0.53
0.02	<0.02	111.96	1.37	1.34	2.21
5. Total phosphorus content, mgP/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.01	<0.01	96.30	0.27	0.26	3.77
0.01	<0.01	96.00	0.32	0.32	0.00
6. E. coli count, cfu/100ml					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1	<1	-	$1.2 \times 10^4$	$1.4 \times 10^4$	15.4
1	<1	-	$5.4 \times 10^3$	$5.7 \times 10^3$	5.41

Certified by :


 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202385



Page 1 of 2

**Test Report on Analysis of Water****Information Supplied by Client**

Client : Drainage Services Department

Client's address : -

Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Sample description : Forty-eight samples of water taken by the staff of FTS on 22/12/2020

Client sample ID : Refer to results pages

Test required : Total suspended solids dried at 103°C - 105°C

**Laboratory Information**

Lab. sample ID : WA202385/1-48

Date of receipt of sample : 22/12/2020

Date test commenced : 23/12/2020

Date test completed : 24/12/2020

Test method used : APHA 17ed. 2540D

*Note : This report refers only to the sample(s) tested.*

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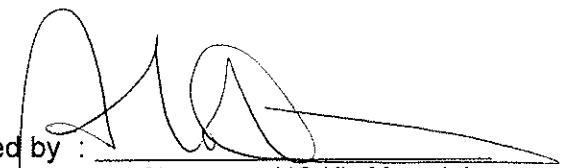
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**Results :**

Sample identification	Test result Total suspended solids dried at 103°C – 105°C, mg/L
1. M1F M	26
2. M1F M Dup	26
3. M2F M	30
4. M2F M Dup	29
5. E1F S	27
6. E1F S Dup	26
7. E1F B	34
8. E1F B Dup	33
9. E2aF M	25
10. E2aF M Dup	24
11. E3aF M	12
12. E3aF M Dup	12
13. E4F M	37
14. E4F M Dup	37
15. E5aF M	23
16. E5aF M Dup	23
17. DB1F M	13
18. DB1F M Dup	12
19. SP1F M	42
20. SP1F M Dup	41
21. KT1F M	19
22. KT1F M Dup	19

Remark: Disclaimer: Sampling is out of scope of accreditation.

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 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

*Note : This report refers only to the sample(s) tested.*

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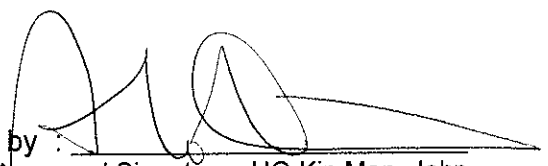
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**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
23. M1E M	53
24. M1E M Dup	54
25. M2E M	27
26. M2E M Dup	28
27. E1E S	25
28. E1E S Dup	25
29. E1E B	30
30. E1E B Dup	29
31. E2aE M	26
32. E2aE M Dup	26
33. E3aE M	19
34. E3aE M Dup	19
35. E4E M	26
36. E4E M Dup	26
37. E5aE M	30
38. E5aE M Dup	30
39. DB1E M	16
40. DB1E M Dup	16
41. SP1E M	41
42. SP1E M Dup	42
43. KT1E M	24
44. KT1E M Dup	24

Remark: Disclaimer: Sampling is out of scope of accreditation.

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 Assistant General Manager – Laboratories  
 Date : 15/11/2021

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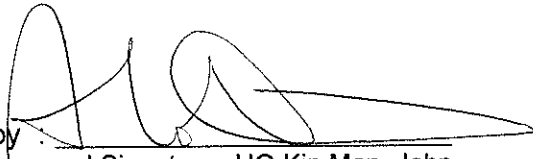
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**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
45. M3F M	70
46. M3F M Dup	69
47. M3E M	68
48. M3E M Dup	71

Remark: Disclaimer: Sampling is out of scope of accreditation.

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Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories  
Date : 15/1/2024

**\*\*End of Report\*\***


*Note : This report refers only to the sample(s) tested.*

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**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

Total suspended solids dried at 103°C – 105°C, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1 mg/L	<1	100.16	11.7	11.5	1.72
	<1	100.56	12.3	12.5	1.61
	<1	100.30	27.8	27.5	1.08
	<1	100.20	42.0	41.0	2.41
	<1	99.56	67.3	68.0	1.03

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202385(1)



**Test Report on Analysis of Water**

**Information Supplied by Client**

Client : Drainage Services Department  
 Client's address : -  
 Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1  
 Sample description : Thirty-six samples of water taken by the staff of FTS on 22/12/2020  
 Client sample ID : Refer to result pages  
 Tests required : Biochemical oxygen demand  
 Total Kjeldahl Nitrogen content  
 Total Nitrogen content  
 Ammonical Nitrogen content  
 Total Inorganic Nitrogen  
 Total phosphorus content  
 E. coli count

**Laboratory Information**

Lab. sample ID :	Chemical tests	Microbiological tests
	WA202385/5-22, 27-44	WA202385/5B-22B, 27B-44B

Sample condition :		Chemical tests	Microbiological tests
	Container	Thirty-six 2 L plastic bottles and Thirty-six 0.18 mL plastic bottles	Thirty-six sterilized 250 ml plastic bottles with thiosulphate added
	Appearance	Colorless	
	Temperature	Cooled	

Date of receipt of sample : 22/12/2020  
 Date test commenced : 23/12/2020  
 Date test completed : 28/12/2020

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202385(1)

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Test methods used : Biochemical oxygen demand  
*BS 6068: Section 2.14: 1990*

Total Kjeldahl Nitrogen content  
*In house method E-T-037 & APHA 18ed. 4500-N<sub>org</sub> B & 4500-NH<sub>3</sub>E*

Total Nitrogen content  
*By Calculation*

Ammonical Nitrogen content  
*In house method E-T-095 Segmented flow-salicylate method*

Total Inorganic Nitrogen  
*By Calculation*

Total phosphorus content  
*APHA, 17th edition, 4500-PB5 (Digestion) &  
In house method E-T-056 (Determination)*

E. coli count  
*The Bacteriological Examination of Drinking Water Supplies  
1982, DoE (1983) Membrane Filtration Procedure: Sections 7.8,  
7.9.4.2 Bacterial Confirmation: Section 7.9.4.4 & in-situ urease  
test*

*Note : This report refers only to the sample(s) tested.*

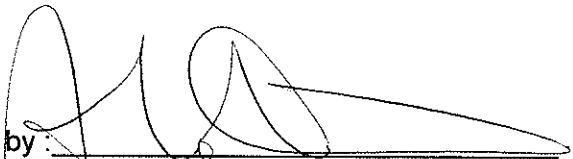
Report No. : 181172WA202385(1)

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**Results :**

Test parameters	Sample identification							
	E1F S	E1F S Dup	E1F B	E1F B Dup	E2aF M	E2aF M Dup	E3aF M	E3aF M Dup
1. Biochemical oxygen demand, mg/L	5.0	4.0	3.5	4.0	3.0	3.0	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	4.3	4.1	3.5	4.0	1.5	1.4	0.22	0.20
3. Total nitrogen content, mg/L	4.7	4.5	3.8	4.4	1.7	1.7	0.30	0.30
4. Ammonical nitrogen content, mg/L	4.2	3.1	3.2	2.7	1.3	1.3	0.15	0.16
5. Total Inorganic nitrogen, mg/L	4.6	3.5	3.6	3.1	1.6	1.5	0.23	0.26
6. Total phosphorus content, mgP/L	0.60	0.65	0.56	0.56	0.26	0.26	0.12	0.11
7. E. coli count, cfu/100ml	1.0 x 10 <sup>4</sup> (estimated)	9.3 x 10 <sup>3</sup>	9.3 x 10 <sup>3</sup>	7.6 x 10 <sup>3</sup>	2.1 x 10 <sup>3</sup>	1.2 x 10 <sup>3</sup>	4.2 x 10	3.7 x 10

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 5.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
 i. Samples taken by staff of FTS on 22/12/2020  
 ii. Samples stored at 0-4°C refrigerator prior to testing.  
 iii. Date and hour of commencing BOD<sub>5</sub> test : 23/12/2020 11:00  
 iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
 v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
 vi. The samples were incubated at 19-21°C for 5 days

 Certified by : 

 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

 Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202385(1)

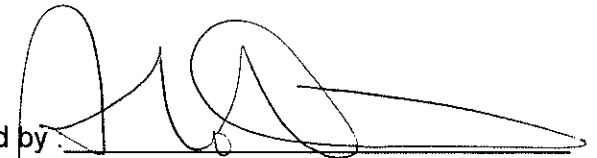
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**Results :**

Test parameters	Sample identification							
	E4F M	E4F M Dup	E5aF M	E5aF M Dup	DB1F M	DB1F M Dup	SP1F M	SP1F M Dup
1. Biochemical oxygen demand, mg/L	3.0	3.5	3.0	4.0	<1.5	<1.5	5.0	4.0
2. Total Kjeldahl nitrogen content, mg/L	1.7	2.0	4.9	4.5	0.25	0.30	7.5	7.7
3. Total nitrogen content, mg/L	2.0	2.3	5.3	4.9	0.34	0.41	7.9	8.0
4. Ammonical nitrogen content, mg/L	1.6	1.6	4.0	4.2	0.13	0.12	6.8	6.9
5. Total Inorganic nitrogen, mg/L	1.9	1.9	4.3	4.6	0.22	0.23	7.2	7.2
6. Total phosphorus content, mgP/L	0.33	0.33	0.83	0.85	0.21	0.22	0.96	0.92
7. E. coli count, cfu/100ml	$9.7 \times 10^3$	$7.6 \times 10^3$	$7.9 \times 10^3$	$5.6 \times 10^3$	$1.3 \times 10$	$1.0 \times 10$	$2.1 \times 10^4$	$9.8 \times 10^3$

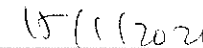
- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 5.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 22/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 23/12/2020 11:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :



 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :


*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202385(1)

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**Results :**

Test parameters	Sample identification							
	KT1F M	KT1F M Dup	E1E S	E1E S Dup	E1E B	E1E B Dup	E2aE M	E2aE M Dup
1. Biochemical oxygen demand, mg/L	4.0	3.5	3.0	2.5	3.0	3.0	2.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	5.1	5.2	6.8	6.7	5.2	5.5	3.8	4.2
3. Total nitrogen content, mg/L	5.4	5.5	7.2	7.2	5.5	5.8	4.2	4.6
4. Ammonical nitrogen content, mg/L	3.2	3.6	5.4	4.5	4.0	2.8	2.5	2.7
5. Total Inorganic nitrogen, mg/L	3.5	3.9	5.7	5.0	4.3	3.1	2.9	3.1
6. Total phosphorus content, mgP/L	0.68	0.72	0.73	0.76	0.55	0.58	0.45	0.49
7. E. coli count, cfu/100ml	$5.0 \times 10^3$	$5.4 \times 10^3$	$7.0 \times 10^3$	$7.9 \times 10^3$	$8.9 \times 10^3$	$6.6 \times 10^3$	$2.4 \times 10^4$	$2.4 \times 10^4$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 5.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 22/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 23/12/2020 11:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:

 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

10/1/2021
*Note : This report refers only to the sample(s) tested.*



Report No. : 181172WA202385(1)

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**Results :**

Test parameters	Sample identification							
	E3aE M	E3aE M Dup	E4E M	E4E M Dup	E5aE M	E5aE M Dup	DB1E M	DB1E M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	3.0	3.0	3.5	3.5	2.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	0.36	0.39	5.1	5.3	7.7	7.8	0.54	0.51
3. Total nitrogen content, mg/L	0.48	0.54	5.5	5.7	8.0	8.1	0.63	0.62
4. Ammonical nitrogen content, mg/L	0.17	0.21	3.6	3.2	4.5	5.2	0.16	0.13
5. Total Inorganic nitrogen, mg/L	0.30	0.36	4.1	3.5	4.9	5.4	0.25	0.23
6. Total phosphorus content, mgP/L	0.13	0.14	0.61	0.65	0.87	0.86	0.51	0.54
7. E. coli count, cfu/100ml	$2.5 \times 10^2$	$2.6 \times 10^2$	$9.1 \times 10^3$	$9.7 \times 10^3$	$8.2 \times 10^3$	$9.5 \times 10^3$	$4.8 \times 10^2$	$2.6 \times 10^2$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 5.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 22/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 23/12/2020 11:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

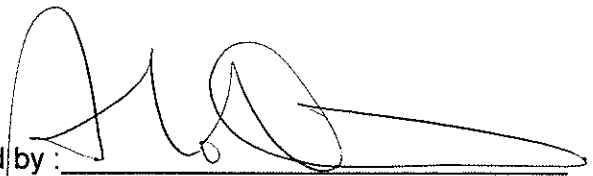
Report No. : 181172WA202385(1)

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**Results :**

Test parameters	Sample identification			
	SP1E M	SP1E M Dup	KT1E M	KT1E M Dup
1. Biochemical oxygen demand, mg/L	3.0	3.0	4.0	4.0
2. Total Kjeldahl nitrogen content, mg/L	8.3	9.2	8.1	8.6
3. Total nitrogen content, mg/L	8.8	9.6	8.4	9.2
4. Ammonical nitrogen content, mg/L	2.9	2.7	6.0	6.2
5. Total Inorganic nitrogen, mg/L	3.3	3.1	6.3	6.5
6. Total phosphorus content, mgP/L	0.72	0.78	0.94	0.93
7. E. coli count, cfu/100ml	1.4 x 10 <sup>4</sup>	1.5 x 10 <sup>4</sup>	6.0 x 10 <sup>3</sup>	7.4 x 10 <sup>3</sup>

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 5.1°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
 i. Samples taken by staff of FTS on 22/12/2020  
 ii. Samples stored at 0-4°C refrigerator prior to testing.  
 iii. Date and hour of commencing BOD<sub>5</sub> test : 23/12/2020 11:00  
 iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
 v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
 vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

**\*\* End of Report \*\***

*Note : This report refers only to the sample(s) tested.*

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

1. Biochemical oxygen demand, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1.5	<1.5	-	3.10	2.91	6.32
1.5	<1.5	-	3.86	4.02	4.06
2. Total Kjeldahl nitrogen content, mg/L (Colorimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.05	<0.05	104.80	0.51	0.51	0.00
0.05	<0.05	-	-	-	-
3. Total Kjeldahl nitrogen content, mg/L (Titrimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
5	<5	104.44	8.88	8.34	6.27

Certified by :


 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

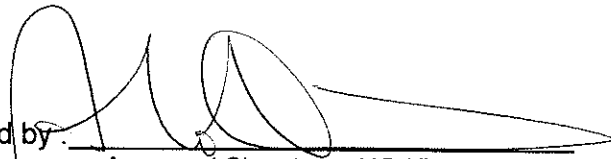
15/1/2021

*Note : This report refers only to the sample(s) tested.*

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

4. Ammonical nitrogen content, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.02	<0.02	111.21	4.20	4.16	0.96
0.02	<0.02	106.74	5.36	5.35	0.19
5. Total phosphorus content, mgP/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.01	<0.01	103.52	0.77	0.75	2.63
0.01	<0.01	101.88	0.96	0.91	5.35
6. E. coli count, cfu/100ml					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1	<1	-	$5.5 \times 10^3$	$5.2 \times 10^3$	5.61
1	<1	-	$7.8 \times 10^3$	$6.9 \times 10^3$	12.2

Certified by:


  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202409



Page 1 of 2

**Test Report on Analysis of Water****Information Supplied by Client**

Client : Drainage Services Department

Client's address : -

Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Sample description : Forty-eight samples of water taken by the staff of FTS on 24/12/2020

Client sample ID : Refer to results pages

Test required : Total suspended solids dried at 103°C - 105°C

**Laboratory Information**

Lab. sample ID : WA202409/1-48

Date of receipt of sample : 24/12/2020

Date test commenced : 24/12/2020

Date test completed : 28/12/2020

Test method used : APHA 17ed. 2540D

*Note : This report refers only to the sample(s) tested.*

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Report No. : 181172WA202409

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**Results :**

Sample identification	Test result Total suspended solids dried at 103°C – 105°C, mg/L
1. M1F M	39
2. M1F M Dup	38
3. M2F M	57
4. M2F M Dup	57
5. E1F S	34
6. E1F S Dup	33
7. E1F B	48
8. E1F B Dup	48
9. E2aF M	43
10. E2aF M Dup	44
11. E3aF M	26
12. E3aF M Dup	25
13. E4F M	34
14. E4F M Dup	34
15. E5aF M	31
16. E5aF M Dup	30
17. DB1F M	16
18. DB1F M Dup	15
19. SP1F M	34
20. SP1F M Dup	35
21. KT1F M	36
22. KT1F M Dup	36

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :

Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories

Date

: 15/1/2021

*Note : This report refers only to the sample(s) tested.*

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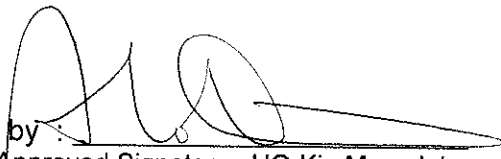
Page 2 of 2



**Results :**

Sample identification	Test result Total suspended solids dried at 103°C – 105°C, mg/L
23. M1E M	31
24. M1E M Dup	30
25. M2E M	33
26. M2E M Dup	32
27. E1E S	27
28. E1E S Dup	26
29. E1E B	26
30. E1E B Dup	24
31. E2aE M	40
32. E2aE M Dup	41
33. E3aE M	17
34. E3aE M Dup	17
35. E4E M	37
36. E4E M Dup	36
37. E5aE M	32
38. E5aE M Dup	32
39. DB1E M	11
40. DB1E M Dup	12
41. SP1E M	31
42. SP1E M Dup	31
43. KT1E M	35
44. KT1E M Dup	36

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

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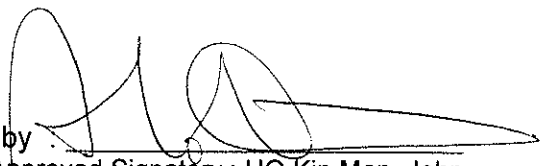
Page 2 of 2



**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
45. M3F M	79
46. M3F M Dup	81
47. M3E M	100
48. M3E M Dup	100

Remark: Disclaimer: Sampling is out of scope of accreditation.

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 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

**\*\*End of Report\*\***

*Note : This report refers only to the sample(s) tested.*


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**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

Total suspended solids dried at 103°C – 105°C, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1 mg/L	<1	100.80	25.3	25.3	0.00
	<1	100.76	15.5	15.3	1.30
	<1	100.56	32.3	32.5	0.62
	<1	99.60	31.3	30.0	4.24
	<1	99.66	78.7	82.3	4.47

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202409(1)



Page 1 of 7

**Test Report on Analysis of Water**

**Information Supplied by Client**

Client : Drainage Services Department  
 Client's address : -  
 Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1  
 Sample description : Thirty-six samples of water taken by the staff of FTS on 24/12/2020  
 Client sample ID : Refer to result pages  
 Tests required : Biochemical oxygen demand  
 Total Kjeldahl Nitrogen content  
 Total Nitrogen content  
 Ammonical Nitrogen content  
 Total Inorganic Nitrogen  
 Total phosphorus content  
 E. coli count

**Laboratory Information**

Lab. sample ID :	Chemical tests	Microbiological tests
	WA202409/5-22, 27-44	WA202409/5B-22B, 27B-44B

Sample condition :	Chemical tests	Microbiological tests
Container	Thirty-six 2 L plastic bottles and Thirty-six 0.18 mL plastic bottles	Thirty-six sterilized 250 ml plastic bottles with thiosulphate added
Appearance	Colorless	
Temperature	Cooled	

Date of receipt of sample : 24/12/2020  
 Date test commenced : 25/12/2020  
 Date test completed : 31/12/2020

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202409(1)

Page 2 of 7

Test methods used : Biochemical oxygen demand  
*BS 6068: Section 2.14: 1990*

Total Kjeldahl Nitrogen content  
*In house method E-T-037 & APHA 18ed. 4500-N<sub>org</sub> B & 4500-NH<sub>3</sub>E*

Total Nitrogen content  
*By Calculation*

Ammonical Nitrogen content  
*In house method E-T-095 Segmented flow-salicylate method*

Total Inorganic Nitrogen  
*By Calculation*

Total phosphorus content  
*APHA, 17th edition, 4500-PB5 (Digestion) &  
In house method E-T-056 (Determination)*

E. coli count  
*The Bacteriological Examination of Drinking Water Supplies  
1982, DoE (1983) Membrane Filtration Procedure: Sections 7.8,  
7.9.4.2 Bacterial Confirmation: Section 7.9.4.4 & in-situ urease  
test*

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202409(1)

Page 3 of 7

**Results :**

Test parameters	Sample identification							
	E1F S	E1F S Dup	E1F B	E1F B Dup	E2aF M	E2aF M Dup	E3aF M	E3aF M Dup
1. Biochemical oxygen demand, mg/L	3.5	3.5	3.0	2.5	2.5	2.5	1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	7.0	6.6	5.7	6.2	1.7	1.7	0.64	0.58
3. Total nitrogen content, mg/L	7.2	6.8	6.0	6.4	2.0	2.0	0.94	0.94
4. Ammonical nitrogen content, mg/L	5.6	5.0	4.7	4.3	1.2	1.3	0.23	0.22
5. Total Inorganic nitrogen, mg/L	5.9	5.3	4.9	4.5	1.5	1.6	0.53	0.57
6. Total phosphorus content, mgP/L	0.65	0.66	0.58	0.55	0.32	0.31	0.18	0.20
7. E. coli count, cfu/100ml	$1.7 \times 10^4$	$1.5 \times 10^4$	$8.9 \times 10^3$	$9.7 \times 10^3$	$1.9 \times 10^3$	$2.5 \times 10^3$	$4.6 \times 10$	$5.3 \times 10$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.0°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
 i. Samples taken by staff of FTS on 24/12/2020  
 ii. Samples stored at 0-4°C refrigerator prior to testing.  
 iii. Date and hour of commencing BOD<sub>5</sub> test : 25/12/2020 17:00  
 iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
 v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
 vi. The samples were incubated at 19-21°C for 5 days

Certified by :



 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202409(1)


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**Results :**

Test parameters	Sample identification							
	E4F M	E4F M Dup	E5aF M	E5aF M Dup	DB1F M	DB1F M Dup	SP1F M	SP1F M Dup
1. Biochemical oxygen demand, mg/L	3.0	4.0	4.0	3.5	1.5	2.0	4.0	3.5
2. Total Kjeldahl nitrogen content, mg/L	3.6	3.7	6.4	6.6	0.47	0.47	8.5	8.1
3. Total nitrogen content, mg/L	3.9	4.0	6.7	6.8	0.75	0.81	8.8	8.4
4. Ammonical nitrogen content, mg/L	2.9	3.0	5.8	5.9	0.20	0.20	7.2	7.7
5. Total Inorganic nitrogen, mg/L	3.2	3.2	6.1	6.2	0.49	0.54	7.5	8.0
6. Total phosphorus content, mgP/L	0.37	0.42	0.77	0.79	0.10	0.09	0.99	1.0
7. E. coli count, cfu/100ml	$7.8 \times 10^3$	$6.1 \times 10^3$	$1.2 \times 10^4$ (estimated)	$1.4 \times 10^4$ (estimated)	$1.1 \times 10$	$1.2 \times 10$	$2.8 \times 10^4$	$2.3 \times 10^4$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.0°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
 i. Samples taken by staff of FTS on 24/12/2020  
 ii. Samples stored at 0-4°C refrigerator prior to testing.  
 iii. Date and hour of commencing BOD<sub>5</sub> test : 25/12/2020 17:00  
 iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
 v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
 vi. The samples were incubated at 19-21°C for 5 days

Certified by:

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021
*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202409(1)

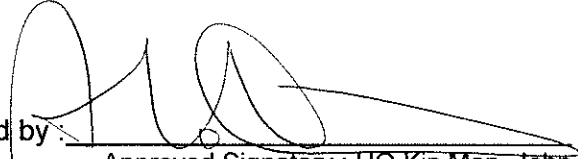
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**Results :**

Test parameters	Sample identification							
	KT1F M	KT1F M Dup	E1E S	E1E S Dup	E1E B	E1E B Dup	E2aE M	E2aE M Dup
1. Biochemical oxygen demand, mg/L	4.5	3.5	3.5	3.0	3.5	3.5	3.0	4.0
2. Total Kjeldahl nitrogen content, mg/L	14	15	7.4	7.4	6.2	6.0	4.6	4.1
3. Total nitrogen content, mg/L	14	15	7.7	7.7	6.4	6.2	4.9	4.4
4. Ammonical nitrogen content, mg/L	12	14	7.1	6.9	5.4	5.3	3.9	3.8
5. Total Inorganic nitrogen, mg/L	12	14	7.4	7.2	5.6	5.5	4.2	4.1
6. Total phosphorus content, mgP/L	0.92	0.92	1.0	0.96	0.90	0.89	0.73	0.59
7. E. coli count, cfu/100ml	$1.5 \times 10^4$	$1.5 \times 10^4$	$1.6 \times 10^4$	$2.1 \times 10^4$	$1.7 \times 10^4$	$1.5 \times 10^4$	$6.3 \times 10^3$	$8.9 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.0°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 24/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 25/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:

  
 Approved Signatory : HO Kin Man, JOHN  
 Assistant General Manager – Laboratories

Date :

15/11/2021

Note : This report refers only to the sample(s) tested.

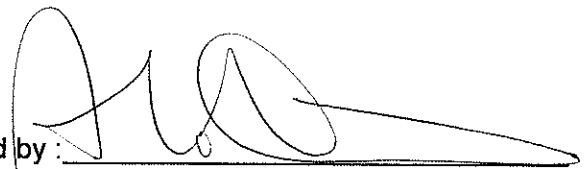
Report No. : 181172WA202409(1)

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**Results :**

Test parameters	Sample identification							
	E3aE M	E3aE M Dup	E4E M	E4E M Dup	E5aE M	E5aE M Dup	DB1E M	DB1E M Dup
1. Biochemical oxygen demand, mg/L	2.0	1.5	3.5	3.0	3.0	3.0	2.0	2.0
2. Total Kjeldahl nitrogen content, mg/L	1.4	1.3	6.4	6.7	8.1	8.3	0.73	0.81
3. Total nitrogen content, mg/L	1.7	1.6	6.8	7.0	8.6	8.9	0.95	1.1
4. Ammonical nitrogen content, mg/L	0.49	0.49	5.5	5.6	7.9	8.0	0.33	0.31
5. Total Inorganic nitrogen, mg/L	0.76	0.77	5.9	5.9	8.4	8.5	0.55	0.56
6. Total phosphorus content, mgP/L	0.20	0.19	0.87	0.87	0.85	0.85	0.16	0.13
7. E. coli count, cfu/100ml	$7.8 \times 10^2$	$6.5 \times 10^2$	$4.7 \times 10^4$	$2.1 \times 10^4$	$3.8 \times 10^4$	$2.7 \times 10^4$	$2.6 \times 10^2$	$3.1 \times 10^2$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.0°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 24/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 25/12/2020 17:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202409(1)

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**Results :**

Test parameters	Sample identification			
	SP1E M	SP1E M Dup	KT1E M	KT1E M Dup
1. Biochemical oxygen demand, mg/L	3.0	2.5	4.0	3.5
2. Total Kjeldahl nitrogen content, mg/L	6.3	6.6	8.3	8.5
3. Total nitrogen content, mg/L	6.6	6.9	8.6	8.6
4. Ammonical nitrogen content, mg/L	6.2	5.3	7.7	7.2
5. Total Inorganic nitrogen, mg/L	6.5	5.6	7.9	7.4
6. Total phosphorus content, mgP/L	0.83	0.85	1.3	1.2
7. E. coli count, cfu/100ml	$6.8 \times 10^4$	$5.0 \times 10^4$	$3.1 \times 10^4$	$2.4 \times 10^4$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 6.0°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
 i. Samples taken by staff of FTS on 24/12/2020  
 ii. Samples stored at 0-4°C refrigerator prior to testing.  
 iii. Date and hour of commencing BOD<sub>5</sub> test : 25/12/2020 17:00  
 iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
 v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
 vi. The samples were incubated at 19-21°C for 5 days

 Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

 Date : 15/1/2021

\*\* End of Report \*\*

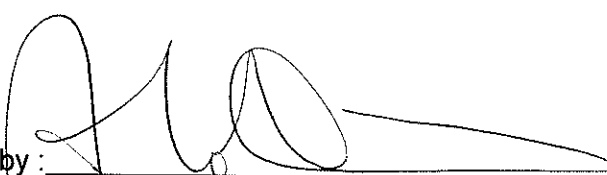
Note : This report refers only to the sample(s) tested.



**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

1. Biochemical oxygen demand, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1.5	<1.5	-	2.89	3.07	6.04
1.5	<1.5	-	3.32	3.49	4.99
2. Total Kjeldahl nitrogen content, mg/L (Colorimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.05	<0.05	98.80	0.82	0.80	2.47
0.05	<0.05	-	-	-	-
3. Total Kjeldahl nitrogen content, mg/L (Titrimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
5	<5	100.32	6.56	6.70	2.11
5	<5	100.30	8.34	8.75	4.80

Certified by :

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2021

*Note : This report refers only to the sample(s) tested.*

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

4. Ammonical nitrogen content, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.02	<0.02	111.93	5.59	5.57	0.36
0.02	<0.02	112.56	7.10	7.11	0.14

5. Total phosphorus content, mgP/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.01	<0.01	100.38	0.96	0.96	0.00
0.01	<0.01	97.72	1.23	1.24	0.81

6. E. coli count, cfu/100ml					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1	<1	-	1.8 x 10 <sup>4</sup>	1.1 x 10 <sup>4</sup>	48.3
1	<1	-	2.3 x 10 <sup>4</sup>	2.5 x 10 <sup>4</sup>	8.33

Certified by :

 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202411



Page 1 of 2

**Test Report on Analysis of Water****Information Supplied by Client**

Client : Drainage Services Department

Client's address : -

Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Sample description : Forty-eight samples of water taken by the staff of FTS on 26/12/2020

Client sample ID : Refer to results pages

Test required : Total suspended solids dried at 103°C - 105°C

**Laboratory Information**

Lab. sample ID : WA202411/1-48

Date of receipt of sample : 26/12/2020

Date test commenced : 26/12/2020

Date test completed : 28/12/2020

Test method used : APHA 17ed. 2540D

*Note : This report refers only to the sample(s) tested.*

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Report No. : 181172WA202411

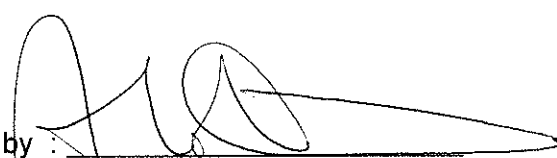
Page 2 of 2


**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
1. M1F M	36
2. M1F M Dup	35
3. M2F M	38
4. M2F M Dup	37
5. E1F S	27
6. E1F S Dup	27
7. E1F B	27
8. E1F B Dup	28
9. E2aF M	35
10. E2aF M Dup	36
11. E3aF M	25
12. E3aF M Dup	25
13. E4F M	27
14. E4F M Dup	27
15. E5aF M	43
16. E5aF M Dup	44
17. DB1F M	13
18. DB1F M Dup	14
19. SP1F M	41
20. SP1F M Dup	41
21. KT1F M	37
22. KT1F M Dup	36

Remark: Disclaimer: Sampling is out of scope of accreditation.

Certified by :

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021

*Note : This report refers only to the sample(s) tested.*

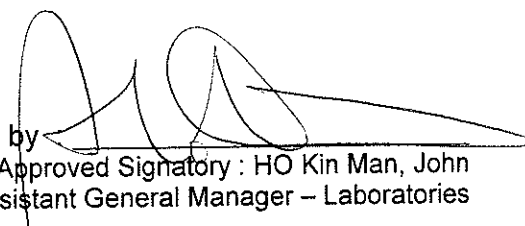
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**Results :**

Sample identification	Test result Total suspended solids dried at 103°C – 105°C, mg/L
23. M1E M	24
24. M1E M Dup	24
25. M2E M	31
26. M2E M Dup	31
27. E1E S	29
28. E1E S Dup	28
29. E1E B	26
30. E1E B Dup	26
31. E2aE M	43
32. E2aE M Dup	43
33. E3aE M	32
34. E3aE M Dup	31
35. E4E M	30
36. E4E M Dup	31
37. E5aE M	29
38. E5aE M Dup	29
39. DB1E M	17
40. DB1E M Dup	16
41. SP1E M	28
42. SP1E M Dup	28
43. KT1E M	36
44. KT1E M Dup	35

Remark: Disclaimer: Sampling is out of scope of accreditation.

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 Assistant General Manager – Laboratories

Date

: 15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202411

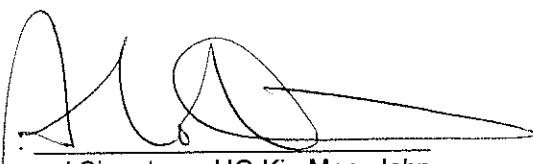
Page 2 of 2



**Results :**

Sample identification	Test result
	Total suspended solids dried at 103°C – 105°C, mg/L
45. M3F M	24
46. M3F M Dup	22
47. M3E M	28
48. M3E M Dup	28

Remark: Disclaimer: Sampling is out of scope of accreditation.

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 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

**\*\*End of Report\*\***

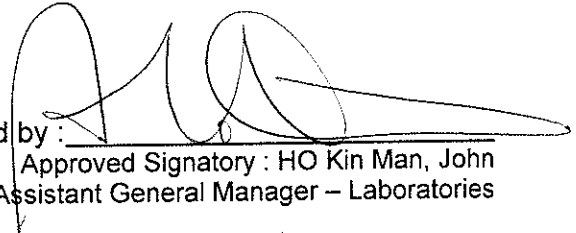
*Note : This report refers only to the sample(s) tested.*

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**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

Total suspended solids dried at 103°C – 105°C, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1 mg/L	<1	99.00	25.7	24.3	5.6
	<1	99.50	30.3	31.7	4.52
	<1	99.46	27.5	27.7	0.72
	<1	101.36	21.3	23.0	7.67
	<1	99.56	28.3	28.0	1.07

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202411(1)



Page 1 of 7

**Test Report on Analysis of Water**

**Information Supplied by Client**

Client : Drainage Services Department  
 Client's address : -  
 Project : Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1  
 Sample description : Thirty-six samples of water taken by the staff of FTS on 26/12/2020  
 Client sample ID : Refer to result pages  
 Tests required : Biochemical oxygen demand  
 Total Kjeldahl Nitrogen content  
 Total Nitrogen content  
 Ammonical Nitrogen content  
 Total Inorganic Nitrogen  
 Total phosphorus content  
 E. coli count

**Laboratory Information**

Lab. sample ID :	Chemical tests	Microbiological tests
	WA202411/5-22, 27-44	WA202411/5B-22B, 27B-44B

Sample condition :	Chemical tests	Microbiological tests
Container	Thirty-six 2 L plastic bottles and Thirty-six 0.18 mL plastic bottles	Thirty-six sterilized 250 ml plastic bottles with thiosulphate added
Appearance	Colorless	
Temperature	Cooled	

Date of receipt of sample : 26/12/2020  
 Date test commenced : 27/12/2020  
 Date test completed : 01/01/2021

*Note : This report refers only to the sample(s) tested.*



Report No. : 181172WA202411(1)

Page 2 of 7

Test methods used : Biochemical oxygen demand  
*BS 6068: Section 2.14: 1990*

Total Kjeldahl Nitrogen content  
*In house method E-T-037 & APHA 18ed. 4500-N<sub>org</sub> B & 4500-NH<sub>3</sub>E*

Total Nitrogen content  
*By Calculation*

Ammonical Nitrogen content  
*In house method E-T-095 Segmented flow-salicylate method*

Total Inorganic Nitrogen  
*By Calculation*

Total phosphorus content  
*APHA, 17th edition, 4500-PB5 (Digestion) &  
In house method E-T-056 (Determination)*

E. coli count  
*The Bacteriological Examination of Drinking Water Supplies  
1982, DoE (1983) Membrane Filtration Procedure: Sections 7.8,  
7.9.4.2 Bacterial Confirmation: Section 7.9.4.4 & in-situ urease  
test*

*Note : This report refers only to the sample(s) tested.*

Report No. : 181172WA202411(1)

Page 3 of 7

**Results :**

Test parameters	Sample identification							
	E1F S	E1F S Dup	E1F B	E1F B Dup	E2aF M	E2aF M Dup	E3aF M	E3aF M Dup
1. Biochemical oxygen demand, mg/L	2.5	3.0	3.0	2.5	<1.5	1.5	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	7.5	7.6	7.7	7.5	2.5	2.5	0.24	0.25
3. Total nitrogen content, mg/L	7.7	7.8	7.9	7.7	2.7	2.8	0.31	0.32
4. Ammonical nitrogen content, mg/L	5.5	6.1	5.1	5.4	1.3	1.3	0.23	0.22
5. Total Inorganic nitrogen, mg/L	5.8	6.4	5.3	5.7	1.5	1.5	0.30	0.28
6. Total phosphorus content, mgP/L	0.78	0.76	0.78	0.76	0.39	0.38	0.11	0.13
7. E. coli count, cfu/100ml	$9.2 \times 10^3$	$1.2 \times 10^4$ (estimated)	$1.4 \times 10^4$ (estimated)	$1.1 \times 10^4$ (estimated)	$4.2 \times 10^3$	$4.5 \times 10^3$	$6.4 \times 10$	$4.6 \times 10$

- Remark:
1. Disclaimer: Sampling is out of scope of accreditation.
  2. Temperature of ice-box when samples being received were 4.8°C
  3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.
  4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.
  5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.
  6. Detailed information for BOD<sub>5</sub> test :
    - i. Samples taken by staff of FTS on 26/12/2020
    - ii. Samples stored at 0-4°C refrigerator prior to testing.
    - iii. Date and hour of commencing BOD<sub>5</sub> test : 27/12/2020 12:00
    - iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.
    - v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.
    - vi. The samples were incubated at 19-21°C for 5 days

Certified by : 

Approved Signatory : HO Kin Man, John  
Assistant General Manager – Laboratories

Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202411(1)

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**Results :**

Test parameters	Sample identification							
	E4F M	E4F M Dup	E5aF M	E5aF M Dup	DB1F M	DB1F M Dup	SP1F M	SP1F M Dup
1. Biochemical oxygen demand, mg/L	2.0	2.0	1.5	1.5	<1.5	<1.5	<1.5	1.5
2. Total Kjeldahl nitrogen content, mg/L	4.5	4.6	11	12	0.23	0.21	11	10
3. Total nitrogen content, mg/L	4.7	4.8	12	13	0.29	0.28	11	11
4. Ammonical nitrogen content, mg/L	3.2	3.4	6.4	6.9	0.22	0.20	7.9	7.5
5. Total Inorganic nitrogen, mg/L	3.4	3.7	6.7	7.2	0.29	0.27	8.1	7.7
6. Total phosphorus content, mgP/L	0.60	0.55	0.85	0.91	0.10	0.09	0.98	0.98
7. E. coli count, cfu/100ml	$7.5 \times 10^3$	$7.1 \times 10^3$	$2.9 \times 10^4$	$3.5 \times 10^4$	$1.1 \times 10$	$1.2 \times 10$	$3.1 \times 10^4$	$5.1 \times 10^4$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.8°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
 i. Samples taken by staff of FTS on 26/12/2020  
 ii. Samples stored at 0-4°C refrigerator prior to testing.  
 iii. Date and hour of commencing BOD<sub>5</sub> test : 27/12/2020 12:00  
 iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
 v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
 vi. The samples were incubated at 19-21°C for 5 days

Certified by :



 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/11/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202411(1)

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**Results :**

Test parameters	Sample identification							
	KT1F M	KT1F M Dup	E1E S	E1E S Dup	E1E B	E1E B Dup	E2aE M	E2aE M Dup
1. Biochemical oxygen demand, mg/L	2.5	<1.5	2.5	2.5	2.5	2.5	3.0	2.5
2. Total Kjeldahl nitrogen content, mg/L	7.0	7.2	7.2	6.8	8.2	7.9	6.2	6.8
3. Total nitrogen content, mg/L	7.2	7.4	7.4	7.1	8.5	8.2	6.4	7.1
4. Ammonical nitrogen content, mg/L	6.8	7.0	7.0	6.4	6.1	5.4	5.8	6.6
5. Total Inorganic nitrogen, mg/L	7.0	7.2	7.2	6.6	6.3	5.6	6.0	6.8
6. Total phosphorus content, mgP/L	1.0	1.0	0.76	0.75	0.83	0.81	0.41	0.40
7. E. coli count, cfu/100ml	$5.5 \times 10^3$	$5.4 \times 10^3$	$1.2 \times 10^4$ (estimated)	$1.1 \times 10^4$ (estimated)	$8.8 \times 10^3$	$1.1 \times 10^4$ (estimated)	$7.0 \times 10^3$	$5.4 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.8°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 26/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 27/12/2020 12:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by :



 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date :

15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202411(1)

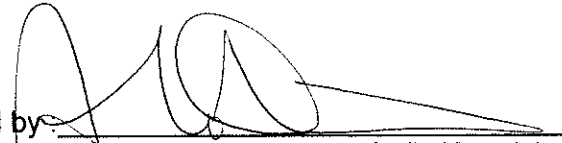
Page 6 of 7

**Results :**

Test parameters	Sample identification							
	E3aE M	E3aE M Dup	E4E M	E4E M Dup	E5aE M	E5aE M Dup	DB1E M	DB1E M Dup
1. Biochemical oxygen demand, mg/L	<1.5	<1.5	3.0	3.5	3.0	3.0	<1.5	<1.5
2. Total Kjeldahl nitrogen content, mg/L	0.54	0.54	4.5	4.7	14	16	0.26	0.25
3. Total nitrogen content, mg/L	0.63	0.62	4.7	4.9	14	16	0.34	0.32
4. Ammonical nitrogen content, mg/L	0.50	0.48	4.3	4.6	13	15	0.20	0.18
5. Total Inorganic nitrogen, mg/L	0.60	0.56	4.6	4.9	14	16	0.28	0.25
6. Total phosphorus content, mgP/L	0.14	0.14	0.56	0.59	0.96	0.97	0.11	0.08
7. E. coli count, cfu/100ml	$1.3 \times 10^2$	$1.3 \times 10^2$	$1.3 \times 10^4$	$6.5 \times 10^3$	$5.8 \times 10^4$	$5.7 \times 10^4$	$3.4 \times 10$	$3.3 \times 10$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.8°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 26/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 27/12/2020 12:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date

 : 15/1/2021

Note : This report refers only to the sample(s) tested.

Report No. : 181172WA202411(1)

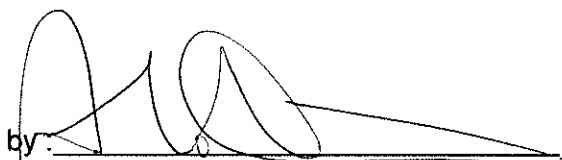
Page 7 of 7

**Results :**

Test parameters	Sample identification			
	SP1E M	SP1E M Dup	KT1E M	KT1E M Dup
1. Biochemical oxygen demand, mg/L	2.5	2.5	4.0	4.0
2. Total Kjeldahl nitrogen content, mg/L	13	12	7.4	7.2
3. Total nitrogen content, mg/L	13	13	7.5	7.6
4. Ammonical nitrogen content, mg/L	11	11	6.3	6.3
5. Total Inorganic nitrogen, mg/L	11	11	6.4	6.5
6. Total phosphorus content, mgP/L	0.94	1.0	0.97	0.93
7. E. coli count, cfu/100ml	$4.6 \times 10^4$	$4.8 \times 10^4$	$6.9 \times 10^3$	$8.2 \times 10^3$

- Remark: 1. Disclaimer: Sampling is out of scope of accreditation.  
 2. Temperature of ice-box when samples being received were 4.8°C  
 3. Total nitrogen is the sum of Total Kjeldahl nitrogen content and total oxidized nitrogen content.  
 4. Total Inorganic nitrogen is the sum of Ammonical nitrogen content and total oxidized nitrogen content.  
 5. 'Estimated' for E. coli count means the colonies counted was not within the range of 10 to 100 cfu/100ml.  
 6. Detailed information for BOD<sub>5</sub> test :  
     i. Samples taken by staff of FTS on 26/12/2020  
     ii. Samples stored at 0-4°C refrigerator prior to testing.  
     iii. Date and hour of commencing BOD<sub>5</sub> test : 27/12/2020 12:00  
     iv. The BOD<sub>5</sub> test was conducted without suppression of nitrification by ATU.  
     v. Type of seeding water used was Polyseed BOD<sub>5</sub> seeding water.  
     vi. The samples were incubated at 19-21°C for 5 days

Certified by:

  
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories

Date

15/1/2021

**\*\* End of Report \*\***
*Note : This report refers only to the sample(s) tested.*



**Note**

**Laboratory Duplicate, Quality Assurance/Quality Control Report**

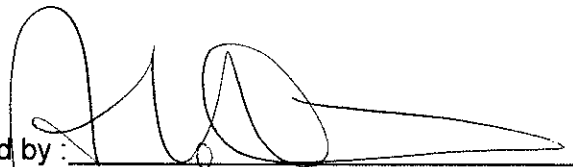
1. Biochemical oxygen demand, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1.5	<1.5	-	2.59	2.62	1.15
1.5	<1.5	-	4.16	4.14	0.48

2. Total Kjeldahl nitrogen content, mg/L (Colorimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.05	<0.05	102.60	0.27	0.26	3.77
0.05	<0.05	-	-	-	-

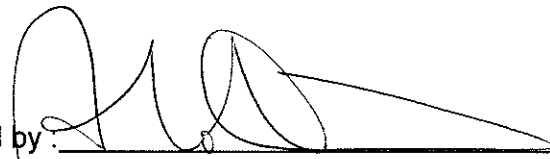
3. Total Kjeldahl nitrogen content, mg/L (Titrimetric Method)					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
5	<5	100.34	7.38	6.97	5.71
5	<5	-	-	-	-

Certified by :   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/1/2021

Note : This report refers only to the sample(s) tested.

**Note**
**Laboratory Duplicate, Quality Assurance/Quality Control Report**

4. Ammonical nitrogen content, mg/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.02	<0.02	115.06	5.56	5.50	1.08
0.02	<0.02	112.13	7.00	6.92	1.15
5. Total phosphorus content, mgP/L					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
0.01	<0.01	101.10	0.74	0.76	2.67
0.01	<0.01	98.30	0.91	0.96	5.35
6. E. coli count, cfu/100ml					
Reporting Limit	Blank	Spike recovery (%)	Laboratory Duplicate		
			Original result	Duplicate result	RPD%
1	<1	-	$4.5 \times 10^3$	$6.3 \times 10^3$	33.3
1	<1	-	$7.7 \times 10^3$	$8.6 \times 10^3$	11.0

Certified by:   
 Approved Signatory : HO Kin Man, John  
 Assistant General Manager – Laboratories  
 Date : 15/11/2021

Note : This report refers only to the sample(s) tested.



# Appendix E

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## Event and Action Plan

## Event and Action Plan for Air Quality (Construction Dust)

EVENT	ACTION			
	ET	IEC	ER	Contractor
Action level being exceeded by one sampling	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of complaint and propose remedial measures;</li> <li>2. Inform Contractor, IEC and ER;</li> <li>3. Repeat measurement to confirm finding; and</li> <li>4. Increase monitoring frequency to daily.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method; and</li> <li>3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s), investigate the causes of exceedance and propose remedial measures;</li> <li>2. Implement remedial measures; and</li> <li>3. Amend working methods agreed with the ER as appropriate.</li> </ol>
Action level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform Contractor, IEC and ER;</li> <li>3. Advise the Contractor and ER on the effectiveness of the proposed remedial measures;</li> <li>4. Repeat measurements to confirm findings;</li> <li>5. Increase monitoring frequency to daily;</li> <li>6. Discuss with IEC and Contractor on remedial actions required;</li> <li>7. If exceedance continues, arrange meeting with Contractor, IEC and ER; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET, ER and Contractor on possible remedial measures;</li> <li>4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and</li> <li>5. Supervise Implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source and investigate the causes of exceedance;</li> <li>2. Submit proposals for remedial measures to the ER with a copy to ET and IEC within three working days of notification;</li> <li>3. Implement the agreed proposals; and</li> <li>4. Amend proposal as appropriate.</li> </ol>
Limit level being exceeded by one sampling	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>2. Inform Contractor, IEC, ER, and EPD;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily; and</li> <li>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures; and</li> <li>5. Supervise implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s) and investigate the causes of exceedance;</li> <li>2. Take immediate action to avoid further exceedance;</li> <li>3. Submit proposals for remedial measures to ER with a copy to ET and IEC within three working days of notification;</li> <li>4. Implement the agreed proposals; and</li> <li>5. Amend proposal if appropriate.</li> </ol>
Limit level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>1. Notify IEC, ER, Contractor and EPD;</li> <li>2. Identify source;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by the ET;</li> <li>2. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>3. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and</li> <li>4. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>3. Supervise the implementation of remedial measures; and</li> <li>4. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s) and investigate the causes of exceedance;</li> <li>2. Take immediate action to avoid further exceedance;</li> <li>3. Submit proposals for remedial measures to the ER with a copy to the IEC and ET within three working days of notification;</li> <li>4. Implement the agreed proposals;</li> <li>5. Revise and resubmit proposals if problem still not under control; and</li> <li>6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>

## Event and Action Plan for Noise (Construction)

EVENT	ACTION			
	ET	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> <li>1. Notify IEC and Contractor;</li> <li>2. Carry out investigation;</li> <li>3. Report the results of investigation to the IEC, ER and Contractor;</li> <li>4. Discuss with the Contractor and formulate remedial measures; and</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analyzed results submitted by the ET;</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; and</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analyzed noise problem; and</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC; and</li> <li>2. Implement noise mitigation proposals.</li> </ol>
Limit Level	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC, ER, EPD and Contractor;</li> <li>3. Repeat measurements to confirm findings;</li> <li>4. Increase monitoring frequency;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Inform IEC, ER and EPD the causes and actions taken for the exceedances;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analyzed noise problem;</li> <li>4. Ensure remedial measures properly implemented; and</li> <li>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control; and</li> <li>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>

## Event and Action Plan for Water Quality Monitoring

EVENT	ACTION			
	ET	IEC	ER	Contractor
Action level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>1. Repeat in situ 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 and AFCD.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing</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>
Action level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> <li>1. Repeat in situ 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 and AFCD;</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. 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>	<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>

EVENT	ACTION			
	ET	IEC	ER	Contractor
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>1. Repeat in situ 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 and AFCD;</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. 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>	<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>
Limit level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> <li>1. Repeat in situ 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 and AFCD;</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. 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>	<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>

# Appendix F

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## Baseline Monitoring Schedule

**Project: Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1**

**Baseline Monitoring Schedule (December 2020)**

Sun	Mon	Tue	Wed	Thur	Fri	Sat
		1 <b>AQM, NM, WQM</b> Mid Flood(09:02) Mid Ebb(14:12)	2 <b>AQM, NM</b>	3 <b>AQM, NM, WQM</b> Mid Flood(10:31) Mid Ebb(15:22)	4 <b>AQM, NM,</b>	5 <b>AQM, NM, WQM</b> Mid Flood(12:04) Mid Ebb(16:46)
6 <b>AQM, NM</b>	7 <b>AQM, NM</b>	8 <b>AQM, NM, WQM</b> Mid Flood(14:53) Mid Ebb(06:47)	9 <b>AQM, NM</b>	10 <b>AQM, NM, WQM</b> Mid Flood(16:16) Mid Ebb(09:20)	11 <b>AQM, NM</b>	12 <b>AQM, NM, WQM</b> Mid Flood(17:28) Mid Ebb(11:45)
13 <b>AQM, NM</b>	14 <b>AQM, NM</b>	15 <b>WQM</b> Mid Flood(09:00) Mid Ebb(14:13)	16	17 <b>WQM</b> Mid Flood(10:39) Mid Ebb(15:29)	18	19 <b>WQM</b> Mid Flood(12:13) Mid Ebb(17:04)
20	21	22 <b>WQM</b> Mid Flood(14:53) Mid Ebb(06:45)	23	24 <b>WQM</b> Mid Flood(16:01) Mid Ebb(08:46)	25	26 <b>WQM</b> Mid Flood(16:45) Mid Ebb(11:09)
27	28	29	30	31		

**Remarks**

1. Air Quality Monitoring (**AQM**): 3 x 1-hour TSP Monitoring for 14 consecutive days.
2. Noise Monitoring (**NM**):  $L_{eq}$  (30 min) for at least 14 consecutive days at a minimum logging interval of 30 minutes during daytime between 0700-1900.
3. Water Quality Monitoring (**WQM**): Once per day for 3 days per week, for a period of 4 weeks prior.
4. Air Quality Location: AM1 and AM2
5. Noise Monitoring Location: CM1, CM2 and CM3
6. Water Quality Monitoring Location: M1, M2, M3, E1, E2a, E3a, E4, E5a, DB1, SP1 and KT1

# Appendix G

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Weather Condition



# December 2020 Weather

Station: Hong Kong Observatory

Date	Mean Pressure (hPa)	Air Temperature			Mean Relative Humidity (%)	Total Rainfall (mm)
		Maximum (deg. C)	Mean (deg. C)	Minimum (deg. C)		
December 2020						
1	1022.3	22.4	19.7	17.0	66	0
2	1020.5	22.7	19.9	17.4	65	0
3	1021.0	20.6	17.4	15.4	64	0
4	1021.4	18.5	15.9	13.8	63	0
5	1021.5	19.8	16.8	13.9	63	0
6	1020.4	21.6	18.2	15.4	69	0
7	1020.4	23.2	20.7	18.1	63	0
8	1019.7	21.9	19.9	17.8	64	0
9	1017.7	21.4	19.8	18.4	71	Trace
10	1016.8	23.5	20.9	18.7	78	0.3
11	1015.9	23.6	21.6	20.3	82	Trace
12	1015.3	22.1	20.9	20.2	84	Trace
13	1014.7	22.5	20.9	20.2	78	0
14	1018.1	22.1	19.5	15.5	80	Trace
15	1022.2	16.8	15.4	13.4	72	Trace
16	1023.5	16.5	14.8	13.3	71	0
17	1022.1	16.5	14.9	13.6	71	0
18	1021.6	19.3	16.4	14.7	68	0
19	1023.4	17.8	15.0	12.5	63	0
20	1024.1	18.5	14.9	11.9	59	0
21	1022.1	19.6	16.5	13.0	58	0
22	1019.6	19.6	17.4	14.7	66	0
23	1016.9	19.7	18.4	16.9	83	1.2
24	1016.3	22.5	20.0	18.3	76	0
25	1018.7	20.9	18.9	17.4	77	0
26	1018.1	21.1	18.7	17.0	79	0
27	1015.8	24.5	20.4	17.6	71	0
28	1014.8	23.7	20.6	18.7	69	0
29	1014.8	24.5	21.0	18.7	75	0
30	1022.8	21.6	15.1	10.6	50	0
31	1027.0	14.2	10.9	8.1	37	0

Remark: The corresponding weather station at Wetland Park were unavailable at the time of preparation of this report.

Source: Hong Kong Observatory

# Appendix H

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Wind Data

Wind Data for  
 Contract No. SPW 07/2020 Environmental Team for Construction of Yuen  
 Long Effluent Polishing Plant Stage 1

Date	Wind Speed	Wind Direction
1/12/2020 00:00	0.7	SE
1/12/2020 01:00	0.7	SE
1/12/2020 02:00	0.1	SEE
1/12/2020 03:00	0.0	SSW
1/12/2020 04:00	0.0	SEE
1/12/2020 05:00	0.0	SE
1/12/2020 06:00	0.6	SSE
1/12/2020 07:00	0.6	E
1/12/2020 08:00	0.8	NW
1/12/2020 09:00	0.5	SEE
1/12/2020 10:00	0.5	SSW
1/12/2020 11:00	0.5	E
1/12/2020 12:00	0.5	SE
1/12/2020 13:00	0.6	SE
1/12/2020 14:00	0.2	S
1/12/2020 15:00	0.4	SEE
1/12/2020 16:00	0.3	NWW
1/12/2020 17:00	0.0	SEE
1/12/2020 18:00	0.4	SE
1/12/2020 19:00	0.6	S
1/12/2020 20:00	0.7	NWW
1/12/2020 21:00	0.9	SEE
1/12/2020 22:00	0.7	NW
1/12/2020 23:00	0.7	NW
2/12/2020 00:00	0.1	SEE
2/12/2020 01:00	0.2	NW
2/12/2020 02:00	0.4	SE
2/12/2020 03:00	0.6	SE
2/12/2020 04:00	0.5	SSE
2/12/2020 05:00	1.2	E
2/12/2020 06:00	0.6	SE
2/12/2020 07:00	0.2	SWW
2/12/2020 08:00	1.0	SEE
2/12/2020 09:00	0.6	NNW
2/12/2020 10:00	0.0	SWW
2/12/2020 11:00	0.1	SWW
2/12/2020 12:00	0.0	SSW
2/12/2020 13:00	0.9	SW
2/12/2020 14:00	0.7	SW
2/12/2020 15:00	0.2	SW

Wind Data for  
 Contract No. SPW 07/2020 Environmental Team for Construction of Yuen  
 Long Effluent Polishing Plant Stage 1

Date	Wind Speed	Wind Direction
2/12/2020 16:00	0.3	SW
2/12/2020 17:00	0.4	SSW
2/12/2020 18:00	1.5	NWW
2/12/2020 19:00	1.3	SE
2/12/2020 20:00	0.4	SSE
2/12/2020 21:00	0.4	W
2/12/2020 22:00	0.5	SSW
2/12/2020 23:00	0.1	SE
3/12/2020 00:00	0.8	SE
3/12/2020 01:00	0.8	SSW
3/12/2020 02:00	0.5	NWW
3/12/2020 03:00	0.2	SSW
3/12/2020 04:00	0.9	NNE
3/12/2020 05:00	0.1	NW
3/12/2020 06:00	0.8	NW
3/12/2020 07:00	0.8	NW
3/12/2020 08:00	0.9	SE
3/12/2020 09:00	0.7	SSW
3/12/2020 10:00	0.7	SE
3/12/2020 11:00	0.2	SSE
3/12/2020 12:00	0.0	SEE
3/12/2020 13:00	0.3	SE
3/12/2020 14:00	0.2	SE
3/12/2020 15:00	1.0	SE
3/12/2020 16:00	1.6	SWW
3/12/2020 17:00	0.2	W
3/12/2020 18:00	0.3	SE
3/12/2020 19:00	0.3	NW
3/12/2020 20:00	1.0	SWW
3/12/2020 21:00	1.4	SE
3/12/2020 22:00	1.4	SSE
3/12/2020 23:00	1.5	SSW
4/12/2020 00:00	0.3	NNE
4/12/2020 01:00	0.9	NNE
4/12/2020 02:00	0.7	NNE
4/12/2020 03:00	0.3	NW
4/12/2020 04:00	1.2	NNE
4/12/2020 05:00	1.3	NNE
4/12/2020 06:00	1.0	NNE
4/12/2020 07:00	0.9	NWW
4/12/2020 08:00	0.7	NNE

Wind Data for  
 Contract No. SPW 07/2020 Environmental Team for Construction of Yuen  
 Long Effluent Polishing Plant Stage 1

Date	Wind Speed	Wind Direction
4/12/2020 09:00	0.4	NNE
4/12/2020 10:00	0.5	NNE
4/12/2020 11:00	0.8	NNE
4/12/2020 12:00	0.3	W
4/12/2020 13:00	0.4	SEE
4/12/2020 14:00	0.3	S
4/12/2020 15:00	0.9	SWW
4/12/2020 16:00	0.6	NW
4/12/2020 17:00	0.2	E
4/12/2020 18:00	0.7	SWW
4/12/2020 19:00	0.5	SE
4/12/2020 20:00	0.6	NNE
4/12/2020 21:00	0.8	SEE
4/12/2020 22:00	1.0	NWW
4/12/2020 23:00	0.2	SW
5/12/2020 00:00	0.5	S
5/12/2020 01:00	0.4	SW
5/12/2020 02:00	0.1	SW
5/12/2020 03:00	0.6	S
5/12/2020 04:00	0.5	SWW
5/12/2020 05:00	0.3	SWW
5/12/2020 06:00	0.3	SSW
5/12/2020 07:00	0.0	SSW
5/12/2020 08:00	0.5	SSW
5/12/2020 09:00	0.4	SSW
5/12/2020 10:00	0.9	SSW
5/12/2020 11:00	0.7	SWW
5/12/2020 12:00	1.0	SSW
5/12/2020 13:00	0.9	S
5/12/2020 14:00	0.5	SE
5/12/2020 15:00	0.6	SW
5/12/2020 16:00	0.9	S
5/12/2020 17:00	0.3	SE
5/12/2020 18:00	0.3	NNW
5/12/2020 19:00	0.9	SE
5/12/2020 20:00	0.2	SEE
5/12/2020 21:00	0.8	SEE
5/12/2020 22:00	0.9	SSW
5/12/2020 23:00	0.7	SSE
6/12/2020 00:00	0.2	SWW
6/12/2020 01:00	0.8	SSE

Wind Data for  
 Contract No. SPW 07/2020 Environmental Team for Construction of Yuen  
 Long Effluent Polishing Plant Stage 1

Date	Wind Speed	Wind Direction
6/12/2020 02:00	0.4	SSW
6/12/2020 03:00	0.9	SEE
6/12/2020 04:00	0.1	NNE
6/12/2020 05:00	0.5	E
6/12/2020 06:00	0.2	SE
6/12/2020 07:00	0.0	SW
6/12/2020 08:00	0.0	SE
6/12/2020 09:00	0.1	SWW
6/12/2020 10:00	0.0	NW
6/12/2020 11:00	0.3	SSE
6/12/2020 12:00	0.4	SE
6/12/2020 13:00	0.4	SE
6/12/2020 14:00	0.5	SSE
6/12/2020 15:00	0.3	NNW
6/12/2020 16:00	0.9	S
6/12/2020 17:00	0.8	NNE
6/12/2020 18:00	0.0	NNE
6/12/2020 19:00	0.4	NNE
6/12/2020 20:00	0.3	NNE
6/12/2020 21:00	0.3	NNW
6/12/2020 22:00	0.2	N
6/12/2020 23:00	0.1	NNW
7/12/2020 00:00	0.7	N
7/12/2020 01:00	0.8	NNE
7/12/2020 02:00	0.4	NNE
7/12/2020 03:00	0.9	NNE
7/12/2020 04:00	0.6	NNE
7/12/2020 05:00	0.9	NNE
7/12/2020 06:00	0.3	NNW
7/12/2020 07:00	0.5	N
7/12/2020 08:00	0.0	NNW
7/12/2020 09:00	0.0	NWW
7/12/2020 10:00	0.0	NWW
7/12/2020 11:00	0.0	NW
7/12/2020 12:00	0.0	NW
7/12/2020 13:00	0.2	N
7/12/2020 14:00	1.6	NWW
7/12/2020 15:00	0.0	NNE
7/12/2020 16:00	0.9	NNE
7/12/2020 17:00	0.8	NNE
7/12/2020 18:00	0.6	NNE

Wind Data for  
 Contract No. SPW 07/2020 Environmental Team for Construction of Yuen  
 Long Effluent Polishing Plant Stage 1

Date	Wind Speed	Wind Direction
7/12/2020 19:00	0.2	NNE
7/12/2020 20:00	0.2	NNE
7/12/2020 21:00	0.4	NNE
7/12/2020 22:00	0.1	SWW
7/12/2020 23:00	0.9	SSW
8/12/2020 00:00	0.4	SSW
8/12/2020 01:00	0.1	SWW
8/12/2020 02:00	0.5	W
8/12/2020 03:00	0.6	SWW
8/12/2020 04:00	0.3	SSW
8/12/2020 05:00	0.5	SWW
8/12/2020 06:00	0.3	NWW
8/12/2020 07:00	0.5	SW
8/12/2020 08:00	0.3	SSW
8/12/2020 09:00	0.7	W
8/12/2020 10:00	0.2	SSW
8/12/2020 11:00	0.5	NW
8/12/2020 12:00	0.1	SSW
8/12/2020 13:00	0.7	SWW
8/12/2020 14:00	0.6	SWW
8/12/2020 15:00	0.0	SWW
8/12/2020 16:00	0.7	SWW
8/12/2020 17:00	0.9	SWW
8/12/2020 18:00	0.0	NW
8/12/2020 19:00	0.8	SWW
8/12/2020 20:00	0.8	SWW
8/12/2020 21:00	0.1	SWW
8/12/2020 22:00	1.0	SWW
8/12/2020 23:00	1.0	NE
9/12/2020 00:00	0.1	NNE
9/12/2020 01:00	0.0	NE
9/12/2020 02:00	0.4	NE
9/12/2020 03:00	0.0	NNE
9/12/2020 04:00	0.2	SSE
9/12/2020 05:00	0.0	SW
9/12/2020 06:00	0.0	E
9/12/2020 07:00	0.4	N
9/12/2020 08:00	0.1	NNE
9/12/2020 09:00	1.5	SW
9/12/2020 10:00	0.9	SE
9/12/2020 11:00	0.3	SE

Wind Data for  
 Contract No. SPW 07/2020 Environmental Team for Construction of Yuen  
 Long Effluent Polishing Plant Stage 1

Date	Wind Speed	Wind Direction
9/12/2020 12:00	0.5	S
9/12/2020 13:00	0.0	W
9/12/2020 14:00	0.4	S
9/12/2020 15:00	0.0	SSW
9/12/2020 16:00	0.2	S
9/12/2020 17:00	0.0	SWW
9/12/2020 18:00	0.0	SE
9/12/2020 19:00	0.2	NNW
9/12/2020 20:00	0.3	SSW
9/12/2020 21:00	0.7	SW
9/12/2020 22:00	0.6	SWW
9/12/2020 23:00	0.5	SWW
10/12/2020 00:00	0.7	N
10/12/2020 01:00	0.3	N
10/12/2020 02:00	0.8	N
10/12/2020 03:00	0.2	N
10/12/2020 04:00	0.8	N
10/12/2020 05:00	0.9	N
10/12/2020 06:00	0.0	N
10/12/2020 07:00	0.0	SW
10/12/2020 08:00	0.1	NNW
10/12/2020 09:00	0.0	NNE
10/12/2020 10:00	0.2	SSE
10/12/2020 11:00	0.2	SE
10/12/2020 12:00	0.1	NNE
10/12/2020 13:00	0.3	N
10/12/2020 14:00	0.1	NWW
10/12/2020 15:00	0.1	SW
10/12/2020 16:00	0.0	W
10/12/2020 17:00	0.1	SEE
10/12/2020 18:00	0.0	SW
10/12/2020 19:00	0.6	SWW
10/12/2020 20:00	0.7	SW
10/12/2020 21:00	0.6	SE
10/12/2020 22:00	0.2	NWW
10/12/2020 23:00	0.3	SEE
11/12/2020 00:00	0.1	S
11/12/2020 01:00	0.6	SSW
11/12/2020 02:00	0.9	SWW
11/12/2020 03:00	0.9	SWW
11/12/2020 04:00	0.9	SW

Wind Data for  
 Contract No. SPW 07/2020 Environmental Team for Construction of Yuen  
 Long Effluent Polishing Plant Stage 1

Date	Wind Speed	Wind Direction
11/12/2020 05:00	0.4	SW
11/12/2020 06:00	0.3	SW
11/12/2020 07:00	0.5	SWW
11/12/2020 08:00	0.3	SW
11/12/2020 09:00	0.3	SWW
11/12/2020 10:00	0.5	W
11/12/2020 11:00	0.5	NWW
11/12/2020 12:00	0.1	NWW
11/12/2020 13:00	0.7	NNW
11/12/2020 14:00	0.3	W
11/12/2020 15:00	0.9	SSE
11/12/2020 16:00	0.7	NW
11/12/2020 17:00	0.9	SEE
11/12/2020 18:00	0.4	SSW
11/12/2020 19:00	0.9	SE
11/12/2020 20:00	0.2	SEE
11/12/2020 21:00	0.7	S
11/12/2020 22:00	0.4	NW
11/12/2020 23:00	1.0	SE
12/12/2020 00:00	0.4	SW
12/12/2020 01:00	0.2	S
12/12/2020 02:00	0.5	NWW
12/12/2020 03:00	0.8	S
12/12/2020 04:00	0.6	SSW
12/12/2020 05:00	0.6	SSW
12/12/2020 06:00	0.1	SSW
12/12/2020 07:00	0.6	SSW
12/12/2020 08:00	0.1	SSW
12/12/2020 09:00	0.8	S
12/12/2020 10:00	0.6	SSW
12/12/2020 11:00	0.2	NEE
12/12/2020 12:00	0.6	SW
12/12/2020 13:00	0.3	NNE
12/12/2020 14:00	0.9	SSW
12/12/2020 15:00	0.1	S
12/12/2020 16:00	0.5	SSW
12/12/2020 17:00	0.6	SSW
12/12/2020 18:00	0.3	SE
12/12/2020 19:00	0.4	SWW
12/12/2020 20:00	0.2	SSW
12/12/2020 21:00	0.6	SSW

Wind Data for  
 Contract No. SPW 07/2020 Environmental Team for Construction of Yuen  
 Long Effluent Polishing Plant Stage 1

Date	Wind Speed	Wind Direction
12/12/2020 22:00	0.5	SSW
12/12/2020 23:00	0.2	SSW
13/12/2020 00:00	0.1	SW
13/12/2020 01:00	0.4	SWW
13/12/2020 02:00	0.2	SWW
13/12/2020 03:00	0.0	SWW
13/12/2020 04:00	0.4	SWW
13/12/2020 05:00	0.2	SW
13/12/2020 06:00	0.9	S
13/12/2020 07:00	0.7	SSW
13/12/2020 08:00	0.6	SSW
13/12/2020 09:00	0.3	W
13/12/2020 10:00	0.8	SW
13/12/2020 11:00	0.9	W
13/12/2020 12:00	0.2	SW
13/12/2020 13:00	0.3	SWW
13/12/2020 14:00	0.4	SWW
13/12/2020 15:00	0.1	W
13/12/2020 16:00	0.0	SWW
13/12/2020 17:00	0.6	SSW
13/12/2020 18:00	0.3	SWW
13/12/2020 19:00	0.0	SWW
13/12/2020 20:00	0.8	SSW
13/12/2020 21:00	0.4	S
13/12/2020 22:00	0.2	NNW
13/12/2020 23:00	0.2	NNW
14/12/2020 00:00	1.0	S
14/12/2020 01:00	0.0	SWW
14/12/2020 02:00	0.0	S
14/12/2020 03:00	0.2	SWW
14/12/2020 04:00	0.1	SW
14/12/2020 05:00	0.8	SWW
14/12/2020 06:00	0.2	SSW
14/12/2020 07:00	0.5	S
14/12/2020 08:00	0.5	SSE
14/12/2020 09:00	0.7	S
14/12/2020 10:00	0.7	NW
14/12/2020 11:00	0.8	SSW
14/12/2020 12:00	0.8	SW
14/12/2020 13:00	0.6	NNW
14/12/2020 14:00	1.0	SWW

Wind Data for  
Contract No. SPW 07/2020 Environmental Team for Construction of Yuen  
Long Effluent Polishing Plant Stage 1

<b>Date</b>	<b>Wind Speed</b>	<b>Wind Direction</b>
14/12/2020 15:00	0.3	SSW
14/12/2020 16:00	0.9	SSE
14/12/2020 17:00	0.2	NWW
14/12/2020 18:00	0.3	SSE
14/12/2020 19:00	0.8	W
14/12/2020 20:00	0.2	W
14/12/2020 21:00	1.1	NWW
14/12/2020 22:00	0.6	SE
14/12/2020 23:00	1.3	NNW
15/12/2020 00:00	0.3	NNW

# Appendix I

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EPD's Approval Letter



## MEMO

From: Director of Environmental Protection

Ref. (57) in EP2/N6/F/151 Pt.2

Tel. No. 2835 1115

Fax. No. 2591 0558

Date: 29.10.2020

To: CE/Sewerage Project, DSD

(Attn: Mr. LAM Yu Wan)

Your Ref.

Dated: Fax. No. 2827 8700

Total Pages 2

**PWP Item 4439DS: Yuen Long Effluent Polishing Plant – Main Works for Stage 1**  
**Contract No. DC/2019/10**  
**Environmental Permit No: EP-565/2019**

**EP Condition 3.1: Proposal for relocation of Water Quality Monitoring Stations**

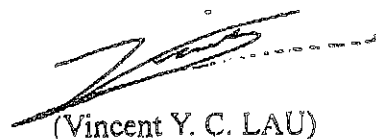
I refer to the letter dated 22 September 2020 from the Environmental Team (ET) Leader (Furgo's reference: MCL/ED/0502/2020/C) and letter dated 27.10.2020 from the Engineering Representative (ER), enclosing the above proposal for alternative water quality monitoring stations (WQMSs), proposed by the ET leader, agreed by ER and verified by the IEC respectively, for our approval under EP Condition 3.1 of EP-565/2019.

2. Having reviewed the submission, we understand that the proposal of alternative WQMSs is required because:

- (i) the original coordinates are located on the mudflat area which may cause safety concern for vessel to access;
- (ii) insufficient depth of water sample would cause disturbance from the seabed which may also affect monitoring results; and
- (iii) the proposed coordinates are the closest locations to original coordinates and can be reached safely, and interference should be minimized.

3. In view of the above, the proposal of alternative WQMSs is approved and will be deposited to the EIAO Register for fulfilling the Permit Condition 3.1 from the environmental perspective as examined under the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499) and does not absolve you/the project proponent/any person from any requirements or obligations under other laws in force in Hong Kong, nor the liabilities due to any conflicts, nuisance or damages that the proposed works may cause to third parties.

Yours sincerely,



(Vincent Y. C. LAU)  
 Senior Environmental Protection Officer  
 for Director of Environmental Protection

c.c.

AECOM  
 ET Leader / Furgo  
 IEC/ Ramboll

(Attn: Mr. Robert Chan)  
 (Attn: David Hung)  
 (Attn: Mr. F.N. Wong)

Fax: 3922 9797  
 Fax: 3656 4160  
 Fax: 3465 2899

# Appendix J

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HOKLAS Certificate of Accreditation



Hong Kong Accreditation Service  
香港認可處

**Certificate of Accreditation**  
**認可證書**

*This is to certify that*  
特此證明

**FUGRO TECHNICAL SERVICES LIMITED**  
輝固技術服務有限公司

**Fugro Development Centre, 5 Lok Yi Street, Tai Lam, Tuen Mun, New Territories, Hong Kong**  
香港新界屯門大欖樂怡街五號輝固發展中心

*has been accepted by the HKAS Executive, on the recommendation of the Accreditation Advisory Board, as a*  
在認可諮詢委員會的建議下獲香港認可處執行機關接受為

**HOKLAS Accredited Laboratory**  
「香港實驗所認可計劃」認可實驗所

*This laboratory meets the requirements of ISO/IEC 17025:2005 and it has been accredited for performing specific tests or calibrations as listed in the scope of accreditation within the test category of*

**Environmental Testing**

此實驗所符合ISO/IEC 17025:2005所訂的要求  
並獲認可進行載於認可範圍內下述測試類別中的指定測試或校正工作

**環境測試**

*This accreditation to ISO/IEC 17025:2005 demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (see joint IAF-ILAC-ISO Communiqué).*  
此項 ISO/IEC 17025:2005 的認可資格證明此實驗所具備指定範疇內所須的技術能力並實施一套實驗所質量管理體系(見國際認可論壇、國際實驗所認可合作組織及國際標準化組織的聯合公報)。

*The common seal of the Hong Kong Accreditation Service is affixed hereto by the authority of the HKAS Executive*  
現經香港認可處執行機關授權在此蓋上香港認可處的印章

WONG Wang-wah, Executive Administrator  
執行幹事 黃宏華  
Issue Date : 20 December 2016  
簽發日期：二零一六年十二月二十日

Registration Number : **HOKLAS 015**  
註冊號碼：

Date of First Registration : 23 March 1989  
首次註冊日期：一九八九年三月二十三日



Fugro Technical Services Limited

輝固技術服務有限公司

Fugro Development Centre, 5 Lok Yi Street, Tai Lam, Tuen Mun, New Territories, Hong Kong

香港新界屯門大欖樂怡街五號輝固發展中心

Environmental Testing 環境測試		
ITEM TESTED OR MEASURED 測試或量度項目	SPECIFIC TEST OR PROPERTY MEASURED 特定測試或量度的特性	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED 規範、標準方法或應用技術
Water and Wastewater	Physical Examination :-  - pH Value  - Turbidity  - Conductivity  - Salinity  - Dissolved oxygen  - Colour  - Total Suspended Solids Dried at 103 -105°C  - Total Solids Dried at 103 -105°C  - Total Dissolved Solids dried at 180°C  Trace Metals :- (Recoverable) - Aluminium - Cadmium - Copper - Iron - Lead - Magnesium - Manganese - Nickel - Potassium - Sodium - Zinc  - Chromium, Calcium  - Mercury	APHA 17e 4500-H <sup>+</sup> B  APHA 18e 2130 B  ASTM D1125-82 Method B Excluding Cl. 7  In-house Method E-T-006  APHA 17e 4500-0 G  In-house Method E-T-008  APHA 17e 2540 D  APHA 17e 2540 B  APHA 17e 2540 C  APHA 18e 3030 A, B, F.3b & 3111 D APHA 18e 3030 A, B, F.3b & 3111 B  In-house Method ET-021(Flame AAS)  In-house Method E-T-022 (Cold vapour AAS)

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Environmental Testing 環境測試

ITEM TESTED OR MEASURED 測試或量度項目	SPECIFIC TEST OR PROPERTY MEASURED 特定測試或量度的特性	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED 規範、標準方法或應用技術
Water and Wastewater (cont'd)	Non-metallic Constituents :- - Total alkalinity (as CaCO <sub>3</sub> )  - Bicarbonate and carbonate content  - Chloride  - Nitrogen (Nitrate)  - Nitrogen (Nitrite)  - Nitrogen (Total oxidised)  - Nitrogen (Total Kjeldahl)  - Nitrogen (Total Kjeldahl)  - Nitrogen (Ammonia)  - Nitrogen (Ammonia)  - Nitrogen (Ammonia)  - Reactive Phosphorus  - Non-ionic surfactants (as CTAS)  - Total Phosphorus Digestion Determination  - Total surfactants (Anionic and Non-ionic)	APHA 17e 2320 B APHA 20e 2320 B (Indicator method)  In-house Method E-T-016 (Titrimetric)  APHA 18e 4500 Cl <sup>-</sup> B  APHA 20e 4500-NO <sub>3</sub> <sup>-</sup> E & F In-house Method E-T-080  APHA 20e 4500-NO <sub>2</sub> <sup>-</sup> A & NO <sub>3</sub> <sup>-</sup> F In-house Method E-T-084  APHA 20e 4500-NO <sub>3</sub> <sup>-</sup> E & F In-house Method E-T-081  APHA 18e 4500-Norg B & 4500-NH <sub>3</sub> E (Titrimetric method)  In-house Method E-T-037 (Colorimetric method)  APHA 18e 4500-NH <sub>3</sub> B & E (Titrimetric method)  In-house Method E-T-039 (Colorimetric method)  In-house Method E-T-095 (Automation segmented flow-salicylate method)  In-house Method E-T-055  In-house method E-T-099  APHA 17e 4500-PB5 In-house Method E-T-056  In-house method E-T-099, E-T-057 and E-T-103 (by calculation)

Fugro Technical Services Limited

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Environmental Testing 環境測試		
ITEM TESTED OR MEASURED 測試或量度項目	SPECIFIC TEST OR PROPERTY MEASURED 特定測試或量度的特性	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED 規範、標準方法或應用技術
Water and Wastewater (cont'd)	- Residual Free Chlorine	In-house Method E-T- 066
	- Total Residual Chlorine	In-house Method E-T- 067
	Organic Pollutants :-	
	- Oil and grease	APHA 18e 5520B
	- <b>Biochemical Oxygen Demand</b>	BS 6068: Section 2.14: 1990
	- Chemical Oxygen Demand	APHA 18e 5220 B
	- Anionic Surfactants	In-house Method E-T-057
	- Tributyl tin	In-house Method E-T-089 (GC-MSD)
	- Tributyl tin in interstitial water	In-house Method E-T-101(Preparation for Interstitial Water) In-house Method E-T-089 (GC/MS)
	Microbiological tests :-	
	- <b>E. coli count</b>	DoE (1983) The Bacteriological Examination of Drinking Water Supplies, 1982 Membrane Filtration Procedure: Section 7.8, 7.9.4.2 Bacterial Confirmation: Section 7.9.4.4 & in-situ urease test
	-Total Coliform count	DoE (1983) The Bacteriological Examination of Drinking Water Supplies, 1982 Membrane Filtration Procedure: Sections 7.8, 7.9.4.1 Bacterial Confirmation: Section 7.9.4.3
	- Faecal Coliform count	DoE (1983) The Bacteriological Examination of Drinking Water Supplies, 1982 Membrane Filtration Procedure: Sections 7.8, 7.9.4.2 Bacterial Confirmation: Section 7.7.6.3
	- Heterotrophic Plate Count	APHA 20e 9215 A & B
-Legionellae including Legionella pneumophila	AS/NZS 3896:1998 ISO 11731-2: 2004	

# Appendix K

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Construction Programme

# Construction of Yuen Long Effluent Polishing Plant Stage 1

## Construction Programme

				2020												2021												2022												2023															
				Month												Month												Month												Month															
Work ID	Work Activity	Start	Finish	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	Site Investigation, clearance/ formation	Jan-21	Apr-25	2.1, 2.4, 2.14																																																			
2	Demolition of existing facilities	Apr-21	Jul-24	2.8, 2.9, 2.11 & 2.12				2.15																																															
3	Piling	May-21	Oct-24																																																				
4	Superstructures	Nov-21	Mar-26																																																				
5	Testing and Commissioning	Jun-23	Apr-26																																																				

				2024												2025												2026											
				Month												Month												Month											
Work ID	Work Activity	Start	Finish	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	Site Investigation, clearance/ formation	Jan-21	Apr-25																																				
2	Demolition of existing facilities	Apr-21	Jul-24																																				
3	Piling	May-21	Oct-24																																				
4	Superstructures	Nov-21	Mar-26																																				
5	Testing and Commissioning	Jun-23	Apr-26																									2.16, 2.17											

2.1 Referring to the milestone of environmental protection/mitigation activities as stated in relevant EP Conditions.



EIAO-EP\_Project Title: Construction of Yuen Long Effluent Polishing Plant Stage 1  
(Application No. AEP-565/2018)

EP Conditions	Measures/Actions	Milestones of Environmental Protection/Mitigation Activities
2.1	Employment of ET	no later than <u>3 months before the commencement of construction of the Project</u>
2.4	Employment of IEC	no later than <u>3 months before the commencement of construction of the Project</u>
2.8	Submission of Management Organizations	no later than <u>1 month before the commencement of construction of the Project</u>
2.9	Submission of Construction Phase Emergency Response Plan	no later than <u>1 month before the commencement of construction of the Project</u>
2.11 & 2.12	Measure for Mitigating Ecological Impacts during Construction of the Project (i) a pre-construction survey for areas within 100 m from the Project boundary to confirm the location(s) and status of ardeid night roost(s) (ii) a Noise Mitigation Measures Plan (NMMP)	no later than <u>1 month before the commencement of construction of the Project</u>
2.14	Submissions for Land Contamination Assessment	no later than <u>3 months before the commencement of site investigation (SI) at the concerned facilities / areas</u>
2.15	Submission of Landscape and Visual Mitigation Plan(s)	no later than <u>1 month before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project</u>
2.16	Submissions or Measures to be Implemented before or during Operation of the Project	no later than <u>1 year before the commencement of operation of the Project</u>
2.17	Submission of Commissioning Test Report(s)	no later than <u>1 month before the commencement of operation of the Project</u>

# Construction of Yuen Long Effluent Polishing Plant Stage 1

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Appendix B Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage*			Relevant Legislation & Guidelines
				Des	C	O	
<b>Air Quality Impact</b>							
<b>Construction Phase</b>							
3.6.1.6	Watering once per every two hours on active works areas to reduce dust emission.	All active works areas during construction phase	Contractor		✓		Air Pollution Control Ordinance (APCO); Air Pollution Control (Construction Dust) Regulation; HKAQO; Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM)
3.8.1.1	Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices listed below shall be carried out to further minimize construction dust impact:  <ul style="list-style-type: none"> <li>Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.</li> <li>Use of frequent watering for particularly dusty construction areas and areas close to ASRs.</li> <li>Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.</li> <li>Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.</li> <li>Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.</li> <li>Establishment and use of vehicle wheel and body washing facilities at the exit points of the site.</li> <li>Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading area of barging point, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods.</li> <li>Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit.</li> <li>Imposition of speed controls for vehicles on site haul roads.</li> <li>Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.</li> <li>Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.</li> </ul>	Construction Sites	Contractor		✓		
<b>Operation Phase</b>							
3.5.2.4	Biogas generated will be stored in the biogas holders. The stored biogas will go through the sulphur absorption vessels to remove the hydrogen sulphide (H2S) before passing to the combined heat and power (CHP) generator.	YLEPP / Operation Phase	Operator	✓		✓	
3.6.3.2	Install selective catalytic reduction (SCR) to control Nitrogen Dioxide (NO2) emission at the exhausts of the CHP.	YLEPP / Operation Phase	Operator	✓		✓	
3.6.3.5	boiler and ammonia stripping unit.	YLEPP / Operation Phase	Operator	✓		✓	
3.6.2.9 and 3.7.2.1	Install an activated carbon filter with odour (ammonia) removal efficiency of at least 70% at the ammonia stripping unit exhaust.	YLEPP / Operation Phase	Operator	✓		✓	
3.7.2.1	All the odour sources in YLEPP should be covered and all odourous gas should be treated at the deodorizers (DOs) with 90% - 95% odour removal efficiency before venting to the atmosphere.	YLEPP / Operation Phase	Operator	✓		✓	EIAO-TM
<b>Noise Impact</b>							
<b>Construction Phase</b>							
4.8.1	Movable noise barriers are recommended for hydraulic breakers mounted on excavators to be adopted during construction. Good site practices listed below and the noise control requirements stated in EPD's "Recommended Pollution Control Clauses for Construction Contracts" should be included in the Contract Specification for the Contractors to follow and should be implemented to further minimize the potential noise impacts during the construction phase of the Project.  <ul style="list-style-type: none"> <li>Quiet PME, such that those listed in EPD's Quality Powered Mechanical Equipment, should be considered for construction works to further minimize the potential construction noise impact.</li> <li>Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme.</li> <li>Silencers or mufflers on construction equipment should be utilised and should be properly maintained during the construction programme.</li> <li>Mobile plant, if any, should be sited as far away from noise sensitive receivers (NSRs) as possible.</li> <li>Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.</li> <li>Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs</li> <li>Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities.</li> </ul>	Construction Sites	Contractor		✓		EIAO-TM; Noise Control Ordinance (NCO)
<b>Operation Phase</b>							
4.8.2	Fixed plant noise sources (except extraction fans) should be located within plantroom with silencers at air inlet and outlet and a sound proof door. Ventilation fans should be installed with silencers. Commissioning test should be conducted to ensure fixed plant noise impact would comply with the relevant noise standards.	YLEPP / Operation Phase	Operator	✓		✓	EIAO-TM; NCO
<b>Water Quality Impact</b>							
<b>Construction Phase</b>							
5.8.1.2	Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities	Construction Sites / Construction Phase	Contractor		✓		WPCO; EIAO-TM
5.8.1.3	All vehicles and plant should be cleaned before they leave a construction site to minimise the deposition of earth, mud, debris on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfill to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.	Construction Sites / Construction Phase	Contractor		✓		Professional Persons Environmental Consultative Committee (ProPECC) Practice Note (PN) 1/94; WPCO; Waste Disposal Ordinance (WDO)
5.8.1.4	Good site practices should be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis.	Construction Sites / Construction Phase	Contractor		✓		WPCO; EIAO-TM

The milestones of environmental protection/mitigation activities under the following Project Stages (should be read in conjunction with Construction Programme)

Site Investigation, clearance/ formation	Demolition of existing facilities	Piling	Superstructures	Testing and Commissioning
✓	✓	✓	✓	
✓	✓	✓	✓	
				✓
				✓
				✓
				✓
✓	✓	✓	✓	
✓	✓	✓	✓	
✓	✓	✓	✓	



# Construction of Yuen Long Effluent Polishing Plant Stage 1

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## Appendix B Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage*			Relevant Legislation & Guidelines
				Des	C	O	
5.8.2.9	An Emergency Response Plan will be formulated prior to commissioning of YLEPP to set out the emergency response procedures and actions to be followed in case of equipment or sewage treatment failure. The plant operators of YLEPP should carry out necessary follow-up actions according to the procedures of the contingency plan to minimise any impacts on the identified WSRs due to emergency bypass. Regular maintenances and inspections to all treatment units, penstocks and plant facilities are necessary to maintain a good operation condition. A follow-up water quality monitoring exercise shall be conducted after each emergency discharge event to monitor the recovery of water quality in the vicinity.	Project site / Design and Operation Phase	Project Proponent	✓		✓	WPCO
5.8.2.10	If capacity of San Wai STW allows, part of the raw sewage from Ping Shun Street Pumping Stations could be temporarily diverted to San Wai STW in case of emergency discharge, so that the inflow quantity to YLEPP as well as the emergency discharge loading can be minimised.	Project site / Design and Operation Phase	Project Proponent	✓		✓	WPCO
5.8.2.11	Chemical should be stored on site at banded area and separate drainage system as appropriate should be provided to avoid any spilled chemicals from entering the storm drain in case of accidental spillage. Also, adequate tools for cleanup of spilled chemicals should be stored on site and appropriate training shall be provided to staffs to further prevent potential adverse water quality impacts from happening.	Project site / Design and Operation Phase	Project Proponent	✓		✓	WPCO
<b>Waste Management Implication</b>							
<b>Construction Phase</b>							
6.6.1.3	<u>Good Site Practices</u> Recommendations for good site practices during the construction phase include: • Nomination of approved personnel, such as a site manager, to be responsible for good site practices, and making arrangements for collection of all wastes generated at the site and effective disposal to an appropriate facility; • Training of site personnel in proper waste management and chemical waste handling procedures; • Provision of sufficient waste reception/ disposal points, of a suitable vermin-proof design that minimises windblown litter; • Arrangement for regular collection of waste for transport off-site and final disposal; • Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; • A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed, and • A WMP should be prepared and should be submitted to the Engineer for approval. One may make reference to ETWB TCW No. 19/2005 for details.	Construction Sites	Contractor		✓		Waste Disposal Ordinance (WDO)
6.6.1.5	<u>Waste Reduction Measures</u> Recommendations to achieve waste reduction include: • Segregate and store different types of construction related waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; • Provide separate labelled bins to segregate recyclable waste such as aluminium cans from other general refuse generated by the work force, and to encourage collection by individual collectors; • Any unused chemicals or those with remaining functional capacity shall be recycled; • Maximising the use of reusable steel formwork to reduce the amount of C&D material; • Prior to disposal of C&D waste, it is recommended that wood, steel and other metals shall be separated for re-use and / or recycling to minimise the quantity of waste to be disposed of to landfill; • Adopt proper storage and site practices to minimise the potential for damage to, or contamination of, construction materials; • Plan the delivery and stock of construction materials carefully to minimise the amount of surplus waste generated; • Adopt pre-cast construction method instead of cast-in-situ method for construction of concrete structures as much as possible; and • Minimise over ordering of concrete, mortars and cement grout by doing careful check before ordering.	Construction Sites	Contractor		✓		WDO
6.6.1.7	<u>Storage of Waste</u> Recommendations to minimise the impacts include: • Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimising the potential of pollution; • Maintain and clean storage areas routinely; • Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and • Different locations should be designated to stockpile each material to enhance reuse.	Construction Sites	Contractor		✓		-
6.6.1.8	<u>Collection of Waste</u> Licensed waste haulers should be employed for the collection and transportation of waste generated. The following measures should be enforced to minimise the potential adverse impacts: • Remove waste in timely manner; • Waste collectors should only collect wastes prescribed by their permits; • Impacts during transportation, such as dust and odour, should be mitigated by the use of covered trucks or in enclosed containers; • Obtain relevant waste disposal permits from the appropriate authorities, in accordance with the WDO (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28); • Waste should be disposed of at licensed waste disposal facilities; and • Maintain records of quantities of waste generated, recycled and disposed.	Construction Sites	Contractor		✓		WDO; Waste Disposal (Charges for Disposal of Construction Waste) Regulation; Land (Miscellaneous Provisions) Ordinance
6.6.1.10	<u>Transportation of Waste</u> In order to monitor the disposal of C&D materials at PFRs and landfills and to control fly-tipping, a trip-ticket system should be established in accordance with DEVB TCW No. 6/2010. A recording system for the amount of waste generated, recycled and disposed, including the disposal sites, should also be set up. Warning signs should be put up to remind the designated disposal sites. CCTV should be installed at the vehicular entrance and exit of the site as additional measures to prevent fly-tipping.	Transportation Route of Waste / Construction Phase	Contractor		✓		DEVB TC(W) No. 6/2010
6.6.1.12	<u>Construction and Demolition Material</u> Careful design, planning together with good site management can reduce over-ordering and generation of C&D materials such as concrete, mortar and cement grouts. Formwork should be designed to maximize the use of standard wooden panels, so that high reuse levels can be achieved. Alternatives such as steel formwork or plastic facing should be considered to increase the potential for reuse	Construction Sites	Contractor	✓	✓		-

The milestones of environmental protection/mitigation activities under the following Project Stages (should be read in conjunction with Construction Programme)					
Site Investigation, clearance/ formation	Demolition of existing facilities	Piling	Superstructures	Testing and Commissioning	
✓		✓	✓	✓	
	✓	✓	✓	✓	
✓	✓	✓	✓	✓	
✓	✓	✓	✓	✓	
✓	✓	✓	✓	✓	
✓	✓	✓	✓	✓	
✓	✓	✓	✓	✓	



# Construction of Yuen Long Effluent Polishing Plant Stage 1

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## Appendix B Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage*			Relevant Legislation & Guidelines	
				Des	C	O		
6.6.2.2	The below good housekeeping practices for the proposed YLEPP should be followed to further ameliorate any odour impact from handling, collection, transportation and disposal of screenings, grits and sludge: <ul style="list-style-type: none"> <li>• Screens should be cleaned regularly to remove any accumulated organic debris;</li> <li>• Screening and grit transfer systems should be flushed regularly with water to remove organic debris and grit;</li> <li>• Grit and screened materials should be transferred to closed containers;</li> <li>• Scum and grease collection wells and troughs should be emptied and flushed regularly to prevent putrefaction of accumulated organics;</li> <li>• Skim and remove floating solids and grease from primary clarifiers regularly;</li> <li>• Frequent sludge withdrawal from tanks is necessary to prevent the production of gases;</li> <li>• Organic waste should be transported to YLEPP by fully enclosed pipes or trucks to avoid odour nuisance;</li> <li>• Sludge should be transported to the STF by water-tight containers to avoid H2S/odour emission and ingress of water into the containers which would lower the sludge dryness during transportation;</li> <li>• Sludge cake should be transferred to closed containers;</li> <li>• Sludge containers should be flushed with water regularly; and</li> <li>• Sludge trucks and containers should be washed thoroughly before leaving the YLEPP to avoid any odour nuisance during transportation.</li> </ul>	Operation Phase	Operator			✓	WDO	
<b>Land Contamination</b>								
7.8.1.2 7.8.1.3 7.8.2.1	<p>Prior to the commencement of the SI works, a review of the Contamination Assessment Plan (CAP) should be conducted to confirm whether the proposed SI works (e.g. sampling locations, testing parameters etc.) are still valid. Supplementary CAP(s), presenting findings of the review, the latest site conditions and updated sampling strategy and testing protocol, should be submitted to EPD for endorsement. The SI works should be carried out according to EPD's agreed supplementary CAP(s).</p> <p>SI works should be carried out according to the supplementary CAP endorsed by EPD. Following completion of SI works and receipt of laboratory test results, Contamination Assessment Report(s) ((CAR)(s)) should be prepared to present the findings of the SI works and to discuss the presence, nature and extent of contamination.</p> <p>If contamination is identified, Remedial Action Plan(s) ((RAP)(s)) which provides details of the remedial actions for the identified contaminated soil and / or groundwater should be endorsed by EPD. The possible remediation methods are detailed in Section 5.2 of the CAP provided in Appendix 7.1 of the EIA Report.</p> <p>Remediation action, if necessary, will be carried out according to EPD endorsed RAP(s) and Remediation Report(s) (RR(s)) will be submitted after completion of the remediation action. The RRR(s) should be endorsed by EPD prior to the commencement of construction works at the respective identified contaminated areas (if any).</p>	Existing YLSTW / Construction Phase (after decommissioning of the concerned facilities / areas but prior to the construction works at the concerned facilities / areas)	Project Proponent / Contractor		✓			Guidance Note for Contaminated Land Assessment and Remediation; Practice Guide for Investigation and Remediation of Contaminated Land; Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management
7.8.3.1	<p>The mitigation measures will be recommended in the RAP and would typically include the following:</p> <ul style="list-style-type: none"> <li>• Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety;</li> <li>• Excavation shall be carried out during dry season as far as possible to minimise contaminated runoff from contaminated soils; Supply of suitable clean backfill material (or treated soil) after excavation;</li> <li>• Stockpiling site(s) shall be lined with impermeable sheeting and banded. Stockpiles shall be fully covered by impermeable sheeting to reduce dust emission. If this is not practicable due to frequent usage, regular watering shall be applied. However, watering shall be avoided on stockpiles of contaminated soil to minimise contaminated runoff.</li> <li>• Vehicles containing any excavated materials shall be suitably covered to limit potential dust emissions or contaminated wastewater run-off, and truck bodies and tailgates shall be sealed to prevent any discharge during transport or during wet conditions;</li> <li>• Speed control for the trucks carrying contaminated materials shall be enforced;</li> <li>• Vehicle wheel and body washing facilities at the site's exist points shall be established and used; and</li> <li>• Pollution control measures for air emissions (e.g. from biopile blower and handling of cement), noise emissions (e.g. from blower or earthmoving equipment), and water discharges (e.g. runoff control from treatment facility) shall be implemented and complied with relevant regulations and guidelines.</li> </ul>	Project Site / Construction Phase	Contractor		✓		Guidance Note for Contaminated Land Assessment and Remediation; Practice Guide for Investigation and Remediation of Contaminated Land; Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management	
<b>Ecological Impact (Terrestrial and Aquatic)</b>								
<b>Construction Phase</b>								
8.10.2.1	<b>Avoidance of Recognised Site of Conservation Importance</b> Construction works are designed to be confined to the boundary of the existing YLSTW that direct impacts on all other sites of conservation importance within the assessment area, including the Ramsar Site, Priority Site, WCA, WBA, SSSI and CA would be avoided.	Project site / Construction Phase	Project Proponent / Contractor	✓	✓		-	
8.10.2.3 – 8.10.2.4	<b>Avoidance of Demolition Works Using Breakers Mounted on Excavators and Percussive Piling during Dry Season</b> In order to minimise the construction noise disturbance on overwintering waterbirds, the noisy construction works, i.e. all percussive piling works and demolition using breakers mounted on excavators, would therefore be scheduled outside the dry season (i.e. November to March, which is the peak overwintering period of waterbirds).	Construction sites / Construction Phase	Contractor		✓		-	
8.10.2.5	<b>Restriction of Construction Hours</b> No construction activities with the use of PME should be conducted within 100m from any night roost confirmed by the pre-construction survey after 18:00 during wet season and 17:30 during dry season to avoid disturbance to the nearby ardeids night roosts.	Construction sites / Construction Phase	Contractor		✓		-	
8.10.3.2 – 8.10.3.3	<b>Minimising Construction Noise Disturbance Impacts through Consideration of Alternative Construction Methods</b> Demolition using concrete crusher is quieter than demolition using breaker that its construction noise level is comparable to other general construction activities and concrete crusher would be used for demolition works to be undertaken during dry season months. The quieter foundation methods, including bored piling, raft foundation and shallow foundation, would be adopted as far as possible.	Construction sites / Construction Phase	Contractor		✓		-	
8.10.3.4 – 8.10.3.5	<b>Minimising Construction Noise Disturbance Impacts Through Careful Phasing of Construction Activities</b> Percussive piling works and demolition using breakers mounted on excavators would typically be completed over two wet seasons and not be undertaken in the same construction zone at the same time to localise the construction disturbance and to reduce the duration of high level of disturbances on sensitive wetland habitats and associated waterbirds nearby each construction zone.  Facilities in the eastern side of the Project site (i.e. Phase 1A and Phase 1B) are scheduled to be developed first that the new structures could screen the works in the middle and western parts of the site in later stage of the construction phase after the structures in Phase 1A and Phase 1B are completed, hence minimising the construction noise and human disturbance on sensitive wetland habitats adjacent to the Project site in Shan Pui River, including the confluence of Shan Pui River and Kam Tin River and ardeid night roost to the immediate east of the Project site.	Project site / Construction Phase	Project Proponent / Contractor	✓	✓		-	

The milestones of environmental protection/mitigation activities under the following Project Stages (should be read in conjunction with Construction Programme)				
Site Investigation, clearance/ formation	Demolition of existing facilities	Piling	Superstructures	Testing and Commissioning
				✓
✓	✓	✓		
✓	✓	✓		
✓	✓	✓	✓	✓
✓	✓	✓	✓	✓
✓	✓	✓	✓	✓
✓	✓	✓	✓	✓



# Construction of Yuen Long Effluent Polishing Plant Stage 1

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## Appendix B Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage*			Relevant Legislation & Guidelines
				Des	C	O	
11.5.8	<ul style="list-style-type: none"> <li>Method statements and risk assessments shall be prepared and safety control measures shall be in place before commencement of work</li> <li>All work procedures shall be compiled with the operating plant procedures or guidelines and regulatory requirements;</li> <li>Work permit system, on-site pre-work risk assessment and emergency response procedure shall be in place before commencement of work;</li> <li>All construction workers shall equip with appropriate personal protective equipment (PPE) when working at the Project Site;</li> <li>Safety training and briefings shall be provided to all construction workers;</li> <li>Regular site safety inspections shall be conducted during the construction phase of the Project;</li> </ul>	Project site / Construction Phase	Contractor		✓		-
11.9.1.2	<ul style="list-style-type: none"> <li>Ensure speed limit enforcement is specified in the contractor's method statement to limit the speed of construction vehicles onsite;</li> <li>Conduct speed checks to ensure enforcement of speed limits and to ensure adequate site access control;</li> <li>A lifting plan, with detailed risk assessment, should be prepared and endorsed for heavy lifting of large equipment;</li> <li>Vehicle crash barriers should be provided between the construction site and the operating biogas facilities;</li> <li>Ensure that a hazardous area classification study is conducted and hazardous area maps are updated before the start of the construction activities to ensure ignition sources are controlled during both construction and operation phases;</li> <li>Ensure work permit system for hot work activities within the Project Site is specified in the contractor's method statement to minimize and control the ignition sources during the construction phase;</li> <li>Ensure effective communication system / protocol is in place between the contractors and the operation staff;</li> <li>Ensure the Project Construction Emergency Response Plan is integrated with the Emergency Response Plan for the YLEPP during construction phase. The plan should address stop work instructions to be promptly communicated to all construction workers performing hot works in case a confirmed biogas detection at the Project Site;</li> <li>Ensure that the construction activities do not impede the functions of fire and gas detection system, fire protection system, muster areas, fire-fighting vehicle access and escape routes;</li> <li>Ensure a Job Safety Analysis is conducted for construction activities of the Project during the construction phase, to identify and analyze hazards associated with the construction activities (e.g. lifting operations by cranes) onto the operating biogas facilities.</li> </ul> <p>Potential risks of the construction activities shall be assessed, and risk precautionary measures shall be implemented in Contractor's works procedures.</p>	Project site / Construction Phase	Contractor		✓		-
<b>Operation Phase</b>							
11.9.1.1	<ul style="list-style-type: none"> <li>Process plant building should be provided with adequate number of gas detectors distributed over various areas of potential leak sources to provide adequate coverage.</li> <li>All electrical equipment inside the building should be classified in accordance with the electrical area classification requirements. No unclassified electrical equipment should be used during operations or maintenance.</li> <li>All safety valves should be designed to discharge the released fluid to a safe location and stop misdirection of fluid flows in order to avoid hazardous outcome.</li> <li>Safety markings and crash barriers should be provided to the aboveground piping, digesters and gas holders near the entrance.</li> <li>Fixed crash barriers should be provided in areas where process equipment is adjacent to the internal roadway to protect against vehicle collision. Adequate warning signage and lighting should also be provided and maximum speed limit should also be in place.</li> <li>Lightning protection installations should be installed following IEC 62305, BS EN 62305, AS/NZS 1768, NFPA 780 or equivalent standards.</li> <li>Suitable fire extinguishers should be provided within the site. An External Water Spray System (EWSS) should be installed in appropriate areas, such as around the gas holders, digester and sulphur removal vessels. The facilities should also be equipped with fire and gas detection system and fire suppression system.</li> <li>Stringent procedures should be implemented to prohibit smoking or naked flames to be used on-site.</li> </ul>	YLEPP / Operational Phase	Project Proponent, Operators	✓		✓	-

\*Des = Design; C = Construction; O = Operation

The milestones of environmental protection/mitigation activities under the following Project Stages (should be read in conjunction with Construction Programme)				
Site Investigation, clearance/ formation	Demolition of existing facilities	Piling	Superstructures	Testing and Commissioning
✓	✓	✓	✓	✓
✓	✓	✓	✓	✓