

PROJECT NO.: TCS/00512/09

## DSD CONTRACT NO. DC/2009/13 CONSTRUCTION OF SEWAGE TREATMENT WORKS AT YUNG SHUE WAN AND SOK KWU WAN

SOK KWU WAN PORTION AREA MONTHLY ENVIRONMENTAL MONITORING AND AUDIT (EM&A) REPORT (NO.35) – JUNE 2013

PREPARED FOR LEADER CIVIL ENGINEERING CORPORATION LIMITED

Quality Index			
Date	<b>Reference No.</b>	<b>Prepared By</b>	Approved By
12 July 2013	TCS00512/09/600/R0662v2	Anh	Burn
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		Environmental Consultant	Environmental Team Leader

Version	Date	Description
1	10 July 2013	First Submission
2	12 July 2013	Amended against IEC's comments on 11 July 2013

# **URS CDM Joint Venture**

Chief Engineer/Harbour Area Treatment Scheme	Your reference:		
Drainage Services Department 5/F, Western Magistracy	Our reference:	05117/6/16/414757	
2A, Pok Fu Lam Road Hong Kong	Date:	16 July 2013	
Attention: Ms Jacky C M Wong		BY FAX	

Dear Madam

Contract No. DC/2009/13 Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan Sok Kwu Wan Portion Area <u>Monthly Environmental Monitoring and Audit (EM&A) Report</u> No. 35 (June 2013)

We refer to the Monthly EM&A Monitoring Report No. 35 for June 2013 received under cover of the email from the Environmental Team, Action-United Environmental Services and Consulting (AUES), dated on 15 July 2013. We have no comment and have verified the captioned report.

Yours faithfully URS CDM JOINT-VENTURE

Rodney Ip // Independent Environmental Checker

ICWR/SLSY/lykl

Encl

cc Leader Civil Engineering (A AUES (A ER/LAMMA (A CDM (A

(Attn: Mr Vincent Chan) (Attn: Mr T.W. Tam) (Attn: Mr Ian Jones) (Attn: Mr Mark Sin)



## EXECUTIVE SUMMARY

ES.01. This is the **35<sup>th</sup>** monthly Environmental Monitoring and Audit (EM&A) Report for Sok Kwu Wan (hereinafter 'this Report') for the designated works under the Environmental Permit [EP-281/2007/A], covering a period from **26 May to 25 June 2013** (hereinafter 'the Reporting Period').

#### **ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES**

ES.02. Environmental monitoring activities under the EM&A programme in this Reporting Period are summarized in the following table.

Issues	Environmental Monitoring Parameters / Inspection	Occasions
Air Quality	1-hour TSP	54
All Quality	24-hour TSP	15
Construction Noise	L <sub>eq(30min)</sub> Daytime	24
Water Quality	Marine Water Sampling	12
Inspection / Audit	ET Regular Environmental Site Inspection	5

ES.03. As informed by the Contractor, the marine work of outfall construction has been commenced on 19 July 2011, therefore, water quality was undertaken in this Reporting Period.

#### BREACH OF ACTION AND LIMIT (A/L) LEVELS

ES.04. No exceedance of air quality and construction noise monitoring were recorded in this Reporting Period. The statistics of environmental exceedance, NOE issued and investigation of exceedance are summarized in the following table.

Environmental	Monitoring	Action	Limit Level	Event & Action		
Issues	Parameters	Level		NOE Issued	Investigation	Corrective Actions
Air Quality	1-hour TSP	0	0	0		
	24-hour TSP	0	0	0		
Construction Noise	L <sub>eq(30min)</sub> Daytime	0	0	0		
	DO	0	0	0		
Water Quality	Turbidity	0	0	0		
	SS	0	0	0		

*Note: NOE* – *Notification of Exceedance* 

## SITE INSPECTION BY EXTERNAL PARTIES

ES.05. In this Reporting Period, weekly joint site inspection by RE, the Contractor and ET was carried out on 28 May, 4, 11, 18 and 25 June 2013. All the observation has been rectified in the set time frame.

# ENVIRONMENTAL COMPLAINT, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES.06. No written or verbal environmental complaint, summons or successful prosecutions were recorded in this Reporting Period.

## **REPORTING CHANGE**

ES.07. No reporting change was made in this Reporting Period.

## **FUTURE KEY ISSUES**

ES.08. During wet season, muddy water and other water quality pollutants via site surface water runoff into the sea body within Fish culture zone at Picnic Bay and the Secondary recreation contact subzone



at Mo Tat Wan is the key issue of the Project. Mitigation measures for water quality should be properly maintained to prevent any muddy or sandy runoff from the loose soil surface overflow on the site boundary.

ES.09. Muddy water and other water quality pollutants via site surface water runoff into the sea body within Fish Culture Zone (FCZ) at Picnic Bay and the secondary recreation contact subzone at Mo Tat Wan is the key issue of the Project. Mitigation measures for water quality should be properly maintained to prevent any muddy or sandy runoff from the loose soil surface overflow on the site boundary.



## TABLE OF CONTENTS

1	INTRODUCTION Project Background Report Structure	<b>1</b> 1 1
2	PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS Project Organization and Management Structure Construction Progress Summary of Environmental Submissions	<b>3</b> 3 3 3
3	<ul> <li>SUMMARY OF BASELINE MONITORING REQUIREMENTS</li> <li>ENVIRONMENTAL ASPECT</li> <li>MONITORING LOCATIONS</li> <li>MONITORING FREQUENCY AND PERIOD</li> <li>MONITORING EQUIPMENT</li> <li>EQUIPMENT CALIBRATION</li> <li>METEOROLOGICAL INFORMATION</li> <li>DATA MANAGEMENT AND DATA QA/QC CONTROL</li> <li>REPORTING</li> <li>DETERMINATION OF ACTION/LIMIT (A/L) LEVELS</li> </ul>	<b>4</b> 4 5 6 7 7 7 7 8
4	IMPACT MONITORING RESULTS - AIR QUALITY	9
5	IMPACT MONITORING RESULTS – CONSTRUCTION NOISE	10
6	IMPACT MONITORING RESULTS – WATER QULAITY	11
7	ECOLOGY	13
8	WASTE MANAGEMENT	14
9	SITE INSPECTION	15
10	ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE	16
11	IMPLEMENTATION STATUS OF MITIGATION MEASURES	17
12	IMPACT FORECAST	23
13	CONCLUSIONS AND RECOMMENDATIONS	24
	Conclusions Recommendations	24 24

## LIST OF TABLES

Status of Environmental Licenses and Permits
Summary of EM&A Requirements
Location of Air Quality Monitoring Station
Location of Construction Noise Monitoring Station
Location of Marine Water Quality Monitoring Station
Action and Limit Levels for Air Quality
Action and Limit Levels for Construction Noise
Action and Limit Levels for Marine Water Quality
Summary of 24-hour and 1-hour TSP Monitoring Results – AM1
Summary of 24-hour and 1-hour TSP Monitoring Results – AM2
Summary of 24-hour and 1-hour TSP Monitoring Results – AM3
Summarized of Construction Noise Monitoring Results at NM1
Summarized of Construction Noise Monitoring Results at NM2
Summarized of Construction Noise Monitoring Results at RNM3
Summarized of Construction Noise Monitoring Results at NM4
Summary of Water Quality Results – Mid-ebb Tides (Dissolved Oxygen)
Summary of Water Quality Results – Mid-ebb Tides (Turbidity & Suspended Solids)
Summary of Water Quality Results – Mid-flood Tides (Dissolved Oxygen)
Summary of Water Quality Results – Mid-flood Tides (Turbidity & Suspended Solids)
Summarized Exceedances of Marine Water Quality
Summary of Quantities of Inert C&D Materials
Summary of Quantities of C&D Wastes
Site Observations
Statistical Summary of Environmental Complaints
Statistical Summary of Environmental Summons

 Table 10-3
 Statistical Summary of Environmental Prosecution

 Table 11-1
 Environmental Mitigation Measures

## LIST OF APPENDICES

- Appendix A Site Layout Plan Sok Kwu Wan Portion Area
- Appendix B Organization Structure and Contact Details of Relevant Parties
- Appendix C A Master and Three Months Rolling Construction Programme
- Appendix D Location of Monitoring Stations (Air Quality / Construction Noise / Water Quality)
- Appendix E Monitoring Equipments Calibration Certificate
- Appendix F Event and Action Plan
- Appendix G Monitoring Data Sheet
- Appendix H Graphical Plots of Monitoring Results
- Appendix I Meteorological Information
- Appendix J Monthly Summary Waste Flow Table
- Appendix K Weekly Site Inspection Checklist
- Appendix L Implementation Schedule of Mitigation Measures
- Appendix M Tree Inspection Report

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## 1 INTRODUCTION

## **PROJECT BACKGROUND**

- 1.01 The Leader Civil Engineering Corporation Limited (Leader) has been awarded the Contract DC/2009/13 Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan (the Project) by the Drainage Services Department (DSD) on 4 May 2010. The Project is part of an overall plan approved under a statutory EIA for Outlying Islands Sewerage Stage 1 Phase 2 Package J Sok Kwu Wan Sewage Collection and Treatment (Register No. AEIAR-075/2003) and Disposal Facilities and Outlying Islands Sewerage Stage 1 Phase 1 Package C Yung Shue Wan Sewage Treatment Works and Outfall (Register No. EIA-124/BC). The Environmental Permit (EP) No. EP-281/2007 and EP-282/2007 for the Project have been obtained by the DSD on 29 June 2007 for the relevant works. After July 2009, EP-281/2007/A stead EP-281/2007 is EP for Sok Kwu Wan relevant works.
- 1.02 The Project involves construction of sewage treatment works at Sok Kwu Wan and Yung She Wan with a capacity of 1,430m<sup>3</sup>/day and 2,850m<sup>3</sup>/day respectively to provide secondary treatment, construction of 2 pumping stations at Sok Kwu Wan and 1 pumping station at Yung Shue Wan, construction of submarine outfall from the coastline and lying of underground sewerage pipeline. The site layout plan for the captioned work under the Project is showing in *Appendix A*.
- 1.03 According to the Particular Specification (PS) and *Appendix 25* of the Project, Leader should establish an Environmental Team (ET) to implement the environmental monitoring and auditing works to fulfill the requirements as stipulated in the Environmental Monitoring and Audit (EM&A) Manual. This EM&A Manual is referred to the Appendix B of the Review Report on EIA Study Sok Kwu Wan (Final) in January 2007 (Agreement No. CE 20/2005(DS)).
- 1.04 Action-United Environmental Services and Consulting (AUES) has been commissioned by Leader as the ET to implement the relevant EM&A programme. Organization chart of the Environmental Team for the Project is shown in *Appendix B*. For ease of reporting, the proposed EM&A programme for baseline and impact monitoring is spilt to following two stand-alone parts:
  - (a) Proposed EM&A Programme for Baseline and Impact Monitoring Sok Kwu Wan (under EP No. 281/2007/A varied on 23 September 2009)
  - (b) Proposed EM&A Programme for Baseline and Impact Monitoring Yung Shue Wan (under EP No. 282/2007)
- 1.05 According to the EM&A Manual of Sok Kwu Wan and Yung Shue Wan, baseline water quality monitoring should be carried out for consecutive six months before the marine work commencement. Therefore, the baseline reports of Sok Kwu Wan and Yung Shue Wan are divided to two volumes i.e. the Volume 1 for air quality and noise monitoring; and the Volume II for water quality monitoring for separate submission.
- 1.06 There is a concurrent DSD contract "*DC/2007/18 Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works*" undertaking at Sok Kwu Wan since April 2008.
- 1.07 Consider that the construction works of DC/2007/18 and DC/2009/13 at Sok Kwu Wan is under the same Environmental Permit and EM&A Manual, the performance criteria of air quality and construction noise at Sok Kwu Wan under the Project is recommended to adopt the Action/Limit Levels established by contract DC/2007/18. The Baseline Monitoring Report Volume 1 under the Project for air quality and noise at Sok Kwu Wan was submitted on 9 July 2010 and verified by IEC and for EPD endorsement before the relevant land works commencement on 27 July 2010.
- 1.08 This is the 35<sup>th</sup> monthly EM&A Report Sok Kwu Wan Portion Area presenting the monitoring results and inspection findings for the Reporting Period from 26 May to 25 June 2013.

## **REPORT STRUCTURE**

1.09 The Monthly Environmental Monitoring and Audit (EM&A) Report – Sok Kwu Wan is structured into the following sections:-



SECTION 1	INTRODUCTION
SECTION 2	PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS
SECTION 3	SUMMARY OF MONITORING REQUIREMENTS
SECTION 4	AIR QUALITY MONITORING RESULTS
SECTION 5	CONSTRUCTION NOISE MONITORING RESULTS
SECTION 6	WATER QUALITY MONITORING RESULTS
SECTION 7	WASTE MANAGEMENT
SECTION 8	SITE INSPECTIONS
SECTION 9	ENVIRONMENTAL COMPLAINTS AND NON-COMPLIANCE
SECTION 10	IMPLEMENTATION STATUES OF MITIGATION MEASURES
SECTION 11	IMPACT FORECAST
SECTION 12	CONCLUSIONS AND RECOMMENDATION



## 2 PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS

### **PROJECT ORGANIZATION AND MANAGEMENT STRUCTURE**

2.01 Organization structure and contact details of relevant parties with respect to on-site environmental management are shown in *Appendix B*.

#### **CONSTRUCTION PROGRESS**

- 2.02 The master and three month rolling construction programme are enclosed in *Appendix C* and the major construction activities undertaken in this Reporting Period are listed below:-
  - Construction of SKWSTW: Concreting, Steel Fixing, Formwork Erection, Formwork Removal, Backfilling,
  - Construction of SKW PS1 & PS2: E&M works installation

#### SUMMARY OF ENVIRONMENTAL SUBMISSIONS

2.03 Summary of the relevant permits, licences, and/or notifications on environmental protection for this Project in this Reporting Period is presented in *Table 2-1*.

 Table 2-1
 Status of Environmental Licenses and Permits

Item	Description	License/Permit Status
1	Air Pollution Control (Construction Dust)	Notified EPD on 19 May 2010
	Regulation	Ref.: 317486
2	Chemical Waste Producer Registration	Issued on 8/6/2010
		WPN 5213-912-L2720-01
3	Water Pollution Control Ordinance	Approved on 29/9/2010
		Valid to: 30/09/2015
		Licence no.: WT00007567-2010
4	Billing Account for Disposal of Construction	Issued on 26 May 2010
	Waste	A/C No: 7010815
5	Construction Noise Permit	Permit no. GW-RS0419-13
		Valid from: 22 April 2013
		Until: 30 September 2013

- 2.04 The "Baseline/Impact Monitoring Methodology (TCS00512/09/600/R0010Ver.4)" was set out in accordance with the Sok Kwu Wan EM&A Manual' requirements. It was approved by the Engineer Representative (ER) and agreed with the Independent Environmental Checker (IEC) and then submitted to the EPD on 8 July 2010.
- 2.05 Baseline Monitoring Report Volume 1 for Sok Kwu Wan (TCS00512/09/600/R0020Ver.3) was verified by the IEC on 12 July 2010 and submitted to EPD on 12 July 2010.
- 2.06 Baseline Water Quality Monitoring Report Volume 2 for Sok Kwu Wan (TCS00512/09/600/R0182v7) was revised against EPD comments and re-submitted on 11 October 2011.



## **3** SUMMARY OF BASELINE MONITORING REQUIREMENTS

#### **ENVIRONMENTAL ASPECT**

- 3.01 The EM&A baseline monitoring programme cover the following environmental issues:
  - Air quality;
  - Construction noise; and
  - Marine water quality
- 3.02 The ET implements the EM&A programme in accordance with the aforementioned requirements. Detailed air quality, construction noise and water quality of the EM&A programme are presented in the following sub-sections.
- 3.03 A summary monitoring parameters for the air quality, noise and marine water monitoring is presented in *Table 3-1*:

Environmental Issue	Parameters
	1-hour TSP Monitoring by Real-Time Portable Dust Meter; and
Air Quality	• 24-hour TSP Monitoring by High Volume Air Sampler.
Naina	• Leq (30min) during normal working hours; and
Noise	• Leq (15min) during Restricted Hours.
	In-situ Measurements
	• Dissolved Oxygen Concentration (DO) (mg/L);
	• Dissolved Oxygen Saturation (%);
	• Turbidity (NTU);
Moning Water Ouglity	• pH unit;
Marine Water Quality	• Salinity (ppt);
	• Water depth (m); and
	• Temperature (°C).
	Laboratory Analysis
	• Suspended Solids (SS) (mg/L)

 Table 3-1
 Summary of EM&A Requirements

## MONITORING LOCATIONS

## **Air Quality**

3.04 Three air monitoring stations: AM1, AM2 and AM3 were designated in the *EM&A Manual Section* 2.5. The detailed air monitoring stations is described in *Table 3-2* and graphical is shown in *Appendix D*.

Table 3-2Location of Air Quality Monitoring Station

Sensitive Receiver	Location
AM1	Squatter house in Chung Mei Village
AM2	Squatter house in Chung Mei Village
AM3	Football court

## **Construction Noise**

3.05 According to *EM&A Manual Section 3.4*, there were four noise sensitive receivers (NM1-NM4) designated for the construction noise monitoring. NM1, NM2 and NM4 of the three designated monitoring stations were identified and are monitored by the current DSD contract DC/2007/18. However, the premises monitoring station NM3 was rejected by the owner of 1B Sok Kwu Wan and an alternative noise monitoring station RNM3 replacement was proposed by the contract DC/2007/18 ET and accepted by the IEC and EPD before the baseline monitoring commencement in April 2008. The location RNM3 is located at Sok Kwu Wan Sitting-out area which just 3m width footpath away from the original location house 1B. The detailed construction noise monitoring stations to also under the Project is described in *Table 3-3* and graphical is shown in *Appendix D*.



Table 3-3Location of Construction Noise Monitoring Stat	ion
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Sensitive Receiver	Location
NM1	1, Chung Mei Village
NM2	20, Sok Kwu Wan
RNM3	Sok Kwu Wan Sitting-out Area
NM4	2-storey village house at Ta Shui Wan

## Water Quality

3.06 Three control stations (C1-C3) and three impact stations (W1-W3) were recommended in the *EM&A Manual Section 4.5*. Impact stations W1-W3 identified at the sensitive receivers (FCZ and secondary contact recreation subzone) to monitor the impacts from the construction of the submarine outfall as well as the effluent discharge from the proposed STW on water quality. Three control stations: C1, C2 & C3 were specified at locations representative of the project site in its undisturbed condition and located at upstream and downstream of the works area. Detailed and co-ordnance of marine water quality monitoring stations is described in *Table 3-4* and the graphical is shown in *Appendix D* and would be performed for EM&A programme.

Station	Description	<b>Co-ordnance</b>		
Station	Description	Easting	Northing	
W1	Secondary recreation contact subzone at Mo Tat Wan	832 968	807 732	
W2	Fish culture zone at Picnic Bay	832 670	807 985	
W3	Fish culture zone at Picnic Bay	832 045	807 893	
C1 (flood)	Control Station	833 703	808 172	
C2	Control Station	831 467	807 747	
C3 (ebb)	Control Station	832 220	808 862	

## MONITORING FREQUENCY AND PERIOD

3.07 The impact monitoring carried out in the EM&A programme is basically in accordance with the requirements in *EM&A Manual Sections* 2.7, 3.6, 4.7 and 4.8. The monitoring requirements are listed as follows.

## Air Quality Monitoring

Parameters:	1-hour TSP and 24-hour TSP.
Frequency:	Once in every six days for 24-hour TSP and three times in every six days for 1-hour TSP.
Duration:	Throughout the construction period.

## Noise Monitoring

Parameters:	$L_{eq 30min}$ & $L_{eq(5min)}$ , $L_{10}$ and $L_{90}$ . $L_{eq(15min)}$ & $L_{eq(5min)}$ , $L_{10}$ and $L_{90}$ during the construction undertaken during Restricted hours (19:00 to 07:00 hours next of normal working day and full day of public holiday and Sunday)
Frequency:	Once per week during 0700-1900 hours on normal weekdays. Restricted hour
Duration:	monitoring should depend on conditions stipulated in Construction Noise Permit. Throughout the construction period.

## Marine Water Quality Monitoring

<u>Parameters</u>: Duplicate in-situ measurements: water depth, temperature, dissolved oxygen, pH, turbidity and salinity;

HOKLAS-accredited laboratory analysis: suspended solids



Frequency:	Three days a week, at mid ebb and mid flood tides. The interval between 2 sets of monitoring will be more than 36 hours.
<u>Sampling</u> Depth	(i.) Three depths: 1m below water surface, 1m above sea bottom and at mid-depth when the water depth exceeds 6m.
	(ii.) If the water depth is between 3m and 6m, two depths: 1m below water surface and 1m above sea bottom.
	(iii.) If the water depth is less than 3m, 1 sample at mid-depth is taken
Duration:	During the course of marine works

## **Post-Construction Monitoring – Marine Water**

3.08 Upon the marine works (dredging and HDD pipe installation) completion, 4 weeks of post-construction monitoring would be undertaken in accordance with the *Section 4.8 of EM&A Manual*. The requirements of post-construction monitoring such as the parameter, frequency, location and sampling depth is same as the impact monitoring.

## MONITORING EQUIPMENT

#### Air Quality Monitoring

3.09 The 24-hour and 1-hour TSP levels shall be measured by following the standard high volume sampling method as set out in the *Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50), Appendix B.* If the ET proposes to use a direct reading dust meter to measure 1-hour TSP levels, it shall submit sufficient information to the IEC to approve. The filter paper of 24-hour TSP measurement shall be determined by HOKLAS accredited laboratory.

#### Noise Monitoring

3.10 Sound level meter in compliance with the *International Electrotechnical Commission Publications* 651: 1979 (*Type 1*) and 804: 1985 (*Type 1*) specifications shall be used for carrying out the noise monitoring. The sound level meter shall be checked using an acoustic calibrator. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m s<sup>-1</sup>.

## Water Quality Monitoring

- 3.11 **Dissolved Oxygen and Temperature Measuring Equipment** The instrument should be a portable and weatherproof dissolved oxygen (DO) measuring instrument complete with cable and sensor, and use a DC power source. The equipment should be capable of measuring as included a DO level in the range of 0 20mg L-1 and 0 200% saturation; and a temperature of 0 45 degree Celsius.
- 3.12 *pH Meter* 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.
- 3.13 *Turbidity (NTU) Measuring Equipment* The instrument should be a portable and weatherproof turbidity measuring instrument using a DC power source. It should have a photoelectric sensor capable of measuring turbidity between 0 1000 NTU.
- 3.14 *Water Sampling Equipment* A water sampler should comprise a transparent PVC cylinder, with a capacity of not less than 2 litres, which can be effectively sealed with latex cups at both ends. The sampler should 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.
- 3.15 *Water Depth Detector* A portable, battery-operated echo sounder should 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.
- 3.16 *Salinity Measuring Equipment* A portable salinometer capable of measuring salinity in the range of 0 40 parts per thousand (ppt) should be provided for measuring salinity of the water at each monitoring location.

- 3.17 *Sample Containers and Storage* Water samples for suspended solids should be stored in high density polythene bottles with no preservative added, packed in ice (cooled to 4°C without being frozen).
- 3.18 *Monitoring Position Equipment* A hand-held or boat-fixed type digital Differential Global Positioning System (DGPS) with way point bearing indication and Radio Technical Commission for maritime (RTCM) Type 16 error message 'screen pop-up' facilities (for real-time auto-display of error messages and DGPS corrections from the Hong Kong Hydrographic Office), or other equipment instrument of similar accuracy, should be provided and used during marine water monitoring to ensure the monitoring vessel is at the correct location before taking measurements.
- 3.19 **Suspended Solids Analysis** Analysis of suspended solids shall be carried out in a HOKLAS or other international accredited laboratory.

## **EQUIPMENT CALIBRATION**

- 3.20 Calibration of the HVS is performed upon installation in accordance with the manufacturer's instruction using the NIST-certified standard calibrator (Tisch Calibration Kit Model TE-5025A). The calibration data are properly documented and the records are maintained by ET for future reference.
- 3.21 The 1-hour TSP meter was calibrated by the supplier prior to purchase. Zero response of the equipment was checked before and after each monitoring event. In-house calibration with the High Volume Sampler (HVS) in same condition was undertaken in yearly basis.
- 3.22 The sound level meter and calibrator are calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme at yearly basis.
- 3.23 The Water Quality Monitoring equipments such as DO meter, pH meter, turbidity measuring instrument and salinometer, are calibrated by HOKLAS accredited laboratory of three month intervals.
- 3.24 All updated calibration certificates of the monitoring equipment used for the impact monitoring programme in the Reporting Period would be attached in *Appendix E*.

## METEOROLOGICAL INFORMATION

3.25 The meteorological information during the construction phase is obtained from the Wong Chuk Hang Station of the Hong Kong Observatory (HKO) due to it nearly the Project site.

## DATA MANAGEMENT AND DATA QA/QC CONTROL

- 3.26 The impact monitoring data are handled by the ET's systematic data recording and management, which complies with in-house Quality Management System. Standard Field Data Sheets (FDS) are used in the impact monitoring programme.
- 3.27 The monitoring data recorded in the equipment e.g. 1-hour TSP meter, sound level meter and Multi-parameter Water Quality Monitoring System, are downloaded directly from the equipments at the end of each monitoring day. The downloaded monitoring data are input into a computerized database properly maintained by the ET. The laboratory results are input directly into the computerized database and QA/QC checked by personnel other than those who input the data. For monitoring activities require laboratory analysis, the local laboratory follows the QA/QC requirements as set out under the HOKLAS scheme for all laboratory testing.

## REPORTING

3.28 It was agreed among the ER, IEC, Contractor and ET that, in order to streamline the EM&A report submission and to cater for the occasional delay in obtaining laboratory analysis results, the cutoff day for each month is the 25th i.e. the first day of each report is the 26<sup>th</sup> of the last month and the end

day, the 25<sup>th</sup> of that month.

## DETERMINATION OF ACTION/LIMIT (A/L) LEVELS

3.29 According to the Sok Kwu Wan Environmental Monitoring and Audit Manual, the air quality, construction noise and marine water quality were set up, namely Action and Limit levels are listed in *Tables 3-5*, *3-6 and 3-7* as below.

Table 3-5Action and Limit Levels for Air Quality

Monitoring Station	Action Le	vel (µg/m <sup>3</sup> )	Limit Level (µg/m <sup>3</sup> )	
Womtoring Station	1-hour	24-hour	1-hour	24-hour
AM1	343	173	500	260
AM2	331	175	500	260
AM3	353	191	500	260

#### Table 3-6

#### Action and Limit Levels for Construction Noise

Monitoring	Action Level	Limit Level
Location	0700-1900 hours on normal weekdays	
NM1 NM2 RNM3 NM4	When one or more documented complaints are received	75 dB(A) of $L_{eq(30min)}$ during normal hours from 0700 to 1900 hours on normal weekdays, reduced to 70 dB(A) of $L_{eq(30min)}$ for schools and 65 dB(A) during school examination periods

## Table 3-7 Action and Limit Levels for Marine Water Quality

Parameter	Performance	Impact Station		
rarameter	Criteria	W1	W2	W3
DO Concentration (Surface and Middle)	Action Level	5.39	4.64	4.71
(mg/L)	Limit Level	5.29	4.56	4.54
DO Concentration (Bottom)	Action Level	N/A	3.60	3.37
(mg/L)	Limit Level	N/A	3.06	3.18
Turbidity (Depth-Average)	Action Level	4.39	4.84	6.48
(NTU)	Limit Level	6.06	5.99	6.71
Suspended Solids (Depth-Average)	Action Level	12.41	9.24	10.79
(mg/L)	Limit Level	12.68	11.28	12.25

3.30 Should non-compliance of the environmental quality criteria occurs, remedial actions will be triggered according to the Event and Action Plan enclosed in *Appendix F*.



## 4 IMPACT MONITORING RESULTS - AIR QUALITY

4.01 The impact EM&A programme was carried out as compliance with the contract Particular Specification, Sok Kwu Wan EM&A Manual and the EP.

## **Results of Air Quality Monitoring**

4.02 In this Reporting Period, **54** and **15** monitoring events were performed for 1-hour TSP and 24-hour TSP monitoring respectively at the designated locations AM1, AM2 and AM3. The monitoring results for 24-hour and 1-hour TSP are summarized in *Tables 4-1, 4-2* and *4-3*. The detail 24-hour TSP data are shown in *Appendix G* and the graphical plots of are shown in *Appendix H*.

Table 4-1Summary of 24-hour and 1-hour TSP Monitoring Results – AM1

	24-hour	1-hour TSP (µg/m³)				
Date	TSP (µg/m <sup>3</sup> )	Date	Start Time	1 <sup>st</sup> hour measured	2 <sup>nd</sup> hour measured	3 <sup>rd</sup> hour measured
30-May-13	4	27-May-13	12:00	47	52	44
5-Jun-13	3	31-May-13	14:05	46	50	42
11-Jun-13	3	6-Jun-13	15:45	49	56	44
17-Jun-13	3	10-Jun-13	10:30	37	44	35
22-Jun-13	13	14-Jun-13	10:07	45	52	44
		20-Jun-13	10:50	46	61	53
Average	5	Averag	ge	47		
(Range)	(3 – 13)	(Rang	e)	(35 – 56)		

1able 4-2 Summary of 24-nour and 1-nour 1SP Monitoring Results – AM2	Table 4-2	Summary of 24-hour and 1-hour TSP Monitoring Results – AM2
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	24-hour		1-hour TSP (µg/m <sup>3</sup> )			
Date	TSP (µg/m <sup>3</sup> )	Date	Start Time	1 <sup>st</sup> hour measured	2 <sup>nd</sup> hour measured	3 <sup>rd</sup> hour measured
30-May-13	2	27-May-13	14:10	39	43	41
5-Jun-13	16	31-May-13	16:10	43	51	41
11-Jun-13	9	8-Jun-13	13:40	43	47	42
17-Jun-13	10	10-Jun-13	12:35	43	49	37
22-Jun-13	11	14-Jun-13	12:10	41	46	38
		20-Jun-13	13:00	51	54	60
Average	10	Avera	ge	45		
(Range)	(2 - 16)	(Rang	e)	(37 – 51)		

## Table 4-3Summary of 24-hour and 1-hour TSP Monitoring Results – AM3

	24-hour			1-hour TSP	$(\mu g/m^3)$			
Date	TSP (µg/m <sup>3</sup> )	Date	Start Time	1 <sup>st</sup> hour measured	2 <sup>nd</sup> hour measured	3 <sup>rd</sup> hour measured		
30-May-13	8	27-May-13	9:40	75	88	79		
5-Jun-13	20	31-May-13	11:10	78	83	75		
11-Jun-13	6	6-Jun-13	11:50	82	90	79		
17-Jun-13	9	10-Jun-13	8:00	82	99	94		
22-Jun-13	35	14-Jun-13	14:30	112	122	127		
		20-Jun-13	15:23	123	131	117		
Average	16	Avera	ge	96				
(Range)	(6 - 35)	(Rang	e)	(75–127)				

4.03 As shown in *Tables 4-1, 4-2* and *4-3*, 1-hour and 24-hour TSP results fluctuated well below the Action Level during the Reporting Period.

4.04 The meteorological information during the impact monitoring days are summarized in *Appendix I*.



## 5 IMPACT MONITORING RESULTS – CONSTRUCTION NOISE

5.01 The noise monitoring results are presented in the following sub-sections.

## **Results of Construction Noise Monitoring**

5.02 In this Reporting Period, a total of 24 construction noise monitoring events were undertaken at designated locations. The results for  $L_{eq30min}$  at NM1, NM2, RNM3 and NM3 are summarized in *Tables 5-1, 5-2, 5-3* and 5-4 and graphical plots are shown in *Appendix H*.

 Table 5-1
 Summarized of Construction Noise Monitoring Results at NM1

Date	Start Time	End time	1 <sup>st</sup> Leq5	2 <sup>nd</sup> Leq5	3 <sup>rd</sup> Leq5	4 <sup>th</sup> Leq5	5 <sup>th</sup> Leq5	6 <sup>th</sup> Leq5	Leq30		
27-May-13	11:09	11:39	46.8	44.5	51.1	49.1	46.6	43.6	47.7		
31-May-13	14:10	14:40	44.9	41.6	42.4	44.2	44.2	42.5	43.5		
6-Jun-13	13:46	14:16	53.8	50.5	52.3	57.7	50.3	52.6	53.7		
10-Jun-13	10:37	11:07	52.5	49.9	53.2	48.9	49.7	52.8	51.5		
14-Jun-13	10:10	10:40	48.9	49.1	51.5	48.9	51.5	52.1	50.6		
20-Jun-13	10:49	11:19	44.9	50.0	46.2	50.6	48.3	50.9	49.0		
Limit Le	vel in dI	B(A)		-							

Table 5-2Summarized of Construction Noise Monitoring Results at NM2

Date	Start Time	End time	1 <sup>st</sup> Leq5	2 <sup>nd</sup> Leq5	3 <sup>rd</sup> Leq5	4 <sup>th</sup> Leq5	5 <sup>th</sup> Leq5	6 <sup>th</sup> Leq5	Leq30
27-May-13	13:00	13:30	61.4	65.4	62.7	59.8	69.5	64.4	65.1
31-May-13	14:50	15:20	61.7	62.3	59.5	56.1	58.5	64.5	61.3
6-Jun-13	14:26	14:56	59.4	60.7	58.4	59.2	62.3	66.2	62.0
10-Jun-13	11:17	11:47	63.1	60.7	66.0	65.3	63.5	67.1	64.8
14-Jun-13	10:50	11:20	60.9	63.9	61.0	56.7	57.9	59.3	60.6
20-Jun-13	11:29	11:59	61.8	72.8	58.3	63.0	62.7	63.7	66.6
Limit Le	vel in dI	B(A)			75				

Table 5-3Summarized of Construction Noise Monitoring Results at RNM3

Date	Start Time	End time	1 <sup>st</sup> Leq5	2 <sup>nd</sup> Leq5	3 <sup>rd</sup> Leq5	4 <sup>th</sup> Leq5	5 <sup>th</sup> Leq5	6 <sup>th</sup> Leq5	Leq30	Corrected* Leq30
27-May-13	13:40	14:10	63.4	66.6	66.3	61.9	59.5	59.6	63.8	66.8
31-May-13	16:15	16:45	60.4	59.8	57.5	58.4	61.0	57.8	59.4	62.4
6-Jun-13	15:03	15:33	54.5	53.5	58.9	57.6	55.2	55.5	56.3	59.3
10-Jun-13	15:02	15:32	62.3	63.2	61.3	69.1	73.0	63.9	67.7	70.7
14-Jun-13	11:25	11:55	56.5	64.2	56.1	56.9	59.4	58.1	59.6	62.6
20-Jun-13	13:22	13:52	53.1	56.2	64.0	52.1	55.0	52.4	58.0	61.0
Limit Le	vel in dE	<b>B</b> ( <b>A</b> )		-						

\* A façade correction of +3dB(A) has been added according to acoustical principles and EPD guidelines.

Table 5-4	Summarized of Construction Noise Monitoring Results at NM4
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Date	Start Time	End time	1 <sup>st</sup> Leq5	2 <sup>nd</sup> Leq5	3 <sup>rd</sup> Leq5	4 <sup>th</sup> Leq5	5 <sup>th</sup> Leq5	6 <sup>th</sup> Leq5	Leq30		
27-May-13	9:50	10:20	55.8	57.5	54.8	54.8	53.4	53.5	55.2		
31-May-13	11:18	11:48	55.2	52.6	51.5	58.9	56.8	54.5	55.6		
6-Jun-13	13:00	13:30	57.1	51.6	53.9	57.4	51.6	54.0	54.9		
10-Jun-13	15:44	16:14	52.2	49.3	55.7	56.0	56.4	58.3	55.5		
14-Jun-13	13:16	13:46	50.0	50.9	54.3	53.9	50.1	54.3	52.7		
20-Jun-13	14:03	14:33	57.6	61.2	51.4	48.3	48.5	47.3	55.7		
Limit Le	Limit Level in dB(A)			-							

5.03 It was noted that no noise complaint (which is an Action Level exceedance) was received. In view of the results shown in *Tables 5-1, 5-2, 5-3 and 5-4* which were all below 75dB(A), no Action or Limit Level exceedance was triggered during this month.



## 6 IMPACT MONITORING RESULTS – WATER QULAITY

- 6.01 The construction of marine outfall works was commenced on 19 July 2011 and therefore marine water quality monitoring is required in this Reporting Period. In this Reporting Period, 12 events of water quality monitoring were carried out at the designated locations.
- 6.02 The monitoring results including in-situ measurements and laboratory testing results are presented in *Appendix G*. The graphical plots are shown in *Appendix H*.
- 6.03 During the Reporting Period, field measurements of both control and impact stations showed that marine water of the depth average of the salinity concentration was within 27.80 to 35.00 ppt, and pH value was within 7.30 to 8.31.
- 6.04 Monitoring results of 3 key parameters: dissolved oxygen (DO), turbidity and suspended solids (SS) in this Reporting Period, are summarized in *Tables 6-1*, *6-2*, *6-3 and 6-4*. A summary of exceedances for the 3 parameters are shown in *Table 6-5*.

 Table 6-1
 Summary of Water Quality Results – Mid-ebb Tides (Dissolved Oxygen)

Sampling date	Disso		• •	onc. of I Layer	-	ve. of	Dissolved Oxygen conc. of Depth Ave. of Bottom Layer (mg/L)					
uate	W1	W2	W3	C1	C2	C3	W1	W2	W3	C1	C2	C3
27-May-13	5.56	5.43	5.87	4.66	6.02	5.56	NA	4.96	4.71	4.45	5.24	4.72
29-May-13	6.99	6.35	5.72	6.62	5.65	5.73	NA	5.44	4.49	5.41	5.21	5.22
31-May-13	6.94	6.77	6.11	6.40	6.00	6.11	NA	5.72	5.39	5.83	5.81	5.55
4-Jun-13	6.39	6.14	5.98	5.72	6.11	5.50	NA	5.24	4.09	4.85	5.07	4.75
6-Jun-13	7.84	7.40	8.53	6.56	9.05	7.04	NA	4.48	4.27	4.73	6.88	5.20
8-Jun-13	7.80	7.52	7.73	7.72	7.68	7.31	NA	4.56	3.98	5.05	5.87	4.01
10-Jun-13	5.41	5.47	4.84	5.30	5.75	5.96	NA	4.57	3.49	3.16	4.65	3.95
14-Jun-13	5.51	5.16	5.60	5.30	5.16	4.75	NA	4.76	4.54	4.63	4.64	4.16
18-Jun-13	7.32	6.87	6.68	6.62	6.60	6.90	NA	6.57	6.63	6.16	6.30	6.58
20-Jun-13	8.11	7.14	7.63	7.16	7.32	7.87	NA	5.74	5.57	6.65	5.76	6.48
22-Jun-13	8.90	7.77	8.95	8.02	7.82	7.58	NA	7.51	7.79	7.87	6.25	7.30
24-Jun-13	8.13	7.99	8.61	7.71	8.28	7.38	NA	7.64	7.98	7.27	7.98	6.81

 Table 6-2
 Summary of Water Quality Results – Mid-ebb Tides (Turbidity & Suspended Solids)

Sampling		Turbi	dity Dep	th Ave.	(NTU)		Sus	spended	Solids	Depth A	ve. (mg	g/L)
date	W1	W2	W3	C1	C2	C3	W1	W2	W3	C1	C2	C3
27-May-13	1.21	1.11	0.98	0.98	1.08	1.28	1.30	2.03	1.43	1.27	3.63	1.67
29-May-13	1.92	4.61	1.82	2.02	1.67	2.12	1.40	1.87	1.83	1.00	2.30	1.33
31-May-13	3.64	3.12	2.78	4.37	3.33	4.63	2.00	1.73	1.87	1.63	1.30	1.57
4-Jun-13	0.60	0.70	0.54	0.70	0.71	0.79	2.80	2.73	2.97	3.57	2.70	2.90
6-Jun-13	0.40	1.60	1.33	0.47	1.12	0.48	1.60	2.13	1.97	2.13	4.20	2.57
8-Jun-13	1.05	0.52	0.77	0.48	0.73	1.18	2.20	4.43	4.50	6.90	5.33	5.10
10-Jun-13	0.50	0.85	2.15	0.92	1.28	1.38	1.00	2.13	1.90	1.23	1.60	1.27
14-Jun-13	0.85	0.92	1.57	1.45	1.42	1.25	2.60	1.73	1.87	1.43	1.33	1.23
18-Jun-13	1.10	0.65	0.33	0.15	0.35	0.62	1.00	1.17	1.23	1.07	0.93	1.10
20-Jun-13	0.15	2.03	2.18	0.25	2.22	0.43	3.90	2.23	1.70	2.07	1.23	1.47
22-Jun-13	1.70	1.58	1.78	2.13	1.82	2.22	2.40	3.07	3.63	1.97	2.50	2.43
24-Jun-13	3.70	2.63	2.60	2.90	1.98	3.70	1.90	2.50	2.47	2.40	2.73	3.73



Tab		62	
Tab	Ie.	0-5	

Summary of Water Quality Results – Mid-flood Tides (Dissolved Oxygen)

Sampling date	Disso	olved Ox Surf. a	• •	onc. of I Layer	-	ve. of	Dissolved Oxygen conc. of Depth Ave. of Bottom Layer (mg/L)					
uate	W1	W2	W3	C1	C2	C3	W1	W2	W3	C1	C2	C3
27-May-13	5.59	5.50	6.03	5.11	4.51	4.52	NA	5.09	5.67	4.68	4.22	4.40
29-May-13	7.25	6.71	6.00	6.86	5.83	6.21	NA	6.24	5.45	6.35	5.72	5.17
31-May-13	7.51	7.28	7.17	7.84	6.62	7.17	NA	6.96	6.50	7.33	6.56	6.09
4-Jun-13	6.26	6.29	5.97	5.40	5.15	5.19	NA	5.75	5.37	4.93	4.94	4.72
6-Jun-13	8.11	8.32	7.15	7.95	5.44	7.14	NA	5.53	4.61	5.44	5.89	4.48
8-Jun-13	6.60	7.23	7.90	7.35	4.51	7.26	NA	4.13	4.37	4.51	5.77	4.77
10-Jun-13	5.62	5.57	5.51	5.18	3.42	4.82	NA	4.06	4.21	3.42	3.04	3.65
14-Jun-13	6.61	6.04	6.37	6.08	5.09	6.19	NA	4.93	5.01	5.09	4.66	4.78
18-Jun-13	6.75	7.10	6.55	6.60	6.44	6.55	NA	6.38	6.18	6.44	5.78	6.04
20-Jun-13	7.74	8.16	7.65	7.51	6.04	6.53	NA	6.50	6.58	6.04	6.44	5.69
22-Jun-13	8.54	7.57	8.09	7.78	7.60	7.91	NA	7.46	8.09	7.60	7.75	7.21
24-Jun-13	8.39	8.02	7.82	7.90	6.98	7.88	NA	8.13	7.65	6.98	7.56	7.37

Table 6-4Summary of Water Quality Results – Mid-flood Tides (Turbidity &<br/>Suspended Solids)

Sampling		Turbi	dity Dep	th Ave. (	(NTU)		Su	spende	d Solids	Depth A	Ave. (mg	/L)
date	W1	W2	W3	C1	C2	C3	W1	W2	W3	C1	C2	C3
27-May-13	0.53	0.47	0.70	0.40	0.78	0.53	1.70	2.80	4.53	2.50	4.37	2.47
29-May-13	1.30	1.38	1.18	1.18	1.28	1.08	1.00	1.87	1.47	1.20	1.77	1.80
31-May-13	2.03	1.96	2.47	2.07	2.69	1.98	1.60	0.80	1.50	2.07	1.17	1.70
4-Jun-13	0.57	0.37	0.42	0.70	0.43	0.58	3.00	2.93	3.40	3.23	3.17	1.87
6-Jun-13	0.60	2.20	1.38	0.52	2.18	0.82	1.30	1.60	3.63	2.53	3.13	2.60
8-Jun-13	1.00	0.95	1.35	0.95	1.13	7.55	1.00	7.17	6.57	5.17	4.17	3.80
10-Jun-13	0.50	1.85	0.82	1.38	0.83	0.88	0.70	1.57	1.23	1.33	1.80	1.97
14-Jun-13	0.65	1.18	0.90	0.67	1.07	0.62	1.00	1.17	1.13	1.10	1.17	1.33
18-Jun-13	0.10	0.70	0.72	0.42	0.47	0.70	0.80	1.43	1.00	1.10	1.10	1.77
20-Jun-13	1.00	0.78	2.80	0.72	1.73	0.53	2.80	2.37	2.70	2.67	2.80	2.27
22-Jun-13	1.25	1.97	3.08	1.73	1.80	2.37	2.90	2.63	3.00	2.30	2.53	2.57
24-Jun-13	2.20	0.88	0.93	0.90	1.03	1.23	1.50	1.60	1.13	1.27	1.50	2.13

## Table 6-5 Summarized Exceedances of Marine Water Quality

Station	Station DO (Ave of Surf. & mid-depth)			ve. of Layer)	Turb (Depth	•	S: (Depth		Total Exceedance	
	Action	Limit	Action	Limit	Action	Limit	Action	Limit	Action	Limit
W1	0	0	0	0	0	0	0	0	0	0
W2	0	0	0	0	0	0	0	0	0	0
W3	0	0	0	0	0	0	0	0	0	0
				Mid	-Flood					
W1	0	0	0	0	0	0	0	0	0	0
W2	0	0	0	0	0	0	0	0	0	0
W3	0	0	0	0	0	0	0	0	0	0
No of Exceedance	0	0	0	0	0	0	0	0	0	0

6.05 For marine water monitoring, no exceedance of Action/Limit levels was recorded in this Reporting Period. Therefore, no associated corrective actions were then required.

## 7 ECOLOGY

- 7.01 According to Clause 3.7 and Figure 4 in the Environmental Permit No. EP-281/2007/A, a total of 12 numbers *Celtis Timorensis* (uncommon species) in Chung Mei at Sok Kwu Wan, are identified to require labeling, fencing and protection. Out of these, four numbers located in the Pumping Station No.1 area are required to be transplanted in advance of pumping station construction and the transplantation proposal has been submitted to EPD previously.
- 7.02 Regular inspection of the transplanted tree was carried out by the landscaping sub-Contractor (Melofield Nursery and Landscape Contractor Limited) on **31 May and 15 June 2013**. As a contingency measure in case that CT7 to CT10 can no longer be recovered, additional 7 no. of *Celtis Timorensis* (No. CT\_1A to CT7A) were planted adjacent to the under-monitoring Celtis Timorensis CT7 to CT10 on 30 April 2011.
- 7.03 In April 2012, CT\_1A and CT\_7A were damaged by the fell broken tree trunk due to tree decayed by white ants. Therefore, only 5 no. of additional *Celtis Timorensis*, namely CT\_2A, CT\_3A, CT4A, CT\_5A and CT\_6A were inspected since May 2012. Furthermore, during tree inspection on 30 July, CT4A was disappeared after typhoon No.10 on 24 July and it was certified as dead. Eventually, 4 no. of additional *Celtis Timorensis*, namely CT\_2A, CT\_5A and CT\_6A were inspected in the remaining period.
- 7.04 The tree inspection report for this Reporting Period is presented in *Appendix M*.



## 8 WASTE MANAGEMENT

8.01 Waste management was carried out by an on-site Environmental Officer or an Environmental Supervisor from time to time.

#### **Records of Waste Quantities**

- 8.02 All types of waste arising from the construction work are classified into the following:
  - Construction & Demolition (C&D) Material;
  - Chemical Waste;
  - General Refuse; and
  - Excavated Soil
- 8.03 The quantities of waste for disposal in this Reporting Period are summarized in *Table 8-1* and *8-2* and the Monthly Summary Waste Flow Table is shown in *Appendix J*. Whenever possible, materials were reused on-site as far as practicable.

## Table 8-1 Summary of Quantities of Inert C&D Materials

Type of Waste	Quantity	Disposal Location
C&D Materials (Inert) ('000m <sup>3</sup> )	0	-
Reused in the Contract (Inert) ( $(000m^3)$ )	0	-
Reused in other Projects (Inert) ('000m <sup>3</sup> )	0	-
Disposal as Public Fill (Inert) ('000m <sup>3</sup> )	0	-

## Table 8-2Summary of Quantities of C&D Wastes

Type of Waste	Quantity	<b>Disposal Location</b>
Metal (kg)	0	-
Paper / Cardboard Packing (kg)	0	-
Plastic (kg)	0	-
Chemical Wastes (kg)	0	-
General Refuses (tonne)	48.24	Outlying Islands Transfer Facilities (Sok Kwu Wan)

8.04 There was no site effluent discharged but the estimated volume of surface runoff was less than  $50m^3$  in this monthly period.



## 9 SITE INSPECTION

- 9.01 According to the Environmental Monitoring and Audit Manual, the environmental site inspection should been formulated by ET Leader. Regular environmental site inspections had been carried out by the ET to confirm the environmental performance. In this Reporting Period, weekly joint site inspection by RE, the Contractor and ET was carried out on 28 May, 4, 11, 18 and 25 June 2013.
- 9.02 The findings/ deficiencies that observed during the weekly site inspection are listed in *Table 9-1* and the relevant checklists are attached in *Appendix K*.

Table 9-1S	Site Observations	
Date	Findings / Deficiencies	Follow-Up Status
28 May 2013	• No adverse environmental impacts were observed. However, stagnant water due to rains was observed. Mosquito control measures are reminded.	Not requirement for general reminder.
4 June 2013	• No adverse environmental impacts were observed. However, stagnant water was observed in the concrete walled space within 1/F of the sewage treatment plant. Mosquito control measures, particularly drying off the stagnant water, are reminded.	Not requirement for general reminder.
11 June 2013	No adverse environmental impacts were observed	N.A.
18 June 2013	No adverse environmental impacts were observed	N.A.
25 June 2013	• Silt curtain installed around the seawater near sewage treatment plant was observed broken. Repair of the silt curtain is required to avoid muddy water from construction site entering the sea.	Broken slit curtain was repaired on 2 July 2013.

Table 9.1 Site Observations



## **10 ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE**

10.01 No environmental complaint, summons and prosecution was received in this Reporting Period. The statistical summary table of environmental complaint is presented in *Tables 10-1*, *10-2* and *10-3*.

Table 10-1	Statistical Summary of Environmental	Complaints

Departing Devied	Environmental Complaint Statistics							
Reporting Period	Frequency	Cumulative	<b>Complaint Nature</b>					
27 July 2010 – 31 December 2011	1 (Nov 2011)	1 (Nov 2011)	water quality					
January - December 2012	0	1 (Nov 2011)	NA					
January - May 2013	0	1 (Nov 2011)	NA					
June 2013	0	1 (Nov 2011)	NA					

## Table 10-2 Statistical Summary of Environmental Summons

Departing Devied	<b>Environmental Summons Statistics</b>							
<b>Reporting Period</b>	Frequency	Cumulative	<b>Complaint Nature</b>					
27 July 2010 – 31 December 2011	0	0	NA					
January - December 2012	0	0	NA					
January - May 2013	0	0	NA					
June 2013	0	1 (Nov 2011)	NA					

#### Table 10-3 Statistical Summary of Environmental Prosecution

Depending Devied	Environmental Prosecution Statistics							
Reporting Period	Frequency	Cumulative	<b>Complaint Nature</b>					
27 July 2010 – 31 December 2011	0	0	NA					
January - December 2012	0	0	NA					
January - May 2013	0	0	NA					
June 2013	0	1 (Nov 2011)	NA					



## 11 IMPLEMENTATION STATUS OF MITIGATION MEASURES

11.01 The environmental mitigation measures that recommended in the Sok Kwu Wan Environmental Monitoring and Audit covered the issues of dust, noise, water and waste and they are summarized as following:

## **Dust Mitigation Measure**

- 11.02 Installation of 2m high solid fences around the construction site of Pumping Station P2 is recommended. Implementation of the requirements stipulated in the Air Pollution Control (Construction Dust) Regulation and the following good site practices are recommended to control dust emission from the site:
  - (a) Stockpiles of imported material kept on site should be contained within hoardings, dampened and / or covered during dry and windy weather;
  - (b) Material stockpiled alongside trenches should be covered with tarpaulins whenever works are close to village houses;
  - (c) Water sprays should be used during the delivery and handling of cement, sands, aggregates and the like.
  - (d) Any vehicle used for moving sands, aggregates and construction waste shall have properly fitting side and tail boards. Materials should not be loaded to a level higher than the side and tail boards, and should be covered by a clean tarpaulin.

## **Noise Mitigation Measure**

- 11.03 As detailed in the EIA report, concreting work of the Pumping Station P1a and sewer alignment construction activities would likely cause adverse noise impacts on some of the noise sensitive receivers. Appropriate mitigation measures have therefore been recommended. The mitigation measures recommended in the EIA report are summarised below:
  - (a) Use of quiet equipment for the construction activities of the Pumping Stations and sewer alignment;
  - (b) Use of temporary noise barrier around the site boundary of Pumping Station P1a;
  - (c) Use of kick ripper (saw and lift) method to replace the breaker for pavement removal during sewer alignment construction;
  - (d) Restriction on the number of plant during sewer alignment construction;
  - (e) Use of noise screening structures in the form of acoustic shed or movable barrier wherever practicable and feasible in areas with sufficient clearance and headroom during the construction of sewer alignment;
  - (f) Adoption of manual working method wherever practicable and feasible in areas where the worksites of the proposed sewer alignment are located less than 20m from the residential noise sensitive receivers and less than 30m from the temple and the public library; and
  - (g) Implementation of the following good site practices:
    - Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme.
    - Mobile plant, if any, should be sited as far away from NSRs as possible.
    - 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.
    - 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.
    - Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities.

## Water Quality Mitigation Measure

11.04 No-dig method using Horizontal Directional Drilling (HDD) would be used for the installation of outfall pipe of about 480 m from shore to minimize the potential water quality impacts arising from the dredging works required for the submarine outfall construction. For the remaining outfall pipe of about 240m and the diffuser section, open trench dredging would still be required.

- 11.05 During the dredging works, the Contractor should be responsible for the design and implementation of the following mitigation measures.
  - Dredging should be undertaken using closed grab dredgers with a total production rate of 55m<sup>3</sup>/hr;
  - Deployment of 2-layer silt curtains with first layer enclosing the grab and the second layer at around 50, from the dredging area while dredging works are in progress;
  - all vessels should be sized such that adequate clearance (i.e. minimum clearance of 0.6m) is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash;
  - all pipe leakages should be repaired promptly and plant shall not be operated with leaking pipes;
  - excess material should be cleaned from the decks and exposed fittings of barges before the vessel is moved;
  - adequate freeboard (i.e. minimum of 200m) should be maintained on barges to ensure that decks are not washed by wave action;
  - all barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; and
  - loading of barges and hoppers should be controlled to prevent splashing of dredged material to the surrounding water, and barges and hoppers should not be filled to a level which would cause the overflow of materials or sediment laden water during loading or transportation; and
  - the decks of all vessels should be kept tidy and free of oil or other substances that might be accidentally or otherwise washed overboard.

## Construction Run-off and Drainage

- 11.06 The Contractor should observe and comply with the Water Pollution Control Ordinance and the subsidiary regulations. The Contractor should follow the practices, and be responsible for the design, construction, operation and maintenance of all the mitigation measures as specified in ProPECC PN 1/94 "Construction Site Drainage". The design of the mitigation measures should be submitted by the Contractor to the Engineer for approval. These mitigation measures should include the following practices to minimise site surface runoff and the chance of erosion, and also to retain and reduce any suspended solids prior to discharge:
  - Provision of perimeter channels to intercept storm-runoff from outside the site. These should be constructed in advance of site formation works and earthworks.
  - Works programmes should be designed to minimize works areas at any one time, thus minimising exposed soil areas and reducing the potential for increased siltation and runoff.
  - Sand/silt removal facilities such as sand traps, silt traps and sediment basins should be provided to remove the sand/silt particles from run-off. These facilities should be properly and regularly maintained. These facilities shall be carefully planned to ensure that they would be installed at appropriate locations to capture all surface water generated on site.
  - Careful programming of the works to minimise soil excavation works during rainy seasons.
  - Exposed soil surface should be protected by paving or hydroseeding as soon as possible to reduce the potential of soil erosion.
  - Trench excavation should be avoided in the wet season, and if necessary, these should be excavated and backfilled in short sections.
  - Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric.

## General Construction Activities

11.07 Debris and rubbish generated on-site should be collected, handled and disposed of properly to avoid entering the nearby coastal waters and stormwater drains. All fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. Open drainage channels and culverts near the works areas should be covered to block the entrance of large debris and refuse.

## Wastewater Arising from Workforce

11.08 Portable toilets shall be provided by the Contractors, where necessary, to handle sewage from the workforce. The Contractor shall also be responsible for waste disposal and maintenance practices

## **Sediment Contamination Mitigation Measure**

- 11.09 The basic requirements and procedures for dredged mud disposal are specified under the WBTC No. 34/2002. The management of the dredging, use and disposal of marine mud is monitored by the MFC, while the licensing of marine dumping is the responsibility of the Director of Environmental Protection (DEP).
- 11.10 The uncontaminated dredged sediment will be loaded onto barges and transported to the designated marine disposal site. Appropriate dredging methods have been incorporated into the recommended water quality mitigation measures including the use of closed-grab dredgers and silt curtains. Category L sediment would be suitable for disposal at a gazetted open sea disposal ground.
- 11.11 During transportation and disposal of the dredged marine sediments, the following measures should be taken to minimize potential impacts on water quality:
  - Bottom opening of barges should be fitted with tight fitting seals to prevent leakage of material. Excess material should be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved.
  - Monitoring of the barge loading should be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels should be equipped with automatic self-monitoring devices as specified by the DEP.

## **Construction Waste Mitigation Measure**

## Good Site Practices and Waste Reduction Measures

- 11.12 It is not anticipated that adverse waste management related impacts would arise, provided that good site practices are strictly followed. Recommendations for good site practices for the construction waste arising include:
  - Nomination of an approved person, such as a site manager, to be responsible for the implementation of good site practices, arranging for collection and effective disposal to an appropriate facility, of all wastes generated at the site.
  - Training of site personnel in proper waste management and chemical handling procedures.
  - Appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers.
  - Provision of sufficient waste disposal points and regular collection for disposal.
  - Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Facility.
  - Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.
  - Maintain records of the quantities of wastes generated, recycled and disposed.
- 11.13 In order to monitor the disposal of C&D waste at landfills and to control fly tipping, a trip-ticket system should be included as one of the contractual requirements and implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work. An Independent Environmental Checker should be responsible for auditing the results of the system.
- 11.14 Good management and control can prevent the generation of significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:
  - segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;

- to encourage collection of aluminium cans by individual collectors, separate labelled bins should be provided to segregate this waste from other general refuse generated by the work force;
- any unused chemicals or those with remaining functional capacity should be recycled;
- use of reusable non-timber 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 should be separated for re-use and / or recycling to minimise the quantity of waste to be disposed of to landfill;
- proper storage and site practices to minimise the potential for damage or contamination of construction materials; and
- plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.

## General Site Wastes

11.15 A collection area should be provided where waste can be stored prior to removal from site. An enclosed and covered area is preferred for the collection of the waste to reduce 'wind blow' of light material.

## Chemical Wastes

- 11.16 After use, chemical waste (eg. cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Any unused chemicals or those with remaining functional capacity should be recycled. Spent chemicals should be properly stored on site within suitably designed containers, and should be collected by an approved operator for disposal at the Chemical Waste Treatment Facility or other licenced facility in accordance with the Waste Disposal (Chemical Waste) (General) Regulation under the Waste Disposal Ordinance.
- 11.17 Any service shop and minor maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakages and spillage should only be undertaken with the areas appropriately equipped to control these discharges.

## Construction and Demolition Material

- 11.18 The C&D material should be separated on-site into three categories: (i) public fill, the inert portion of the C&D material (e.g. concrete and rubble), which should be re-used on-site or disposed of at a public filling area; (ii) C&D waste for re-use and/or recycling, the non-inert portion of the C&D material, (e.g. steel and other metals, wood, glass and plastic); (iii) C&D waste which cannot be re-used and/or recycled. The waste producers are responsible for its disposal at strategic landfills.
- 11.19 In order to minimise the impact resulting from collection and transportation of material for off-site disposal, it was recommended that inert material should be re-used on-site where possible. Prior to disposal of C&D material, it was also recommended that steel and other metals should be separated for re-use and/or recycling where practicable to minimise the quantity of waste to be disposed of to landfill.

## **Ecology Mitigation Measure**

## <u>Terrestrial Ecology</u>

- 11.20 The uncommon tree species should be labelled and probably fenced to avoid direct or indirect disturbance during construction. Works areas should avoid woodland habitats, in particular where these trees are located.
- 11.21 Construction and maintenance of site runoff control measures would be required at all work sites during construction. These should include barriers to direct runoff to sand/silt removal facilities (sand/silt/traps and/or sediment basins); minimisation of earthworks during rainy season (May to September); and coverage of sand/fill piles and exposed earth during storms.



11.22 Special attention should be paid during the breeding season of Romer's Tree Frog (March to September) to ensure their habitat landward to Pumping Station P2 site is well protected from site runoff. Barriers should be deployed completely along the landward side of the pumping station site boundary to prevent any site runoff from entering the tree frog habitat. Intactness of the barriers should be frequently inspected.

## Intertidal and Subtidal Ecology

- 11.23 Construction and maintenance of site runoff control measures would be required at all work sites during construction. These should include barriers to direct runoff to sand/silt removal facilities (sand/silt/traps and/or sediment basins); use of silt curtains along coastline; minimisation of earthworks during rainy season (May to September); and coverage of sand/fill piles and exposed earth during storms.
- 11.24 To reduce impacts of sediment resuspension upon nearby habitats and organisms during dredging, all dredging should be done using a closed-grab dredger, and silt curtains should be deployed around the dredger during all dredging activity

## **Fisheries Mitigation Measure**

11.25 Closed grab dredger, deployment of silt curtains around the immediate dredging area and low dredging rate have been recommended in Water Quality of the EIA report in order to minimise sediment release into the water column.

## Landscape & Visual Mitigation Measure

- 11.26 Mitigation measures recommended in the EIA Report for landscape and visual impacts during the construction stage are summarised below.
  - Screening of site construction works by use of hoarding that is appropriate to its site context;
  - Retaining existing trees and minimising damage to vegetation where possible by close co-ordination and on site alignment adjusted of rising main and gravity sewer pipelines. Tree protective measures should be implemented to ensure trees identified as to be retained are satisfactorily protected during the construction phase;
  - Careful and efficient transplanting of affected trees (1 no.) to temporary or final transplant location (the proposed tree to be transported is a semi-mature *Macaranga tanarius* and is located at the proposed Pumping Station P2 location);
  - Short excavation and immediate backfilling of sections upon completion of works to reduce active site area;
  - Conservation of top-soil for reuse.
  - Night-time light source from marine fleets should be directed away from the residential units
- 11.27 The implementation schedule of mitigation measures is presented in *Appendix L*.
- 11.28 Leader had been implementing the required environmental mitigation measures according to the Sok Kwu Wan Environmental Monitoring and Audit Manual subject to the site condition. Environmental mitigation measures generally implemented by Leader in this Reporting Period are summarized in *Table 11-1*.

Issues	Environmental Mitigation Measures
Water	• Drainage channels were provided to convey run-off into the treatment facilities;
Quality	and
<b>C</b>	<ul> <li>Drainage systems were regularly and adequately maintained.</li> </ul>
Air Quality	• Cover all excavated or stockpile of dusty material by impervious sheeting or
	sprayed with water to maintain the entire surface wet;
	<ul> <li>Public roads around the site entrance/exit had been kept clean and free from dust; and</li> </ul>
	Tarpaulin covering of any dusty materials on a vehicle leaving the site.

 Table 11-1
 Environmental Mitigation Measures



Issues	Environmental Mitigation Measures											
Noise	<ul> <li>Good site practices to limit noise emissions at the sources;</li> </ul>											
	• Use of quite plant and working methods;											
	• Use of site hoarding or other mass materials as noise barrier to screen noise at											
	ground level of NSRs; and											
	To minimize plant number use at the worksite.											
Waste and	• Excavated material should be reused on site as far as possible to minimize off-site											
Chemical	disposal. Scrap metals or abandoned equipment should be recycled if possible;											
Management	<ul> <li>Waste arising should be kept to a minimum and be handled, transported and disposed of in a suitable memory.</li> </ul>											
management	disposed of in a suitable manner;											
	• The Contractor should adopt a trip ticket system for the disposal of C&D											
	materials to any designed public filling facility and/or landfill; and											
	• Chemical waste shall be handled in accordance with the Code of Practice on the											
	Packaging, Handling and Storage of Chemical Wastes.											
General	The site was generally kept tidy and clean.											



## **12 IMPACT FORECAST**

12.01 Key issues to be considered in the coming month include:

## Water Quality

- Erect of sand bag in proper area to avoid any muddy surface runoff from the loose soil surface or haul road during the rainy days; and
- The accumulated stagnant water should be drained away.

## Air Quality

- Vehicles shall be cleaned of mud and debris before leaving the site;
- Stockpile and loose soil surface shall be covered with tarpaulin sheet or other means to eliminate the fugitive dust;
- Water spaying on the dry haul road and exit/entrance of the site in regular basis is reminded; and
- Public roads around the site entrance/exit had been kept clean and free from dust.

## Noise

- Works and equipment should be located to minimize noise nuisance from the nearest sensitive receiver; and
- Idle equipments should be either turned off or throttled down;

## Waste and Chemical Management

- Housekeeping on site shall be improved;
- The Contractor is advised to fence off the construction waste at a designated area in order to maintain the tidiness of the site;
- Drip tray and proper label should be provided for all chemical containers.
- C&D waste should be disposed in regular basis.

## **13 CONCLUSIONS AND RECOMMENDATIONS**

## CONCLUSIONS

- 13.01 This is the 35<sup>th</sup> monthly EM&A Report covering the construction period from 26 May to 25 June 2013.
- 13.02 In this Reporting Period, no 1-hour and 24-hour TSP results were found to be triggered the Action or Limit Level
- 13.03 No noise complaint (an Action Level exceedance) was received and no construction noise measurement results that exceeded the Limit Level were recorded in this Reporting Period.
- 13.04 The monitoring result demonstrated no exceedance of Action or Limit Level of marine water quality monitoring in this Reporting Period.
- 13.05 No documented complaint, notification of summons or successful prosecution was received.
- 13.06 In this Reporting Period, weekly joint site inspection by RE, the Contractor and ET was carried out on 28 May, 4, 11, 18 and 25 June 2013. All the observation has been rectified in the set time frame. The environmental performance of the Project was therefore considered as satisfactory.

#### RECOMMENDATIONS

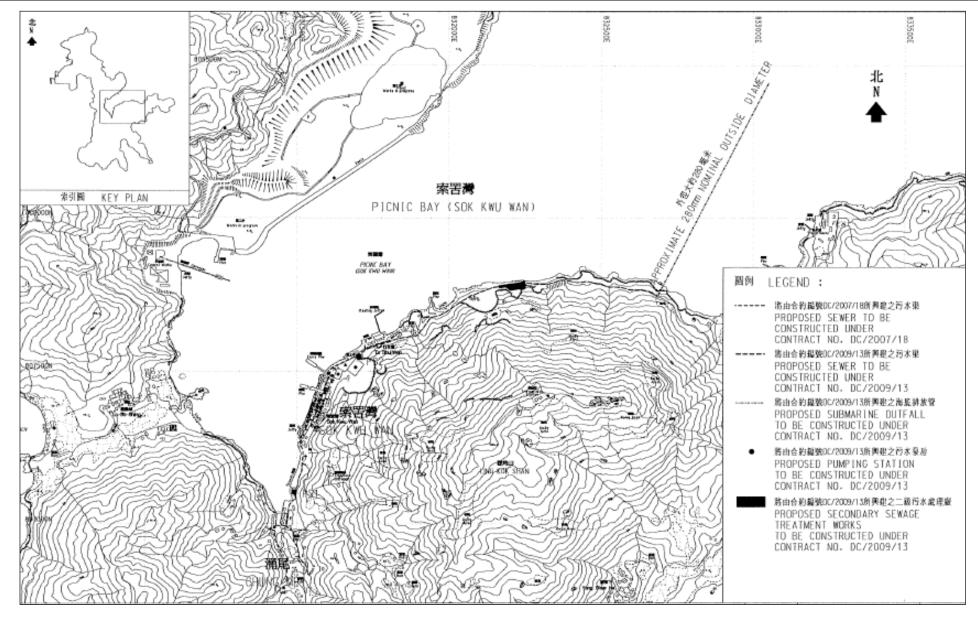
- 13.07 During wet season, muddy water and other water quality pollutants via site surface water runoff into the sea body within Fish culture zone at Picnic Bay and the Secondary recreation contact subzone at Mo Tat Wan is the key issue of the Project. Mitigation measures for water quality should be properly maintained to prevent any muddy or sandy runoff from the loose soil surface overflow on the site boundary.
- 13.08 Muddy water and other water quality pollutants via site surface water runoff into the sea body within Fish Culture Zone (FCZ) at Picnic Bay and the secondary recreation contact subzone at Mo Tat Wan is the key issue of the Project. Mitigation measures for water quality should be properly maintained to prevent any muddy or sandy runoff from the loose soil surface overflow on the site boundary.



## Appendix A

## Site Layout Plan – Sok Kwu Wan Portion Area







## **Appendix B**

## **Organization Structure and Contact Details of Relevant Parties**

Organization	<b>Project Role</b>	Name of Key Staff	Tel No.	Fax No.		
DSD	Employer	Ms. Jacky C.M. Wong	2159-3413	2833-9162		
SCJV	Engineer's Representative	Mr. Ian Jones	2982 0240	2982 4129		
SCJV	Resident Engineer	Mr. Alfred Cheung	2982 0240	2982 4129		
URS	Independent Environmental Checker	Mr. Rodney Ip	2410 3750	2428 9922		
Leader	Director	Mr. Wilfred So	2982 1750	2982 1163		
Leader	Project Manager	Mr. Vincent Chan	2982 1750	2982 1163		
Leader	Construction Manager	Mr. Ron Hung	2982 1750	2982 1163		
Leader	Environmental Officer	Mr. Leung Man Kin	2982 8652	2982 8650		
Leader	Environmental Supervisor	Mr. Chan Chi Kau	2982 8652	2982 8650		
Leader	Sub-Agent	Mr. Leung Man Kin	2982 1750	2982 1163		
Leader	Senior Safety Officer	Mr. Edwin Leung	2982 1750	2982 1163		
AUES	Environmental Team Leader	Mr. T. W. Tam	2959 6059	2959 6079		
AUES	Environmental Consultant	Ms. Nicola Hon	2959 6059	2959 6079		
AUES	Team Supervisor	Mr. Ben Tam	2959 6059	2959 6079		

## Contact Details of Key Personnel

AUES

Legend:

DSD (Employer) – Drainage Services Department

CDM (Engineer) – URS Hong Kong Limited CDM Joint Venture

Leader (Main Contractor) – Leader Civil Engineering Corporation Limited

URS (IEC) – URS Hong Kong Limited

AUES (ET) – Action-United Environmental Services & Consulting



## Appendix C

## A Master and Three Months Rolling Construction Programme

Activity ID	Description		Percent Complete	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	APR			2013 //AY	JUN		JUL
Project Key I	Date										APR			ЛАТ	JUN		JUL
KD0010	Receive Letter of Acceptance	0	100		05/05/10 A		05/05/10 A	1		KD0125							
KD0020	Project Commencement Date	0	100		17/05/10 A		17/05/10 A			E&M0010, E&M0070, E&M1001, E&M2001, KD0125, PRE0020, PRE0040, PRE0050, PRE0060, PRE0090, PRE0100, PRE0130, SKW0250, SKW0588, SKW0651, SKW0681, SKW1131, SKW1488, SKW1591, SKW1611, YSW0200, YSW0500, YSW075, YSW0180, YSW0200, YSW0220, YSW0240, YSW02401, YSW0412, YSW0422							
KD0030	Section W1 - Slope Works in Portion A & C	0	100		14/10/11 A		14/10/11 A		YSW0100, YSW0110, YSW0140,	KD0125, KD0130, YSW01755							
KD0040	Section W2 - YSW STW & Submarine Outfall (1370d)	0	0		16/06/14 *		16/06/14 *	0 *	E&M0700, YSW0400, YSW0800, YSW0870, YSW0925, YSW16704, YSW1700	KD0125, KD0132		 !		·=== !	=====	====: !	======
KD0050	Section W3 - Footpath Diversion in Ptn G	0	0		29/04/13 *		24/03/11 *	-767d *	SKW0481	KD0125			Section W	3 - Footpath Diver	sion in Ptn G	1	
KD0060	Section W4 - Slope Works in Portios H & I	0	0		29/04/13 *		27/03/12 *	-398d *	SKW05938, SKW059416	KD0125, KD0135, SKW05941		╴┥┍╇		4 - Slope Works in		+	
KD0070	Section W5 - P.S. No. 1 in Portion D	0	0		29/04/13 *		10/02/12 *	ļ	SKW0741	KD0125				5 - P.S. No. 1 in P		। ⊥	
KD0080	Section W6 - Sewer & PS No2 in Ptn. E & F	0	0		29/04/13 *		10/02/12 *		SKW0971	KD0125	++			6 - Sewer & PS No		 +	
KD0090	Section W7 - SKW STW, RM & Sm. Outfall	0	0		07/10/14 *		07/10/14 *		E&M3360, SKW1221, SKW1291, SKW1431, SKW1441, SKW1521,	KD0125, KD0165, SKW0491				• • • • • • • • • •	<b></b>	<b>+</b> .   	
KD0100	Section W8 - Landscape Softworks	0	0		29/04/13 *		05/04/13 *	-24d *	SKW1611, SKW1621	-	++	1 + 🔶	Section Wa	3 - Landscape Sof	tworks	i	
KD0110	Section W9 - Establishment Works	0	0		03/04/14 *		03/04/14 *	0 *	SKW1631	KD0125			I		I I	1	
KD0125	Project Completion	0	0		12/09/15 *		12/09/15 *	0 *	KD0010, KD0020, KD0030, KD0040, KD0050, KD0060, KD0070, KD0080, KD0090, KD0110, SKW0541				   	   	   	   	
KD0130	Completion of Maintenance Period of W1	1	0	30/04/13	30/04/13 *	13/10/12	13/10/12 *	-199d	KD0030, YSW01755, YSW01805, YSW01810			╴┼╾┚	Completior	of Maintenance F	Period of W1		
KD0132	Completion of Maintenance Period of W2	1	0	15/06/15	15/06/15 *	15/06/15	15/06/15 *	0	E&M0730, KD0040				j]	1	1	1	
KD0135	Completion of Maintenance Period of W4	1	0	30/04/13	30/04/13 *	27/03/13	27/03/13 *	-34d	KD0060, SKW05947, SKW1581		r!   !	╷╴╴└═┛┚ ╵	Completior	of Maintenance F	Period of W4	1	
KD0145	Completion of Maintenance Period of W5	1	0	30/04/13	30/04/13 *	10/02/13	10/02/13 *	-79d			· + ;+ · 			of Maintenance F		+ · I	
KD0155	Completion of Maintenance Period of W6	1	0	30/04/13	30/04/13 *	10/02/13	10/02/13 *	-79d	E&M2130, E&M2180, SKW0961,			└ <del>╷╷╻═</del> ╢	Completior	of Maintenance F	Period of W6	1	
KD0165	Completion of Maintenance period of W7	1	0	06/10/15	06/10/15 *	06/10/15	06/10/15 *	0 *	KD0090, SKW0595, SKW05972, SKW0861								
Preliminary (	Civil)										<u>    </u> 		<u> </u>	1	1	1	
PRE0020	Pre-condition Survey	60	100	17/05/10 A	15/07/10 A	17/05/10 A	15/07/10 A	1	KD0020				 			1	
PRE0040	Erection of Engineer's Site Accommodation at YSW	60		17/05/10 A	15/07/10 A	17/05/10 A	15/07/10 A		KD0020		1111	нн 📗		1	i		
PRE0050	Taking over the Secondary Engineer's Site Accomm	75		17/05/10 A	30/07/10 A	17/05/10 A	30/07/10 A		KD0020			нн 📗	" 	1	I I	1	
PRE0060	Application of Consent from Marine Department	60		17/05/10 A		17/05/10 A			KD0020				 	1	1	1	
PRE0090	Working Group Meeting for Outfall Construction	120		17/05/10 A					KD0020	SKW1151	1111	HH		· <del> </del>		<u>+</u>	
PRE0100 PRE0130	Application & Consent of XP from HyD (Mo Tat Rd) Setup Web-site for EM&A Reporting	120		17/05/10 A 17/05/10 A					KD0020 KD0020	SKW1491, SKW1501	1111	нн 📗	Ü.			1	
		90	100	17/05/10 A	14/08/10 A	17/05/10 A	14/08/10 A		KD0020				<u>  </u> 	1		 	
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	n of SKWSTW & YSWSTW										1111	1111	ü	i	i		
E&M0010	Submission	38	100	17/05/10 A	23/06/10 A	17/05/10 A	23/06/10 A		KD0020	E&M0020, E&M0040, E&M0235			 	1	1	1	
E&M0020	Vetting and Comment by ER	21		24/06/10 A	14/07/10 A	24/06/10 A	14/07/10 A		E&M0010	E&M0030, E&M0040			11		1	1	
E&M0030	Revision and Resubmission	125				15/07/10 A			E&M0020	E&M0080	1111	1111		1	Ì	1	
E&M0080	Approval from the Engineer	14	100	17/11/10 A	30/11/10 A	17/11/10 A	30/11/10 A		E&M0030	E&M0295		<u>1111  </u>	 	 		T 	
Hydraulic Desi			1										 	1		1	
E&M0040 E&M0050	Submission Vetting and Comment by ER	21				15/07/10 A 05/08/10 A	04/08/10 A 18/08/10 A		E&M0010, E&M0020 E&M0040	E&M0050, E&M0101, E&M0240, E&M0260, E&M0060		нн 📗	11	1	1	1	
E&M0050	Revision and Resubmission	97			10/10/10 A	19/08/10 A	10/10/10 A		E&M0050	E&M0430	1111	1111		i	i		
E&M0430	Approval from the Engineer	7		24/11/10 A	1				E&M0060	E&M0295			 	1	l l	1	
	mission & Approval	-		•	•	I	<b>I</b>					<del>nn  </del>	-11 11	1	1	1	
E&M0070	Submission of Membrane Module	50		17/05/10 A	05/07/10 A	17/05/10 A	05/07/10 A		KD0020	E&M0090	1111	1111		i	ļ		
E&M0090	Vetting and Comment by ER	14				06/07/10 A	<u> </u>		E&M0070	E&M0100			11 11	I I	l l	I I	
E&M0100	Revision and Resubmission	14				20/07/10 A	24/02/11 A		E&M0090	E&M0160	1111	1111	11 11		1	1	
E&M0101	Submission of Equipment	90				05/08/10 A	30/11/11 A		E&M0040	E&M0102	1111	11 H 📗		į	i	i	
E&M0102	Vetting and Comment by ER	60	100	03/11/10 A	30/11/11 A	03/11/10 A	30/11/11 A		E&M0101	E&M0103	1111	1111	II	1		l	
Start date Finish date Data date Run date Page number c Primav era S	05/05/10       Early bar         13/01/17       Progress bar         30/04/13       Critical bar         20/05/13       Progress point         1A       Summary bar         Systems, Inc.       Start milestone point				onstructio	Cor Con of Sev	ntract No wage Tre	. DC/2 atmen	ng Corp. Ltd. 009/13 t Works at YSW & SKV ay 2013 - July 2013	V	30/04	Date /13		Revis Revision 0	sion	Checked RH	Approved VC
	▲ Einish milostono point																

	Activity ID	Description		Percent Complete	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	API			2013 MAY	JUN
	E&M0103	Revision and Resubmission	60		01/02/11 A		01/02/11 A	30/11/11 A		E&M0102	E&M0110, E&M0120, E&M0130, E&M0140,	-	` 		WAT	JUN
	E&M0110	Approval on Coarse Screens	30		25/05/11 A	25/05/11 A	25/05/11 A	25/05/11 A		E&M0103	E&M0390	1	111111	i ii	1	i i
	E&M0120	Approval on Fine Screens	30		12/09/11 A	12/09/11 A	12/09/11 A	12/09/11 A		E&M0103	E&M0400, E&M3060				1	1
	E&M0130	Approval on Pumps	30	100	23/06/11 A	23/06/11 A	23/06/11 A	23/06/11 A		E&M0103	E&M0410, E&M3070				1	1
	E&M0140	Approval on Submersible Mixers	30	100	23/03/11 A	23/03/11 A	23/03/11 A	23/03/11 A		E&M0103	E&M0420, E&M3080		1             +		1	1
	E&M0150	Approval on Grit Removal Equipment	30	100	10/10/11 A	10/10/11 A	10/10/11 A	10/10/11 A		E&M0103	E&M0380, E&M3030			-II		· -
	E&M0160	Approval on MBR Membrane Modules (M.M.)	105	100	03/08/10 A	24/02/11 A	03/08/10 A	24/02/11 A		E&M0100	E&M0360, E&M0370, E&M3010				1	1
	E&M0170	Approval on Sludge Dewatering Equipment	30	100	01/09/11 A	01/09/11 A	01/09/11 A	01/09/11 A		E&M0103	E&M0440, E&M3090			ü	i	i
	E&M0180	Approval on Valves, Pipes & Fittings	30	85	19/11/11 A	04/05/13	19/11/11 A	15/04/13	-19d	E&M0103	E&M0450, E&M3100			Approv	al on Valves, Pipe	s & Fittings
	E&M0190	Approval on Penstocks	30	100	15/11/11 A	15/11/11 A		15/11/11 A		E&M0103	E&M0460, E&M3110	1	111111		_ <u>!</u>	!
	E&M0200	Approval on Instrumentation	30	100	21/06/11 A	08/03/12 A	21/06/11 A	08/03/12 A		E&M0103	E&M0470, E&M3130		таас	1 II 1 II	l	1
	E&M0210	Approval on MCC & LVSB	30	55	19/11/11 A	01/05/13	19/11/11 A	22/08/11		E&M0103	E&M0480, E&M3140			Approval	on MCC & LVSB	1
	E&M0220	Approval on BS Equipment	30		30/11/11 A	04/06/13	30/11/11 A	22/04/12	-408d	E&M0103, E&M0280	E&M0490, E&M3150					Approval o
	E&M0230	Approval on FS Equipment	30	85	30/11/11 A	16/06/13	30/11/11 A	22/08/11	-664d	E&M0103, E&M0290	E&M0295, E&M0320, E&M0500, E&M3160					
	·	nission & Approval								Eshlooto	Fab. 40050					
		Sub. P&ID Drawings	100		24/06/10 A	24/05/13	24/06/10 A			E&M0010 E&M0040	E&M0250 E&M0250, E&M0280, E&M0290		<u></u>	<u> </u>	Sub. Pant GA	LD Drawing
	E&M0240	Sub. Plant GA Drawings Sub. Builder's Works Requirements Drawings	45	00	04/08/10 A 04/08/10 A	14/05/13	04/08/10 A 04/08/10 A	31/07/11	-653d	E&M0235, E&M0240, E&M0260,	E&M0230, E&M0230					rawings
	E&M0250 E&M0260	Sub. Mechanical Installation Drawings	15		27/09/10 A	31/01/13 A 17/05/13	27/09/10 A	31/01/13 A 31/07/11	-657d	E&M0040	E&M0250				– Ч 📕 Sub. Mechan	ical Installati
	E&M0200	Sub. Electrical Installation Drawings	60	-	27/09/10 A 27/09/10 A	14/05/13	27/09/10 A	31/07/11	-654d	E&M0040	E&M0250, E&M0280	+	+  +  -   1	<del>  -  </del>	Sub. Electrical	
	E&M0280	Sub. BS Installation Drawings	120		27/09/10 A	30/05/13	27/09/10 A	18/04/12	-408d	E&M0240, E&M0250, E&M0270	E&M0220			1		ıb. BS İnstalla
	E&M0290	Sub. FS Installation Drawings	120		13/11/11 A	11/06/13	13/11/11 A	18/08/11		E&M0240, E&M0250	E&M0230	i		<del>    </del>		Sub.
	Statutory Submi	ů – Š	120	85	13/11/11 A	11/00/13	13/11/11 A	10/00/11	-0040				111111	<u> </u>	1	1
	E&M0295	Preparation of Submission to HEC	39	100	01/11/11 A	30/11/11 A	01/11/11 A	30/11/11 A		E&M0080, E&M0230, E&M0430	E&M0300			II    II	1	-
	E&M0300	Application & Approval from HEC	150		01/11/11 A	01/07/13	01/11/11 A	04/11/12	-239d	E&M0295	E&M0305		<u></u>	<u>  </u>		
	E&M0305	Provision of Cables to the STWs	180		01/07/13	28/12/13	05/11/12	03/05/13	-239d	E&M0300	E&M0680				1	
	E&M0320	Form 314 Submission to FSD	14	v	16/06/13	30/06/13	20/04/13	03/05/13	-58d	E&M0230	E&M0325, E&M0670	Г I I		u. U	i	i L_
	E&M0325	Submission to WSD	14	100	01/11/11 A	29/02/12 A	01/11/11 A	29/02/12 A		E&M0320	E&M0670, E&M0680			 	 	<u> </u>
	E&M0330	Form 501 Submission to FSD (YSW)	28		11/03/15	08/04/15	14/11/13	11/12/13	-483d	E&M0500	E&M0700		FAAF	2 =u= = = : 	= = = = = = = = = = = = = = = = = = = =	: = <u> </u> = = = =
	E&M0340	Form 501 Submission to FSD (SKW)	28	0	04/12/13	01/01/14	11/06/14	08/07/14	189d	E&M3160	E&M3360			II   II	1	I
	E&M0350	Form 501 Submission to FSD (PS1 & PS2)	28	0	28/05/13	25/06/13	14/11/12	11/12/12	-196d	E&M2016	E&M11800, E&M2180				·	
Y	ung Shue W	/an													i	i
	Preliminary															
	YSW0020	Approval of Environmental Team	16				17/05/10 A			KD0020	YSW00201, YSW0030, YSW00351,	1		U U	1	I
	YSW00201	Change Baseline Monitoring Location (Air&Noise)	59	100	02/06/10 A	30/07/10 A	02/06/10 A	30/07/10 A		YSW0020	YSW0030			II   II		1
	YSW0030	Baseline monitoring (Air & Noise)	23		31/07/10 A	22/08/10 A	31/07/10 A	22/08/10 A		YSW0020, YSW00201	YSW0035					1
	YSW0035	Baseline Monitoring Report Submission (A & N)	16		23/08/10 A		23/08/10 A	07/09/10 A		YSW0030	YSW0120, YSW01545, YSW0500,			u u		i i
	YSW00351	Submission & Approval for Monitoring Method (W)	58		02/06/10 A			29/07/10 A		YSW0020	YSW0040					·
	YSW0040	Baseline monitoring (Water)	155		30/07/10 A	31/12/10 A		31/12/10 A		YSW0020, YSW00351	YSW0350			н	i	i
	YSW0050	Erect Hoarding and Fencing	60	100	19/05/10 A	17/07/10 A	19/05/10 A	17/07/10 A		KD0020	YSW0155		111111			
	YSW0075	ope W orks in Portion A & C	1 20		17/05/10 A	15/06/10 A	17/05/10 A	15/06/10 A	1	KD0020	YSW0080, YSW0100			<u> </u>	!	1
	YSW0075	Site Clearance	30		16/06/10 A	15/06/10 A		15/07/10 A		YSW0075	YSW0085, YSW0090, YSW0120					1
	YSW0080	Initial Survey	14			15/07/10 A		15/07/10 A		YSW0080	YSW0120					1
	YSW00000	Verify the Rock Boulder required Stablization Wk	249	100	16/07/10 A	21/03/11 A		21/03/11 A		YSW0080	YSW0100, YSW0110	1		l ü	i	i
	YSW0100	Removal of Rock Boulder	257	100	20/09/10 A	03/06/11 A	20/09/10 A	03/06/11 A		YSW0075, YSW0090	KD0030			II   II		1
	YSW0110	Stablizing work for rock boulder	35	100	16/07/11 A	19/08/11 A		19/08/11 A		YSW0090	KD0030	г	тппг	4 -ii ·		· - <u>1</u>
	YSW0120	Cut the slope to design profile	2	100	24/09/10 A	25/09/10 A		25/09/10 A		YSW0035, YSW0080, YSW0085	YSW0131, YSW0155, YSW0170					I I
	YSW0131	Mobilization of Plant and Material of Soil Nails	14		12/09/10 A	25/09/10 A	1	25/09/10 A		YSW0120	YSW0132	1			1	-
		Fract Cooffeld and Warking Distform	_			27/09/10 A	26/09/10 A	27/09/10 A		YSW0131	YSW0133					1
	YSW0132	Erect Scaffold and Working Platform	2							YSW0132	YSW0134		11111	н	1	1
	YSW0132 YSW0133	Setting out and Verify Locations of Soil Nails	45		28/09/10 A	11/11/10 A	28/09/10 A	11/11/10 A						<b>1</b> II		·
		° ·	45	100	28/09/10 A 19/10/10 A	11/11/10 A 30/11/10 A		11/11/10 A 30/11/10 A		YSW0133	YSW0135			_IL   _I	- L	I.
	YSW0133	Setting out and Verify Locations of Soil Nails		100 100			19/10/10 A			YSW0133 YSW0134			1 1 1 1 1 1	II II II		
	YSW0133 YSW0134	Setting out and Verify Locations of Soil Nails Drilling and Soil Nails Installation	43	100 100 100	19/10/10 A 01/12/10 A	30/11/10 A	19/10/10 A 01/12/10 A	30/11/10 A			YSW0135					   
	YSW0133 YSW0134 YSW0135	Setting out and Verify Locations of Soil Nails Drilling and Soil Nails Installation Construction of Nail Heads	43	100 100 100 100	19/10/10 A 01/12/10 A	30/11/10 A 12/12/10 A	19/10/10 A 01/12/10 A 13/12/10 A	30/11/10 A 12/12/10 A		YSW0134	YSW0135 YSW0136					
	YSW0133 YSW0134 YSW0135 YSW0136 YSW01361 YSW0140	Setting out and Verify Locations of Soil Nails Drilling and Soil Nails Installation Construction of Nail Heads Mesh Installation on Cut Slope	43 12 3	100 100 100 100 100	19/10/10 A 01/12/10 A 13/12/10 A	30/11/10 A 12/12/10 A 15/12/10 A 12/04/11 A	19/10/10 A 01/12/10 A 13/12/10 A	30/11/10 A 12/12/10 A 15/12/10 A 12/04/11 A		YSW0134 YSW0135	YSW0135 YSW0136 YSW01361					
	YSW0133 YSW0134 YSW0135 YSW0136 YSW01361 YSW0140 tart date	Setting out and Verify Locations of Soil Nails         Drilling and Soil Nails Installation         Construction of Nail Heads         Mesh Installation on Cut Slope         Verify alignment of access & channels on slope         Construct U-channels & Step Channel on Cut Slope         05/05/10       Early bar	43 12 3 118	100 100 100 100 100	19/10/10 A 01/12/10 A 13/12/10 A 16/12/10 A	30/11/10 A 12/12/10 A 15/12/10 A 12/04/11 A 11/10/11 A	19/10/10 A 01/12/10 A 13/12/10 A 16/12/10 A 13/04/11 A	30/11/10 A 12/12/10 A 15/12/10 A 12/04/11 A 11/10/11 A		YSW0134 YSW0135 YSW0136 YSW01361	YSW0135 YSW0136 YSW01361 YSW0140		Date		Revi	sion
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Normal Process De Funda and can be the formation of the formatio of the formation of the formation of the formation of	Activity	Description	Original Percent	Early	Early Late Finish Start	Late Total Finish Float	Predecessors	Successors			2013		
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Open Unit         Open Unit <t< td=""><td>YSW01810</td><td>Construct U-channels and Catchpits (Phase 2)</td><td><sup>30</sup> 100</td><td>29/11/12 A</td><td>22/12/12 A 29/11/12 A</td><td>22/12/12 A</td><td>YSW01800</td><td>KD0130, YSW01805</td><td></td><td><u> </u></td><td><u> </u></td><td><u> </u></td><td>I</td></t<>	YSW01810	Construct U-channels and Catchpits (Phase 2)	<sup>30</sup> 100	29/11/12 A	22/12/12 A 29/11/12 A	22/12/12 A	YSW01800	KD0130, YSW01805		<u> </u>	<u> </u>	<u> </u>	I
Normal         Normal<	Section W2 - YS	W STW & Submarine Outfall										1	
Normality         Description         Normality         Description         Normality	Civil & Structura	al Work								i i	i	i i	i
UPU-2000       UPU-2000 <th< td=""><td>YSW0412</td><td>Mobilization</td><td>30 100</td><td>17/05/10 A</td><td>15/06/10 A 17/05/10 A</td><td>15/06/10 A</td><td>KD0020</td><td>YSW0422</td><td></td><td></td><td></td><td></td><td></td></th<>	YSW0412	Mobilization	30 100	17/05/10 A	15/06/10 A 17/05/10 A	15/06/10 A	KD0020	YSW0422					
Provide         1 mm	YSW0422	Site Clearance	30 100	17/05/10 A	15/06/10 A 17/05/10 A	15/06/10 A	KD0020, YSW0412	YSW0432, YSW0500, YSW0610, YSW0650		i i	i	i	i
Weak         Control	YSW0432	Initial Survey	14 100	02/06/10 A	15/06/10 A 02/06/10 A	15/06/10 A	YSW0422	YSW0510					
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No.         No. <td>YSW0500</td> <td>ELS &amp; Excavation for Inlet Pumping Station</td> <td>105 100</td> <td>08/09/10 A</td> <td>21/12/10 A 08/09/10 A</td> <td>21/12/10 A</td> <td>YSW0035, YSW0422</td> <td>YSW0510</td> <td></td> <td>!!!</td> <td>!</td> <td></td> <td></td>	YSW0500	ELS & Excavation for Inlet Pumping Station	105 100	08/09/10 A	21/12/10 A 08/09/10 A	21/12/10 A	YSW0035, YSW0422	YSW0510		!!!	!		
Image: space         Logical List of the Second List of List o	YSW0510	Sub-structure construction (Inlet Pumping Stn)			29/04/11 A 22/12/10 A	29/04/11 A	YSW0432, YSW0500	YSW0520				1	
Image: No. 20         Col: 0.00000000000000000000000000000000000	YSW0520	Backfill & Remove ELS (Inlet Pumping Stn)			08/06/11 A 30/04/11 A	08/06/11 A	YSW0510	YSW05701		I I	1	I	1
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Image: Name: 10 - State: 10 - S	YSW05731	ELS & Excavation for Grease Separators (GS)						ļ			<u>-</u>	<u> </u>	
Image: market in the field period of the section of the field period	YSW05741	Construct sub-structure for Grease Separators			30/09/11 A 10/08/11 A	30/09/11 A		YSW05751				1	
V 900000         Construct from Control (Control (Co	YSW05751	Install Dia.400 Puddles in Grease Separators			27/10/11 A 01/10/11 A	27/10/11 A	YSW05741	YSW05752		т т	1	I.	I.
Number         Second 1.4         Second 1.4<	YSW05752	Construct sub-structure for GS (above puddles)	48 100	28/10/11 A	14/12/11 A 28/10/11 A	14/12/11 A	YSW05751	YSW05761					
1       0.20020       0.20010	YSW05761	Backfill & remove ELS for Grease Separators	10 100	15/12/11 A	24/12/11 A 15/12/11 A	24/12/11 A	YSW05752	YSW0580, YSW05921		i i	i	i	i
N         Verside         Decade to brandon - 0:d - M+57         00         0.00174.8         202012.4         CONTRACT         0.00174.8         CONTRACT	YSW0580	Excavate to Formation for Deodorizer Room	10 100	25/12/11 A	03/01/12 A 25/12/11 A	03/01/12 A	YSW05761	YSW05801, YSW05922					
Version         Londer Journal of Market View         10         0.00         Description         Construction         Version	YSW05801	Excavate to formation - Grid J-N/5-7	40 100	04/01/12 A	12/02/12 A 04/01/12 A	12/02/12 A	YSW0580	YSW05802, YSW05923				· •	
V W00501         GF to LF Desclusion Get GAN-15         90         100         2900111         290111         290111         290111         9701111         9701111         9701111 </td <td>YSW05802</td> <td>Excavate to formation - Grid GA-H/5-7</td> <td>10 100</td> <td>13/02/12 A</td> <td>22/02/12 A 13/02/12 A</td> <td>22/02/12 A</td> <td>YSW05801</td> <td>YSW05924</td> <td></td> <td>1 1</td> <td>!</td> <td>1</td> <td></td>	YSW05802	Excavate to formation - Grid GA-H/5-7	10 100	13/02/12 A	22/02/12 A 13/02/12 A	22/02/12 A	YSW05801	YSW05924		1 1	!	1	
V WorkSt1         OF b 17 Construction Get AN1-5         60         100         211/011-A         00/11/2A         210/011-A         10/01/2A         210/011-A         10/01/2A         210/011-A         10/01/2A         210/011-A         10/01/2A         10/01/2A         10/01/2A         210/011-A         10/01/2A         210/011-A         10/01/2A         210/011-A         10/01/2A         210/011-A         10/01/2A         210/011-A         10/01/2A         210/011-A         10/01/2A         10/01/2A <td>YSW05901</td> <td>G/F to 1/F Construction Grid GA-K/1-5</td> <td></td> <td></td> <td>27/12/11 A 29/09/11 A</td> <td>27/12/11 A</td> <td>YSW0540, YSW0550</td> <td>YSW06001</td> <td></td> <td></td> <td></td> <td></td> <td></td>	YSW05901	G/F to 1/F Construction Grid GA-K/1-5			27/12/11 A 29/09/11 A	27/12/11 A	YSW0540, YSW0550	YSW06001					
V Model         GP1 is 1F Construction for GA (A+V)-5         45         100         257/11.4         070017.4         357017.4         070007.0         1000000000000000000000000000000000000	YSW05911	G/F to 1/F Construction Grid N-S/1-5					YSW05711, YSW05721	YSW06011, YSW06035		i i	i i	Î.	i i
V Worksitz         OF to IF Construction for Goodsater Room         80         100         040/17/4         230/21/4         040/17/4         230/21/4         040/21/4 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>YSW05761</td><td>YSW06021</td><td></td><td></td><td></td><td></td><td></td></t<>							YSW05761	YSW06021					
Version         Services         Open to PC construction for Grid JANS-7         60         100         1280/12/A         1280/12/A </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>YSW0580</td> <td>YSW06022</td> <td></td> <td>-i i</td> <td>i</td> <td>· i</td> <td></td>							YSW0580	YSW06022		-i i	i	· i	
Image: Non-State Carlie Diff: Construction for Grid CArlis-7       50       100       280/51/2       190/7								E&M0530, E&M0540, E&M0550, E&M0560,		1 1		1	
VSW0000       1/1 Hz Bod Construction for Gla K/1 5       87       100       200/12       230/12       200/12       230/12       VSW0001         VSW0001       1/1 Hz Bod Construction for Gla K/1 5       75       100       000/12       230/12       230/12       VSW0001       VSW0001         VSW0001       1/1 Hz Bod Construction for Gla K/1 5       75       100       000/12       230/12       230/12       230/12       VSW0001         VSW0001       1/1 Hz Bod Construction for Gla K/1 5       75       100       000/12       230/12       230/12       VSW0001         VSW0002       1/1 Hz Bod Construction for Gla K/15       44       000       000/12       230/12       230/12       VSW0001         VSW0003       1/1 Hz Bod Construction for Gla K/15       44       000       200/12       200/12       200/12       VSW0001       VSW0001         1/1 Hz Bod Construction for Gla K/15       73       100       200/12       200/1												1	
VSW0011       1/F to Bod Construction for Grid N-S1.5       75       100       090/11/2       200/11/2       200/11/2       200/11/2       200/11/2       200/11/2       VSW0001       YSW0002         VSW00021       1/F to Bod Construction for Grid N-S1.5       1/4       100       080/21/2       22/0/51/2       22/0/51/2       22/0/51/2       YSW0002       YSW0002       YSW0002       1/F to Bod Construction for Grid A-N57       45       100       12/0/12/2       22/0/51/2       2/0/51/2       YSW0002       YSW0002       YSW0002       1/F to Bod Construction for Grid A-N57       45       100       12/0/17/2       13/0/0/2       13/0/17										1 1		1	1
1 Finde Construction 10 and Construction 10 and V1/15         10         100 and V1/12 A         200/12 A         100/12 A         1												1	
YSW0022       I/F to Roof Construction for Dedotator for Gid J.N/5-7       45       100       2403/12.4       22/05/12.4       YSW0082       E&M0580. YSW00804         YSW0023       I/F to Roof Construction for Gid J.N/5-7       45       100       1304/12.4       27/05/12.4       1308/12.4       27/05/12.4       YSW00823       E&M0580. YSW00804         YSW0023       UF to Roof Construction for Gid J.N/5-7       28       100       1304/12.4       27/05/12.4       1308/12.4       27/05/12.4       YSW00823       EMM580. YSW00804         YSW0023       User for Gid GA-H5-7       28       100       1304/12.4       20/05/12.4       10/05/12.4       20/05/12.4       YSW00204         YSW07202       Water tightness test for for Gid CAmbers       42       100       22/05/12.4       22/05/12.4       2/05/07.4       2/05/07.4       2/05/07.4 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>- I I</td> <td></td> <td> +</td> <td></td>										- I I		+	
Instruction													
YSW06034         1/F to Roof Construction for Grid GA-H/5-7         2.8         100         27/07/12 A         13/08/12 A         20/07/12 A         13/07/12 A         20/07/12 A         13/07/12 A         20/07/12 A         13/07/12 A         20/07/12 A         20/07/12 A         20/07/12 A         20/07/12 A										i i	i i	i	i
1000000000000000000000000000000000000								,		: :	!	I	<u>!</u>
VSW0603         Construct buffle walls in Grease Separators         90         100         180/412.4         160/712.4         180/412.4         160/712.4         VSW06011         VSW06024         VSW0724         VSW0724 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>; ;</td> <td></td> <td>i I</td> <td></td>										; ;		i I	
Visite indjunces test for majority data on human data data data data data data data da		•									!	<u>!</u>	!
VSW07202       Water tightness test for Equalization Tanks       42       100       22/05/12.A       02/07/12.A       1/00/12.A       01/00/12.A       01/00/12.A <t< td=""><td>YSW07201</td><td>Water tightness test for Inlet Pumping Station</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>I</td><td></td></t<>	YSW07201	Water tightness test for Inlet Pumping Station										I	
1010/12/02       Water tightness test for Grease Separators       32       100       03/10/12 A       10/10/12 A	YSW07202	Water tightness test for Equalization Tanks			02/07/12 A 22/05/12 A	02/07/12 A	YSW07201	E&M0600, YSW07203, YSW0800		I İ	i i	I	i i
VSW07204         Water tightness test for Grease Separators         32         100         03/10/12         31/10/12         03/10/12         31/10/12         VSW0000         EAM050, VSW07200         EAM050, VSW07200, VSW0800         IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	YSW07203	Water tightness test for Grit Chambers			29/09/12 A 17/09/12 A	29/09/12 A	YSW07202	YSW07204, YSW0800				1	
YSW0800       ABWF installation       271       94       03/07/12 A       16/05/13       03/07/12 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17/09/10 A       17	YSW07204	Water tightness test for Grease Separators	32 100	03/10/12 A	31/10/12 A 03/10/12 A	I I I		E&M0570, YSW07205, YSW0800		i i	i	·	i
YSW0800       ABWF installation       271       94       03/07/12 A       16/05/13       03/07/12 A       16/05/13       03/07/12 A       16/05/13       03/07/12 A       16/05/14       397       YSW06001, YSW06001, YSW06001, YSW06002, K0004       Construction       Image: Construction       Imag	YSW07205	Water tightness test for water channels	21 0	30/04/13	23/05/13 07/06/14	30/06/14 4030	YSW07204	YSW0800			Water tightness te	est for water channels	<u>!</u>
YSW STW - GL T - X         YSW 0510         Excavate to formation         10         100         08/09/10 A         17/09/10 A         YSW0030, YSW0422         YSW0620         Hitting	YSW0800	ABWF installation	271 94	03/07/12 A	16/05/13 03/07/12 A	16/06/14 3970	YSW06001, YSW06011, YSW06022,	KD0040		ABV	VF installation	· +	
YSW0610       Excavate to formation       10       100       08/09/10 A       17/09/10 A       VSW0030, VSW0422       VSW0620       VSW0620       Base slab construction       248       100       18/09/10 A       23/05/11 A	YSW STW - C	al T - X			<u> </u>	· · · · · · · · · · · · · · · · · · ·	·	•		1	1	1	
YSW0620       Base slab construction       248       100       18/09/10 A       23/05/11 A       14/12/11 A       23/05/11 A       14/12/11 A       23/05/11 A       14/12/11 A       23/05/11 A       14/12/11 A       23/05/11 A       14/12/11 A       23/05/11 A       14/12/11 A       23/05/11 A       14/12/11 A       14/12/11 A       YSW0620       YSW0630       111111 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			10 100	08/09/10 A	17/09/10 A 08/09/10 A	17/09/10 A	YSW0035, YSW0422	YSW0620		1		1	
YSW0630       G/F to 1/F construction       205       100       24/05/11 A       14/12/11 A       24/05/11 A       14/12/11 A       YSW0620       YSW0640       Image: Construction of Severage Treatment Works at YSW & SKW         Start date       05/05/10       Early bar       Early bar       Checked App         Finish date       13/01/17       Progress bar       Critical bar       Summary bar       Revision 0       RH       VC         Data date       30/04/13       Progress point       Construction of Sew age Treatment Works at YSW & SKW       Image: Critical point       Image: Critical										i.	i i	I	i
Start date       05/05/10       Early bar         Finish date       13/01/17       Progress bar         Data date       30/04/13         Run date       20/05/13         Page number       3A										1	!	I	<u> </u>
Finish date       13/01/17       Progress bar Critical bar       No. 0			100				l			•	Devided a c		
Initial date       13/04/13       Revision 0       RH       VC         Data date       30/04/13       Contract No. DC/2009/13       Contract No. DC/2009/13       Construction of Sewage Treatment Works at YSW & SKW       Construction					l andre C	Null Engineer	na Corn I ta						
Run date       20/05/13       Progress point Ortical point Summary point       Progress point Ortical point Summary point       Construction of Sewage Treatment Works at YSW & SKW		Critical bar							30/04/13	Revi	SION U	KH	
Page number 3A Critical point Summary point 3-month Rolling Programme (May 2013 - July 2013				~									
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Activity ID	Description		Percent Early Complete Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	APR
YSW0640	1/F to Roof Construction	64	100 15/12/11 A	16/02/12 A	15/12/11 A	16/02/12 A		YSW0630	YSW0810	
	ABWF installation	80	100 28/12/11 A	16/03/12 A	28/12/11 A	16/03/12 A		YSW0640	E&M0610, E&M0620, E&M0630, E&M0640	
	àL F - H & DN Tanks				1					
	ELS & Excavation for DN Tanks	37	100 08/09/10 A	14/10/10 A	08/09/10 A	14/10/10 A		YSW0035, YSW0422	YSW0660	
	Sub-struction construction (DN Tanks)	78	100 15/10/10 A	31/12/10 A	15/10/10 A			YSW0650	YSW0530, YSW0670	
	Backfill & Remove ELS (DN Tanks)	70	100	11/03/11 A	01/01/11 A	11/03/11 A		YSW0660	YSW0680	
	Base slab construction (SD1, SD2 & MBR4)	17	100	28/03/11 A	12/03/11 A	28/03/11 A		YSW0670	YSW0690	
	Construct Superstructure SD1, SD2 & MBR4	82		18/06/11 A	29/03/11 A	18/06/11 A		YSW0680	YSW0710, YSW0820	
					15/05/12 A			YSW0735	YSW0830	+ + + + + + + + + + + + + + +
	Construct Superstructure of DN Tanks Water test for MBR 4	28 47	100 15/05/12 A	11/06/12 A		11/06/12 A		YSW0710	E&M0510, E&M0640, YSW07055, YSW0820	
	Water test for SD1 & SD2	54	100 01/10/12 A	16/11/12 A	01/10/12 A	16/11/12 A		YSW0705, YSW07105	E&M0610	
		74	100 17/11/12 A	10/01/13 A	17/11/12 A	10/01/13 A		YSW0690	YSW0705, YSW07105	
	Apply protective paint for MBR 4	/	100 24/09/12 A	30/09/12 A	24/09/12 A	30/09/12 A		YSW0710	YSW07055	
	Apply protective paint for SD1 & SD2	/	100 01/10/12 A	07/10/12 A	01/10/12 A	07/10/12 A	1001			
	ABWF installation	34	35 15/01/13 A	21/05/13	15/01/13 A	15/01/13	-126d	YSW0690, YSW0705	E&M0630, E&M0640	+ + + + + + + +
	Water test for DN Tanks	28	0 30/04/13	27/05/13	18/02/13	18/03/13	-70d	YSW06901	YSW0850	
	Apply protecitve paint for DN Tanks	6	10 27/04/13 A	01/06/13	27/04/13 A	23/03/13	-70d	YSW0830	E&M0610	
VSTW-G		- I I		1	1	1				
	Completion of HDD	0	100 21/01/12 A		21/01/12 A			YSW03601, YSW03605	YSW0732	
	Excavate for MBR 2 & 3	20	100 21/01/12 A	09/02/12 A	21/01/12 A	09/02/12 A		YSW0730	YSW0733	
	Construct basement of MBR 2 & 3	20	100 10/02/12 A	29/02/12 A	10/02/12 A	29/02/12 A		YSW0732	YSW0735, YSW0740	1111111
W0735	Construct superstructure of MBR 2	75	100 01/03/12 A	14/05/12 A	01/03/12 A	14/05/12 A		YSW0733	YSW06901, YSW0736, YSW08302,	
W0736	Construct superstructure of MBR 3	100	100 15/05/12 A	14/05/12 A	15/05/12 A	14/05/12 A		YSW0735	YSW08302, YSW08305	
W0740	ELS & excavate for Outfall Shaft	75	100 01/03/12 A	14/05/12 A	01/03/12 A	14/05/12 A		YSW0733	YSW0750	
W0750	Construct basement of Outfall Shaft	19	100 15/05/12 A	02/06/12 A	15/05/12 A	02/06/12 A		YSW0740	YSW07501	1
W07501	Connect additional flange to HDPE pipe (VO 042)	5	100 03/06/12 A	07/06/12 A	03/06/12 A	07/06/12 A		YSW0750	YSW07502	
W07502	Construct sub-structure of Outfall Shaft	16	100 08/06/12 A	23/06/12 A	08/06/12 A	23/06/12 A		YSW07501	YSW0760	
W0760	Backfill & remove ELS (outfall shaft)	8	100 24/06/12 A	01/07/12 A	24/06/12 A	01/07/12 A		YSW07502	YSW01800, YSW07601, YSW07603,	
W07601	Construct superstructure for Outfall Shaft	30	100 03/07/12 A	31/07/12 A	03/07/12 A	31/07/12 A		YSW0760	YSW08301, YSW08305	
SW07603	ELS & excavate for FSH Water Supply Tank	25	100 01/06/12 A	25/06/12 A	01/06/12 A	25/06/12 A		YSW0760	YSW07604	
SW07604	Construct substructure for FSH Water Supply Tank	24	100 26/06/12 A	19/07/12 A	26/06/12 A	19/07/12 A		YSW07603	YSW07605	1
W07605	Backfill & remove ELS for FSH Water Supply Tank	12	100 20/07/12 A	31/07/12 A	20/07/12 A	31/07/12 A		YSW07604	YSW07607	
W07607	Construct basement of MBR 1 & Workshop	24	100 01/08/12 A	24/08/12 A	01/08/12 A	24/08/12 A		YSW07605	YSW07608, YSW07609	
W07608	Construct superstructure for FSH Water Supply Tk	37	100 25/08/12 A	30/09/12 A	25/08/12 A	30/09/12 A		YSW07607	YSW08304, YSW08305	+ +1+1+1+1+11+
W07609	Construct superstructure for MBR 1	37	100 25/08/12 A	30/09/12 A	25/08/12 A	30/09/12 A		YSW07607	YSW07610, YSW08303, YSW1470	
	Construct Workshop, FSSH Pump Rm, PW Pump Rm	31	100 03/10/12 A					YSW07609	YSW0840, YSW16606, YSW16607,	
	Water tightness test for Outfall Shaft	42	100 03/04/13 A		03/04/13 A			YSW0380, YSW07601	E&M0690	- Water t
	Water tightness test for MBR 2 & 3	95	100 03/07/12 A		03/07/12 A			YSW0735, YSW0736	E&M0520, E&M0590, E&M0605, E&M0650	
	Water tightness test for MBR 1	19	100 30/11/12 A		30/11/12 A			YSW07609	E&M0520	+   רוד ה הוח
	Water tightness test for FSH Water Supply Tank	32	0 30/04/13	31/05/13	19/02/13	23/03/13	-69d	YSW07608	E&M0610	
	Apply protective paint	120	80 02/10/12 A	23/05/13		23/03/13	-61d	YSW0735, YSW0736, YSW07601,	E&M0610, YSW0870	
	ABWF installation	30	0 24/05/13	22/06/13	18/05/14	16/06/14	359d	YSW08305	KD0040	
	el / Sprinkler Pump Rm	50	0 24/03/13	22/00/13	10/03/14	10/00/14	5550	10110000		111111
	ELS & excavate to formation (+0 mPD approx.)	40	100 25/02/13 A	18/04/13 A	25/02/13 A	18/04/13 A		YSW07610, YSW16606	YSW0860	ELS &
	Sub-structure construction	40	80 19/04/13 A	12/05/13	19/04/13 A	18/05/13	7d	YSW0840	YSW0890	
	Backfill & remove ELS			26/07/13	25/11/16	13/01/17		YSW0890	1300000	
		35	0 21/06/13							111111
	Construction Ground Slab at +5.2mPD	40	0 12/05/13	21/06/13	19/05/13	27/06/13		YSW0860	YSW0880, YSW0900	
	Superstructure construction upto +9.2mPD	35	0 21/06/13	26/07/13	28/06/13	01/08/13		YSW0890	YSW0910, YSW0925	
	Water test	28	0 26/07/13	23/08/13	02/08/13	29/08/13		YSW0900	YSW0915	
	Apply protective paint	14	0 23/08/13	06/09/13	30/08/13	12/09/13	7d	YSW0910	E&M0640, YSW0925	
	ABWF installation	30	0 07/08/13	06/09/13	18/05/14	16/06/14	284d	YSW0900, YSW0915	KD0040	
	orage Tank	- I I		1	1	1				
	ELS & excavate to formation (-1.5mPD Approx.)	16	100 17/09/12 A		17/09/12 A			YSW07609	YSW1480	
	Sub-structure construction	14	100 03/10/12 A		03/10/12 A	16/10/12 A		YSW1470	YSW1490	
	Backfill & extract sheetpile	3	100 17/10/12 A			19/10/12 A		YSW1480	YSW1500	
SW1500	Superstructure construction upto +10.5mPD	41	100 20/10/12 A	29/11/12 A	20/10/12 A	29/11/12 A		YSW1490	YSW1530, YSW1536	
	05/05/10 Early bar									Dat
late	13/01/17 Progress bar Critical bar							ng Corp. Ltd.		30/04/13
late	30/04/13 Cirica ba 20/05/13 ▲ Progress point		-	<u> </u>		ntract No.		009/13 t Works at YSW & SKW		

Progress point Critical point Summary point Start milestone point Run date 20/05/13 Page number 4A c Primav era Systems, Inc.

Construction of Sewage Treatment Works at YSW & SKW 3-month Rolling Programme (May 2013 - July 2013

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	Activity ID	Description		Percent Complete	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors		APR		
	YSW1530	Underground pipeline works	40	0	30/04/13	08/06/13	21/04/13	30/05/13	-9d	YSW1500	E&M0690, YSW1680	1		<b> -</b> [	
	YSW1536	Water tightness test	40	0	30/04/13	08/06/13	20/03/13	28/04/13	-41d	YSW1500	YSW1538				
	YSW1538	Apply protective paint	30	100	04/03/13 A	05/03/13 A	04/03/13 A	05/03/13 A		YSW1536	YSW1540	1	<u> </u>		H
	YSW1540	ABWF installation	40	20	03/04/13 A	10/07/13	03/04/13 A	30/05/13	-41d	YSW1538	E&M0690			÷	
	Road, Drain, (	Cable Draw Pits & Ducting					•	<u> </u>			•				
	YSW16601	ELS & excavate 6m deep sewer (FM1 - YFMH13)	60	0	04/05/13	03/07/13	19/01/13	19/03/13	-106d	YSW0760, YSW16606, YSW16607,	YSW16602	1			┝╾╘
	YSW16602	Lay pipe & backfill 6m deep sewer (FM1 - YFMH13	) 45	0	03/07/13	17/08/13	20/03/13	03/05/13	-106d	YSW16601	E&M0680, YSW1700	1			1 !
	YSW16603	Construct UU & pipes along sea side (Grid Q-X)	60	0	03/05/13	02/07/13	24/03/13	22/05/13	-41d	YSW16607, YSW16608	YSW16604, YSW16703	1			
	YSW16604	Construct UU & pipes along sea side (Grid XA-D)	60	0	02/07/13	31/08/13	23/05/13	21/07/13	-41d	YSW16603	YSW16605, YSW16701	1	1 1 1 1 1 1		11
	YSW16605	Construct UU & pipes along sea side (Grid D-Q)	60	0	31/08/13	30/10/13	22/07/13	19/09/13	-41d	YSW16604	YSW16702, YSW1700	<b>-</b>			Ė
	YSW16606	Construct UU & pipes along hill side (Grid D-Q)	90	95	10/10/12 A	04/05/13	10/10/12 A	18/01/13	-106d	YSW07610	YSW0840, YSW16601				
	YSW16607	Construct UU & pipes along hill side (Grid Q-X)	72	95	20/08/12 A	03/05/13	20/08/12 A	18/01/13	-105d	YSW07610	YSW16601, YSW16603				
	YSW16608	Construct UU & pipes along hill side (Grid XA-D)	72	95	30/11/12 A	03/05/13	30/11/12 A	18/01/13	-105d	YSW07610	YSW16601, YSW16603, YSW1690				
	YSW16701	Construct Boundary Wall (Grid XA-D)	80	90	10/01/13 A	08/09/13	10/01/13 A	19/09/13	11d	YSW16604	YSW16702				
	YSW16702	Construct Boundary Wall (Grid D-Q)	80	0	30/10/13	18/01/14	20/09/13	08/12/13	-41d	YSW16605, YSW16701	YSW16703	1			
	YSW16703	Construct Boundary Wall (Grid Q-X)	80	0	18/01/14	08/04/14	09/12/13	26/02/14	-41d	YSW16603, YSW16702	YSW16704, YSW1700			н	ī
	YSW16704	ABWF installation for Boundary Wall	240	0	30/10/13	27/06/14	20/10/13	16/06/14	-11d	YSW16703	KD0040	1			
	YSW1680	Fire Hydrant & pipeline installation	120	10	26/01/13 A	24/09/13	26/01/13 A	14/10/13	20d	YSW1530	YSW1690, YSW1700				
	YSW1690	Construction of Road Kerbs, Downpipes, U-chann	el 180	25	02/01/13 A	06/02/14	02/01/13 A	26/02/14	20d	YSW16608, YSW1680	YSW1700				
	YSW1700	Road Paving	110	0	08/04/14	27/07/14	27/02/14	16/06/14	-41d	YSW16602, YSW16605, YSW16703, YSW1680, YSW1690	KD0040	1	111111	н	1
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	Submarine Outfa			1						KD0020		4	111111		1
	YSW0180	Coordination of HEC	53	100		08/07/10 A				KD0020	YSW0350 YSW0210	-			
	YSW0200	Submission and Approval of Ecologist	60	100	17/05/10 A	15/07/10 A	17/05/10 A	15/07/10 A		YSW0200	YSW0350	-			1
	YSW0210	Ecology Survey	211	100	16/07/10 A	11/02/11 A	16/07/10 A	11/02/11 A		KD0020	YSW0230	-			
	YSW0220	Submission and Approval of In. Hydro Survey	103	100	17/05/10 A	27/08/10 A	17/05/10 A	27/08/10 A		YSW0220	YSW0350	-			
	YSW0230 YSW0240	Hydrogrophical Survey (YSW) Material Submission, Approval of HDPE pipe	319	100	28/08/10 A 17/05/10 A	31/01/11 A 31/03/11 A	28/08/10 A 17/05/10 A	31/01/11 A 31/03/11 A		KD0020	YSW0360		FITITE		( - i-
	YSW0240	Clarify Coordinate of Point Y (Reply of RFI 010)	83	100		18/09/10 A	28/06/10 A	18/09/10 A		KD0020	YSW0250	4	1 1 1 1 1 1		1 !
	YSW02401	Submit and Approval of Method Statement for HDE		100	19/09/10 A	25/03/11 A	19/09/10 A	25/03/11 A		YSW02401	YSW0260, YSW0270, YSW0340	-			( i
	YSW0250	Submission of HDD Method Statement to HEC	188	100		08/04/11 A	26/03/11 A	08/04/11 A		YSW0250	YSW0340	-			
	YSW0200	Additional G.I. Boreholes (YSW)	123	100 100	19/09/10 A	19/01/11 A	19/09/10 A	19/01/11 A		YSW0250	YSW0280, YSW0290	-			i
	YSW0280	Submission of propose alignment	44			04/03/11 A	20/01/11 A	04/03/11 A		YSW0270	YSW0310, YSW0340	+	LILII. IIIIII		
	YSW0200	Submission of Marine Notice	69	100 100		29/03/11 A	20/01/11 A	29/03/11 A		YSW0270	YSW0350	-			i
	YSW0230	Construction of Entry Pit and Preparation Work	27	100			05/03/11 A			YSW0280	YSW0320	-			
	YSW0320	Prepare of HDD Drill Rig Set-up (YSW)	28		01/04/11 A		01/04/11 A			YSW0310	YSW0330, YSW0350	-	111111		i
	YSW0330	Establishment of HDD plant & equipment	6	100			09/04/11 A			YSW0320	YSW0340	-			
	YSW0340	Setting up at drillhole location	14	100		1	15/04/11 A			YSW0250, YSW0260, YSW0280,	YSW0350	+		nd H	( - i-
	YSW0350	Drill pilot hole and reaming hole - NS400 - 530m	229	100		13/12/11 A	29/04/11 A	13/12/11 A		YSW0040, YSW0180, YSW0210,	YSW0360	-			
	YSW0360	Installation of NS400 HDPE 530m	17	100	14/12/11 A	30/12/11 A				YSW0240, YSW0350	SKW1181, YSW03601, YSW03620,	-	111111	н	i
	YSW03601	Demobilization of HDD plant & equipment	7	100		1				YSW0360	YSW03605, YSW03641, YSW0730	-			
	YSW03605	Remove Entry pit of HDD	14	100			07/01/12 A			YSW03601	YSW0730	-	111111	н	i i
	YSW03620	Removal of Receiving Pit	14	100			31/12/11 A			YSW0360	YSW0365		LILIL IIIIII		 
	YSW03641	Prepare backfilling material under VO 046A	120	100		1				YSW03601	YSW0365	1	111111	н	I.
	YSW0365	Set up of Silt Curtain as per EP	2	100		24/11/12 A	23/11/12 A			SKW1431, YSW03620, YSW03641	YSW0370	1			
	YSW0370	Dredging of Marine Deposit for Diffuser (YSW)	5	100		29/11/12 A	24/11/12 A	29/11/12 A		YSW0360, YSW0365	YSW0380	1	111111	н	1
	YSW0380	Diffuser Construction (YSW)	60	65		20/05/13	30/11/12 A		10d	YSW0370	E&M0690, YSW0400, YSW08301				
	YSW0400	Removal of silt curtain	30		21/05/13	19/06/13	18/05/14	16/06/14	362d	YSW0380	KD0040	+			
	E&M Works - Y	/SW STW		ů	I	I	<b>I</b>				<b>I</b>		<u> </u>		
	E&M0360	Delivery of MBR Memb. Mod. (MBR Tk 4)	118	100	24/02/11 A	21/06/11 A	24/02/11 A	21/06/11 A		E&M0160	E&M0510	1			1 !
	E&M0370	Delivery of MBR Membrane Modules - 2nd Shipme	nt 236	100		17/10/11 A	24/02/11 A	17/10/11 A		E&M0160	E&M0520	1			
	E&M0380	Delivery of Grit Removal Equipment	81	100		29/12/11 A	10/10/11 A	29/12/11 A		E&M0150	E&M0530	1			1 !
	E&M0390	Delivery of Coarse Screens	129	100		12/01/12 A	06/09/11 A	12/01/12 A		E&M0110	E&M0540	1			¦ ;
	E&M0400	Delivery of Fine Screens	80	100	12/09/11 A	30/11/11 A	12/09/11 A	30/11/11 A		E&M0120	E&M0550	1	 L 1_ 1_ _		
	E&M0410	Delivery of Pumps	75	100	23/06/11 A	05/09/11 A	23/06/11 A	05/09/11 A		E&M0130	E&M0560				 
	E&M0420	Delivery of Submersible Mixers	230		26/02/11 A	26/02/11 A	26/02/11 A	26/02/11 A	İ	E&M0140	E&M0570	1	1 1 1 1 1 1		
St/	art date	05/05/10 Early bar	1					-				<u> </u>		)ate	
		13/01/17 Progress bar					Leader (	Civil Engi	neerir	ng Corp. Ltd.		ŀ	30/04/1		
		30/04/13 Critical bar						ntract No.		• •		ŀ	55/04/1	5	
		20/05/13 A Progress point			Co	onstructio				t Works at YSW & SKW		ŀ			
	0	5A Critical point Summary point						•		ay 2013 - July 2013		ŀ		—	
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Activity ID	Description		Percent Complete	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	APR	2013 MAY
E&M0440	Delivery of Sludge Dewatering Equipment	558	70	31/08/11 A	14/10/13	31/08/11 A	10/08/13	-65d	E&M0170	E&M0580		
E&M0450	Delivery of Valves, Pipes & Fittings	560	90	30/08/11 A	26/11/13	30/08/11 A	07/11/13	-19d	E&M0180	E&M0590		
E&M0460	Delivery of Penstocks	135	100	12/08/11 A	24/12/11 A	12/08/11 A	24/12/11 A		E&M0190	E&M0600, E&M0605		
E&M0470	Delivery of Instruments	232	100	03/11/11 A	21/06/11 A	03/11/11 A	21/06/11 A		E&M0200	E&M0610		
E&M0480	Delivery of MCC LVSB	90	100	03/12/12 A	04/03/15 A	03/12/12 A	04/03/15 A		E&M0210	E&M0620		
E&M0490	Delivery of BS Equipment	446	65	10/12/11 A	18/07/14	10/12/11 A	05/06/13	-408d	E&M0220	E&M0630		
E&M0500	Delivery FS Equipment	507	25	11/12/11 A	11/03/15	11/12/11 A	16/05/13	-664d	E&M0230	E&M0330, E&M0640		
E&M0510	Install Membrane Modules in MBR Tank no. 4	89	100	03/11/12 A	28/02/13 A	03/11/12 A	28/02/13 A	Ì	E&M0360, YSW0705	E&M0690 ;	in MBR Tank no. 4	I
E&M0520	Install Membrane Modules in MBR Tank No. 1 to 3	57	100	03/12/12 A	28/02/13 A	03/12/12 A	28/02/13 A		E&M0370, YSW08302, YSW08303	E&M0690	in MBR Tank No. 1 to 3 = = = =	
E&M0530	Install Grit Removal Equipment	122	100		30/09/12 A	01/06/12 A	30/09/12 A		E&M0380, YSW05923	E&M0590, E&M0660	·	<mark>-</mark>
E&M0540	Install Coarse Screens	240		23/04/12 A	23/05/13	23/04/12 A	22/04/13	-31d	E&M0390, YSW05923	E&M0660		Install Coarse S
E&M0550	Install Fine Screens	122		01/06/12 A	24/05/13	01/06/12 A	12/03/13	-73d	E&M0400, YSW05923	E&M0590, E&M0660		Install Fine Sc
E&M0560	Install Pumps	355	60	23/04/12 A	18/09/13	23/04/12 A	22/04/13	-149d	E&M0410, YSW05923	E&M0660		<u> </u>
E&M0570	Install Submersible Mixers	163	50		20/07/13	15/01/13 A	22/04/13	-89d	E&M0420, YSW07204	E&M0660, E&M0690	+++++++++++++++++++++++++++++++++++	
E&M0580	Install Sludge Dewatering Equipment	361		29/05/12 A	02/12/13	29/05/12 A	31/05/13	-185d	E&M0440, YSW06023	E&M0690		
E&M0590	Install Valves, Pipes & Fittings	232	10	15/01/13 A	13/08/13	15/01/13 A	01/06/13		E&M0450, E&M0530, E&M0550,	E&M0650, E&M0690		
E&M0600	Install Penstocks (Batch 1, GL H - T)	213		23/04/12 A	21/05/13 A	23/04/12 A	21/05/13 A	700	E&M0460. YSW07202	E&M0690		Install Penstocks
E&M0605	Install Penstocks (Batch 2, GL A - F)	131	100	02/01/13 A	08/06/13	02/01/13 A	30/05/13 A	04	E&M0460, YSW08302	E&M0690		
	, , ,		/0						E&M0470, YSW07055, YSW0810,	E&M0690		
E&M0610		74	5	02/01/13 A	11/08/13	02/01/13 A	01/06/13	-700		E&M0660, E&M0680		
E&M0620	Install SAT, MCC & LVSB	8		02/01/13 A	02/01/15 A	02/01/13 A	02/01/15 A		E&M0480, YSW0810	,	· · · · · · · · · · · · · · · · · · ·	
E&M0630	Install BS Equipment	180	50	02/01/13 A	17/08/14	02/01/13 A	05/07/13		E&M0490, YSW0810, YSW0820	E&M0690		
E&M0640	Install FS Equipment	180	5	02/01/13 A	30/04/15	02/01/13 A	05/07/13	-664d	E&M0500, YSW0705, YSW0810,	E&M0690		
E&M0650	Hydraulic Tests of Pipeworks	153		02/01/13 A	15/08/13	02/01/13 A	06/06/13	-69d	E&M0590, YSW08302	E&M0690	+ + + + + + + +	
E&M0660	Cabling Works	15	20	04/02/15 A	12/01/15	04/02/15 A	04/05/13	-618d	E&M0530, E&M0540, E&M0550, E&M0560, E&M0570, E&M0620	E&M0670	1111111	1
E 9 M0 C 70	Inculation Tests of Cobles and Coble Termineties			10/01/15	07/00/15	05/05/10	20/05/12	6104	E&M0320, E&M0325, E&M0660,	E&M0690		
E&M0670	Insulation Tests of Cables and Cable Termination	n 26	0	12/01/15	07/02/15	05/05/13	30/05/13		E&M0305, E&M0325, E&M0620,	E&M0670		i i
E&M0680	Energization	1	0	31/12/14 *	01/01/15	04/05/13	04/05/13		E&M0510, E&M0520, E&M0570,			
E&M0690	Functional and Performance Tests of Equipment	35	20	25/03/15 A	22/04/15	25/03/15 A	27/06/13 *	-6640	E&M0580, E&M0590, E&M0600,	E&M0700	i ii ii ii ii ii	i
									E&M0605, E&M0610, E&M0630, E&M0640, E&M0650, E&M0670,			
									YSW0380, YSW08301, YSW1530, YSW1540		i i i i i i	i
E&M0700	T&C Period	137	0	22/04/15	06/09/15	12/12/13	27/04/14	_497d	E&M0330, E&M0690	E&M0730, KD0040		
E&M0730	Trial Operation Period	413	0	06/09/15	13/01/17	28/04/14	14/06/15		E&M0700	KD0132	ritinine	
		413	0	00/03/13	13/01/17	20/04/14	14/00/13	-4970				I
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Preliminary				1	1							
	Approval of Environmental Team	16		17/05/10 A					KD0020	SKW0260		
SKW0260	Baseline monitoring (Air & Noise)	14		02/06/10 A		02/06/10 A			SKW0250	SKW0242, SKW0265, SKW0592, SKW0681,		1
SKW0265	Baseline Monitoring Submission (A & N)	14	100	16/06/10 A	08/07/10 A	16/06/10 A	08/07/10 A		SKW0260	SKW0242, SKW0592, SKW0681, SKW0921,		
	ootpath Diversion in Portion G											i
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SKW0240	Site Clearance	21		17/05/10 A		17/05/10 A				SKW0241	1111111	i
SKW0241	Initial Survey	9	100	07/06/10 A	15/06/10 A	07/06/10 A	15/06/10 A		SKW0240	SKW0242		
SKW0242	Retaining Wall Bay 0-10 (Incl. VO. 001A)	177	100	30/06/10 A	23/12/10 A	30/06/10 A	23/12/10 A		SKW0241, SKW0260, SKW0265	SKW0461	i i i i i i	
SKW0461	Utilities Laying and Diversion	70	100	24/12/10 A	03/03/11 A	24/12/10 A	03/03/11 A		SKW0242	SKW0471		1
SKW0471	Concreting for Pavement	7	100	04/03/11 A	10/03/11 A	04/03/11 A	10/03/11 A		SKW0461	SKW0481		
SKW0481	Footpath Diversion - Stage 1	14	100	11/03/11 A	24/03/11 A	11/03/11 A	24/03/11 A		SKW0471	KD0050, SKW04811, SKW0491		
SKW04811	Excavate for FP transition at CH0-35 &CH130-141	37	100	25/03/11 A	30/04/11 A	25/03/11 A	30/04/11 A		SKW0481	SKW04821		
SKW04821	Construction of Drainage outfall near bay 10	3		0.1/05/11.1	03/05/11 A	01/05/11 A	03/05/11 A	Ì	SKW04811	SKW04831		i
SKW04831	Cable diversion by HEC	26	100		29/05/11 A	04/05/11 A	29/05/11 A		SKW04821	SKW04841		
SKW04841	Diversion of Ducting and Drawpit by PCCW	12				20/05/11 A			SKW04831	SKW04851	i i i i i i	
SKW04851	Soil backfilling behind FP retaining wall	14			1	01/06/11 A		1	SKW04841	SKW04861		
SKW04861	Concreting for footpath pavement	7	100		21/06/11 A				SKW04851	SKW04871		
SKW04871	Relocation of Temp Safety Fence at SKW STW A	, -G 57			17/08/11 A				SKW04861	SKW04881	1111111	1
SKW04871	Disposal of excavation material at A-G SKW STW		100	18/08/11 A	02/01/12 A				SKW04871	SKW04885		
		130	100						SKW04881	SKW1261		i
SKW04885	Footpath Diversion - Stage 2	7	100			03/01/12 A						
SKW0491	Removal of Haul Road after SKW STW	7	0	08/10/14	14/10/14	29/05/15	04/06/15	233d	KD0090, SKW0481, SKW1401	SKW0501		
Start date	05/05/10 Early bar										Date	Revision
Finish date	13/01/17 Progress bar					Leader C	ivil Enai	ineeri	ng Corp. Ltd.		30/04/13	Revision 0
Data date	30/04/13 Critical bar						ntract No.					
Run date	20/05/13 A Progress point			C	onstructio				t Works at YSW & SKW	1		
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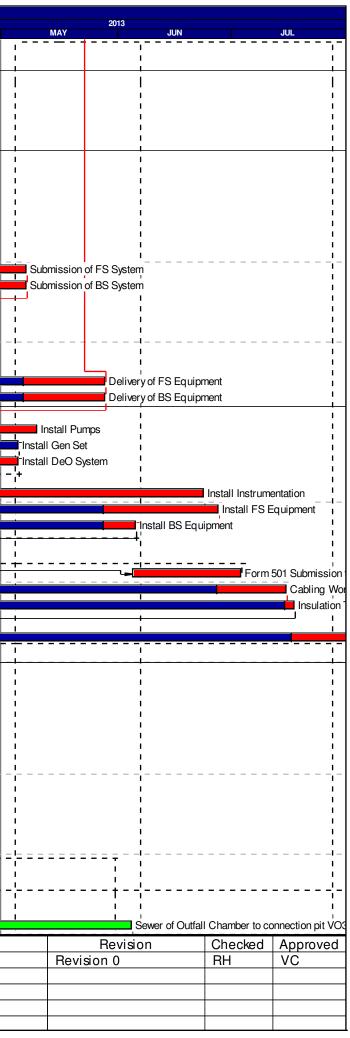
Activity ID	Description	Original Percer Juration Completion		Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	AP	R		МАҮ	2013	JUN		JL
SKW0501	Concreting for no-fine concrete	14	0 08/10/14	21/10/14	29/05/15	11/06/15	233d SK\	W0491	SKW0511		• • • • • • • • •	1	W/AT	1	3014	J	
SKW0511	Wall Tie & Stone Facing	14	0 22/10/14	04/11/14	12/06/15	25/06/15	233d SKV	W0501	SKW0521			i i		i			i i
SKW0521	Gabion Wall & Geotextile	30	0 05/11/14	04/12/14	26/06/15	25/07/15	233d SK\	W0511	SKW0531					1			
SKW0531	Installation of Flower Pot	7	0 05/12/14	11/12/14	26/07/15	01/08/15	233d SK\	W0521	SKW0541					1			
SKW0541	Completion of Outstanding Works	42	0 12/12/14	22/01/15	02/08/15	12/09/15	233d SK\	W0531	KD0125	тг	πποπ	il					
Section W 4 - Slo	ope W orks in Portions H & I	<u> </u>	•				1 1		I					I			
Geotechnical W	•									- I		i		I			- i i
	Construct scaffolding access	30	100 15/06/10 A	14/07/10 A	15/06/10 A	14/07/10 A	KDO	0020	SKW0590					1			
SKW0590	Site Clearance for Slope		100 15/07/10 A	22/10/10 A		22/10/10 A	SK	W0588	SKW0591	1 1		i -		I			1 I
SKW0591	Initial Survey for Slope		100 21/09/10 A	18/10/10 A	21/09/10 A	18/10/10 A	SKI	W 0590	SKW0592								- : :
SKW0592	Temporary Rockfall fence at ex. Footpath		100 31/08/10 A	12/10/10 A	31/08/10 A	12/10/10 A	SKI	W0260, SKW0265, SKW0591	SKW05931	1 1		i i		i			i i
SKW05931	Construction of Haul Road (To +30mPD)		100 03/09/10 A	22/10/10 A		22/10/10 A	SKI	W0592	SKW05932								
SKW05932	Construction of Haul Road (To +42.5mPD)		100 23/10/10 A	29/12/10 A	23/10/10 A	29/12/10 A	SKI	W05931	SKW059322	+r	πποπ	∦-i		i-			ii-
SKW059321	Removal of Boulders (IBG 1 - 119, SI No. 11B)		100 03/11/10 A	03/03/11 A		03/03/11 A			SKW059411								- : :
SKW059322	Add. Site Invest. Works (VO. No. 9,12 &16)		100 11/01/11 A	03/07/11 A		03/07/11 A	SKI	W05932	SKW059341	1 1		l i		i			i i
SKW059323	Revised Profile at West Slope (+56 to +42.5mPD)		100 17/03/11 A	17/03/11 A		17/03/11 A			SKW059324								
SKW059324	Construction of Haul Road (+42.5 to +56mPD)		100 18/03/11 A	29/03/11 A		29/03/11 A	SK\	W 059323	SKW059325			i		i			i i
SKW059325	Removal of Boulders (IBG 120-139, SI No. 11C)		100 30/03/11 A	15/04/11 A		15/04/11 A	SKI	W059324	SKW05933			H - I					
SKW05933	West Slope Cutting (+56mPD to +42.5mPD)		100 16/04/11 A	17/04/11 A		17/04/11 A	SK\	W 059325	SKW059331			i		i			i i
SKW059331	Removal of Boulders (IBG 140-189, SI No. 11D)		100 18/04/11 A	01/06/11 A		01/06/11 A		W 05933	SKW05934								
SKW05934	West Slope Cutting (+42.5mPD to +35mPD)	-	100 02/06/11 A	03/07/11 A		03/07/11 A		W059331	SKW059341			i		i			i i
SKW059341	Revised Profile at West Slope (+20 to +4.8mPD)		100 04/07/11 A	04/07/11 A		04/07/11 A		W059322, SKW05934	SKW05935			1		!			_ ! !
SKW05935	West Slope Cutting (+35mPD to +27.5mPD)		100 08/07/11 A	28/09/11 A		28/09/11 A		W059341	SKW05936			∦ - ;					·
SKW05936	West Slope Cutting (+27.5mPD to +20mPD)		100 29/09/11 A	28/11/11 A		28/11/11 A		W 05935	SKW05937			ll !		!			<u> </u>
SKW05937	West Slope Cutting (+20mPD to +20mPD)		100 29/09/11 A 100 29/11/11 A	06/01/12 A		06/01/12 A		W 05936	SKW05938								
SKW05937			100 29/11/11 A 100 07/01/12 A	27/03/12 A		27/03/12 A		W 05937	KD0060, SKW1261, SKW1311, SKW1371			<u> </u>		1			
	West Slope Cutting (+12.5mPD to +4.8mPD)							0060	SKW05942								
SKW05941	Slope Stormwater Drainage		100 28/03/12 A			25/05/12 A		W 059321	SKW059412	++	ннн	- <u>-</u>					
	East Slope Cutting (+50mPD to +42.5mPD)		100 04/03/11 A	14/05/11 A	04/03/11 A	14/05/11 A		W059321	SKW059412 SKW059413					1			
SKW059412	East Slope Cutting (+42.5mPD to +35mPD)		100 15/05/11 A	04/08/11 A		04/08/11 A		W059411	SKW059413 SKW059414			i i		I			i i
SKW059413	East Slope Cutting (+35mPD to +27.5mPD)		100 05/08/11 A	28/09/11 A		28/09/11 A								1			
	East Slope Cutting (+27.5mPD to +20mPD)		100 29/09/11 A	28/11/11 A		28/11/11 A		N059413	SKW059415			l i		i			i i
SKW059415	East Slope Cutting (+20mPD to +12.5mPD)		100 29/11/11 A			06/01/12 A		N059414	SKW059416		HHH	H					·¦¦-
SKW059416	East Slope Cutting (+12.5mPD to +4.8mPD)		100 07/01/12 A			27/03/12 A		N059415	KD0060, SKW1311, SKW1371			l i		i			i i
SKW05942	Slope Miscellaneous Works		100 26/05/12 A			31/07/12 A		N05941	SKW05943, SKW0595		   +   +   -	∐_¦					'' _
	Buttress & surface Protection (SI No. 31)		100	31/07/12 A				N 05942	SKW05944			i		i			i i
SKW05944	Slope Treatment (SI. No. 36)		100			31/07/12 A		N 05943	SKW05945								
SKW05945	Rock Slope Treatment (SI. No. 68)		100 01/08/12 A			30/09/12 A		N 05944	SKW05946		ннн	∦ _ i					·ii -
SKW05946	Rock Slope Treatment (SI. No. 98)		100	28/02/13 A		28/02/13 A		W05945	SKW05947								_ : :
SKW05947	Rock Slope Treatment (SI. No. 115)		100 01/11/12 A			28/02/13 A	SKI	W05946	KD0135	No. 115)	iiiiii	i		i			i i l
SKW05948	Soil Nailing Works (VO. No. 52)		100 10/02/12 A	28/02/13 A		28/02/13 A			SKW05963	lo. 52)							- : :
SKW0595	Rock Meshing	60	0 06/02/14	06/04/14	07/08/15	05/10/15		N05942, SKW05972	KD0165	-		i		i			i
SKW05963	Determine Alignment & Foundation Design of RFB		100 10/02/12 A	08/06/12 A		08/06/12 A		W 05948	SKW059631, SKW05964, SKW05965		łaał						
SKW059631	GEO Approval of Foundation Design		100 09/06/12 A			31/07/12 A		N 05963	SKW05968	4		i		1			- i i
SKW05964	Fabrication & Shipping of RFB Material		100 09/06/12 A			30/11/12 A		N 05963	SKW05972					ا 1			
SKW05965	Site clearance & Formation of access		100 09/06/12 A			31/07/12 A		N 05963	SKW05967		+ 1+ 1+ 1+			·			·
SKW05967	Plant mobilization		100 02/01/13 A			15/01/13 A		W 05965	SKW05968		111111	<u>   '</u>		1			<u> </u>
SKW05968	Construction of anchors & pull out test	180	70 16/01/13 A	22/06/13		21/12/14		W059631, SKW05967	SKW05969		+ 14 14 14	4 - I	+		Const	ruction of and	hors & pull o
SKW05969	Construction of Foundation	120	60 11/07/13 A	09/08/13		07/02/15	547d SK		SKW05970	4		!		1			
SKW05970	Proof Load Test	60	0 10/08/13	08/10/13	08/02/15	08/04/15	547d SK		SKW05971	4				I I			
SKW05971	Transportation of Material (To the slope crest)	30	0 09/10/13	07/11/13	09/04/15	08/05/15	547d SK\		SKW05972	_		!		I			<u> </u>
SKW05972	Installation of Flexible barrier	90	0 08/11/13	05/02/14	09/05/15	06/08/15	547d SK\	N05964, SKW05971	KD0165, SKW0595					I			
Section W 5 - P.S	S. No. 1 in Portion D										111111	!		1			<u> </u>
Civil & Geotech	nical Works													I I			
SKW0651	Site Clearance		100 17/05/10 A	23/05/10 A	17/05/10 A	23/05/10 A	KDO	0020	SKW0652			!		I.			
SKW0652	Initial Survey	7	100 24/05/10 A	30/05/10 A	24/05/10 A	30/05/10 A	SK	W0651	SKW0661, SKW0681					I			
													· · · · ·				
	05/05/10 Early bar										Date	е		Revision		ecked A	
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	Statt milestone point																

Start date	05/05/10		Early bar
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Data date	30/04/13		Summary bar
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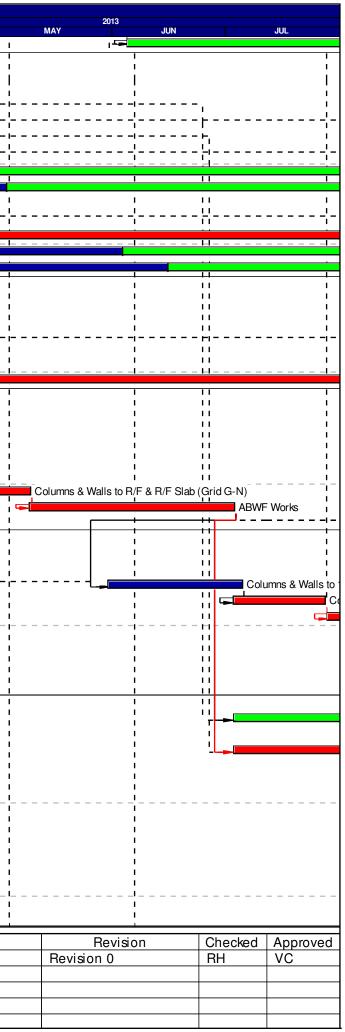
	Activity ID	Description		Percent Complete	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	APR		
	SKW0661	Transplantation for uncommon vegatation	30	100	31/05/10 A	29/06/10 A	31/05/10 A	29/06/10 A		SKW0652	SKW0681			
	SKW0681	Excavate to lower the working platform to +3mPD	) 49	100	30/06/10 A	17/08/10 A	30/06/10 A	17/08/10 A		SKW0260, SKW0265, SKW0652,	SKW0691	1 11111		1
	SKW0691	ELS to +2.2mPD	40	100	18/08/10 A	26/09/10 A	18/08/10 A	26/09/10 A		SKW0681	SKW0721			l i
	SKW0721	Excavate to formation	270	100	17/09/10 A	13/06/11 A	17/09/10 A	13/06/11 A		SKW0691	SKW0741		ı	Ē
	SKW0722	Construction of Manholes (VO. No. 21A)	107	20	28/10/13 A	22/12/13	28/10/13 A	08/07/14	198d	E&M11800	E&M3360			
	Structural Work	ſS												
	SKW0741	RC Works for Structure	240		14/06/11 A	08/02/12 A	14/06/11 A	08/02/12 A		SKW0721	KD0070, SKW0841			
	SKW0841	ABWF works	60		09/02/12 A	08/04/12 A	09/02/12 A	08/04/12 A		SKW0741	E&M1101, E&M1102, E&M1103, E&M1104,		!  /	1
	SKW0861	300mm U-channel & 675mm Step Channel	30	0	28/09/13	27/10/13	06/09/15	05/10/15	708d	E&M11800, SKW0841	KD0165		77	- ¦
	E&M Works (PS	S1)										11111		
	Submission &			-		-	-				-			l i
	E&M1001	Submission of Pumps	198	100	17/05/10 A	24/02/11 A	17/05/10 A	24/02/11 A		KD0020	E&M1011	11111		
	E&M1002	Submission of Gen-Set	198	100	17/05/10 A	24/02/11 A	17/05/10 A	24/02/11 A			E&M1012			l i
	E&M1003	Submission of DeO System	198	100	17/05/10 A	16/07/13 A	17/05/10 A	16/07/13 A			E&M1013			
	E&M1004	Submission of LV SB & MCC	180	100	17/05/10 A	09/01/12 A	17/05/10 A	09/01/12 A			E&M1014		ı	
	E&M1005	Submission of Instrumentation	243	100	17/05/10 A	12/03/12 A	17/05/10 A	12/03/12 A			E&M1015	11111 11111		-
	E&M1006	Submission of FS System	243	100	17/05/10 A	30/09/12 A	17/05/10 A	30/09/12 A			E&M1016			Ĺ
	E&M1007	Submission of BS System	243	97	17/05/10 A	07/05/13	17/05/10 A	06/12/13	213d		E&M1017			
	E&M1011	Delivery of Pumps	150	100	24/02/11 A		24/02/11 A	21/07/11 A		E&M1001	E&M1101			1 !
	E&M1012	Delivery of Gen-Set	150	100	24/02/11 A	23/09/11 A	24/02/11 A	23/09/11 A		E&M1002	E&M1102	11111		
	E&M1013	Delivery of DeO System	150	100	11/07/11 A	28/10/11 A	11/07/11 A	28/10/11 A		E&M1003 E&M1004	E&M1103 E&M1104		-	-!
	E&M1014	Delivery of LV SB & MCC	150	100	01/06/12 A	31/07/12 A	01/06/12 A	31/07/12 A		E&M1004	E&M1104	11111		
	E&M1015	Delivery of Instrumentation	90		01/11/11 A	03/11/11 A		03/11/11 A				11111	<u>.                                    </u>	
	E&M1016	Delivery of FS Equipment	107			21/05/13	01/12/11 A		198d		E&M1106	11111		
	E&M1017	Delivery of BS Equipment	107	80	15/11/11 A	28/05/13	15/11/11 A	27/12/13	213d	E&M1007	E&M1107			
	Installation, T	-		1		1					1		i	i i
	E&M1101	Install Pumps	55	00		05/05/13	02/10/12 A	04/01/14	245d		E&M1110, E&M1140			
	E&M1102	Install Gen Set	55		02/10/12 A	05/05/13 A		05/05/13 A	0.15	E&M1012, SKW0841	E&M1110, E&M1140	1111	ч	<u> </u>
	E&M1103	Install DeO System Install LV SB & MCC	55		03/12/12 A	05/05/13	03/12/12 A	04/01/14	245d	E&M1013, SKW0841 E&M1014, SKW0841	E&M1110, E&M1140 E&M1140		<u>, t</u>	- 1
	E&M1104		55		02/01/13 A	26/03/13 A	02/01/13 A	26/03/13 A	a / = 1			all LV SB & MCC	<u>ı l</u>	L I
	E&M1105	Install Instrumentation	55		01/11/12 A	01/06/13	01/11/12 A	04/01/14	-	E&M1015, SKW0841	E&M1140		H H	- 1
	E&M1106	Install FS Equipment	55	-	02/10/12 A	20/06/13	02/10/12 A	04/01/14	198d	E&M1016, SKW0841 E&M1017, SKW0841	E&M1130, E&M1140 E&M1110, E&M1140		ш	<u> </u>
	E&M1107	Install BS Equipment Install Valves, Pipes & Fittings	55		02/10/12 A	05/06/13	02/10/12 A	04/01/14	2130	E&M1101, E&M1102, E&M1103,	E&M1120	tall Values, Dines & Fi	ittin	
	E&M1110		46			27/03/13 A	02/01/13 A	27/03/13 A	0.40.1			tall Valves, Pipes & Fi		JS
	E&M1120	Hydraulic Test of Pipeworks	/		09/05/13 A		09/05/13 A		249d		E&M11800			l i
	E&M1130	Form 501 Submission to FSD	28	Ů	20/06/13	18/07/13	16/01/14	13/02/14	210d		E&M11800			-
	E&M1140	Cabling Works	43		21/05/13 A	29/06/13	21/05/13 A	13/01/14	198d		E&M1150 E&M1160		ı	l i
	E&M1150 E&M1160	Insulation Tests of Cables and Cable Termination			25/06/13 A 01/07/13 A	30/06/13 02/07/13	25/06/13 A 01/07/13 A	14/01/14 17/01/14	198d 198d		E&M1170	11111		
	E&M1170	Functional and Performance Tests of Equipmen	3 nt 30	-	01/07/13 A 02/01/13 A	29/07/13	02/01/13 A	13/02/14	1980 198d		E&M11800			
	E&M11800	Commissioning Test	60		30/07/13	27/09/13	13/02/14	14/04/14	1980 1980		SKW0722, SKW0861			
			00	0	30/07/13	27/09/13	13/02/14	14/04/14	1900				<u>п</u> п	
	Civil & Geotech	ewer and PS No.2 in Portions E&H										11111		
	SKW0881	Site Clearance	7	100	17/05/10 A	23/05/10 A	17/05/10 4	23/05/10 A		KD0020	SKW0891			1
	SKW0881	Plant mobilization	7		17/05/10 A	23/05/10 A	17/05/10 A	23/05/10 A		SKW0881	SKW0892	11111		
	SKW0892	Initial Survey	30	100	24/05/10 A			22/06/10 A		SKW0891	SKW0901			
	SKW0901	Tree Transplantation	90					20/09/10 A		SKW0892	SKW0921		ı	l i
	SKW0921	Cut Slope & U-Channel	14		21/09/10 A		21/09/10 A	04/10/10 A		SKW0260, SKW0265, SKW0901	SKW0931, SKW0951			
	SKW0931	Hoarding & Fencing	14	100	05/10/10 A		05/10/10 A	18/10/10 A		SKW0921	SKW0950, SKW0951		đ ji	(-i
	SKW0950	Removal of Rock Boulders before ELS	66		19/10/10 A	23/12/10 A	19/10/10 A	23/12/10 A		SKW0931	SKW0951			
	SKW0951	ELS & Excavate to formation	169	100	24/12/10 A		24/12/10 A	10/06/11 A		SKW0921, SKW0931, SKW0950	SKW0971		ı	l i
	SKW0961	Mass Conc. Retaining Wall	90		16/01/13 A	17/05/13		09/02/13	-97d	SKW1081	KD0155	1		- 1
	SKW1491	LCS (ChA0+45 to 1+75) VO.7	90		24/03/12 A	21/06/12 A		21/06/12 A		PRE0100, SKW1021	SKW15111			
	SKW15111	Twin DN150 DI Rising Main (ChA1+75 - ChA5+7		100	22/06/12 A	30/11/12 A	22/06/12 A	30/11/12 A		SKW1491	SKW1531	1111		
	SKW15112	Twin DN150 DI Rising Main (ChA0+00 - ChA0+4	15) 30		01/02/13 A	05/05/13	01/02/13 A	08/07/14	429d	SKW1581	E&M3360		.	
C+-	art date	05/05/10 Early bar	I			•	•							
	nish date	13/01/17 Progress bar					l aadar (	ivil Engi	neeri	ng Corp. Ltd.		Da 30/04/13		
	ata date	30/04/13 Critical bar						ntract No.				30/04/13	<u>,                                    </u>	
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		mber 8A 3-month Rolling Programme (May 2013 - July 2013												
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	Activity ID	Description	Original Juratior	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	APR	
	SKW1531	Extent village sewers S163.1 & S164.1	34	100	30/11/12 A	10/01/13 A	30/11/12 A	10/01/13 A		SKW15111	SKW1581		
	SKW1581	Construct Manhole no. S163 & S164	34		11/01/13 A	28/02/13 A	11/01/13 A	28/02/13 A		SKW1531	KD0135, SKW15112	63 & S164	
• • •	Structural Work	ks				1		1			1		
	SKW0971	Structural Works (Phase 1)	245	100	11/06/11 A	10/02/12 A	11/06/11 A	10/02/12 A		SKW0951	KD0080, SKW1021		
	SKW1021	Structural Works (Phase 2)	42		11/02/12 A	23/03/12 A	11/02/12 A	23/03/12 A		SKW0971	SKW1061, SKW1081, SKW1491		
	SKW1061	ABWF Works	90		24/03/12 A	21/06/12 A	24/03/12 A	21/06/12 A		SKW1021	E&M2101, E&M2102, E&M2103, E&M2104,		ı
	SKW1081	375mm U-channel/catchpits/outfall	30		22/06/12 A	31/01/13 A	22/06/12 A	31/01/13 A		SKW1021, SKW1061	KD0155, SKW0961		4
	E&M Works (PS	S2)		100			I			I			.+++
	Submission &	- /											i
	E&M2001	Submission of Pumps	198	100	17/05/10 A	24/02/11 A	17/05/10 A	24/02/11 A	1	KD0020	E&M2011	- !!!	
	E&M2002	Submission of Gen-Set	198	100	17/05/10 A	24/02/11 A	17/05/10 A	24/02/11 A			E&M2012	-   ii	1
	E&M2003	Submission of DeO System	198	100	17/05/10 A		17/05/10 A				E&M2013		
	E&M2004	Submission of LV SB & MCC	271	100	17/05/10 A	30/06/12 A	17/05/10 A	30/06/12 A			E&M2014	-   ;;	1
	E&M2005	Submission of Instrumentation	243		17/05/10 A	30/06/12 A	17/05/10 A	30/06/12 A			E&M2015	-   !!	
	E&M2006	Submission of FS System	243	100	17/05/10 A	07/05/13	17/05/10 A	04/09/12	-245d		E&M2016		<u>+ + -</u>
	E&M2007	Submission of BS System	243	01	17/05/10 A	07/05/13	17/05/10 A	26/09/12	-223d		E&M2017	-	
	E&M2011	Delivery of Pumps	150	01	24/02/11 A	21/07/11 A	24/02/11 A	21/07/11 A	2200	E&M2001	E&M2101		· <del>       </del>
	E&M2012	Delivery of Gen-Set	150	100	24/02/11 A	23/09/11 A	24/02/11 A	23/09/11 A		E&M2002	E&M2102		
	E&M2012	Delivery of DeO System	150	100	11/07/11 A	28/10/11 A	11/07/11 A	28/10/11 A		E&M2003	E&M2103	-  ::	
	E&M2014	Delivery of LV SB & MCC	150	100	29/02/12 A	31/07/12 A	29/02/12 A	31/07/12 A		E&M2004	E&M2104	+	
		,		100						E&M2005	E&M2105	-  :	
	E&M2015	Delivery of Instrumentation	90		21/06/11 A	03/11/11 A	21/06/11 A	03/11/11 A	0451			- <u> </u>	
	E&M2016	Delivery of FS Equipment	107		01/12/11 A	28/05/13	01/12/11 A	25/09/12	-245d	E&M2006	E&M0350, E&M2106	-	
	E&M2017	Delivery of BS Equipment	107	80	15/01/11 A	28/05/13	15/01/11 A	17/10/12	-223d	E&M2007	E&M2107		
	Installation, Ta	1	•	1		1	1	1			1		J
	E&M2101	Install Pumps	55		02/10/12 A	10/05/13	02/10/12 A	12/01/13	-118d		E&M2110	-	
	E&M2102	Install Gen Set	55	100	01/09/12 A	05/05/13 A	01/09/12 A	05/05/13 A		E&M2012, SKW1061	E&M2110	-	1.11
	E&M2103	Install DeO System	55	00	03/12/12 A	05/05/13	03/12/12 A	12/01/13	-113d	E&M2013, SKW1061	E&M2110	_	
	E&M2104	Install LV SB & MCC	55	100	02/01/13 A	31/01/13 A	02/01/13 A	31/01/13 A		E&M2014, SKW1061	E&M2140		
	E&M2105	Install Instrumentation	55	v	30/04/13	23/06/13	01/09/12	25/10/12	-241d	E&M2015, SKW1061	E&M2140	<u>_</u>	
	E&M2106	Install FS Equipment	55	45	02/10/12 A	27/06/13	02/10/12 A	25/10/12	-245d	E&M2016, SKW1061	E&M2140		
	E&M2107	Install BS Equipment	55	85	01/09/12 A	05/06/13	01/09/12 A	25/10/12	-223d	E&M2017, SKW1061	E&M2110, E&M2140		
	E&M2110	Install Valves, Pipes & Fittings	46	100	02/01/13 A	31/01/13 A	02/01/13 A	31/01/13 A		E&M2101, E&M2102, E&M2103,	E&M2120		1 11 -
	E&M2120	Hydraulic Test of Pipeworks	7	100	02/01/13 A	31/01/13 A	02/01/13 A	31/01/13 A		E&M2110	E&M2130		╏_ -
	E&M2130	Form 501 Submission to FSD	28	v v	05/06/13	03/07/13	13/01/13	09/02/13	-144d	E&M2120	KD0155		il II –
	E&M2140	Cabling Works	43	60	01/02/13 A	15/07/13	01/02/13 A	12/11/12	-245d	E&M2104, E&M2105, E&M2106,	E&M2150		
	E&M2150	Insulation Tests of Cables and Cable Terminatio	n 7	60	01/02/13 A	17/07/13	01/02/13 A	14/11/12	-245d	E&M2140	E&M2160		
	E&M2160	Engergization	3	100	01/02/13 A	25/03/13 A	01/02/13 A	25/03/13 A		E&M2150	E&M2170	rgization	
	E&M2170	Functional and Performance Tests of Equipment	30	10	15/01/13 A	13/08/13	15/01/13 A	11/12/12	-245d	E&M2160	E&M2180		
	E&M2180	Commissioning Test	60	0	13/08/13	12/10/13	12/12/12	09/02/13	-245d	E&M0350, E&M2170	KD0155		
S	ection W7-Sk	KW STW ,Sewer and Submarine Outfall	•	•		•		•		•	÷		
	Submarine Outf	fall											
111	SKW1130	Approval of IHS Consultant	180	100	17/05/10 A	27/08/10 A	17/05/10 A	27/08/10 A			SKW1131		
	SKW1131	Hydrographical Survey (SKW)	300	100	01/02/11 A	28/02/11 A	01/02/11 A	28/02/11 A		KD0020, SKW1130	SKW1231	-	
	SKW1141	Baseline Monitoring (Water)	213	100	27/07/10 A	31/12/10 A	27/07/10 A	31/12/10 A		SKW0260, SKW0265	SKW1151	-	
	SKW1151											_ /	
		Set up Temporary Working Platform	90	100	15/06/11 A	30/09/11 A	15/06/11 A	30/09/11 A		PRE0090, SKW1141	SKW1171		
	SKW1171	Set up Temporary Working Platform ELS for HDD Set-up (SKW)	90	100						PRE0090, SKW1141 SKW1151	SKW1171 SKW1181	-	
		ELS for HDD Set-up (SKW)	90 90	100	01/09/11 A	30/09/11 A	01/09/11 A	30/09/11 A				_	-
	SKW1181	ELS for HDD Set-up (SKW) Mobilization of HDD plant & equipment to SKW	90 90 8	100 100	01/09/11 A 06/01/12 A	30/09/11 A 07/01/12 A	01/09/11 A 06/01/12 A	30/09/11 A 07/01/12 A		SKW1151 SKW1171, YSW0360	SKW1181 SKW1191	_ 	
	SKW1181 SKW1191	ELS for HDD Set-up (SKW) Mobilization of HDD plant & equipment to SKW Setting up at drillhole location	90 90 8 7	100 100 100	01/09/11 A 06/01/12 A 09/01/12 A	30/09/11 A 07/01/12 A 14/01/12 A	01/09/11 A 06/01/12 A 09/01/12 A	30/09/11 A 07/01/12 A 14/01/12 A		SKW1151 SKW1171, YSW0360 SKW1181	SKW1181 SKW1191 SKW1201	- 	
	SKW1181 SKW1191 SKW1201	ELS for HDD Set-up (SKW)         Mobilization of HDD plant & equipment to SKW         Setting up at drillhole location         Drill pilot hole and reaming hole - NS280 - 750m	90 90 88 77 33	100 100 100 100	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A		SKW1151 SKW1171, YSW0360 SKW1181 SKW1191	SKW1181           SKW1191           SKW1201           SKW1211		
	SKW1181 SKW1191 SKW1201 SKW1211	ELS for HDD Set-up (SKW)         Mobilization of HDD plant & equipment to SKW         Setting up at drillhole location         Drill pilot hole and reaming hole - NS280 - 750m         Receiving Pit for HDD (SKW)	90 90 8 7 33 13	100 100 100 100 100	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A		SKW1151 SKW1171, YSW0360 SKW1181 SKW1191 SKW1201	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221	-	
	SKW1181 SKW1191 SKW1201 SKW1211 SKW1221	ELS for HDD Set-up (SKW)Mobilization of HDD plant & equipment to SKWSetting up at drillhole locationDrill pilot hole and reaming hole - NS280 - 750mReceiving Pit for HDD (SKW)Installaiton of NS280 HDPE 450mm dia. pipe	90 90 8 7 33 13 61	100 100 100 100 100 100	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A		SKW1151 SKW1171, YSW0360 SKW1181 SKW1191 SKW1201 SKW1211	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           KD0090, SKW1231, SKW1441		
	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           SKW1231	ELS for HDD Set-up (SKW)Mobilization of HDD plant & equipment to SKWSetting up at drillhole locationDrill pilot hole and reaming hole - NS280 - 750mReceiving Pit for HDD (SKW)Installaiton of NS280 HDPE 450mm dia. pipeRemoval of Receiving Platform	90 90 8 7 33 13 61 50	100 100 100 100 100 100 100	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A		SKW1151 SKW1171, YSW0360 SKW1181 SKW1191 SKW1201 SKW1211 SKW1211	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           KD0090, SKW1231, SKW1441           SKW1241		
	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           SKW1231           SKW1241	ELS for HDD Set-up (SKW)         Mobilization of HDD plant & equipment to SKW         Setting up at drillhole location         Drill pilot hole and reaming hole - NS280 - 750m         Receiving Pit for HDD (SKW)         Installaiton of NS280 HDPE 450mm dia. pipe         Removal of Receiving Platform         Dredging of MD for Diffuser (PS CL 1.122(3))	90 90 8 7 33 13 61 50 16	100 100 100 100 100 100 100 100	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A		SKW1151           SKW1171, YSW0360           SKW1181           SKW1191           SKW1201           SKW1211           SKW1131, SKW1221           SKW1231	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           KD0090, SKW1231, SKW1441           SKW1241           E&M3359, SKW1251		
	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           SKW1231           SKW1241           SKW1251	ELS for HDD Set-up (SKW)Mobilization of HDD plant & equipment to SKWSetting up at drillhole locationDrill pilot hole and reaming hole - NS280 - 750mReceiving Pit for HDD (SKW)Installaiton of NS280 HDPE 450mm dia. pipeRemoval of Receiving PlatformDredging of MD for Diffuser (PS CL 1.122(3))Diffuser Construction	90 90 8 7 33 13 61 50	100 100 100 100 100 100 100 100 100 100	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A		SKW1151         SKW1171, YSW0360         SKW1181         SKW1191         SKW1201         SKW1211         SKW1131, SKW1221         SKW1231         SKW1241	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           KD0090, SKW1231, SKW1441           SKW1241           E&M3359, SKW1251           SKW1431		
	SKW1181           SKW1191           SKW1201           SKW1221           SKW1221           SKW1231           SKW1241           SKW1251           SKW1431	ELS for HDD Set-up (SKW)         Mobilization of HDD plant & equipment to SKW         Setting up at drillhole location         Drill pilot hole and reaming hole - NS280 - 750m         Receiving Pit for HDD (SKW)         Installaiton of NS280 HDPE 450mm dia. pipe         Removal of Receiving Platform         Dredging of MD for Diffuser (PS CL 1.122(3))         Diffuser Construction         Removal of silt curtain	90 90 8 7 33 13 61 50 16 77 77	100 100 100 100 100 100 100 100 100 100	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A 17/11/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A 17/11/12 A	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A 17/11/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A 17/11/12 A		SKW1151           SKW1171, YSW0360           SKW1181           SKW1191           SKW1201           SKW1211           SKW1131, SKW1221           SKW1231           SKW1241           SKW1251	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           KD0090, SKW1231, SKW1441           SKW1241           E&M3359, SKW1251           SKW1431           KD0090, SKW1440, YSW0365		
	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           SKW1231           SKW1241           SKW1251           SKW1431           SKW1440	ELS for HDD Set-up (SKW)         Mobilization of HDD plant & equipment to SKW         Setting up at drillhole location         Drill pilot hole and reaming hole - NS280 - 750m         Receiving Pit for HDD (SKW)         Installaiton of NS280 HDPE 450mm dia. pipe         Removal of Receiving Platform         Dredging of MD for Diffuser (PS CL 1.122(3))         Diffuser Construction         Removal of silt curtain         Sewer of Outfall Chamber to connection pit VO37	90 90 8 7 33 13 61 50 16 77 77	100 100 100 100 100 100 100 100 100 100	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A 17/11/12 A	276d	SKW1151         SKW1171, YSW0360         SKW1181         SKW1191         SKW1201         SKW1211         SKW1131, SKW1221         SKW1231         SKW1241	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           KD0090, SKW1231, SKW1441           SKW1241           E&M3359, SKW1251           SKW1431		
Sta	SKW1181           SKW1201           SKW1211           SKW1221           SKW1221           SKW1221           SKW1251           SKW1251           SKW1431           SKW1440           rt date	ELS for HDD Set-up (SKW)         Mobilization of HDD plant & equipment to SKW         Setting up at drillhole location         Drill pilot hole and reaming hole - NS280 - 750m         Receiving Pit for HDD (SKW)         Installaiton of NS280 HDPE 450mm dia. pipe         Removal of Receiving Platform         Dredging of MD for Diffuser (PS CL 1.122(3))         Diffuser Construction         Removal of silt curtain         Sewer of Outfall Chamber to connection pit VO37         05/05/10	90 90 8 7 33 13 61 50 16 77 77	100 100 100 100 100 100 100 100 100 100	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A 17/11/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A 17/11/12 A 04/06/13	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A 17/11/12 A 31/12/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A 17/11/12 A 07/03/14		SKW1151         SkW1171, YSW0360         SkW1181         SkW1191         SkW1201         SkW1201         SkW1211         SkW1231         SkW1241         SkW1251         SkW1431	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           KD0090, SKW1231, SKW1441           SKW1241           E&M3359, SKW1251           SKW1431           KD0090, SKW1440, YSW0365	Dat	ate
Sta	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           SKW1231           SKW1241           SKW1251           SKW1431           SKW1440           rt date           ish date	ELS for HDD Set-up (SKW)         Mobilization of HDD plant & equipment to SKW         Setting up at drillhole location         Drill pilot hole and reaming hole - NS280 - 750m         Receiving Pit for HDD (SKW)         Installaiton of NS280 HDPE 450mm dia. pipe         Removal of Receiving Platform         Dredging of MD for Diffuser (PS CL 1.122(3))         Diffuser Construction         Removal of silt curtain         Sewer of Outfall Chamber to connection pit VO37         05/05/10         Image: Star         02/04/12	90 90 8 7 33 13 61 50 16 77 77	100 100 100 100 100 100 100 100 100 100	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A 17/11/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A 17/11/12 A 04/06/13	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A 17/11/12 A 31/12/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A 17/11/12 A 07/03/14	neerii	SkW1151         SkW1171, YSW0360         SkW1181         SkW1191         SkW1201         SkW1211         SkW1231         SkW1251         SkW1431	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           KD0090, SKW1231, SKW1441           SKW1241           E&M3359, SKW1251           SKW1431           KD0090, SKW1440, YSW0365		ate
Sta Fin Dat	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           SKW1231           SKW1241           SKW1251           SKW1431           SKW1440           rt date           ish date           a date	ELS for HDD Set-up (SKW)         Mobilization of HDD plant & equipment to SKW         Setting up at drillhole location         Drill pilot hole and reaming hole - NS280 - 750m         Receiving Pit for HDD (SKW)         Installaiton of NS280 HDPE 450mm dia. pipe         Removal of Receiving Platform         Dredging of MD for Diffuser (PS CL 1.122(3))         Diffuser Construction         Removal of silt curtain         Sewer of Outfall Chamber to connection pit VO37         05/05/10         13/01/17         30/04/13	90 90 8 7 33 13 61 50 16 77 77	100 100 100 100 100 100 100 100 100 100	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A 17/11/12 A 31/12/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A 17/11/12 A	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A 17/11/12 A 31/12/12 A Leader C Cor	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A 17/11/12 A 07/03/14 Civil Engintract No.	neerii DC/2	SkW1151         SkW1171, YSW0360         SkW1181         SkW1191         SkW1201         SkW1211         SkW1231         SkW1241         SkW1251         SkW1431	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           KD0090, SKW1231, SKW1441           SKW1241           E&M3359, SKW1251           SKW1431           KD0090, SKW1440, YSW0365           SKW1441	Dat	ate
Sta Fin Dat Ru	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           SKW1231           SKW1241           SKW1251           SKW1431           SKW1440           rt date           ish date           a date           n date	ELS for HDD Set-up (SKW) Mobilization of HDD plant & equipment to SKW Setting up at drillhole location Drill pilot hole and reaming hole - NS280 - 750m Receiving Pit for HDD (SKW) Installaiton of NS280 HDPE 450mm dia. pipe Removal of Receiving Platform Dredging of MD for Diffuser (PS CL 1.122(3)) Diffuser Construction Removal of silt curtain Sewer of Outfall Chamber to connection pit VO37 05/05/10 13/01/17 30/04/13 20/05/13 QA	90 90 8 7 33 13 61 50 16 77 77	100 100 100 100 100 100 100 100 100 100	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A 17/11/12 A 31/12/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 05/07/12 A 16/11/12 A 17/11/12 A 04/06/13	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A 17/11/12 A 31/12/12 A Leader C Cor on of Sev	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A 17/11/12 A 07/03/14 Civil Engintract No. vage Treat	neerii DC/2 atmen	SKW1151 SKW1171, YSW0360 SKW1181 SKW1201 SKW1201 SKW1211 SKW1231 SKW1231 SKW1241 SKW1251 SKW1431 ng Corp. Ltd. 009/13 t Works at YSW & SKW	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           KD0090, SKW1231, SKW1441           SKW1241           E&M3359, SKW1251           SKW1431           KD0090, SKW1440, YSW0365           SKW1441	Dat	ate
Sta Fin Dat Ru Pac	SKW1181           SKW1191           SKW1201           SKW1221           SKW1221           SKW1231           SKW1241           SKW1251           SKW1431           SKW1440           rt date           ish date           a date           n date           ge number	ELS for HDD Set-up (SKW)         Mobilization of HDD plant & equipment to SKW         Setting up at drillhole location         Drill pilot hole and reaming hole - NS280 - 750m         Receiving Pit for HDD (SKW)         Installaiton of NS280 HDPE 450mm dia. pipe         Removal of Receiving Platform         Dredging of MD for Diffuser (PS CL 1.122(3))         Diffuser Construction         Removal of silt curtain         Sewer of Outfall Chamber to connection pit VO37         05/05/10         13/01/17         30/04/13         20/05/13	90 90 8 7 33 13 61 50 16 77 77	100 100 100 100 100 100 100 100 100 100	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A 17/11/12 A 31/12/12 A	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 05/07/12 A 16/11/12 A 17/11/12 A 04/06/13	01/09/11 A 06/01/12 A 09/01/12 A 16/01/12 A 16/01/12 A 31/03/12 A 01/05/12 A 20/06/12 A 01/09/12 A 17/11/12 A 31/12/12 A Leader C Cor on of Sev	30/09/11 A 07/01/12 A 14/01/12 A 16/02/12 A 29/02/12 A 30/04/12 A 19/06/12 A 05/07/12 A 16/11/12 A 17/11/12 A 07/03/14 Civil Engintract No. vage Treat	neerii DC/2 atmen	SkW1151         SkW1171, YSW0360         SkW1181         SkW1191         SkW1201         SkW1211         SkW1231         SkW1241         SkW1251         SkW1431	SKW1181           SKW1191           SKW1201           SKW1211           SKW1221           KD0090, SKW1231, SKW1441           SKW1241           E&M3359, SKW1251           SKW1431           KD0090, SKW1440, YSW0365           SKW1441	Dat	ate



	Activity ID	Description	Original Duratior	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	APR	
	SKW1441	Sewer of Connection Pit to Outfall VO45	177	50	05/06/13 A	01/09/13	05/06/13 A	03/06/14	276d	SKW1221, SKW1440	E&M3359, KD0090		
	SKW STW		<b>I</b>		1	1	1	1	1	1			
	Submission 8	& Delivery (E&M)											
	E&M3010	Delivery of MBR M.M 1st shipment for Temp S	STP 150	100	24/02/11 A	17/10/11 A	24/02/11 A	17/10/11 A		E&M0160	E&M3170		
	E&M3030	Delivery of Grit Removal Equipment	180	100	10/10/11 A	29/12/11 A	10/10/11 A	29/12/11 A		E&M0150	E&M3190	·	
	E&M3060	Delivery of Fine Screens	136	100	12/09/11 A	30/11/11 A	12/09/11 A	30/11/11 A		E&M0120	E&M3210		11-
	E&M3070	Delivery of Pumps	136	100	23/06/11 A	05/09/11 A	23/06/11 A	05/09/11 A		E&M0130	E&M3220	·	
	E&M3080	Delivery of Submersible Mixers	180	100	26/07/11 A	17/11/11 A	26/07/11 A	17/11/11 A	İ	E&M0140	E&M3230		11-
	E&M3090	Delivery of Sludge Dewatering Equipment	210	50	01/09/11 A	12/08/13	01/09/11 A	11/01/14	152d	E&M0170	E&M3240		
	E&M3100	Delivery of Valves, Pipes & Fittings	180	50	30/08/11 A	02/08/13	30/08/11 A	19/11/13	110d	E&M0180	E&M3250		
	E&M3110	Delivery of Penstocks	180	100	12/08/11 A	24/12/11 A	12/08/11 A	24/12/11 A		E&M0190	E&M3260		
	E&M3130	Delivery of instruments	180	100	21/06/11 A	03/11/11 A	21/06/11 A	03/11/11 A		E&M0200	E&M3270		++-
	E&M3140	Delivery of MCC LVSB	180		01/05/13	28/10/13	07/04/13	03/10/13	-25d	E&M0210	E&M3261		┨╋
	E&M3150	Delivery of BS Equipment	180	8	03/07/12 A	17/11/13	03/07/12 A	04/12/13	18d	E&M0220	E&M3291		- 11 -
	E&M3160	Delivery of FS Equipment	180	5	30/06/12 A	04/12/13	30/06/12 A	23/12/13	20d	E&M0230	E&M0340, E&M3300		
	Construction	of Grid A-G			<b></b>	<b>I</b>	<b></b>	<b></b>	<b></b>	•			
	SKW1261	Excavate for SKW STW Structure (Grid A -G)	164	100	28/03/12 A	31/08/12 A	28/03/12 A	31/08/12 A		SKW04885, SKW05938	SKW1271, SKW1371		
	SKW1271	55 M3 Fire Sprinkle Water Tank (FL +0.9 mPD)					03/07/12 A			SKW1261	SKW1281		
	SKW1281	Ground Floor Slab (Grid A-G)	46	100			03/07/12 A			SKW1271	SKW1291		
	SKW1291	Columns & Walls to 1/F & 1/F Slab (Grid A-G)	50	100	03/07/12 A		03/07/12 A			SKW1281	KD0090, SKW1301		-    -
	SKW1301	Columns & Walls to R/F & R/F Slab (Grid A-G)		-						SKW1291	E&M3261, E&M3291, E&M3311, SKW1411		
	SKW1411	ABWF Works	105	100	01/02/13 A	02/08/13	01/02/13 A	19/06/13	-44d		E&M3261, E&M3291, E&M3311, SKW1551		
	Construction			10	01/02/10/1	02/00/10	01/02/10/1	13/00/10	1				
	SKW1311	Excavate for SKW STW Structure (Grid G-N)	90	100	28/03/12 A	25/06/12 A	28/03/12 A	25/06/12 A	1	SKW05938, SKW059416	SKW1321, SKW1371		
	SKW1311	Equalization Tank no.1 & 2 with base slabs (-2			26/06/12 A	30/09/12 A	26/06/12 A	30/09/12 A		SKW1311	SKW1331		
	SKW1321	Columns & Walls from B/S to G/F Slab (Grid G		100	01/09/12 A					SKW1321	SKW1341		
	SKW1331	,	,					17/12/12 A		SKW1331	SKW1351		
	J	Ground Floor Slab (Grid G-N)	35	100			01/09/12 A			SKW1331	SKW1361		
	SKW1351	Columns & Walls to 1/F & 1/F Slab (Grid G-N)	28		01/11/12 A		01/11/12 A	15/01/13 A			SKW1361		
	SKW1361	Columns & Walls to R/F & R/F Slab (Grid G-N)		-	01/11/12 A	10/05/13	01/11/12 A	01/02/13	-98d		E&M3170, E&M3190, E&M3210, E&M3291,		
	SKW1451	ABWF Works	54	0	10/05/13	03/07/13	01/02/13	27/03/13	-98d	3000 1301	E&M3300, SKW1391, SKW1551		
	Construction	of Grid N T	<b>I</b>			I			1				
	SKW1371	Excavate for SKW STW Structure (Grid N-T)	97	100	03/07/12 A	25/01/13 A	03/07/12 A	25/01/13 A	1	SKW05938, SKW059416, SKW1261,	SKW1381		
	SKW1381	Ground Floor Slabs include MBR Tank (Grid N-1)			02/10/12 A		02/10/12 A			SKW1371	SKW1391		
	SKW1301 SKW1391	Columns & Walls to 1/F & 1/F Slab (Grid N-T)	35		31/05/13 A	1				SKW1381, SKW1451	SKW1401		_ 4 _
	SKW1391	Columns & Walls to R/F & R/F Slab (Grid N-T)	35		03/07/13 A	27/07/13	03/07/13 A	20/04/13	-98d		E&M3240, SKW0491, SKW1421		
	SKW1401 SKW1421	ABWF Works	60		28/07/13 A	25/09/13	21/04/13	19/06/13	-98d		E&M3240, SKW1551		
	SKW1421 SKW1551			Ů	ļ						SKW1561		
	56.01551	Drainage (SSMH1-SSMH7)	35	0	26/09/13	30/10/13	20/06/13	24/07/13	-98d	SKW 1411, SKW 1421, SKW 1451	3600 1301		
	SKW1561	Sewer (SMFH1-SMFH2, SMFH3-SMFH7)	220	0	31/10/13	07/06/14	25/07/13	01/03/14	-98d	SKW1551	SKW1571		
	SKW1571	Roadwork & Drainage Channel (SKW)	220	0	08/06/14	13/01/15	02/03/14	07/10/14	-98d	SKW1561	KD0090		
	SKW STW - E8	&M Works											
	E&M3170	Install Membrane Modules in MBR Tank No. 1 t	to 2 100	0	03/07/13	11/10/13	07/01/14	16/04/14	188d	E&M3010, SKW1451	E&M3311		
	E&M3190	Install Grit Removal Equipment	60	0	01/09/13	31/10/13	21/09/13	19/11/13	20d	E&M3030, E&M3210, SKW1451	E&M3250, E&M3320		
	E&M3210	Install Fine Screens	60	0	03/07/13	01/09/13	24/05/13	22/07/13	-41d	E&M3060, SKW1451	E&M3190, E&M3220, E&M3250, E&M3260, E&M3320		
	E&M3220	Install Pumps	75	,	01/09/13	15/11/13	23/07/13	05/10/13	-41d		E&M3230, E&M3250, E&M3260, E&M3320		
	E&M3230	Install Submersible Mixers	45	0	15/11/13	30/12/13	06/10/13	19/11/13	-41d	E&M3080, E&M3220	E&M3250, E&M3260, E&M3311, E&M3320		
	E&M3240	Install Sludge Dewatering Equipment	74	0	26/09/13	08/12/13	12/01/14	26/03/14	108d	E&M3090, SKW1401, SKW1421	E&M3320		
	E&M3250	Install Valves, Pipes & Fittings	75	0	30/12/13	15/03/14	20/11/13	02/02/14	-41d	E&M3100, E&M3190, E&M3210, E&M3220, E&M3230	E&M3270, E&M3291, E&M3300, E&M3310		
	E&M3260	Install Penstocks	135	0	30/12/13	14/05/14	03/12/13	16/04/14	-28d	E&M3110, E&M3210, E&M3220,	E&M3311		
	E&M3261	Install SAT of MCC & LVSB	174	0	28/10/13	20/04/14	04/10/13	26/03/14	-25d	E&M3140, SKW1301, SKW1411	E&M3311, E&M3320		
	E&M3270	Install instruments	60	0	15/03/14	14/05/14	16/02/14	16/04/14	-28d	E&M3130, E&M3250	E&M3311		
	E&M3291	Install BS Equipment	180	0	14/01/14	13/07/14	05/12/13	02/06/14	-41d	E&M3150, E&M3250, SKW1301, SKW1411, SKW1451	E&M3331, E&M3359		
										01.0011411, 01.001401			
Ct.	art date	05/05/10 Early bar											ate
	nish date	13/01/17 Progress bar					l aadar (	livil Engi	neori	ng Corp. Ltd.		30/04/13	
	ata date	30/04/13 Critical bar						ntract No.				30/04/13	,
	in date	20/05/13 A Progress point			<u></u>	netruati				it Works at YSW & SKW	,		
	ige number	104 Critical point								ay 2013 - July 2013	1		
		Systems, Inc. Start milestone point				5-1101101	noning i	rogram		ay 2013 - July 2013			
		Einish milostono point											



E&M3310 Hydra E&M3311 Cablin E&M3320 Cablin	Description stall FS Equipment draulic Tests of Pipeworks ubling Works bling Works for Dewatering Equipment	161 90 47	Complete         Start           0         14/01/14           0         15/03/14           0         14/05/14	Finish           24/06/14           13/06/14	Start           24/12/13           06/03/14	Finish 02/06/14 03/06/14	Float -22d	Predecessors E&M3160, E&M3250, SKW1451	Successors	APR	MAY	2013 JUN JUL
E&M3310 Hydra E&M3311 Cablin E&M3320 Cablin	draulic Tests of Pipeworks bling Works	90	0 15/03/14	13/06/14			-22d	E&M3160, E&M3250, SKW1451	E8M2221 E8M2250			
E&M3311 Cablin E&M3320 Cablin	bling Works	47	V		06/03/14	00/00/14			Lawi5551, Lawi5555		1 1	I
E&M3320 Cablin	5		0 14/05/14	00/00/14 4		03/06/14	-10d	E&M3250	E&M3359			
	bling Works for Dewatering Equipment			30/06/14	17/04/14	02/06/14	-28d	E&M3170, E&M3230, E&M3260, E&M3261, E&M3270, SKW1301,	E&M3331, E&M3359			
		47	0 20/04/14	06/06/14	27/03/14	12/05/14	-25d	E&M3190, E&M3210, E&M3220, E&M3230, E&M3240, E&M3261	E&M3321			
E&M3321 Insula	sulation Tests of Cables and Cable Termination	21	0 06/06/14	27/06/14	13/05/14	02/06/14	-25d	E&M3320	E&M3331			
E&M3331 Energ	nergization	1	0 13/07/14	14/07/14	03/06/14	03/06/14	-41d	E&M3291, E&M3300, E&M3311,	E&M3359		1	!
E&M3359 Funct	nctional and Performance Tests of Equipment	35	0 14/07/14	18/08/14	04/06/14	08/07/14	-41d	E&M3291, E&M3300, E&M3310, E&M3311, E&M3331, SKW1241,	E&M3360			
E&M3360 T&C	kC Period	91	0 18/08/14	17/11/14	09/07/14	07/10/14	-41d	E&M0340, E&M3359, SKW0722, SKW15112	E&M3370, KD0090			1
E&M3370 Trial	ial Operation Period	456	0 17/11/14	16/02/16	25/07/15	13/01/17	250d	E&M3360				
Rising Main			ľ		•	<u> </u>	•	L	•		1	
SKW1481 Subm	ıbm, Approval & Delivery of DI pipes	120	100 17/05/10 A	13/09/10 A	17/05/10 A	13/09/10 A		KD0020	SKW1501			1
SKW1501 LCS (	CS (ChB0+00 - ChB1+20)	300	100 14/09/10 A	10/07/11 A	14/09/10 A	10/07/11 A		PRE0100, SKW1481	SKW1521			1
SKW1521 Twin	vin DN150 DI Rising Main (ChB0+00 - ChA4+55)	250	85 11/07/11 A	06/06/13	11/07/11 A	07/10/14	489d	SKW1501	KD0090			Twin DN150 DI Rising Main (ChB0+00 -
Section W8 - Landsc	scape Softworks in All Portions		•						· ·		1	
SKW1591 Tree	ee Survey	21	100 17/05/10 A	06/06/10 A	17/05/10 A	06/06/10 A		KD0020	SKW1621		 	
SKW1611 Prese	eservation & Protection of Trees	1053	99 17/05/10 A	10/05/13	17/05/10 A	03/04/13	-37d	KD0020	KD0100, SKW1631		Preserva	ation & Protection of Trees
SKW1621 Trans	ansplantation at SKW	90	100 07/06/10 A	04/09/10 A	07/06/10 A	04/09/10 A		SKW1591	KD0100			
Section W9 - Establis	lishment Works in All Portions		•			•		•	•			
SKW1631 Section	ection W9 - Establishment Works	365	0 10/05/13	10/05/14	04/04/13	03/04/14	-37d	SKW1611	KD0110			

Data date       30/04/13       Critical bar       Contract No. DC/2009/13         Run date       20/05/13       Progress point       Construction of Sewage Treatment Works at YSW & SKW		,				
Page number 11A       Critical point         c Primav era Systems, Inc.       Start milestone point    Start milestone point Start milestone point Start milestone point	point 3-month Rolling Programme (May 2013 - July 2013	Summary point Start milestone point	♥ 8 ♦ 8	Inc.	0	

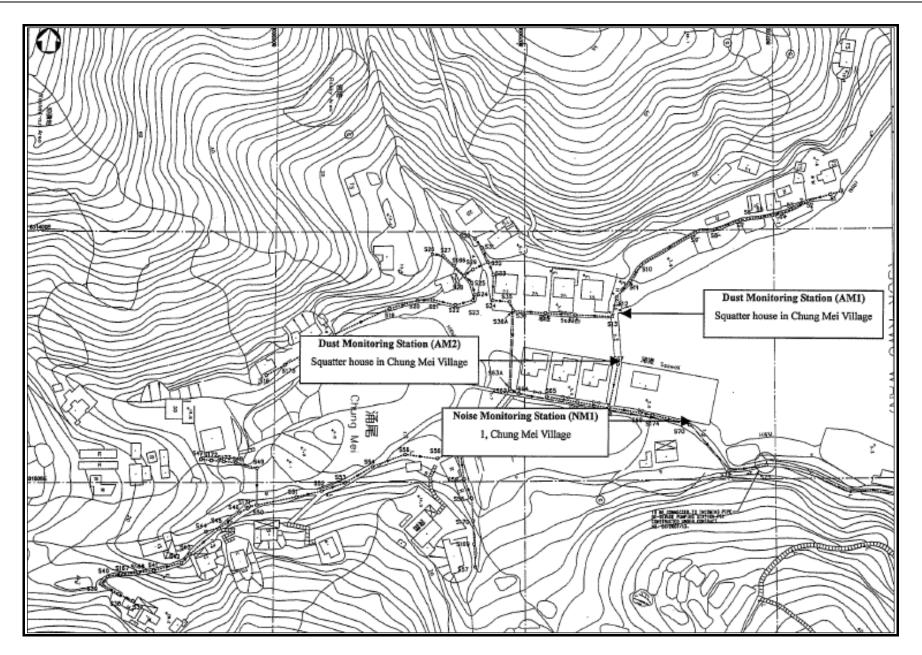
Revision	Checked	Approved
Revision 0	RH	VC



# Appendix D

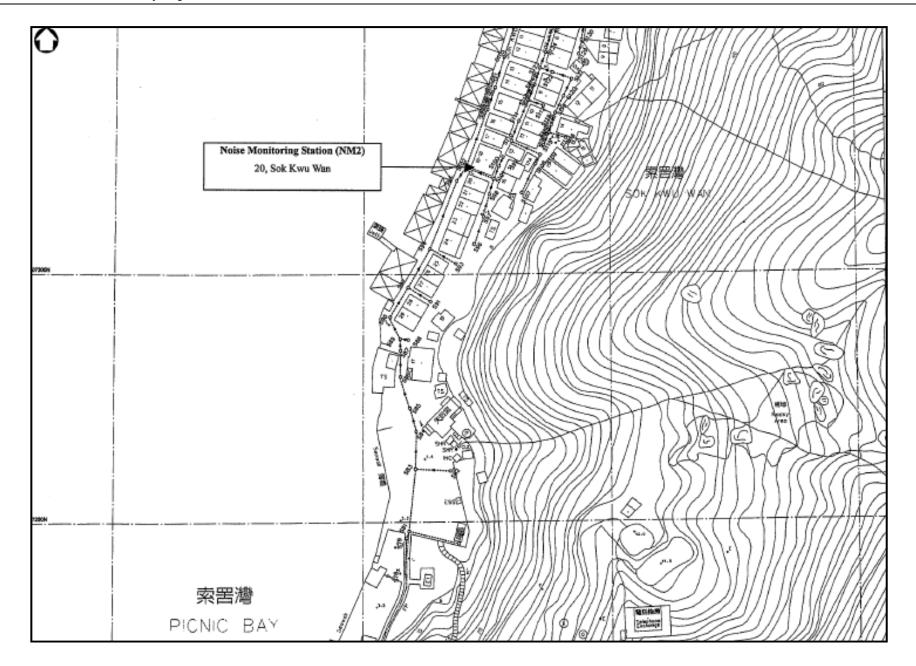
### Location of Monitoring Stations (Air Quality / Construction Noise / Water Quality)





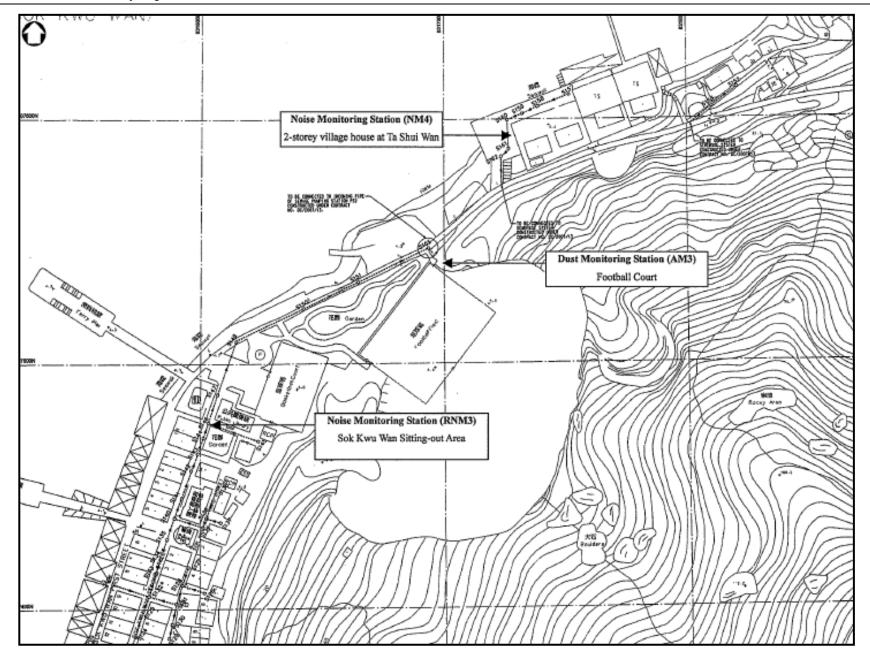
Contract No. DC/2009/13 – Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan Sok Kwu Wan – EM&A Monthly Report –June 2013



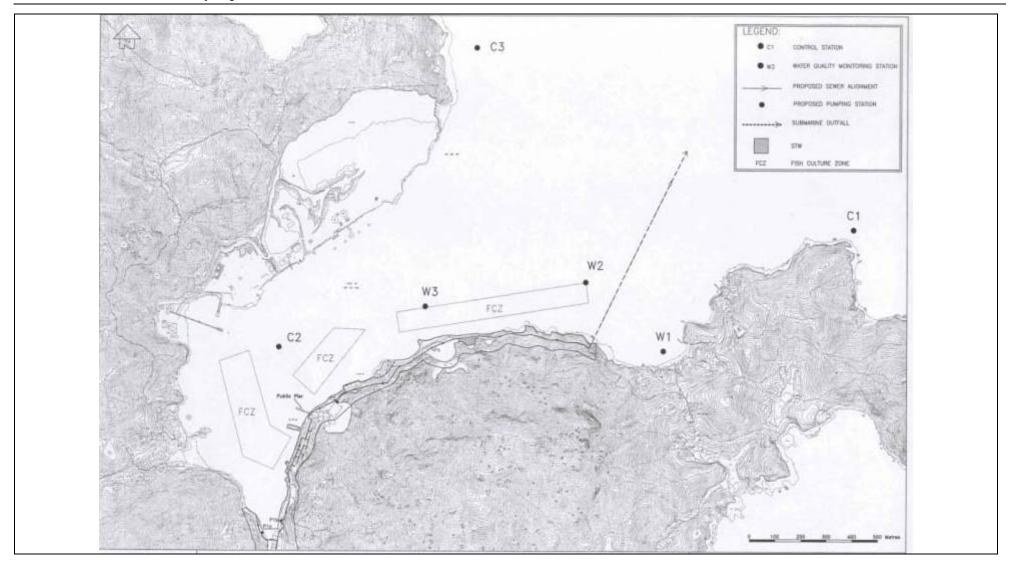


Contract No. DC/2009/13 – Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan Sok Kwu Wan – EM&A Monthly Report –June 2013





# **AUES**



# Appendix E

# **Monitoring Equipments Calibration Certificate**

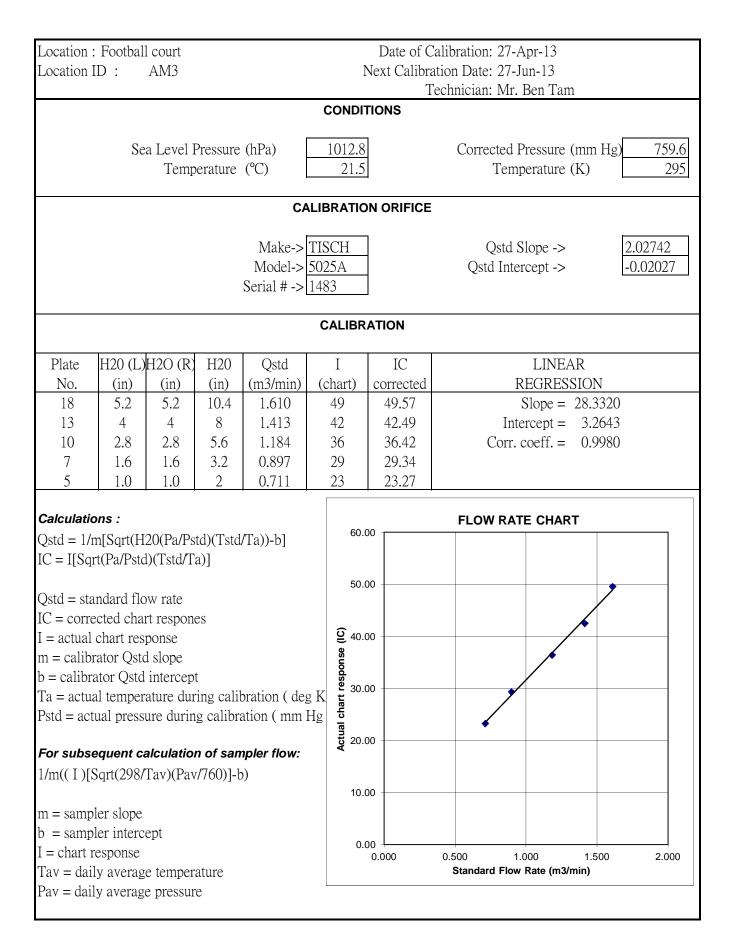
### TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

	-												
	-		n Chung	Mei Village					ation: 27-A	-			
Location I	D :	AM1				Ν	lext Calibra ד		Date: 27-J ician: Mr.				
					CON	DIT					1		
	Se	a Level I	Pressure	(hPa)	1012	2.8		C	Corrected I	Pressure	(mm H	g) 7	59.6
		Temp	erature	(°C)	21	1.5			Tem	perature	(K)		295
				CA									
				CA CA	LIDRAI								
				Make->'	TISCH				Qstd S	Slope ->		2.0274	2
				Model->					Qstd Inte	rcept ->		-0.020	27
				Serial # ->	1483								
					CALIE	BRA	TION						
Plate	H20 (L)	H2O (R)	H20	Qstd	Ι		IC			LINEA	AR		
No.	(in)	(in)	(in)	(m3/min)	(chart)	)	corrected		F	REGRES	SION		
18	5.1	5.1	10.2	1.594	55		55.64			Slope =			
13	4	4	8	1.413	49		49.57			ercept =			
10	3.1	3.1	6.2	1.245	44		44.51		Corr.	coeff. =	0.997	r j	
7 5	1.7 1.0	1.7 1.0	3.4 2	0.925 0.711	36 31		36.42 31.36						
	1.0	1.0		0.711	51		51.50						
Calculatio					6	0.00	)	F	LOW RAT	E CHAR	т		-
Qstd = 1/r				/Ta))-b]							•		
IC = I[Sqn	t(Pa/Pstc	I)(Tstd/T	a)]		_								
Qstd = sta	ndard flo	w rate			5	0.00				/			
IC = correction			es										
I = actual		-			<u>୍</u> ତ୍ର	0.00	1						-
m = calibr	ator Qsta	i slope			onse								
b = calibra	_	-			Lesp	0.00	)		•				-
	_		_	oration ( deg	Hart X								
Pstd = act	ual press	ure durin	g calibra	ation ( mm H	lg gl	0.00							
For subse	equent ca	alculatio	n of san	pler flow:	Act	0.00							
1/m((I)[S	-			-									
	1			, ,	1	0.00							-
m = samp	ler slope												
b = samp		ept				0.00	,						]
I = chart r	-						0.000	0.500		000	1.500	2.0	000
Tav = dail								St	andard Flow	Rate (m3/i	min)		
Pav = dail	y averag	e pressur	e										

### TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

	1										
	-		n Chung	Mei Village				alibration: 27-A	-		
Location 1	ID :	AM2				Ν		tion Date: 27-J			
								echnician: Mr.	Ben Tam		
					CON	DIT	IONS				
				Г							
	Se	a Level I			1012				Pressure (mr		759.6
		Temp	erature	(°C)	21	1.5		Tem	perature (K)		295
				CA	LIBRA	TION					
				Make->	FISCH			Qstd S	Slope ->	2.02	2742
				Model->	5025A			Qstd Inte	rcept ->	-0.0	2027
				Serial # ->	1483						
					CALI	BRA	TION				
Plate	H20 (L)	H2O (R)	H20	Qstd	Ι		IC		LINEAR		
No.	(in)	(in)	(in)	(m3/min)	(chart	t)	corrected	F	REGRESSIC	N	
18	5.8	5.8	11.6	1.699	59		59.69		Slope = $27$	.7243	
13	4.1	4.1	8.2	1.430	51		51.59	Inte	ercept = 12	.1897	
10	3.1	3.1	6.2	1.245	46		46.53	Corr.	coeff. = 0.	.9994	
7	1.7	1.7	3.4	0.925	37		37.43				
5	0.9	0.9	1.8	0.675	31		31.36				
Calculatio	ons :							FLOW RAT	E CHART		
Qstd = 1/r	n[Sart(H	20(Pa/Ps	td)(Tstd	/Ta))-b]		70.00	)	_			
IC = I[Sq											
						60.00	) <u> </u>			-	
Qstd = sta	indard flo	w rate									
IC = corrections	ected char	rt respon	es			50.00	о ——		×		
I = actual	chart res	ponse			(C)						
m = calibi	rator Qsto	d slope			onse	40.00					
b = calibration	ator Qstd	intercep	t		espo	-0.00		×			
Ta = actua	al temper	ature dur	ing calib	oration ( deg	Кд						
Pstd = act	ual press	ure durin	g calibra	ation ( mm H	Actual chart response (IC	30.00	)				
For subse	equent ca	alculatio	n of san	pler flow:	Actu	20.00	, <b></b>				
1/m(( I )[S	Sqrt(298/	Tav)(Pav	r/760)]-t	))							
						10.00	) <u> </u>				
m = samp											
b = samp		ept				0.00	, L				
I = chart r	-						0.000			.500	2.000
Tav = dai								Standard Flow	Rate (m3/min)		
Pav = dail	ly averag	e pressur	e								
I											

#### **TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET**





TISCH ENVIROMENTAL, INC. 145 SOUTH MIAMI AVE. VILLAGE OF CLEVES, OH 45002 513.467.9000 877.263.7610 TOLL FREE 513.467.9009 FAX WWW.TISCH-ENV.COM

#### AIR POLLUTION MONITORING EQUIPMENT

#### ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Ma Operator		Rootsmeter Orifice I.I		438320 1483	Ta (K) - Pa (mm) -	294 754.38
PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	======== DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1 2 3 4 5	NA NA NA NA NA	NA NA NA NA NA	1.00 1.00 1.00 1.00 1.00	1.4140 0.9960 0.8910 0.8510 0.7020	3.2 6.4 7.9 8.7 12.8	2.00 4.00 5.00 5.50 8.00

#### DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
1.0018 0.9976 0.9955 0.9945 0.9890	0.7085 1.0016 1.1173 1.1686 1.4088	1.4185 2.0061 2.2429 2.3524 2.8371	0.9957 0.9915 0.9894 0.9884 0.9830	0.7042 0.9955 1.1105 1.1615 1.4003	0.8829 1.2486 1.3959 1.4641 1.7657
Qstd slc intercep coeffici y axis =	ut (b) = ent (r) =	2.02742 -0.02027 0.99996 Pa/760)(298/Ta)]	Qa slop intercep coeffici v axis =	ot (b) =	1.26953 -0.01262 0.99996 Ta/Pa)1

#### CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta) Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa] Qa = Va/Time

For subsequent flow rate calculations:

Qstd =  $1/m\{ [SQRT(H2O(Pa/760)(298/Ta))] - b \}$ Qa =  $1/m\{ [SQRT H2O(Ta/Pa)] - b \}$ 

# **AUES**

# **Equipment Calibration Record**

Equipmer Type:					
Manufactu Serial No. Equipmen			Dust Trak M TSI 21060 EQ021	odel 8520	
Standard E Location & Equipmen Last Calib	ration Date: nt Calibration F	Results:	Higher Volum Block A of C AM8 20-Jul-12 6-Aug-12	me Sampler Government Dockyard Office	25
Hour	Time	Temp ℃	RH %	Dust Concentra (Standard Equipment)	ntion in mg/m <sup>3</sup> (Calibrated Equipment)
1	9:00 ~ 10:00	29.8	84	0.052	0.056
1	10:05 ~ 11:05	30.2	84	0.057	0.066
1	11:10 ~ 12:10	30.9	84	0.044	0.046
Slope:	e <b>gression of Y o</b>	r X	<u>1.1155</u> 0.9931	0.070 0.060 0.060 0.050 0.040 0.040 0.040 0.040 0.000 0.010 0.000 0.010 0.020 0.010 0.020 0.000 0.010 0.020 0.0000 0.00000 0.0000 0.0000 0.0000 0.00000 0.00000 0.0000 0.000	• 0.030 0.040 0.050 0.060 Count/hour y = 1.1155x - 0.0007 R <sup>2</sup> = 0.9931

# **AUES**

# **Equipment Calibration Record**

Equipmen Type: Manufactu Serial No. Equipment			Dust Trak Me TSI 23079 EQ064	odel 8520	
Standard E Location & Equipment Last Calibi	& Location ID: t Ref: ration Date: <b>ht Calibration F</b>	Results:	Higher Volur Block A of C AM8 20-Jul-12 6-Aug-12	ne Sampler Jovernment Dockyard Office	<u>es</u>
Hour	Time	Temp ℃	RH %	Dust Concentra (Standard Equipment)	ation in mg/m <sup>3</sup> (Calibrated Equipment)
1	9:00 ~ 10:00	29.8	84	0.052	0.055
1	10:05 ~ 11:05	30.2	84	0.057	0.061
1	11:10 ~ 12:10	30.9	84	0.044	0.046
-	Adjustment Zer Adjustment Zer				-
Sensitivity Linear Re Slope:	-	o Calibrat		libration) $0 (mg/m^3)$	



輝創工程有限公司

Sun Creation Engineering Limited

Calibration and Testing Laboratory

# Certificate of Calibration 校正證書

Certificate No. : C132568 證書編號

### ITEM TESTED / 送檢項目 (Job No. / 序引編號: IC13-0878)

:	Integrating Sound Level Meter (EQ006)
2	Brüel & Kjær
:	2238
2	2285762
4	Action-United Environmental Services and Consulting Unit A, 20/F., Gold King Industrial Building,

35-41 Tai Lin Pai Road, Kwai Chung, N.T.

#### TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Line Voltage / 電壓 : --- Relative Humidity / 相對濕度 : (55 ± 20)%

#### TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 27 April 2013

#### TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only. All results are within manufacturer's specification. The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies, USA
- Fluke Everett Service Center, USA
- Rohde & Schwarz Laboratory, Germany

Chan Hun H C Chan

Certified By 核證

Tested By

測試

Date of Issue 簽發日期 :

30 April 2013

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

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Sun Creation Engineering Limited - Calibration & Testing Laboratory co 4/F, Tang Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong 時间,仁程有限公司 - 校正及檢測實驗所 co 香港新界电凹與安集一號青山高機機四種 fv1/電話: 2927 2606 Fax/傳貨: 2744 8986 E-mail/電影 calibbo/suncreation.com Website 鴉虎: www.suncreation.com

K C Lee



輝創工程有限公司

Sun Creation Engineering Limited

Calibration and Testing Laboratory

# Certificate of Calibration 校正證書

Certificate No.: C132568 證書編號

- 1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- 2. Self-calibration using laboratory acoustic calibrator was performed before the test from 6.1.1.2 to 6.4.
- 3. The results presented are the mean of 3 measurements at each calibration point.
- 4. Test equipment :

Equipment IDDescriptionCertificate No.CL28040 MHz Arbitrary Waveform GeneratorC130019CL281Multifunction Acoustic CalibratorDC110233

- 5. Test procedure : MA101N.
- 6. Results :
- 6.1 Sound Pressure Level
- 6.1.1 Reference Sound Pressure Level
- 6.1.1.1 Before Self-calibration

1.1	UUTS	Setting	Applied	UUT		
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)
50 - 130	L <sub>AFP</sub>	A	F	94.00	1	93.6

#### 6.1.1.2 After Self-calibration

	UUT	Setting		Applie	d Value	UUT	IEC 60651	
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Type 1 Spec. (dB)	
50 - 130	LAFP	A	F	94.00	1	94.0	± 0.7	

#### 6.1.2 Linearity

	UU	Γ Setting	Applie	UUT		
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)
50 - 130	LAFP	L <sub>AFP</sub> A	F	94.00	1	94.0 (Ref.)
		1.000	1.0.0	104.00		104.0
		1		114.00		114.0

IEC 60651 Type 1 Spec. :  $\pm$  0.4 dB per 10 dB step and  $\pm$  0.7 dB for overall different.

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Sun Creation Engineering Limited - Calibration & Testing Laboratory

10/0-4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun: New Territories, Hong Kong

师创工程有限公司- 按正及檢測實驗所 2.a 香港新算电門與安里一號青山灣機樓四樓

Tel (1.3): 2927/2606 Fax/得真: 2744/8986 E-mail (范勤: callab/asinerention.com Website (時): www.sunerention.com

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.



輝創工程有限公司

Sun Creation Engineering Limited

Calibration and Testing Laboratory

# Certificate of Calibration 校正證書

Certificate No.: C132568 證書編號

#### 6.2 Time Weighting

#### 6.2.1 Continuous Signal

	UUT	Setting		Applie	d Value	UUT	IEC 60651
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Type 1 Spec. (dB)
50 - 130	LAFP	Α	F	94.00	1	94.0	Ref.
	L <sub>ASP</sub>	1.1	S			94.0	± 0.1
	LAIP		I			94.1	± 0.1

#### 6.2.2 Tone Burst Signal (2 kHz)

	UUT Setting				lied Value	UUT	IEC 60651
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Burst Duration	Reading (dB)	Type 1 Spec. (dB)
30 - 110	LAFP	A	F	106.0	Continuous	106.0	Ref.
	LAFMax				200 ms	104.9	$-1.0 \pm 1.0$
	LASP		S		Continuous	106.0	Ref.
	L <sub>ASMax</sub>				500 ms	101.9	$-4.1 \pm 1.0$

#### 6.3 Frequency Weighting

#### 6.3.1 A-Weighting

	UUT	Setting		Appli	ed Value	UUT	IEC 60651
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.	Reading (dB)	Type 1 Spec. (dB)
50 - 130	LAFP	L <sub>AFP</sub> A	F	94.00	31.5 Hz	55.1	$-39.4 \pm 1.5$
					63 Hz	67.9	$-26.2 \pm 1.5$
					125 Hz	77.8	$-16.1 \pm 1.0$
					250 Hz	85.3	$-8.6 \pm 1.0$
					500 Hz	90.7	$-3.2 \pm 1.0$
					1 kHz	94.0	Ref.
					2 kHz	95.2	$+1.2 \pm 1.0$
					4 kHz	95.0	$+1.0 \pm 1.0$
				8 kHz	92.9	-1.1 (+1.5 ; -3.0)	
	A		12.5 kHz	89.8	-4.3 (+3.0 ; -6.0)		

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Sun Creation Engineering Limited - Calibration & Testing Laboratory era 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong 解(但工程有限公司 - 校正及檢測實驗所

Tel: (E.F: 2927 2606) Fax/傳代: 2744 8986 E-mail/ 近歸: callab/a/suncreation.com Website/親矩:: www.suncreation.com

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.



輝創工程有限公司 Sun Creation Engineering Limited

Calibration and Testing Laboratory

# Certificate of Calibration 校正證書

Certificate No. : C132568 證書編號

#### 6.3.2 C-Weighting

	UUT	Setting	(	Appli	ed Value	UUT	IEC 60651
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.	Reading (dB)	Type 1 Spec. (dB)
50 - 130	L <sub>CFP</sub>	р С	F	94.00	31.5 Hz	91.4	$-3.0 \pm 1.5$
					63 Hz	93.3	$-0.8 \pm 1.5$
					125 Hz	93.8	$-0.2 \pm 1.0$
					250 Hz	94.0	$0.0 \pm 1.0$
					500 Hz	94.0	$0.0 \pm 1.0$
					1 kHz	94.0	Ref.
					2 kHz	93.8	$-0.2 \pm 1.0$
					4 kHz	93.2	$-0.8 \pm 1.0$
					8 kHz	90.9	-3.0 (+1.5 ; -3.0)
				12.5 kHz	87.8	-6.2 (+3.0 ; -6.0)	

#### 6.4

#### Time Averaging

UUT Setting			Applied Value					UUT	1EC 60804	
Range (dB)	Parameter	Frequency Weighting	Integrating Time	Frequency (kHz)	Burst Duration (ms)	Burst Duty Factor	Burst Level (dB)	Equivalent Level (dB)	Reading (dB)	Type 1 Spec. (dB)
30 - 110 1	LAcq	A	A 10 sec.	10 sec. 4	1	1/10	110.0	100	100.0	± 0.5
						1/10 <sup>2</sup>	90	89.8	± 0.5	
			60 sec.	]		1/103		80	79.4	± 1.0
			5 min.	1	1	1/104	1	70	69.2	± 1.0

Remarks : - Mfr's Spec. : IEC 60651 Type 1 & IEC 60804 Type 1

0.1 ID 01 - IZ 10- IZ	
250 Hz - 500 Hz	$: \pm 0.30 \text{ dB}$
1 kHz	$:\pm 0.20 \text{ dB}$
2 kHz - 4 kHz	: ± 0.35 dB
8 kHz	: ± 0.45 dB
12.5 kHz	: ± 0.70 dB
104 dB : 1 kHz	$\pm 0.10 \text{ dB}$ (Ref. 94 dB)
114 dB : 1 kHz	$\pm 0.10 \text{ dB}$ (Ref. 94 dB)
Burst equivalent level	: ± 0.2 dB (Ref. 110 dB continuous sound level)
	2 kHz - 4 kHz 8 kHz 12.5 kHz 104 dB : 1 kHz 114 dB : 1 kHz

- The uncertainties are for a confidence probability of not less than 95 %.

Note :

The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted 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. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full; without the prior written approval of this laboratory.

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# Certificate of Calibration 校正證書

Certificate No. : C132228 證書編號

ITEM TESTED / 送檢	頁目	(Job No. / 序引編號:IC13-0878)
Description / 儀器名稱	1	Acoustical Calibrator (EQ081)
	:	Brüel & Kjær
Model No. / 型號	1	4231
Serial No. / 編號	+	2326408
Supplied By / 委託者	1	Action-United Environmental Services and Consulting Unit A, 20/F., Gold King Industrial Building, 35-41 Tai Lin Pai Road, Kwai Chung, N.T.

#### TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Line Voltage / 電壓 : --- Relative Humidity / 相對濕度 : (55±20)%

#### TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 15 April 2013

#### TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only. All results are within manufacturer's specification. The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA
- Agilent Technologies, USA

Tested By 測試	K Q Lee				
Certified By 核證	: K M Wu	Date of Issue 簽發日期	1	16 April 2013	

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

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Sun Creation Engineering Limited - Calibration & Testing Laboratory vo 4/F, Tsing Shan Wan Exchange Building, I Hing On Lane, Tuen Mun, New Territories, Hong Kong 輝創工程有限公司 - 校正及檢測實驗所 em 香港新界屯門興安里一號省山灣機樓四樓 Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail:電郵: eallab@suncreation.com Website/網址: www.suncreation.com



Calibration and Testing Laboratory

# Certificate of Calibration 校正證書

Certificate No. : C132228 證書編號

- 1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.
- 2. The results presented are the mean of 3 measurements at each calibration point.
- 3. Test equipment :

Equipment IDDescriptionCertificate No.CL130Universal CounterC123541CL281Multifunction Acoustic CalibratorDC110233TST150AMeasuring AmplifierC120886

- 4. Test procedure : MA100N.
- 5. Results :
- 5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	94.0	± 0.2	± 0.2
114 dB, 1 kHz	114.0		

#### 5.2 Frequency Accuracy

UUT Nominal Value	Measured Value	Mfr's	Uncertainty of Measured Value
(kHz)	(kHz)	Spec.	(Hz)
1	1.000 0	1 kHz ± 0.1 %	± 0.1

Remark : The uncertainties are for a confidence probability of not less than 95 %.

Note :

The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted 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. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

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# ALS Technichem (HK) Pty Ltd

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

CONTACT: MR BEN TAM CLIENT: ACTION UNITED ENVIRO SERVICES ADDRESS: RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T., HONG KONG PROJECT: -- 
 WORK ORDER:
 HK1309651

 LABORATORY:
 HONG KONG

 DATE RECEIVED:
 11/04/2013

 DATE OF ISSUE:
 17/04/2013

#### COMMENTS

It is certified that the item under calibration/checking has been calibrated/checked by corresponding calibrated equipment in the laboratory. Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal aceptance criteria of ALS will be followed.

Scope of Test:	Dissolved Oxygen, Turbidity, pH, Salinity and Temperature
Equipment Type:	SONDE
Brand Name:	YSI
Model No.:	YSI 6820 / 650MDS
Serial No.:	02J0912/02K0788 AA
Equipment No.:	
Date of Calibration:	16 April, 2013

#### NOTES

This is the Final Report and supersedes any preliminary report with this batch number. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

#### **ISSUING LABORATORY: HONG KONG**

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Mr. Fung Lim Chee Richard General Manager Greater China & Hong Kong

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Page 1 of 2

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Life Sciences

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

Work Order:	HK1309651
Date of Issue:	17/04/2013
Client:	ACTION UNITED ENVIRO SERVICES



Client:	ACTION UNITED ENVIRO SERVICES				
quipment Type: Brand Name: Model No.: Gerial No.: Equipment No.:	SONDE YSI YSI 6820 / 650MDS 02J0912/02K0788 AA  16 April, 2013 Date of next Calibration: 16 July, 2013				
Date of Calibration:					
Parameters:					
Dissolved Oxygen	Method Ref: APHA (21st edition), 45000: G				
	Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)		
	5.51 8.65	7.86 8.66	2.35 0.01		
		Tolerance Limit (±mg/L)	0.20		
oH Value	Method Ref: APHA 21st Ed. 4		Tolorence (all with		
	Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)		
	4.0	3.98	-0.02		
	7.0	6.92	-0.08		
	10.0	9.97	-0.03		
		Tolerance Limit (±pH unit)	0.20		
6.5.7			0.20		
alinity	Method Ref: APHA (21st editi	on), 2520B			
alinity	Method Ref: APHA (21st editi Expected Reading (NTU)		0.20 Tolerance (%)		
alinity		on), 2520B			
alinity	Expected Reading (NTU) 0 10	on), 2520B Displayed Reading (NTU) 0.08 10.83	Tolerance (%)  8.3		
alinity	Expected Reading (NTU) 0 10 20	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15	Tolerance (%)  8.3 5.7		
alinity	Expected Reading (NTU) 0 10	on), 2520B Displayed Reading (NTU) 0.08 10.83	Tolerance (%)  8.3		
alinity	Expected Reading (NTU) 0 10 20	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28	Tolerance (%)  8.3 5.7 7.6		
alinity	Expected Reading (NTU) 0 10 20	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15	Tolerance (%)  8.3 5.7		
	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical		
	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure.		
	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M Expected Reading (°C )	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer Displayed Reading (°C )	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure. Tolerance (°C )		
	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M Expected Reading (°C ) 12.0	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer Displayed Reading (°C ) 11.40	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure. Tolerance (°C ) -0.6		
	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M Expected Reading (°C) 12.0 23.0	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer Displayed Reading (°C ) 11.40 22.54	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure. Tolerance (°C ) -0.6 -0.5		
	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M Expected Reading (°C ) 12.0	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer Displayed Reading (°C ) 11.40	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure. Tolerance (°C ) -0.6		
	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M Expected Reading (°C) 12.0 23.0	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer Displayed Reading (°C ) 11.40 22.54	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure. Tolerance (°C ) -0.6 -0.5		
emperature	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M Expected Reading (°C) 12.0 23.0 42.5	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer Displayed Reading (°C ) 11.40 22.54 42.68 Tolerance Limit (±°C)	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure. Tolerance (°C ) -0.6 -0.5 0.2		
emperature	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M Expected Reading (°C) 12.0 23.0	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer Displayed Reading (°C ) 11.40 22.54 42.68 Tolerance Limit (±°C)	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure. Tolerance (°C ) -0.6 -0.5 0.2		
emperature	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M Expected Reading (°C ) 12.0 23.0 42.5 Method Ref: APHA (21st editi Expected Reading (NTU)	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer Displayed Reading (°C ) 11.40 22.54 42.68 Tolerance Limit (±°C) ion), 2130B Displayed Reading (NTU)	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure. Tolerance (°C ) -0.6 -0.5 0.2 2.0 Tolerance (%)		
Temperature	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M Expected Reading (°C ) 12.0 23.0 42.5 Method Ref: APHA (21st editi Expected Reading (NTU) 0	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer Displayed Reading (°C ) 11.40 22.54 42.68 Tolerance Limit (±°C) ion), 2130B Displayed Reading (NTU) -0.2	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure. Tolerance (°C ) -0.6 -0.5 0.2 2.0 Tolerance (%)		
Temperature	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M Expected Reading (°C ) 12.0 23.0 42.5 Method Ref: APHA (21st editi Expected Reading (NTU) 0 40	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer Displayed Reading (°C ) 11.40 22.54 42.68 Tolerance Limit (±°C) ion), 2130B Displayed Reading (NTU) -0.2 42.6	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure. Tolerance (°C ) -0.6 -0.5 0.2 2.0 Tolerance (%)		
Femperature	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M Expected Reading (°C ) 12.0 23.0 42.5 Method Ref: APHA (21st edit) Expected Reading (NTU) 0 40 80	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer Displayed Reading (°C ) 11.40 22.54 42.68 Tolerance Limit (±°C) ion), 2130B Displayed Reading (NTU) -0.2 42.6 78.0	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure. Tolerance (°C ) -0.6 -0.5 0.2 2.0 Tolerance (%)  6.5 -2.5		
Salinity Femperature Furbidity	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M Expected Reading (°C ) 12.0 23.0 42.5 Method Ref: APHA (21st edit) Expected Reading (NTU) 0 40 80 400	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer Displayed Reading (°C ) 11.40 22.54 42.68 Tolerance Limit (±°C) ion), 2130B Displayed Reading (NTU) -0.2 42.6 78.0 435.5	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure. Tolerance (°C ) -0.6 -0.5 0.2 2.0 Tolerance (%)		
Femperature	Expected Reading (NTU) 0 10 20 30 Method Ref: Section 6 of Inte Guide No. 3 Second edition M Expected Reading (°C ) 12.0 23.0 42.5 Method Ref: APHA (21st edit) Expected Reading (NTU) 0 40 80	on), 2520B Displayed Reading (NTU) 0.08 10.83 21.15 32.28 Tolerance Limit (±%) rnational Accreditation New Zeala larch 2008: Working Thermometer Displayed Reading (°C ) 11.40 22.54 42.68 Tolerance Limit (±°C) ion), 2130B Displayed Reading (NTU) -0.2 42.6 78.0	Tolerance (%)  8.3 5.7 7.6 10.0 nd Technical Calibration Procedure. Tolerance (°C ) -0.6 -0.5 0.2 2.0 Tolerance (%)  6.5 -2.5		

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

U Mr. Fung Lim Chee, Richard General Manager -Greater China & Hong Kong Page 2 of 2

ALS Technichem (HK) Pty Ltd ALS Environmental

# Appendix F

# **Event/Action Plan**

### Air Quality

		III Quanty		
EVENT	ACTION			
	ET	IC(E)	ER	CONTRACTOR
ACTION LEVEL	1	1	1	
1. Exceedance for one sample	<ol> <li>Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>Inform IC(E) and ER;</li> <li>Repeat measurement to confirm finding;</li> <li>Increase monitoring frequency to daily.</li> </ol>	<ol> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method.</li> </ol>	1. Notify Contractor.	<ol> <li>Rectify any unacceptable practice;</li> <li>Amend working methods if appropriate.</li> </ol>
2. Exceedance for two or more consecutive samples	<ol> <li>Identify source;</li> <li>Inform IC(E) and ER;</li> <li>Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>Repeat measurements to confirm findings;</li> <li>Increase monitoring frequency to daily;</li> <li>Discuss with IC(E) and Contractor on remedial actions required;</li> <li>If exceedance continues, arrange meeting with IC(E) and ER;</li> <li>If exceedance stops, cease additional monitoring.</li> </ol>	<ol> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with ET and Contractor on possible remedial measures;</li> <li>Advise the ET on the effectiveness of the proposed remedial measures;</li> <li>Supervise Implementation of remedial measures.</li> </ol>	<ol> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>Ensure remedial measures properly implemented.</li> </ol>	<ol> <li>Submit proposals for remedial to ER within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if appropriate.</li> </ol>
		LIMIT LEVEL		
1. Exceedance for one sample	<ol> <li>Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>Inform ER, Contractor and EPD;</li> <li>Repeat measurement to confirm finding;</li> <li>Increase monitoring frequency to daily;</li> <li>Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results.</li> </ol>	<ol> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with ET and Contractor on possible remedial measures;</li> <li>Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>Supervise implementation of remedial measures.</li> </ol>	<ol> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>Ensure remedial measures properly implemented.</li> </ol>	<ol> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IC(E) within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if appropriate.</li> </ol>
2. Exceedance for two or more consecutive samples	<ol> <li>Notify IC(E), ER, Contractor and EPD;</li> <li>Identify source;</li> <li>Repeat measurement to confirm findings;</li> <li>Increase monitoring frequency to daily;</li> <li>Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>Arrange meeting with IC(E) and ER to discuss the remedial actions to be taken;</li> <li>Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results;</li> <li>If exceedance stops, cease additional monitoring.</li> </ol>	<ol> <li>Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;</li> <li>Supervise the implementation of remedial measures.</li> </ol>	<ol> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>In consolidation with the IC(E), agree with the Contractor on the remedial measures to be implemented;</li> <li>Ensure remedial measures properly implemented;</li> <li>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> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IC(E) within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Resubmit proposals if problem still not under control;</li> <li>Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>

### **Construction Noise**

EVENT	ACTION			
	ET	IC(E)	ER	CONTRACTOR
Action Level	<ol> <li>Notify IC(E) and Contractor;</li> <li>Carry out investigation;</li> <li>Report the results of investigation to the IC(E), ER and Contractor;</li> <li>Discuss with the Contractor and formulate remedial measures;</li> <li>Increase monitoring frequency to check mitigation effectiveness</li> </ol>	<ol> <li>Review the analysed results submitted by the ET;</li> <li>Review the proposed remedial measures by the Contractor and advise the ER accordingly;</li> <li>Supervise the implementation of remedial measures.</li> </ol>	<ol> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>Ensure remedial measures are properly implemented.</li> </ol>	<ol> <li>Submit noise mitigation proposals to IC(E);</li> <li>Implement noise mitigation proposals.</li> </ol>
Limit Level	<ol> <li>Identify source;</li> <li>Inform IC(E), ER, EPD and Contractor;</li> <li>Repeat measurements to confirm findings;</li> <li>Increase monitoring frequency;</li> <li>Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>Inform IC(E), ER and EPD the causes and actions taken for the exceedances;</li> <li>Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results;</li> <li>If exceedance stops, cease additional monitoring.</li> </ol>	<ol> <li>Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;</li> <li>Supervise the implementation of remedial measures.</li> </ol>	<ol> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>Ensure remedial measures properly implemented;</li> <li>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> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IC(E) within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Resubmit proposals if problem still not under control;</li> <li>Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>

### Water Quality

EVENT	ACTION				
	ET	IC(E)	ER	CONTRACTOR	
ACTION LEVEL		- ( )			
1. Exceedance for one sampling day	<ol> <li>Repeat in-situ measurement on the next day of exceedance to confirm findings;</li> <li>Identify source(s) of impact;</li> <li>Inform ICE, Contractor, ER, EPD and AFCD; and</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods.</li> </ol>	1. Check monitoring data submitted by ET and Contractor's working methods	<ol> <li>Confirm receipt of notification of non-compliance in writing; and</li> <li>Notify Contractor</li> </ol>	<ol> <li>Information the ER and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice; and</li> <li>Amend working methods if appropriate</li> </ol>	
2. Exceedance for two or more consecutive sampling days	<ol> <li>Same as the above;</li> <li>Inform ICE, Contractor, ER, EPD and AFCD;</li> <li>Discuss mitigation measures with IC(E), RE and Contractor;</li> <li>Ensure well implementation of mitigation measures; and</li> <li>Increase the monitoring frequency to daily until no exceedance of Action Level</li> </ol>	<ol> <li>Same as the above;</li> <li>Discuss with ET and Contractor on possible remedial actions;</li> <li>Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly; and</li> <li>Supervise the implementation of mitigation measures.</li> </ol>	<ol> <li>Discuss with IC(E) on the proposed mitigation measures;</li> <li>Ensure well implementation of mitigation measures; and</li> <li>Assess the effectiveness of the implemented mitigation measures</li> </ol>	<ol> <li>Same as the above;</li> <li>Check all plant and equipment and consider changes of working methods;</li> <li>Submit proposal of additional mitigation measures to ER within 3 working days of notification and discuss with ET, IC(E), and ER; and</li> <li>Implement the agreed mitigation measures</li> </ol>	
		LIMIT LEVEL			
1. Exceedance for one sampling day	<ol> <li>Repeat in-situ measurement on the next day of exceedance to confirm findings;</li> <li>Identify source(s) of impact;</li> <li>Inform ICE, Contractor, ER, EPD and AFCD;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods; and</li> <li>Discuss mitigation measures with IC(E), RE and Contractor</li> </ol>	<ol> <li>Check monitoring data submitted by ET and Contractor's working method</li> <li>Discuss with ER and Contractor on possible</li> </ol>	<ol> <li>Confirm receipt of notification failure in writing; and</li> <li>Discuss with IC(E), ET and</li> <li>Contractor on the proposed mitigation measures; and</li> <li>Request Contractor to review the working methods</li> </ol>	<ol> <li>Inform the ER and confirm notification of the failure in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment and consider changes of working methods; and</li> <li>Submit proposal of mitigation measures to ER within 3 working days of notification and discuss with ET and ER</li> </ol>	
2. Exceedance for two or more consecutive sampling days	<ol> <li>Same as the above;</li> <li>Ensure mitigation measures are implemented; and</li> <li>Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days</li> </ol>	<ol> <li>Same as the above; and</li> <li>Supervise the Implementation of mitigation measures</li> </ol>	<ol> <li>Same as the above;</li> <li>Ensure well implementation of mitigation measures</li> <li>Make agreement on the mitigation measures to be implemented; and</li> <li>Consider and instruct, if necessary, the Contractor to stow down or to stop all or part of the construction activities until no exceedance of limit level</li> </ol>	<ol> <li>Same as the above;</li> <li>Take immediate action to avoid further exceedance;</li> <li>Implement the agreed mitigation measures;</li> <li>Resubmit proposals of mitigation measures if problem still not under control; and</li> <li>As directed by the Engineer, to slow down or to stop all or part of the construction activities until to no exceedance of Limit Level.</li> </ol>	



Appendix G

### **Monitoring Data Sheet**

Z:\Jobs\2010\TCS00512(DC-2009-13)-Lama\600\EM&A Monthly Report\Sok Kwu Wan\35th - Jun 2013\R0662v2.docx Appendix



### 24-hour TSP Monitoring Data Sheet

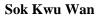
### Air Qualtiy Monitoring - 24-hour TSP Monitoring data sheet

		EI	LAPSED TI	ME	CHA	ART READ	ING			STANDARD	)	INITIAL	FINAL	WEIGHT	DUST
DATE	SAMPLE							AVG	AVG	FLOW	AIR	FILTER	FILTER	DUST	24-hour TSP
	NUMBER	INITIAL	FINAL	ACTUAL	MIN	MAX	AVG	TEMP	PRESS	RATE	VOLUME	WEIGHT	WEIGHT	COLLECTED	IN AIR
				(min)				(oC)	(hPa)	(m3/min)	(std m3)	(g)	(g)	(g)	$(ug/m^3)$
24-hour TSP	Monitoring F	Results - AN	<b>f</b> 1											•	
30-May-13	25530	13534.25	13558.24	1439.40	24	26	25.0	26.9	1007.4	0.49	708	3.6674	3.67	0.0026	4
5-Jun-13	25535	13558.24	13582.23	1439.40	24	26	25.0	27.3	1006.8	0.49	707	3.6653	3.6675	0.0022	3
11-Jun-13	204716	13582.23	13606.22	1439.40	22	24	23.0	27.4	1006.8	0.42	602	3.6662	3.6678	0.0016	3
17-Jun-13	204723	13606.22	13630.21	1439.40	22	24	23.0	28.1	1005.7	0.42	600	3.6683	3.6699	0.0016	3
22-Jun-13	204728	13630.21	13654.2	1439.40	22	24	23.0	28.6	1005.1	0.42	598	3.6642	3.6719	0.0077	13
24-hour TSP	Monitoring F	Results - AN	12												
30-May-13	25529	12037.34	12061.33	1439.40	24	26	25.0	26.9	1007.4	0.46	657	3.6625	3.6638	0.0013	2
5-Jun-13	25536	12061.33	12085.32	1439.40	30	32	31.0	27.3	1006.8	0.67	965	3.6575	3.6725	0.0150	16
11-Jun-13	25537	12085.32	12109.31	1439.40	30	32	31.0	27.4	1006.8	0.67	965	3.6567	3.6652	0.0085	9
17-Jun-13	204718	12109.31	12133.3	1439.40	30	32	31.0	28.1	1005.7	0.67	962	3.6632	3.6725	0.0093	10
22-Jun-13	204727	12133.3	12157.29	1439.40	26	30	28.0	28.6	1005.1	0.56	806	3.662	3.6711	0.0091	11
24-hour TSP	Monitoring F	Results - AN	13												
30-May-13	25531	7507.28	7531.27	1439.4	30	32	31	26.9	1007.4	0.97	1400	3.6534	3.6645	0.0111	8
5-Jun-13	25534	7531.27	7555.26	1439.4	30	32	31	27.3	1006.8	0.97	1398	3.6565	3.6843	0.0278	20
11-Jun-13	204717	7555.26	7579.25	1439.4	24	28	26	27.4	1006.8	0.80	1146	3.6673	3.6739	0.0066	6
17-Jun-13	204724	7579.25	7603.24	1439.4	30	32	31	28.1	1005.7	0.97	1395	3.6664	3.6794	0.0130	9
22-Jun-13	204729	7603.24	7627.23	1439.4	31	33	32	28.6	1005.1	1.00	1444	3.6681	3.7184	0.0503	35



### Marine Water Quality Monitoring Data Sheet

# Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan



Date 27-May-13

Date / Time	Location	Tide*	Co-ord	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS
Date / Time	Location	Tide+	East	North	m	m	ç	mg/L	%	NTU	ppt	unit	mg/l
2013/5/27 13:54	W1	ME	832974	807746	2.4	1.200	26.40	5.60	78.7	1.1	30.26	8.24	1.3
						1.200 1.000	26.40 26.40	5.52 5.59	78.5 78.7	1.3 1.1	30.31 30.61	8.26 8.22	
						1.000	26.40	5.59	78.8	1.1	30.59	8.22	1.4
2013/5/27 13:38	W2	ME	832675	007000	12.5	6.250	25.70	5.35	75.1	0.9	34.62	8.16	1.7
2015/5/27 15:58	W Z	ME	852075	807980	12.5	6.250	25.70	5.21	73.1	1.0	34.61	8.19	1./
						11.500	25.00	5.03	70.5	1.3	35.47	8.21	3.0
						11.500 1.000	25.00	4.90 6.13	68.6 86.6	1.3 0.7	35.52 30.68	8.23	
						1.000	26.30 26.30	6.10	86.3	0.7	30.80	8.28 8.26	1.2
2012/5/07 12 25	11/2		022027	007000	10.4	6.200	25.70	5.65	79.5	1.0	34.31	8.19	1.6
2013/5/27 13:25	W3	ME	832037	807900	12.4	6.200	25.70	5.59	78.5	1.0	34.35	8.16	1.6
						11.400	25.10	4.82	67.3	1.1	34.76	8.21	1.5
						11.400	25.10	4.61	64.4	1.2	34.90	8.23	
						1.000	26.50 26.50	4.74 4.72	66.5 66.3	1.2	29.56 29.57	8.28 8.26	0.9
						6.950	26.00	4.61	64.7	1.0	33.22	8.19	
2013/5/27 14:11	C1	ME	833717	808196	13.9	6.950	26.00	4.60	64.5	0.9	32.87	8.21	1.5
						12.900	25.40	4.52	63.4	0.8	35.54	8.18	1.4
						12.900	25.40	4.38	61.5	0.9	35.56	8.19	1.7
						1.000	26.30	6.29	88.8 88.4	0.9	31.48 31.49	8.24 8.27	2.0
						1.000 5.100	26.30 25.80	6.26 5.92	83.2	1.0	34.67	8.33	
2013/5/27 13:12	C2	ME	831453	807739	10.2	5.100	25.80	5.63	79.1	1.1	34.70	8.31	2.8
						9.200	25.30	5.46	76.5	1.2	34.70	8.26	6.1
						9.200	25.30	5.02	70.3	1.2	34.72	8.27	0.1
						1.000	26.50	5.83	81.9	1.3	32.04	8.24	0.8
						1.000	26.50	5.72	80.6	1.3	32.04	8.23	
2013/5/27 14:29	C3	ME	832227	808883	14.3	7.150 7.150	25.90 255.90	5.49 5.20	77.0 72.9	1.2	35.00 34.61	8.21 8.22	2.1
						13.300	25.30	4.79	66.9	1.3	35.17	8.22	
						13.300	25.30	4.66	65.2	1.4	35.16	8.23	2.1
2013/5/27 8:42	W1	MF	832971	807725	2.6	1.300	25.60	5.60	79.1	0.5	31.09	8.12	1.7
						1.300	25.60	5.58	78.2	0.5	31.10	8.14	
						1.000	25.80 25.80	5.69 5.60	80.1 78.8	0.4	31.94 31.98	8.07 8.09	1.5
						6.600	25.00	5.39	75.8	0.4	35.65	8.08	
2013/5/27 8:53	W2	MF	832678	807973	13.2	6.600	25.00	5.34	74.9	0.3	35.72	8.08	3.6
						12.200	24.70	5.09	71.3	0.7	36.26	8.04	3.3
						12.200	24.70	5.09	71.0	0.7	36.21	8.05	5.5
						1.000	25.70	6.20	87.2	0.5	34.25	8.09	4.2
						1.000 6.500	25.70 25.20	6.08 5.96	85.5 83.7	0.7	34.37 35.40	8.11 8.08	
2013/5/27 10:06	W3	MF	832055	807899	13	6.500	25.20	5.87	82.5	0.0	35.40	8.09	4.2
						12.000	24.80	5.71	79.6	0.8	35.27	8.08	5.0
						12.000	24.80	5.63	78.8	0.9	35.31	8.09	5.2
						1.000	25.30	5.32	74.9	0.5	31.97	8.09	2.2
						1.000 7.400	25.30	5.20	73.4 69.9	0.6	32.01 36.02	8.11 8.07	
2013/5/27 8:27	C1	MF	833712	808180	14.8	7.400	24.70 24.70	5.00 4.92	69.9	0.5	35.91	8.07	2.8
						13.800	24.10	4.74	66.2	0.2	36.20	8.05	2.5
						13.800	24.10	4.62	64.5	0.2	36.23	8.06	2.5
						1.000	25.60	4.68	66.3	0.7	31.67	8.11	1.7
						1.000	25.60	4.66	66.1	0.9	32.13	8.12	
2013/5/27 9:19	C2	MF	831458	807741	11.1	5.550 5.550	25.00 25.00	4.37 4.34	61.7 60.8	0.6	34.87 34.84	8.07 8.09	5.2
						10.100	25.00	4.34	59.3	0.7	34.84	8.09	
						10.100	24.80	4.23	59.0	0.9	34.85	8.04	6.2
						1.000	25.30	4.66	65.3	0.6	32.45	8.11	1.0
						1.000	25.30	4.62	65.3	0.7	32.46	8.12	1.0
2013/5/27 8:11	C3	MF	832231	808869	15.1	7.550	24.60	4.40	62.0	0.5	33.53	8.10	2.6
						7.550	24.60	4.40	62.0	0.6	33.56	8.08	
						14.100	23.90	4.41	62.0	0.4	35.47	8.07	

MF- Mid Flood Tide

ME- Mid Ebb tide



### Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan



### Sok Kwu Wan

Date 29-May-13

Date / Time	Location	Tide*	Co-ore	dinates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS
Date / Time	Location	Tide.	East	North	m	m	c	mg/L	%	NTU	ppt	unit	mg/l
2013/5/29 15:32	W1	ME	832966	807741	2.4	1.200	26.70	6.88	100.7	1.9	31.38	8.17	1.4
						1.200	26.70 26.30	7.09 6.70	103.8 98.0	2.0	31.39 31.30	8.16 8.17	
						1.000	26.30	6.66	98.0 97.4	1.8	31.30	8.18	1.6
2012/5/20 15 10			000657	000000	12.6	6.300	25.70	6.03	88.3	1.6	31.47	8.14	1.0
2013/5/29 15:18	W2	ME	832657	809986	12.6	6.300	25.70	6.02	88.1	1.7	31.49	8.14	1.9
						11.600	25.30	5.70	83.5	19.0	31.79	8.13	2.1
	_					11.600	25.30	5.17	75.8	1.9	31.76	8.15	2.1
						1.000	26.40 26.40	6.18 5.69	90.5 83.4	1.8 1.8	31.05 31.00	8.16 8.10	0.7
						6.250	26.00	5.56	81.4	2.0	31.43	8.16	
2013/5/29 15:04	W3	ME	832060	807895	12.5	6.250	26.00	5.46	79.8	2.0	31.40	8.17	1.9
						11.500	25.40	4.55	66.8	1.6	32.07	8.13	2.9
						11.500	25.40	4.44	65.0	1.7	31.81	8.14	2.9
						1.000	26.20	7.18	105.1	2.0	31.15	8.19	0.8
						1.000	26.20	6.75	98.7	2.1	31.24	8.21	
2013/5/29 15:48	C1	ME	833719	808196	14.3	7.150 7.150	25.60 25.60	6.42 6.15	94.0 89.9	2.0 1.9	31.38 31.42	8.17 8.18	1.0
						13.300	23.00	5.60	81.9	2.0	31.42	8.11	
						13.300	24.70	5.22	76.4	2.1	31.72	8.12	1.2
						1.000	26.40	6.10	89.3	1.5	30.96	8.19	1.6
						1.000	26.40	5.66	82.8	1.6	31.00	8.22	1.6
2013/5/29 14:51	C2	ME	831459	807740	10.7	5.350	26.10	5.47	79.9	1.7	31.51	8.20	2.7
2010/0/27 1 101	02	10112	001107	0077.00	1017	5.350	26.10	5.37	78.5	1.6	31.72	8.18	
						9.700 9.700	25.70 25.70	5.03 5.38	72.2	1.8 1.8	32.65 32.19	8.17 818	2.6
						9.700	26.30	5.97	87.4	1.8	31.08	8.17	
						1.000	26.30	5.87	86.0	1.8	31.13	8.16	1.0
2010/5/2014 6 05	~	1.05	000010			7.280	25.60	5.59	81.8	2.1	31.54	8.13	1.0
2013/5/29 16:07	C3	ME	832213	808890	14.5	7.250	25.60	5.47	80.1	2.1	31.44	8.13	1.3
						13.500	24.60	5.26	77.0	2.4	31.71	8.10	1.7
						13.500	24.60	5.18	75.8	2.4	31.79	8.09	1.7
						1 400	25.90	7.00	106.4	1.2	21.00	8.04	
2013/5/29 8:44	W1	MF	832959	807741	2.8	1.400	25.80 25.80	7.29	106.4 105.2	1.3 1.3	31.08 31.09	8.04 8.05	1.0
						1.400	25.80	7.13	103.2	1.3	30.97	8.03	
						1.000	25.50	6.81	99.4	1.2	30.96	8.09	1.1
2012/5/20 0 57	11/2	ME	022602	007074	12.5	6.750	25.00	6.43	93.9	1.3	31.98	8.08	17
2013/5/29 8:57	W2	MF	832683	807974	13.5	6.750	25.00	6.48	94.7	1.4	31.97	8.08	1.7
						12.500	24.70	6.39	93.2	1.5	33.11	8.04	2.8
	_					12.500	24.70	6.10	88.8	1.6	33.22	8.05	2.0
						1.000	25.60	6.08	88.6	1.0	30.76	8.06	1.2
						1.000 6.650	25.60 24.90	6.04 5.98	88.1 87.2	1.1 1.0	30.74 30.98	8.07 8.03	
2013/5/29 9:14	W3	MF	832044	807886	13.3	6.650	24.90	5.92	86.2	1.0	31.00	8.05	1.4
						12.300	24.70	5.49	80.0	1.4	32.09	8.03	1.0
						12.300	24.70	5.41	78.9	1.5	32.07	8.04	1.8
						1.000	25.50	7.43	108.6	1.0	31.79	7.97	0.9
						1.000	25.50	6.85	100.1	1.1	31.83	7.98	0.2
2013/5/29 8:31	C1	MF	833720	808164	15.1	7.550 7.550	24.90 24.90	6.61	96.7 95.4	1.2	32.05	8.01	1.3
	1					14.100	24.90	6.53 6.37	95.4 93.3	1.3 1.2	32.07 31.90	8.02 8.02	
	1					14.100	24.30	6.33	92.7	1.2	31.90	8.02	1.4
						1.000	25.80	6.00	87.4	1.3	30.52	8.04	0.6
						1.000	25.80	5.80	84.5	1.4	30.52	8.05	0.6
2013/5/29 9:27	C2	MF	831452	807755	11.8	5.900	25.40	5.74	83.5	1.3	30.59	8.01	2.0
2010127 7.21	02		001102	001100	11.0	5.900	25.40	5.78	84.2	1.3	30.49	8.00	2.0
						10.800	24.90	5.78	84.1	1.3	31.11	8.01	2.7
						10.800	24.90 25.70	5.66 6.92	82.5 101.1	1.1 0.9	31.15 31.20	8.02 7.96	
						1.000	25.70	6.92	99.9	0.9	31.20	7.96	1.8
2012/5/55 5 5 5				0000		7.650	25.00	5.59	81.8	1.1	31.25	8.01	
2013/5/29 8:14	C3	MF	832246	808869	15.3	7.650	25.00	5.48	80.0	1.1	31.30	8.03	1.8
	1					14.300	24.20	5.19	76.0	1.2	31.77	8.98	1.8
								5.16	75.6	1.3			

MF- Mid Flood Tide

ME- Mid Ebb tide

# Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan



### Sok Kwu Wan

Date 31-May-13

Date / Time	Location	Tide*	Co-ore	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS
Date / Time	Location	Tide.	East	North	m	m	ç	mg/L	%	NTU	ppt	unit	mg/l
2013/5/31 17:08	W1	ME	832973	807722	2.7	1.350	26.20	6.80	91.4	3.6	31.01	8.18	2.0
						1.350	26.20	7.08	95.2	3.7	31.04	8.20	
						1.000	26.00 26.00	7.27 7.05	96.6 94.2	2.8 2.9	31.08 31.13	8.20 8.21	1.4
						6.650	25.30	6.38	84.7	3.1	31.56	8.17	
2013/5/31 17:25	W2	ME	832684	807971	13.3	6.650	25.30	6.38	84.7	3.1	31.54	8.17	2.1
						12.300	24.80	5.78	77.1	3.4	31.91	8.14	1.7
	_					12.300	24.80	5.66	75.3	3.5	31.73	8.16	1.7
						1.000	25.90 25.90	6.62 6.23	88.9 83.2	3.0 2.9	30.99 30.96	8.16 8.17	1.8
						6.500	25.30	5.85	78.2	2.9	31.34	8.14	
2013/5/31 17:11	W3	ME	832037	807902	13	6.500	25.30	5.72	76.6	2.7	31.24	8.14	1.9
						12.000	24.90	5.49	73.7	2.7	32.07	8.13	1.9
						12.000	24.90	5.30	70.7	2.8	31.84	8.12	1.9
						1.000	26.30	7.19	96.9	4.0	31.17	8.21	1.5
						1.000 7.450	26.30 25.70	6.39 6.15	85.8 82.7	4.0	31.14 31.57	8.23 8.24	
2013/5/31 17:54	C1	ME	833725	808186	14.9	7.450	25.70	5.87	78.8	4.2	31.67	8.22	1.7
						13.900	24.40	5.82	77.9	5.0	32.02	8.19	1.7
						13.900	24.40	5.85	77.7	4.9	31.98	8.20	1.7
						1.000	26.10	6.47	87.1	3.2	30.76	8.12	1.3
						1.000	26.10	6.07	81.2	3.2	30.82	8.14	1.5
2013/5/31 16:57	C2	ME	831439	807750	10.8	5.400 5.400	25.80 25.80	5.78 5.68	76.9 75.7	3.3 3.4	31.07 31.27	8.11 8.12	1.2
						9.800	25.80	5.67	75.8	3.5	32.11	8.11	
						9.800	25.40	5.95	80.0	3.4	31.63	8.12	1.4
						1.000	26.30	6.50	87.1	4.3	31.10	8.23	1.3
						1.000	26.30	6.36	85.1	4.2	31.15	8.24	1.5
2013/5/31 18:12	C3	ME	833247	808869	15.2	7.600	25.50	5.81	77.9	4.6	31.45	8.20	1.2
2010/0/01 10:12	05	10112	000211	000000	1012	7.600	25.50	5.75	76.9	4.4	31.39	8.22	
						14.200	24.30 24.30	5.57 5.53	74.5 73.9	5.2 5.1	31.73 31.75	8.22 8.21	2.2
						14.200	24.00	5.55	13.7	J.1	51.75	0.21	
2012/5/21 10 14	11/1	ME	822060	007700	2.5	1.250	25.30	7.41	100.0	2.0	30.96	8.12	1.6
2013/5/31 10:14	W1	MF	832960	807730	2.5	1.250	25.30	7.61	102.2	2.1	31.02	8.12	1.6
						1.000	25.10	7.58	101.3	2.0	31.20	8.22	0.7
						1.000	25.10	7.35	98.2	2.0	31.20	8.22	0.7
2013/5/31 10:27	W2	MF	832651	807988	12.9	6.450 6.450	24.60 24.60	7.16 7.05	95.5 94.4	1.9 1.9	31.36 31.45	8.26 8.26	0.9
						11.900	24.00	7.05	94.4	1.9	31.43	8.20	
						11.900	24.00	6.86	92.2	2.1	31.73	8.25	0.8
						1.000	25.20	7.45	99.0	2.1	30.82	8.11	0.8
						1.000	25.20	7.32	97.3	2.3	30.83	8.13	0.8
2013/5/31 10:40	W3	MF	832052	807899	12.7	6.350	24.70	7.00	93.3	2.6	31.24	8.11	1.1
						6.350	2.70	6.90	92.1	2.4	31.29	8.11	
	1					11.700 11.700	24.00 24.00	6.46 6.54	86.6 87.6	2.7 2.7	31.77 32.03	8.12 8.12	2.6
						1.000	25.10	8.14	109.9	1.6	30.81	8.19	
	1					1.000	25.10	7.90	106.3	1.7	30.98	8.20	1.4
2013/5/31 10:00	C1	MF	833698	808196	14.4	7.200	24.50	7.75	104.3	2.0	31.55	8.20	1.3
2010/0/01 10:00			000000	000170	1 1.7	7.200	24.50	7.58	102.0	2.2	31.62	8.21	
						13.400	23.70	7.37	99.4	2.4	31.85 32.14	8.21 8.22	3.5
						13.400	23.70 25.30	7.30 6.58	98.6 87.4	2.5 2.4	32.14 30.42	8.22 8.16	
	1					1.000	25.30	6.48	86.4	2.4	30.42	8.16	1.2
2012/5/21 10.54	C2	MF	821452	807744	10.5	5.250	24.80	6.72	89.2	2.6	30.90	8.17	1.0
2013/5/31 10:56	C2	IVIF	831453	807744	10.5	5.250	24.80	6.69	88.9	2.7	30.86	8.17	1.0
						9.500	24.30	6.50	86.6	2.9	31.45	8.16	1.3
	+					9.500	24.30	6.61	87.8	3.0	31.72	8.19	
	1					1.000	14.90 24.90	7.73 7.45	103.5 99.5	1.7	31.25 31.24	8.23 8.25	1.3
						7.450	24.90	6.76	99.5 90.0	1.7	31.24 31.58	8.25 8.25	<u> </u>
2013/5/31 9:44	C3	MF	832234	808869	14.9	7.450	2.20	6.75	89.8	2.1	31.63	8.24	1.2
	1					13.900	23.40	6.12	81.8	2.2	32.47	8.22	26
	1					13.900	23.40	6.06	81.1	2.3	32.34	8.22	2.6

MF- Mid Flood Tide

ME- Mid Ebb tide

### **Construction of Sewage Treatment Works** at Yung Shue Wan and Sok Kwu Wan



### Sok Kwu Wan

4-Jun-13 Date

Data (TTime	Territor	m: 1. +	Co-oro	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS
Date / Time	Location	Tide*	East	North	m	m	ĉ	mg/L	%	NTU	ppt	unit	mg/l
2013/6/4 9:47	W1	ME	832977	807740	2.7	1.350	25.60	6.34	90.6	0.6	27.88	8.19	2.8
						1.350	25.60	6.43	91.9	0.6	27.92	8.19	
						1.000	25.40	6.40	91.8 90.5	0.7	27.84	8.16	2.7
						1.000 6.700	25.40 25.00	6.31 6.03	90.5 86.3	0.8	27.78 30.59	8.17 8.16	
2013/6/4 10:00	W2	ME	832686	807974	13.4	6.700	25.00	5.84	83.5	0.7	30.59	8.10	2.9
						12.400	24.80	5.48	78.4	0.7	30.91	8.12	
						12.400	24.80	4.99	71.3	0.7	31.06	8.14	2.6
						1.000	25.40	6.36	91.1	0.6	27.75	8.17	2.5
						1.000	25.40	6.19	88.7	0.6	27.82	8.19	2.5
2013/6/4 10:14	W3	ME	832052	807894	13.2	6.600	25.10	5.75	82.1	0.5	30.32	8.18	3.1
2015/0/4 10.14	VV J	IVIL	052052	007094	10.2	6.600	25.10	5.64	80.4	0.5	30.33	8.18	5.1
						12.200	24.80	4.14	58.8	0.5	30.56	8.14	3.3
						122.000	24.80	4.05	57.7	0.5	30.75	8.15	515
						1.000	25.50	5.83	83.6	0.7	28.07	8.17	3.6
						1.000 7.450	25.50 24.80	5.96 5.60	85.6 80.2	0.7	28.18 29.85	8.18 8.17	
2013/6/4 9:31	C1	ME	833708	808179	14.9	7.450	24.80	5.50	78.8	0.5	29.83	8.17	3.5
						13.900	24.00	4.98	71.3	0.0	31.31	814	
						13.900	24.10	4.73	67.6	0.9	31.29	8.15	3.6
						1.000	25.50	6.41	91.9	0.8	27.61	8.19	2.5
						1.000	25.50	6.33	90.6	0.8	27.67	8.20	2.5
2012/6/4 10:20	<i>C</i> 2	ME	921455	007720	11.7	5.850	25.20	6.02	85.9	0.6	30.64	8.17	2.7
2013/6/4 10:29	C2	ME	831455	807738	11.7	5.850	25.20	5.70	81.3	0.7	30.81	8.16	2.7
						10.700	24.90	5.22	72.8	0.6	31.03	8.16	2.9
						10.700	24.90	4.92	68.7	0.7	30.61	8.16	2.)
						1.000	25.40	5.67	81.1	0.7	28.48	8.18	2.4
						1.000	25.40	5.61	80.4	0.8	28.58	8.19	2
2013/6/4 9:12	C3	ME	832216	808884	15.2	7.600	24.60	5.43	77.6	0.6	30.53	8.16	2.9
						7.600	24.60	5.28	75.5	0.6	30.04	8.17	
						14.200	23.90 23.90	4.81	68.6	0.9	30.84 30.91	8.16	3.4
						14.200	25.90	4.68	66.8	1.0	50.91	8.16	
						1.250	26.50	6.30	90.4	0.5	28.33	8.27	
2013/6/4 16:01	W1	MF	832954	807738	2.5	1.250	26.50	6.23	89.2	0.6	28.34	8.29	3.0
						1.000	26.30	6.62	94.8	0.1	28.67	8.26	
													2.6
2012/6/4 15 46						1.000	26.30	6.41	91.7	0.2	28.74		
2013/6/4 15:46	11/2	ME	022601	007000	12.0	6.450	26.30 25.90	6.41 6.09	91.7 87.0	0.2	28.74 31.50	8.26 8.26	2.0
	W2	MF	832681	807988	12.9							8.26	3.0
	W2	MF	832681	807988	12.9	6.450	25.90	6.09	87.0	0.2	31.50	8.26 8.26	
	W2	MF	832681	807988	12.9	6.450 6.450	25.90 25.90	6.09 6.05	87.0 86.4	0.2 0.4	31.50 31.47	8.26 8.26 8.26	3.0 3.2
	W2	MF	832681	807988	12.9	6.450 6.450 11.900 11.900 1.000	25.90 25.90 25.40 25.40 26.30	6.09 6.05 5.91 5.59 6.04	87.0 86.4 84.1 79.3 86.1	0.2 0.4 0.5 0.8 0.4	31.50 31.47 33.13 33.20 29.71	8.26 8.26 8.26 8.21 8.24 8.24 8.26	3.2
	W2	MF	832681	807988	12.9	6.450 6.450 11.900 11.900 1.000 1.000	25.90 25.90 25.40 25.40 26.30 26.30	6.09 6.05 5.91 5.59 6.04 6.03	87.0 86.4 84.1 79.3 86.1 85.9	0.2 0.4 0.5 0.8 0.4 0.4	31.50 31.47 33.13 33.20 29.71 29.77	8.26 8.26 8.21 8.24 8.26 8.26 8.28	
2013/6/4 15:33	W2 W3	MF	832681	807988	12.9	6.450           6.450           11.900           11.900           1.000           1.000           6.350	25.90 25.90 25.40 25.40 26.30 26.30 25.90	6.09 6.05 5.91 5.59 6.04 6.03 5.96	87.0 86.4 84.1 79.3 86.1 85.9 84.9	0.2 0.4 0.5 0.8 0.4 0.4 0.4 0.3	31.50 31.47 33.13 33.20 29.71 29.77 30.18	8.26 8.26 8.21 8.24 8.24 8.26 8.28 8.25	3.2
2013/6/4 15:33						6.450           6.450           11.900           11.900           1.000           6.350	25.90 25.90 25.40 25.40 26.30 26.30 25.90 25.90	6.09 6.05 5.91 5.59 6.04 6.03 5.96 5.87	87.0 86.4 79.3 86.1 85.9 84.9 83.6	0.2 0.4 0.5 0.8 0.4 0.4 0.3 0.3	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23	8.26 8.26 8.21 8.24 8.26 8.28 8.28 8.25 8.26	3.2 2.7
2013/6/4 15:33						6.450           6.450           11.900           11.900           1.000           6.350           6.350           11.700	25.90 25.90 25.40 25.40 26.30 26.30 25.90 25.90 25.90	6.09 6.05 5.91 5.59 6.04 6.03 5.96 5.87 5.41	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7	0.2 0.4 0.5 0.8 0.4 0.4 0.3 0.3 0.5	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31	8.26 8.26 8.21 8.24 8.24 8.26 8.28 8.25 8.25 8.26 8.23	3.2 2.7
2013/6/4 15:33						6.450           6.450           11.900           11.900           1.000           6.350           6.350           11.700	25.90 25.90 25.40 25.40 26.30 26.30 25.90 25.90 25.90 25.50	6.09 6.05 5.91 5.59 6.04 6.03 5.96 5.87 5.41 5.33	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7	0.2 0.4 0.5 0.8 0.4 0.4 0.3 0.3 0.5 0.6	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30	8.26           8.26           8.26           8.21           8.24           8.26           8.28           8.25           8.26           8.23	3.2 2.7 3.5 4.0
2013/6/4 15:33						6.450           6.450           11.900           1.000           1.000           6.350           6.350           11.700           11.000	25.90 25.90 25.40 26.30 26.30 25.90 25.90 25.90 25.50 25.50 26.40	6.09 6.05 5.91 5.59 6.04 6.03 5.96 5.87 5.41 5.33 5.86	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9	0.2 0.4 0.5 0.8 0.4 0.4 0.3 0.3 0.5 0.6 0.5	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10	8.26 8.26 8.21 8.24 8.26 8.28 8.25 8.25 8.25 8.23 8.23 8.23 8.23	3.2 2.7 3.5
	W3	MF	832048	807889	12.7	6.450 6.450 11.900 1.000 6.350 6.350 11.700 11.700 1.000	25.90 25.90 25.40 26.30 26.30 25.90 25.90 25.90 25.50 25.50 26.40 26.40	6.09 6.05 5.91 5.59 6.04 6.03 5.96 5.87 5.41 5.33 5.86 5.45	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9 78.0	0.2 0.4 0.5 0.8 0.4 0.4 0.3 0.3 0.5 0.6 0.5 0.5	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21	8.26 8.26 8.26 8.21 8.24 8.26 8.28 8.25 8.25 8.25 8.23 8.23 8.23 8.31 8.32	3.2 2.7 3.5 4.0 2.2
2013/6/4 15:33 2013/6/4 16:19						6.450           6.450           11.900           1.000           1.000           6.350           6.350           11.700           11.000	25.90 25.90 25.40 26.30 25.90 25.90 25.90 25.50 25.50 25.50 26.40 26.40 25.70	6.09 6.05 5.91 5.59 6.04 6.03 5.96 5.87 5.41 5.33 5.86 5.45 5.45 5.18	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9 78.0 74.0	0.2 0.4 0.5 0.8 0.4 0.4 0.3 0.3 0.5 0.6 0.5	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21 31.78	8.26 8.26 8.21 8.24 8.28 8.28 8.28 8.25 8.26 8.23 8.23 8.23 8.23 8.31 8.32 8.33	3.2 2.7 3.5 4.0
	W3	MF	832048	807889	12.7	6.450 6.450 11.900 1.000 6.350 6.350 11.700 11.700 1.000 1.000 7.200	25.90 25.90 25.40 26.30 26.30 25.90 25.90 25.90 25.50 25.50 26.40 26.40	6.09 6.05 5.91 5.59 6.04 6.03 5.96 5.87 5.41 5.33 5.86 5.45	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9 78.0	0.2 0.4 0.5 0.8 0.4 0.4 0.3 0.3 0.5 0.6 0.5 0.5 0.6	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21	8.26 8.26 8.26 8.21 8.24 8.26 8.28 8.25 8.25 8.25 8.23 8.23 8.23 8.31 8.32	3.2 2.7 3.5 4.0 2.2 2.8
	W3	MF	832048	807889	12.7	6.450 6.450 11.900 1.000 6.350 6.350 11.700 11.700 1.000 7.200 7.200	25.90 25.90 25.40 26.30 26.30 25.90 25.90 25.90 25.50 26.40 26.40 25.70	6.09 6.05 5.91 5.59 6.04 6.03 5.96 5.87 5.41 5.33 5.86 5.45 5.18 5.11	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9 78.0 74.0 72.8	0.2 0.4 0.5 0.8 0.4 0.4 0.3 0.3 0.5 0.6 0.5 0.5 0.6 0.7	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21 31.78 31.69	8.26           8.26           8.26           8.21           8.24           8.25           8.26           8.23           8.23           8.23           8.31           8.33           8.33	3.2 2.7 3.5 4.0 2.2
	W3	MF	832048	807889	12.7	6.450           6.450           11.900           11.900           1.000           6.350           6.350           6.350           11.700           11.000           1.000           7.200           7.200           13.400	25.90 25.90 25.40 25.40 26.30 25.90 25.90 25.90 25.50 25.50 26.40 26.40 25.70 25.70 25.70	6.09 6.05 5.91 5.59 6.04 6.03 5.96 5.87 5.41 5.33 5.86 5.45 5.45 5.45 5.11 4.95	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9 78.0 74.0 72.8 70.7	0.2 0.4 0.5 0.8 0.4 0.3 0.3 0.5 0.6 0.5 0.6 0.7 0.9	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21 31.78 31.69 31.79	8.26 8.26 8.21 8.24 8.28 8.25 8.28 8.23 8.23 8.23 8.23 8.31 8.32 8.33 8.31 8.29	3.2 2.7 3.5 4.0 2.2 2.8 4.7
	W3	MF	832048	807889	12.7	6.450           6.450           11.900           11.900           1.000           6.350           6.350           11.700           1.000           1.000           1.000           1.000           1.000           1.000           1.000           1.000           13.400           1.000           1.000	25.90 25.90 25.40 25.40 26.30 25.90 25.90 25.90 25.50 26.40 26.40 25.70 25.70 25.10 25.10 25.10 25.10 26.40	$\begin{array}{c} 6.09\\ 6.05\\ 5.91\\ 5.59\\ 6.04\\ 6.03\\ 5.96\\ 5.87\\ 5.41\\ 5.33\\ 5.86\\ 5.45\\ 5.18\\ 5.11\\ 4.95\\ 4.92\\ 5.43\\ 5.13\end{array}$	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9 78.0 74.0 72.8 70.7 69.9 77.8 73.5	$\begin{array}{c} 0.2 \\ 0.4 \\ 0.5 \\ 0.8 \\ 0.4 \\ 0.3 \\ 0.3 \\ 0.5 \\ 0.6 \\ 0.5 \\ 0.6 \\ 0.7 \\ 0.9 \\ 1.0 \\ 0.4 \\ 0.4 \\ 0.4 \\ \end{array}$	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21 31.78 31.69 31.77 28.84 28.89	8.26           8.26           8.26           8.21           8.24           8.26           8.28           8.25           8.26           8.23           8.23           8.31           8.32           8.33           8.31           8.29           8.29	3.2 2.7 3.5 4.0 2.2 2.8
2013/6/4 16:19	W3 C1	MF	832048 833718	807889	12.7	6.450           6.450           11.900           11.900           1.000           6.350           6.350           11.700           11.000           7.200           7.200           13.400           1.000           1.000           5.650	25.90 25.90 25.40 25.40 26.30 25.90 25.90 25.50 25.50 25.50 26.40 26.40 25.70 25.70 25.70 25.10 25.10 26.40 26.40 26.40	$\begin{array}{c} 6.09\\ 6.05\\ 5.91\\ 5.59\\ 6.04\\ 6.03\\ 5.96\\ 5.87\\ 5.41\\ 5.33\\ 5.86\\ 5.45\\ 5.18\\ 5.11\\ 4.95\\ 5.43\\ 5.11\\ 4.95\\ 5.43\\ 5.13\\ 5.03\end{array}$	87.0 86.4 84.1 79.3 86.1 85.9 83.6 76.7 75.7 83.9 78.0 74.0 72.8 70.7 69.9 77.8 73.5 72.0	0.2 0.4 0.5 0.8 0.4 0.3 0.5 0.6 0.5 0.6 0.7 0.9 1.0 0.4 0.4 0.4 0.4 0.4 0.4 0.5 0.5 0.6 0.7 0.9 1.0 0.4 0.4 0.4 0.4 0.4 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21 31.78 31.69 31.79 31.79 31.77 28.84 28.89 29.62	8.26           8.26           8.26           8.21           8.24           8.25           8.26           8.23           8.23           8.31           8.32           8.31           8.29           8.29           8.27           8.29           8.27           8.29           8.25	3.2 2.7 3.5 4.0 2.2 2.8 4.7 2.9
	W3	MF	832048	807889	12.7	6.450           6.450           11.900           11.900           1.000           6.350           6.350           11.700           11.700           11.700           11.700           11.700           11.700           11.700           11.700           1.000           7.200           7.200           13.400           1.000           5.650           5.650	25.90 25.90 25.40 25.40 26.30 26.30 25.90 25.90 25.50 25.50 26.40 26.40 25.70 25.70 25.70 25.70 25.10 25.10 26.40 26.40 26.40 26.40 26.00 26.00	6.09 6.05 5.91 5.59 6.04 6.03 5.96 5.87 5.41 5.33 5.86 5.45 5.18 5.11 4.95 4.92 5.43 5.03 5.02	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9 78.0 74.0 72.8 70.7 69.9 77.8 73.5 72.0 71.6	$\begin{array}{c} 0.2 \\ 0.4 \\ 0.5 \\ 0.8 \\ 0.4 \\ 0.3 \\ 0.3 \\ 0.5 \\ 0.6 \\ 0.5 \\ 0.6 \\ 0.7 \\ 0.9 \\ 1.0 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.3 \\ \end{array}$	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21 31.78 31.69 31.79 31.77 28.84 28.89 29.62 29.65	8.26           8.26           8.26           8.21           8.24           8.25           8.26           8.23           8.23           8.23           8.31           8.32           8.31           8.29           8.29           8.29           8.27           8.29           8.25           8.25           8.25           8.25	3.2 2.7 3.5 4.0 2.2 2.8 4.7
2013/6/4 16:19	W3 C1	MF	832048 833718	807889	12.7	6.450           6.450           11.900           11.900           1.000           6.350           6.350           6.350           11.700           11.700           11.700           11.700           1.000           7.200           7.200           7.200           13.400           1.000           5.650           5.650           10.300	25.90 25.90 25.40 25.40 25.40 25.90 25.90 25.90 25.50 26.40 25.70 25.70 25.70 25.70 25.70 25.10 25.10 26.40 26.40 26.40 26.40 26.00 26.00 26.80	6.09           6.05           5.91           5.59           6.04           6.03           5.96           5.87           5.41           5.33           5.86           5.45           5.18           5.11           4.95           4.92           5.43           5.13           5.03           5.02           4.98	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9 78.0 74.0 72.8 70.7 69.9 77.8 73.5 72.0 71.6 71.2	0.2 0.4 0.5 0.8 0.4 0.3 0.3 0.5 0.6 0.5 0.6 0.7 0.9 1.0 0.4 0.4 0.4 0.3 0.5 0.6 0.7 0.9 1.0 0.4 0.4 0.5 0.6 0.7 0.9 1.0 0.4 0.4 0.5 0.6 0.5 0.6 0.5 0.6 0.5 0.6 0.5 0.6 0.5 0.6 0.5 0.6 0.5 0.6 0.5 0.6 0.5 0.6 0.7 0.9 0.4 0.4 0.4 0.5 0.6 0.5 0.6 0.5 0.6 0.7 0.9 0.4 0.4 0.4 0.5 0.6 0.7 0.9 0.4 0.4 0.4 0.5 0.6 0.5 0.6 0.7 0.9 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21 31.78 31.69 31.79 31.77 28.84 28.89 29.62 29.65 30.12	8.26         8.26         8.21         8.24         8.25         8.26         8.23         8.23         8.23         8.31         8.32         8.33         8.31         8.29         8.27         8.29         8.27         8.29         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.25	3.2 2.7 3.5 4.0 2.2 2.8 4.7 2.9 3.0
2013/6/4 16:19	W3 C1	MF	832048 833718	807889	12.7	6.450           6.450           11.900           11.900           1.000           6.350           6.350           6.350           11.700           11.700           11.700           11.700           11.700           1.000           7.200           7.200           13.400           1.000           5.650           5.650           10.300	25.90 25.90 25.40 25.40 25.40 25.90 25.90 25.90 25.50 25.50 25.50 26.40 26.40 25.70 25.70 25.70 25.70 25.10 25.10 26.40 26.40 26.40 26.40 26.40 26.40 26.80	$\begin{array}{c} 6.09\\ \hline 6.05\\ \hline 5.91\\ \hline 5.59\\ \hline 6.04\\ \hline 6.03\\ \hline 5.96\\ \hline 5.87\\ \hline 5.41\\ \hline 5.33\\ \hline 5.86\\ \hline 5.45\\ \hline 5.45\\ \hline 5.18\\ \hline 5.11\\ \hline 4.95\\ \hline 4.92\\ \hline 5.43\\ \hline 5.13\\ \hline 5.03\\ \hline 5.02\\ \hline 4.98\\ \hline 4.91\\ \end{array}$	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9 78.0 74.0 72.8 70.7 69.9 77.8 73.5 72.0 71.6 71.2 70.1	$\begin{array}{c} 0.2 \\ 0.4 \\ 0.5 \\ 0.8 \\ 0.4 \\ 0.3 \\ 0.3 \\ 0.5 \\ 0.6 \\ 0.5 \\ 0.5 \\ 0.6 \\ 0.7 \\ 0.9 \\ 1.0 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.5 \\$	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21 31.78 31.69 31.79 31.77 28.84 28.89 29.62 29.65 30.12 30.15	8.26           8.26           8.26           8.21           8.24           8.26           8.27           8.23           8.23           8.31           8.32           8.33           8.31           8.29           8.27           8.29           8.27           8.29           8.27           8.29           8.25           8.25           8.25           8.25           8.25           8.25           8.25           8.25           8.25           8.25           8.25           8.22           8.21	3.2 2.7 3.5 4.0 2.2 2.8 4.7 2.9
2013/6/4 16:19	W3 C1	MF	832048 833718	807889	12.7	6.450           6.450           11.900           11.900           1.000           6.350           6.350           6.350           11.700           11.700           11.700           11.700           11.700           1.000           7.200           7.200           13.400           1.000           5.650           5.650           10.300           1.000	25.90 25.90 25.40 25.40 25.40 25.90 25.90 25.90 25.50 25.50 26.40 26.40 25.70 25.70 25.70 25.70 25.10 25.10 26.40 26.40 26.40 26.40 26.60 25.80 25.80 25.80 25.80	$\begin{array}{c} 6.09\\ 6.05\\ 5.91\\ 5.59\\ 6.04\\ 6.03\\ 5.87\\ 5.41\\ 5.33\\ 5.86\\ 5.45\\ 5.18\\ 5.45\\ 5.18\\ 5.18\\ 5.18\\ 5.45\\ 5.18\\ 5.13\\ 5.03\\ 5.13\\ 5.03\\ 5.03\\ 5.02\\ 4.98\\ 4.91\\ 5.49\end{array}$	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9 78.0 74.0 72.8 70.7 69.9 77.8 73.5 72.0 71.6 71.2 70.1 78.8	$\begin{array}{c} 0.2 \\ 0.4 \\ 0.5 \\ 0.8 \\ 0.4 \\ 0.3 \\ 0.3 \\ 0.5 \\ 0.6 \\ 0.5 \\ 0.6 \\ 0.7 \\ 0.9 \\ 1.0 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.5 \\ 0.5 \\ 0.5 \\ 0.3 \\ \end{array}$	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21 31.78 31.69 31.79 31.77 28.84 28.89 29.62 29.65 30.12 30.15 28.28	8.26         8.26         8.26         8.21         8.24         8.25         8.26         8.23         8.23         8.31         8.32         8.31         8.29         8.29         8.29         8.29         8.29         8.29         8.22         8.23         8.31         8.32         8.33         8.31         8.29         8.21         8.33	3.2 2.7 3.5 4.0 2.2 2.8 4.7 2.9 3.0
2013/6/4 16:19	W3 C1	MF	832048 833718	807889	12.7	6.450           6.450           11.900           11.900           1.000           1.000           6.350           6.350           11.700           1.000           1.000           1.000           1.000           1.000           1.000           1.000           1.200           13.400           1.000           5.650           10.300           1.000           1.000           1.000	25.90 25.90 25.40 25.40 26.30 25.90 25.90 25.50 26.40 25.70 25.70 25.70 25.10 25.10 25.10 25.10 25.10 25.10 25.10 25.40 25.40 25.40 25.40 26.40 26.40 26.40 26.40 26.40 26.40 26.40 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.90 26.40 25.90 26.40 25.80	6.09           6.05           5.91           5.59           6.04           6.03           5.96           5.87           5.41           5.33           5.86           5.45           5.18           5.11           4.95           4.92           5.43           5.13           5.03           5.02           4.91           5.49           5.66	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9 78.0 74.0 72.8 70.7 69.9 77.8 73.5 72.0 71.6 71.2 70.1 78.8 81.3	$\begin{array}{c} 0.2 \\ 0.4 \\ 0.5 \\ 0.8 \\ 0.4 \\ 0.3 \\ 0.3 \\ 0.5 \\ 0.6 \\ 0.5 \\ 0.6 \\ 0.7 \\ 0.9 \\ 1.0 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.3 \\ 0.6 \\ 0.5 \\ 0.3 \\ 0.5 \\ 0.5 \\ 0.5 \\ 0.3 \\ 0.5 \\$	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21 31.78 31.69 31.79 31.77 28.84 28.89 29.62 29.65 30.12 30.15 28.28 28.29	8.26         8.26         8.26         8.21         8.24         8.26         8.27         8.23         8.23         8.23         8.23         8.23         8.23         8.23         8.23         8.23         8.23         8.23         8.31         8.32         8.33         8.31         8.29         8.29         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.21         8.33         8.33	3.2           2.7           3.5           4.0           2.2           2.8           4.7           2.9           3.0           3.6
2013/6/4 16:19	W3 C1	MF	832048 833718	807889	12.7	6.450           6.450           11.900           11.900           1.000           6.350           6.350           11.700           1.000           1.000           1.000           1.000           1.000           1.000           1.000           1.000           1.200           13.400           1.000           5.650           5.650           10.300           1.000           1.000           1.000           1.000	25.90 25.90 25.40 25.40 25.40 25.90 25.90 25.90 25.50 26.40 26.40 25.70 25.10 25.10 25.10 25.10 25.10 25.10 25.40 26.40 25.80 25.80 26.40 26.40 26.40 25.80 26.40 26.40 26.40	$\begin{array}{c} 6.09\\ 6.05\\ 5.91\\ 5.59\\ 6.04\\ 6.03\\ 5.96\\ 5.87\\ 5.41\\ 5.33\\ 5.86\\ 5.45\\ 5.18\\ 5.11\\ 5.18\\ 5.11\\ 5.18\\ 5.11\\ 5.13\\ 5.03\\ 5.02\\ 4.92\\ 5.43\\ 5.03\\ 5.02\\ 4.98\\ 4.91\\ 5.66\\ 4.85\end{array}$	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9 78.0 74.0 72.8 70.7 69.9 77.8 73.5 72.0 71.6 71.2 70.1 78.8 81.3 69.5	$\begin{array}{c} 0.2 \\ 0.4 \\ 0.5 \\ 0.8 \\ 0.4 \\ 0.3 \\ 0.3 \\ 0.5 \\ 0.6 \\ 0.5 \\ 0.6 \\ 0.7 \\ 0.6 \\ 0.7 \\ 0.9 \\ 1.0 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.5 \\$	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21 31.78 31.69 31.77 28.84 28.89 29.62 29.65 30.12 30.15 28.28 28.29 28.52	8.26         8.26         8.21         8.24         8.25         8.26         8.23         8.23         8.31         8.32         8.31         8.29         8.29         8.29         8.29         8.25         8.29         8.21         8.33         8.33         8.33         8.29         8.29         8.21         8.33         8.33         8.33         8.33	3.2           2.7           3.5           4.0           2.2           2.8           4.7           2.9           3.0           3.6
2013/6/4 16:19 2013/6/4 15:19	W3 C1 C2	MF MF	832048 833718 831461	807889 807184 807732	12.7	6.450           6.450           11.900           11.900           1.000           1.000           6.350           6.350           11.700           1.000           1.000           1.000           1.000           1.000           1.000           1.000           1.200           13.400           1.000           5.650           10.300           1.000           1.000           1.000	25.90 25.90 25.40 25.40 26.30 25.90 25.90 25.50 26.40 25.70 25.70 25.70 25.10 25.10 25.10 25.10 25.10 25.10 25.10 25.40 25.40 25.40 25.40 26.40 26.40 26.40 26.40 26.40 26.40 26.40 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.80 25.90 26.40 25.90 26.40 25.80	6.09           6.05           5.91           5.59           6.04           6.03           5.96           5.87           5.41           5.33           5.86           5.45           5.18           5.11           4.95           4.92           5.43           5.13           5.03           5.02           4.91           5.49           5.66	87.0 86.4 84.1 79.3 86.1 85.9 84.9 83.6 76.7 75.7 83.9 78.0 74.0 72.8 70.7 69.9 77.8 73.5 72.0 71.6 71.2 70.1 78.8 81.3	$\begin{array}{c} 0.2 \\ 0.4 \\ 0.5 \\ 0.8 \\ 0.4 \\ 0.3 \\ 0.3 \\ 0.5 \\ 0.6 \\ 0.5 \\ 0.6 \\ 0.7 \\ 0.9 \\ 1.0 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.3 \\ 0.6 \\ 0.5 \\ 0.3 \\ 0.5 \\ 0.5 \\ 0.5 \\ 0.3 \\ 0.5 \\$	31.50 31.47 33.13 33.20 29.71 29.77 30.18 30.23 31.31 31.30 29.10 29.21 31.78 31.69 31.79 31.77 28.84 28.89 29.62 29.65 30.12 30.15 28.28 28.29	8.26         8.26         8.26         8.21         8.24         8.26         8.27         8.23         8.23         8.23         8.23         8.23         8.23         8.23         8.23         8.23         8.23         8.23         8.31         8.32         8.33         8.31         8.29         8.29         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.25         8.21         8.33         8.33	3.2           2.7           3.5           4.0           2.2           2.8           4.7           2.9           3.0           3.6           1.9

### **Construction of Sewage Treatment Works** at Yung Shue Wan and Sok Kwu Wan



### Sok Kwu Wan

6-Jun-13 Date

201366 11.03         W1         ME         8250         80718         2.4         1.20         26.11         7.81         7.8         0.35         7.26         7.26	NameNameNorbBastNorbnoNNorbNorbNNNNNNNN201366 11:3W1M2839760.7142.417002.0177.7317.30.52.758.751.75201366 11:3W2MRS387780782.122.102.0177.7711.120.012.8118.251.16201366 11:3W2MRS387780782.122.157.761.070.02.8138.302.81201366 11:28W3MRS387780791.222.5177.401.070.313.133.007.002.5201366 11:28W3MRS38779.791.222.5174.561.851.002.8168.601.851.851.95201366 11:28W3MRS38799.791.222.574.561.851.002.8168.602.33.147.421.22201366 11:28W3MRS387999.791.212.554.466.902.33.147.421.22201366 11:28MRS37799P.71P.71P.71P.71P.71P.71P.71P.712.758.831.65201366 11:29MRS37799P.71P.72P.71P.71P.71P.71P.71P.71P.71P.71P.71P.71P.71P.71P.71	Data / Time	Location	T:4-*	Co-ore	dinates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS
(1)(3)(5)(1)(3)         (1)(1)         (1)(2) <t< th=""><th>001086 11.30         W1         M6         53/06         00108         2/4         1200         56/8         7.86         7.9         0.8         27.90         8.85         1.8           201306 11:31         W2         ME         83.807         80781         123         4.10         26.07         7.77         112.4         0.0         23.11         8.35         1.8           201306 11:32         W2         ME         83.807         80785         123         6.16         23.22         6.67         9.49         0.0         23.11         8.35         124           11300         23.06         4.00         0.17         3.0         3.00         8.00         124         1100         23.0         4.05         6.17         3.0         3.00         8.00         124         100         2.24         6.10         2.3         7.92         124         100         2.55         10.1         0.0         3.0         8.00         124         100         2.35         7.92         10.1         0.0         3.0         8.00         124         100         2.35         7.93         124         126         8.22         101         100         2.31         7.33         100</th><th>Date / Time</th><th>Location</th><th>11de+</th><th>East</th><th>North</th><th>n</th><th>m</th><th>ç</th><th>mg/L</th><th>%</th><th>NTU</th><th>ppt</th><th>unit</th><th>mg/l</th></t<>	001086 11.30         W1         M6         53/06         00108         2/4         1200         56/8         7.86         7.9         0.8         27.90         8.85         1.8           201306 11:31         W2         ME         83.807         80781         123         4.10         26.07         7.77         112.4         0.0         23.11         8.35         1.8           201306 11:32         W2         ME         83.807         80785         123         6.16         23.22         6.67         9.49         0.0         23.11         8.35         124           11300         23.06         4.00         0.17         3.0         3.00         8.00         124         1100         23.0         4.05         6.17         3.0         3.00         8.00         124         100         2.24         6.10         2.3         7.92         124         100         2.55         10.1         0.0         3.0         8.00         124         100         2.35         7.92         10.1         0.0         3.0         8.00         124         100         2.35         7.93         124         126         8.22         101         100         2.31         7.33         100	Date / Time	Location	11de+	East	North	n	m	ç	mg/L	%	NTU	ppt	unit	mg/l
201366 11:3         W2         ME         8297         8098         1.2         1.200         2.001         7.0         1.124         0.0         8.11         8.12         1.2           201366 11:3         W2         ME         8297         80981         1.2         6.10         1.2         0.1         0.0         7.9         1.124         0.0         8.11         8.25         1.2           201366 11:3         W2         ME         8230         80787         9.00         0.07         7.9         1.124         0.0         8.00         7.01         2.2         1.0         0.05         8.8         1.0         0.05         8.8         1.0         0.05         8.8         1.0         0.05         8.8         1.0         0.05         8.8         1.0         0.05         8.9         1.0         0.05         8.9         1.0         0.05         8.9         1.0         0.06         0.01         7.08         8.00         1.0         1.0         0.01         0.01         0.01         0.01         0.01         0.01         0.01         0.01         0.01         0.01         0.01         0.01         0.01         0.01         0.01         0.01         0.01	1200         200         2013         70         0.5         70         0.5         70         0.5         70         0.5         70         0.5         70         0.5         70         0.5         70         0.5         70         0.5         70         0.5         70         0.5         70         122         0.5         70         122         0.5         70         122         0.5         70         22         22         24         100         250         466         669         58         350         70         22           100         20.0         27.0         430         0.7         0.8         20.0         0.7         858         100         700         22           100         20.7         5.08         100         20.7         8.08         100         20.7         8.08         100         20.7         8.08         100         20.7         10.0         2.0         10.0         2.0         10.0         2.0         10.0         2.0         10.0         2.0         10.0         2.0         10.0         2.0         10.0         2.0         10.0         2.0         10.0         2.0         10.0         2.0         10.0 <td>2013/6/6 11:03</td> <td>W1</td> <td>ME</td> <td>832976</td> <td>807748</td> <td>2.4</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>16</td>	2013/6/6 11:03	W1	ME	832976	807748	2.4	-							16
201366 11:3         W2         ME         82367         80981         123         100         2071         7.29         1126         0.31         8311         8235         12           201366 11:3         W2         ME         82367         80981         12         6150         25.22         6.57         94.9         0.31         0.332         8.00         72           201366 11:38         W3         ME         82004         8059         12         6100         26.13         455         125         0.6         6.65         0.35         8.44         8.40         120           201366 11:38         W3         ME         82008         82099         8209 <t< td=""><td>201366 11:13         W2         ME         83967         8098         1.10         2.01         7.79         11.26         0.3         2.81         8.78         1.83         1.93         1.83         1.93         1.93         1.93         1.93         1.130         2.33         1.83         7.61         1.23         1.130         2.33         1.133         7.33         1.130         2.33         1.133         7.33         1.130         2.33         1.133         7.61         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23</td><td>2015/0/0 11:05</td><td></td><td>ML</td><td>052710</td><td>007710</td><td>2.1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1.0</td></t<>	201366 11:13         W2         ME         83967         8098         1.10         2.01         7.79         11.26         0.3         2.81         8.78         1.83         1.93         1.83         1.93         1.93         1.93         1.93         1.130         2.33         1.83         7.61         1.23         1.130         2.33         1.133         7.33         1.130         2.33         1.133         7.33         1.130         2.33         1.133         7.61         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23         1.130         2.23	2015/0/0 11:05		ML	052710	007710	2.1								1.0
201366 11:13         W2         ME         82371 B         8079 B         8079 B         6150 B         25:19 C         746 C         107.6         0.1 C         90.3 B         8.09 B         20           201366 11:38         W3         ME         8377 B         80787         100         200         450         60.7         9.3         31.00         7.00         20           201366 11:38         W3         ME         80787         100         20.75         8.68         126.0         6.08         7.80         8.80         10         100         20.13         100         20.13         10         20.13         7.00         20.13         10         20.13         7.00         20.13         10         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13         7.00         20.13<	201366 11:13         W2         ME         83387         80'961         12.3         6150         25.25         6.57         94.3         0.3         8.89         2.4           01366 11:3         W3         ME         83306         80'961         1300         2.90         4.66         6.83         5.8         31.03         7.00         2.0           01366 11:28         W3         ME         853066         80'79         12         100         2.67         8.86         12.61         0.6         2.80         8.40         1.8           01306 11:28         W3         ME         853066         80'79         12         100         2.45         8.06         1.0         8.2.0         8.25         1.9           1100         2.45         4.46         6.19         2.3         3.42         7.42         2.2         1.0         8.2.0         8.25         1.9           1100         2.45         4.46         6.19         7.2         8.314         4.6         1.0         2.33         7.66         2.5         8.314         4.6         1.0         2.33         7.74         4.8         3.33         8.06         1.0         1.0         8.014         8.014 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1.8</td>														1.8
301366         11.3         W2         ME         83.01         80.09         12.5         61.50         32.22         6.57         94.9         0.3         93.32         8.00         7.00	001000 1113         W2         WB         80007         80081         11.50         2.52 ± 6.57         94.9         0.3         30.32         809         2.6           13.00         2.500         4.50         55.         34.00         7.30         2.2           13.00         2.570         4.50         61.7         51.         65.0         7.00         2.2           2013066 11.28         W3         ME         82016         80769         1.2         1.00         2.6         5.0         1.00         2.6         5.0         2.6         4.20         1.00         2.6         4.20         2.6         4.20         2.20         4.20         2.21         1.10         2.23         4.40         6.0         2.8         4.20         2.41         4.20         2.41         4.20 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td><u> </u></td></td<>														<u> </u>
11300         25.469         4.660         65.9         5.8         3.00         7.00         7.20           201366 11:28         W3         ME         83038         807879         1.22         4.00         6.17         3.81         33.80         7.00         7.20           201366 11:28         W3         ME         83078         10.0         26.17         8.85         12.50         0.88         8.30         8.25         1.10           201366 11:28         W4         ME         83078         90799         4.66         6.19         2.21         1.10         8.48         8.30         8.23         8.25         1.10           201366 10:42         C1         ME         ME         83799         807193         1.00         2.26         6.97         10.0         4.26         3.42,8         7.42         1.00         1.	11.00         2.360         4.66         66.9         38         34.00         790         22           201366 11:28         W3         ME         83095         80789         122         1000         2.57         8.68         1231         0.6         2.58         8.61         1250         0.8         8.40         18           201366 11:28         W3         ME         85309         80789         12.2         1000         2.51         8.62         1250         0.8         8.40         1.8         3.1         3.16         8.40         1.2         1.0         2.51         8.61         1.0         2.51         8.62         1250         0.8         4.60         1.0         2.51         8.61         1.0         2.51         8.61         1.0         2.51         8.61         1.0         2.51         8.61         1.0         2.51         8.61         1.0         2.51         8.61         1.0         2.50         1.0         2.50         1.0         3.55         8.70         1.0         2.50         1.0         3.55         8.70         1.0         2.55         8.51         1.50         8.61         1.50         8.61         1.50         8.61         1.50         <	2013/6/6 11:13	W2	ME	832677	807981	12.3								2.4
10         10         100         23/0         4.30         6.7         3.30         701         2           201366 11:28         W3         ME         8328         0.079         2.5         8.40         10           201366 11:28         W3         ME         8329         10.00         2.074         8.85         12.8         0.07         2.58         8.40         1.1           201366 11:28         W3         ME         8379         207         10.00         2.33         4.06         6.10         2.6         3.28         7.42         8.25         1.2           201366 11:38         C1         ME         8379         80719         14.1         160         4.06         6.37         9.7         0.0         3.16         8.20         7.20         1.1         8.08         7.06         1.00         3.06         7.00         3.16         7.00         3.16         7.00         3.16         8.00         7.00         3.16         8.00         7.00         3.16         7.00         3.16         7.00         3.16         7.00         3.16         7.00         3.16         7.00         3.16         7.00         3.16         7.00         3.16         7.00	11.00         2.370         4.30         51.7         31.9         79.1         2.2           201366 11:28         W3         ME         82308         80789         11.24														
201366 11:28         W3         ME         8309         90797         124         1600         26/3         8.88<         123.1         0.00         25.88         8.40         1.1           201366 11:28         W3         ME         80797         124         6.100         26.16         8.62         125.0         0.88         23.0         8.23         4.23         4.23         4.23         4.24         7.42         2           201366 10:42         C1         ME         83719         80719         201366         6.57         91.7         0.00         31.65         8.50         2.2         10.00         31.65         8.50         2.2         10.00         31.65         8.50         2.2         10.00         31.65         8.50         2.2         10.00         31.65         8.50         2.2         10.00         31.65         8.50         2.2         10.00         31.65         8.50         2.2         10.00         31.65         8.50         2.2         10.00         31.65         8.50         2.2         10.00         31.65         8.50         2.2         10.00         31.65         8.50         2.2         10.00         30.55         7.00         30.55         7.00	201366 11:28         W3         ME         83206         807679         122         1600         26,75         8.88         126.1         0.06         26,86         8.40         18           201366 11:28         W3         ME         83206         807679         125.1         0.06         26,31         8.83         126.0         0.84         8.23         1.0         28.30         8.35         1.0         28.30         8.35         1.0         28.42         8.25         1.0         28.42         8.25         1.0         28.42         8.25         1.00         28.14         7.00         1.01         4.42         7.02         1.01         4.42         7.00         1.01         4.42         8.35         1.00         27.00         1.00         4.01         3.35         8.27         1.00         2.01         1.00         2.02         3.10         2.01         3.01         3.01         5.00         2.63         1.00         2.01         3.01<							-							2.2
201366 11/38         W3         ME         8000         8070*         12.4         1000         26.74         88.35         12.50         0.3         26.34         8.300         8.207         1.1           201366 10.42         CI         ME         8070*         12.4         12.00         23.84         4.60         6.39         2.3         2.32         7.42         1.32         7.33         7.33	201366 11:28         W3         M8         823086         80789         112         1100         22.571         8.852         127.         10.8         22.63         0.33         23.53         1.9           201366 11:28         W3         M8         823719         80793         11.11         100         22.58         4.46         6.30         22.3         43.28         7.42         2.2           201366 10:42         C1         M8         833719         80793         14.1         11.00         22.58         4.47         36.4         2.6         34.28         7.63         2.23         1.6         2.23         1.6         2.24         8.57         1.0         0.31         7.00         31.57         8.58         1.25         7.65         2.26         7.65         2.26         7.65         2.26         7.65         2.26         7.65         2.21         0.00         7.00         31.58         7.95         2.26         3.25         1.16         3.25         1.16         3.25         1.66         3.17         8.56         1.16         3.25         7.96         2.26         1.10         0.25         9.10         1.52         0.31         9.10         5.26         1.16         3							1							
201366 11:28         W3         ME         82006         80757         12.2         6.100         2013         78.8         13.7         10.8         28.30         8.25         1.1           201366 10.42         C1         ME         83719         807193         11.100         23.88         4.46         63.9         2.3         34.25         7.42         8.25         1.1         1.100         25.85         4.46         63.9         2.3         34.25         7.42         7.85         8.77         1.1         1.100         25.25         6.07         10.16         0.4         27.62         8.88         1.1         1.100         25.25         6.07         10.16         0.4         27.62         8.87         1.1         1.1         1.1         8.85         1.1         1.1         1.1         8.85         1.1         1.1         1.1         1.1         8.85         1.1         1.1         1.1         1.1         8.85         1.1         1.1         1.1         1.1         8.85         1.1         1.1         1.1         1.1         8.85         1.1         1.1         1.1         1.1         1.1         1.1         1.1         1.1         1.1         1.1         1.1	201366 11:28         W3         ME         83204         80787         122         6100         25.61         86.21         125.7         1.0         28.24         82.3         1.9           201366 11:22         C1         ME         83719         807193         1.1         1.000         25.85         4.66         63.9         2.23         34.38         7.62         2.23         34.38         7.63         2.23         34.38         7.63         2.21         34.38         7.62         1.20         2.35         4.66         63.9         2.23         34.38         7.62         1.22         1.100         2.52         6.97         10.08         0.44         7.762         8.28         1.60         2.63         6.57         9.17         0.00         31.65         8.05         2.23         1.10         1.10         1.13         8.38         7.96         2.66         1.10														1.8
201366         11:28         W3         ME         80006         80089         12.2         6.00         26.13         7.98         11.57         1.00         28.28         7.21         3.23         7.32         7.33	Mill (Mob 11:28         Will (Mill														
11200         2358         4.46         639         2.3         3.428         7.42         7.43           201366         10.4         2.43         7.45         1.100         2358         4.07         38.4         2.61         38.4         2.61         38.4         2.61         38.4         2.61         38.4         2.61         38.5         7.42         3.10         2.24         7.63         7.68         3.27         1.00         3.16         8.35         7.36         3.10         2.24         5.60         3.00         2.31         7.36         3.10         2.24         5.60         3.00         2.34         7.36         4.46         6.41         1.0         3.34         7.36         1.310         2.34         4.46         6.41         1.0         3.34         7.36         1.310         2.34         4.46         6.41         1.0         3.34         7.36         1.310         1.324         4.66         6.51         8.41         3.3         3.27         7.34         4.46         3.3         3.27         7.34         4.3         3.3         3.3         3.3         3.3         3.3         3.3         3.3         3.3         3.3         3.3         3.3         3.3	11200         2358         4.46         6.93         2.3         34.38         7.42         2.2           201366 10.42         C1         ME         83719         807193         14.1         1000         26.22         6.97         10.04         4.4         27.56         8.27         1.6           201366 10.42         C1         ME         83719         807193         14.1         7000         2.41.3         6.37         9.17         0.00         31.65         8.305         2.2           201366 11:38         C2         ME         831475         807888         101         5070         2.43.1         4.46         6.61.1         1.0         8.33.84         7.96         2.6           201366 11:38         C2         ME         831475         807888         1.01         5070         2.53         8.93         1.13.83         7.06         5.1         8.41         3.4           201366 11:38         C2         ME         831475         807888         10.0         2.702         8.91         12.98         6.6         7.16         8.34         4.4           201366 11:38         C2         C3         ME         832233         80881         1.10         5.75	2013/6/6 11:28	W3	ME	832036	807879	12.2								1.9
11100         25.88         4.07         58.4         2.6         34.28         7.63         2.72           20136610.42         1.1         ME         835719         807193         87193         1.000         222         6.67         1008         0.4         7.726         8.28         1.1         8.08         1.1         1.000         26.21         9.17         0.00         201.36         8.37         1.1         8.08         2.2         1.1         8.08         1.2         1.1         8.08         1.2         1.1         8.08         1.2         1.1         8.08         1.2         1.1         8.08         1.2         1.1         8.08         1.2         1.1         8.08         1.2         1.1         8.08         1.2         1.1         8.08         1.2         1.1         1.0         3.28         7.66         1.2         1.1         1.0         3.28         7.66         1.2         1.1         1.0         3.28         7.66         1.2         1.1         8.3         1.2         1.1         8.34         4.4         4.4         1.1         1.2         1.1         1.1         1.1         1.1         1.1         1.1         1.1         1.1         1.1	1100         2158         407         58.4         2.6         34.8         7.61         2.2           2013/66 10.42         C1         ME         833719         807193         14.1         1000         26.13         7.20         10.41         0.44         27.36         8.27         1.6           2013/66 10.42         C1         ME         833719         807193         24.81         5.69         82.0         0.2         31.17         8.08         2.2           2013/66 11.38         C2         ME         831475         807858         10.1         1000         27.02         9.28         10.20         33.88         7.96         2.6           2013/66 11.38         C2         ME         831475         807858         10.1         1000         27.02         9.28         13.20         0.3         2.651         8.41         3.4           2013/66 11.38         C2         ME         83223         80785         1000         2.63         7.74         11.16         2.3         3.275         7.94         4.88           2013/66 10.22         C3         ME         832233         808851         1.45         1.000         2.613         7.63         1.10         3.37							-							
201366         1.00         2.613         7.20         1.00.1         0.4         2.72.6         8.8.7         1.1           201366         1.00         2.613         7.20         1.00.1         0.4         2.72.6         8.2.7         1.1         8.65         8.2.7         1.1           201366         1.3         1.00         2.643         6.37         91.7         0.0         31.65         8.65         2.2.1         1.00         2.643         6.37         91.7         0.0         33.88         7.06         2.2.1         1.00         2.8.1         8.31         1.00         3.8.8         7.06         2.2.1         1.00         2.8.1         8.31         1.00         3.8.8         7.06         2.2.1         1.00         2.8.1         8.31         1.0.1         1.0.1         1.0.2         2.2.1         1.0.1         1.0.2         2.2.1         1.0.1         1.0.2         2.2.1         1.0.1         1.0.2         2.2.1         1.0.1         1.0.2         2.2.1         1.0.1         1.0.2         2.2.1         1.0.1         1.0.2         2.2.1         1.0.1         1.0.2         2.2.1         1.0.1         1.0.2         2.2.1         1.0.1         1.0.2         2.2.1         1.2.1	2013/66 10:42         C1         ME         83719         807193         14.1         1000         26.2         6.97         1004.1         0.4         27.86         8.27.3         16.6           2013/66 10:42         C1         ME         83719         807193         14.1         14.0         20.0         24.63         5.37         91.7         0.0         31.65         8.05         2.2           2013/66 11:38         C2         ME         831475         80788         10.0         23.44         4.66         6.41         1.0         33.38         7.96         2.6           2013/66 11:38         C2         ME         831475         80788         10.0         7.710         9.28         10.52         0.5         2.651         8.41         3.4           2013/66 11:38         C2         ME         831475         80788         10.0         2.710         9.33         4.4         3.0         2.710         8.34         4.4           9100         4.23         1281         10.6         1.27         1.0         3.27         7.93         2.8         2.1         4.8         3.1         4.1         3.0         2.10         8.31         1.1         3.0.5 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.2</td></td<>														2.2
201366 10.42         C1         ME         83719         807193         44.1         7200         24.64         6.37         91.7         0.00         231.65         8.80         12           201366 10.42         R         P <td>2013/66 10-42         C1         ME         83719         807193         14.1         1000         26.13         7.20         104.1         0.4         27.86         8.27         1.0           2013/66 10-32         C1         ME         83719         80719         14.1         7.080         24.81         5.60         82.0         0.2         31.17         8.08         2.2           2013/66 11:38         C2         ME         831475         80788         10.00         27.97         4.90         10.8         4.66         6.41         1.0         33.48         7.90         2.6         8.41         3.4           2013/66 11:38         C2         ME         831475         807858         10.00         27.09         8.28         10.05         27.16         8.33         4.4           1000         26.13         7.61         11.16         2.3         32.75         7.93         4.8           2013/66 10:22         C3         ME         822233         80851         14.5         1.000         26.61         7.51         10.66         0.3         24.13         8.22           2013/66 10:22         C3         ME         832954         807725         2.6         1.30</td> <td></td>	2013/66 10-42         C1         ME         83719         807193         14.1         1000         26.13         7.20         104.1         0.4         27.86         8.27         1.0           2013/66 10-32         C1         ME         83719         80719         14.1         7.080         24.81         5.60         82.0         0.2         31.17         8.08         2.2           2013/66 11:38         C2         ME         831475         80788         10.00         27.97         4.90         10.8         4.66         6.41         1.0         33.48         7.90         2.6         8.41         3.4           2013/66 11:38         C2         ME         831475         807858         10.00         27.09         8.28         10.05         27.16         8.33         4.4           1000         26.13         7.61         11.16         2.3         32.75         7.93         4.8           2013/66 10:22         C3         ME         822233         80851         14.5         1.000         26.61         7.51         10.66         0.3         24.13         8.22           2013/66 10:22         C3         ME         832954         807725         2.6         1.30														
2013666 11:42         C1         ME         833/9         80/193         14.1         7050         24.81         5.69         82.0         0.2         31.17         80.88         2.6           2013/66 11:38         C2         ME         83.147         80785         13.100         23.84         4.46         6.41         1.0         33.36         7.964         2.0           2013/66 11:38         C2         ME         83.1475         807858         10.1         1000         27.09         9.28         135.2         0.3         2.651         8.41         4.0           2013/66 11:38         C2         ME         831.475         807858         10.1         2.505         2.056         9.19         11.03         0.6         2.719         8.34         4.0           2013/66 10:22         C3         ME         83223         808851         14.5         7.250         2.546         6.57         9.48         0.0         2.940         8.15         2.0           2013/66 17:48         W1         MF         832954         80726         2.6         1300         26.70         7.72         112.7         0.5         2.786         8.29         1.1         1.3         3.375 <t< td=""><td>001/966/18/2         C1         MH         83/3/9         807/90         14.1         70/50         24.81         56/90         82.0         0.2         31.17         8.08         2.2           2013/66/11:38         C2         MH         83/3/9         807/95         11.10         23.84         4.46         64.1         1.0         33.88         7.96         2.6           2013/66/11:38         C2         MH         831475         807/85         10.00         27.019         2.8         155.2         0.3         2.651         8.41         3.4           2013/66/11:38         C2         MH         831475         807/85         2.90         2.656         9.10         2.16         8.34         4.4           3100         2.2013         7.24         11.16         2.3         2.275         7.94         4.8           2013/66 10:22         C3         ME         822233         808851         14.5         1.000         2.641         7.51         10.06         0.3         2.16         8.34         4.8           2013/66 17:48         W1         MF         832954         807726         2.6         1.300         2.670         7.72         11.27         0.5         <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>1.000</td><td>26.13</td><td>7.20</td><td>104.1</td><td>0.4</td><td></td><td></td><td>1.6</td></td<></td></t<>	001/966/18/2         C1         MH         83/3/9         807/90         14.1         70/50         24.81         56/90         82.0         0.2         31.17         8.08         2.2           2013/66/11:38         C2         MH         83/3/9         807/95         11.10         23.84         4.46         64.1         1.0         33.88         7.96         2.6           2013/66/11:38         C2         MH         831475         807/85         10.00         27.019         2.8         155.2         0.3         2.651         8.41         3.4           2013/66/11:38         C2         MH         831475         807/85         2.90         2.656         9.10         2.16         8.34         4.4           3100         2.2013         7.24         11.16         2.3         2.275         7.94         4.8           2013/66 10:22         C3         ME         822233         808851         14.5         1.000         2.641         7.51         10.06         0.3         2.16         8.34         4.8           2013/66 17:48         W1         MF         832954         807726         2.6         1.300         2.670         7.72         11.27         0.5 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>1.000</td><td>26.13</td><td>7.20</td><td>104.1</td><td>0.4</td><td></td><td></td><td>1.6</td></td<>							1.000	26.13	7.20	104.1	0.4			1.6
100         24.81         3.69         8.20         0.20         3.117         8.08           2013(66 11:38         R.2         He         83147         80785         4.40         6.61         1.0         3.348         7.96         2.0           2013(66 11:38         R.2         M.8         83147         80785         80785         4.00         27.09         9.28         133.2         0.6         27.19         8.34         4.4           2013(66 11:38         R.2         M.8         80785         8.0785         8.83         128.1         0.6         77.19         8.34         4.4           2013(66 10:22         R.3         R.4         8.32954         80726         2.43         7.71         10.3         3.07         7.94         4.3           2013(66 10:22         R.3         R.4         8.32954         80726         2.6         10.00         26.04         7.51         10.05         0.01         2.913         8.22         2.3           2013(66 17:48         W1         M.F         832954         80726         2.6         1.300         26.70         7.72         112.7         0.5         7.86         8.29         1.4         3.3         1.4	100         200         200         200         201         201         31.58         7.96         20         201         31.58         7.96         20         201         31.58         7.96         20         201         31.58         7.96         20         201         31.60         21.79         4.92         10.2         31.58         7.96         20         20         201         31.60         21.79         4.28         6.51         20.55         8.41         3.4         4.4           2013/66 11:38         C2         ME         831475         807858         10.01         27.09         9.28         1352         0.52         27.16         8.34         4.4           2013/66 10:22         C3         ME         82223         80851         14.5         1000         26.61         103         0.32         21.07         8.52         2.5           2013/66 10:22         C3         ME         83223         80851         14.5         11.00         23.66         57         0.44         3.05         7.99         2.8           2013/66 17:48         W1         MF         832679         807726         2.6         13.00         26.70         7.72         11.27	2012/6/6 10 42	<b>C1</b>		022710	007102	14.1	7.050	24.63	6.37	91.7	0.0		8.05	
100         2384         4.46         64.1         10.0         33.48         79.6         1.0           2013/66 11:38         P.2         P.4         P.300         27.02         89.1         120.8         0.5         26.51         8.41         3.           2013/66 11:38         P.2         P.3         125.2         0.3         26.51         8.41         4.0           2013/66 11:38         P.4         P.4         P.16         2.3         2.65         7.16         8.34         4.0           91.00         24.28         6.02         8.67         2.3         2.2         7.94         4.0           91.00         24.28         6.02         8.67         2.3         2.2	13100         2384         4.46         64.1         10         3.48         7.96         2.5           201366 11:38         C2         ME         831475         807858         100         77.02         8.91         133.2         0.6         27.16         8.34         3.4           201366 11:38         C2         ME         831475         807858         10.1         1000         27.02         8.91         133.2         0.6         27.16         8.34         4.44           201366 11:38         C3         ME         83223         80851         14.5         1000         26.18         7.63         110.3         0.3         27.67         8.22         2.3           201366 10:22         C3         ME         83223         80851         1.45         1000         26.64         7.31         108.6         0.0         22.60         8.15         2.6           1300         23.66         4.557         94.8         0.0         22.60         8.15         2.6           1300         26.64         7.31         10.86         6.57         94.8         0.0         22.66         8.15         2.6           1200         26.7         8.49         1.1	2013/6/6 10:42	CI	ME	833719	807193	14.1	7.050	24.81	5.69	82.0	0.2	31.17	8.08	2.2
1000         2584         446         641.         100         3348         796           2013661138         C2         ME         831475         807858         1001         1000         27.00         891         1938         0.5         26.51         8.41         3.           2013661138         C2         ME         831475         807858         1014         100         22.05         9.19         1332         0.66         27.19         8.34         4.4           2013661022         C3         ME         82323         80887         14.5         1000         20.01         7.61         10.03         0.02         20.13         7.71         8.34         4.4           2013661022         C3         ME         82323         80887         14.5         7250         2546         6.67         9.43         3.07.5         7.93         2.2           20136617.38         W1         MF         832954         80726         2.6         1.300         26.70         7.72         11.27         0.5         27.86         8.29         1.2           20136617.33         W2         MF         832654         80726         2.6         1.300         26.70         7.72 <td><math display="block"> \begin{array}{c c c c c c c c c c c c c c c c c c c </math></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>13.100</td> <td>23.79</td> <td>4.99</td> <td>71.6</td> <td>0.8</td> <td>33.58</td> <td>7.96</td> <td>2.6</td>	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $							13.100	23.79	4.99	71.6	0.8	33.58	7.96	2.6
2013/66 11:38         C2         ME         81475         80785         10.00         27.00         9.28         1352         0.3         26.51         8.41         5.5           2013/66 11:38         C2         ME         831475         80785         10.1         1352         0.3         26.51         8.33         128.1         0.66         27.19         8.34         4.4           2013/66 10.22         C3         ME         82233         80851         11.00         26.31         7.74         111.6         2.3         52.07         7.94         4.2           2013/66 10.22         C3         ME         82233         80851         1.00         26.04         7.51         110.6         0.3         22.05         8.31         8.22         2.2         1.2	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $							13.100	23.84	4.46	64.1	1.0	33.48	7.96	2.6
2013/66 11:38         C2         ME         81475         80785         10.00         27.00         9.28         1352         0.3         26.51         8.41         5.5           2013/66 11:38         C2         ME         831475         80785         10.1         1352         0.3         26.51         8.33         128.1         0.66         27.19         8.34         4.4           2013/66 10.22         C3         ME         82233         80851         11.00         26.31         7.74         111.6         2.3         52.07         7.94         4.2           2013/66 10.22         C3         ME         82233         80851         1.00         26.04         7.51         110.6         0.3         22.05         8.31         8.22         2.2         1.2	201366 11:38         C2         ME         831475         807858         10.1         100         27.09         9.28         135.2         0.3         26.51         8.41         4.4           201366 11:38         C2         ME         831475         807858         10.1         5050         26.56         9.19         133.2         0.6         27.16         8.34         4.4           9.100         24.28         6.02         86.7         2.4         32.67         7.94         4.8           201366 10:22         C3         ME         82223         80851         1.45         7.250         25.46         6.57         9.4.8         0.0         20.60         8.15         2.6           7.250         25.43         6.4.5         9.30         0.375         7.93         2.8           201366 17:48         W1         MF         832954         80726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.39         1.3           201366 17:33         W2         MF         832979         80786         1.47         1.300         26.70         7.72         112.7         0.5         27.86         8.33         1.4							1.000	27.02	8.91	129.8	0.5		8.41	
2013/66 11:38         C2         ME         834/5         80/88         10.1         5050         26.53         8.83         128.1         0.6.         7.19         8.34         4.4           9.100         24.31         77.4         11.6         2.3         32.75         7.94         4.4           9.100         24.81         6.02         86.7         2.4         32.76         7.92         4.4           9.100         24.81         7.73         110.8         0.3         27.67         8.22         2.           2013/66 10.22         C3         ME         83223         808851         1.160         26.6         6.57         9.4.8         0.00         29.66         8.15         2.0           2013/66 17.48         W1         MF         832958         80772         2.6         1.300         23.66         4.46         63.9         1.1         33.75         7.93         2.3           2013/66 17.33         W2         MF         832679         807986         1.27         6.55         25.33         8.05         1.0.3         3.0         1.0         3.3         8.0         1.1           2013/66 17.33         W2         MF         832679	201366 11:38         C2         ME         8314/3         80788         10.1         5050         2553         883         1281         0.6         27.19         834         44           9100         24.31         7.74         111.6         2.3         32.75         7.94         4.8           2013/66 10:22         C3         ME         832233         80881         14.5         1000         26.18         7.63         110.3         0.3         27.67         8.25         2.3           2013/66 10:22         C3         ME         832233         80881         14.5         1000         26.18         7.63         110.3         0.3         27.67         8.25         2.3           2013/66 17:48         W1         MF         832954         807726         2.6         1.300         26.70         8.44         1.0         33.75         7.93         2.8           2013/66 17:33         W2         MF         832679         807986         12.7         1.300         26.70         8.49         123.9         0.6         7.76.8         8.33         1.4           2013/66 17:20         W3         MF         832679         807986         12.7         1.300         25.73 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1.000</td> <td></td> <td>9.28</td> <td></td> <td></td> <td></td> <td>8.41</td> <td>3.4</td>							1.000		9.28				8.41	3.4
10.10         10.10         10.10         10.10         10.10         2.053         2.83         12.81         0.10         2.74         11.16         2.3         2.275         7.94         4.1           2013/06 10:22         C3         ME         8.223         808851         10.00         24.31         7.74         11.16         2.3         3.276         8.23         2.2           2013/06 10:22         C3         ME         8.3223         808851         1.44         11.66         6.57         9.48         0.00         29.06         8.15         2.2           2013/06 17:48         W1         MF         832954         807726         2.6         1.300         26.70         8.49         1.10         3.375         7.93         2.3           2013/06 17:48         W1         MF         832954         807726         2.6         1.300         26.70         8.49         123.9         0.07         7.787         8.33         1.1           2013/06 17:33         W2         MF         832679         807986         2.65         1.300         26.70         8.49         123.9         0.07         7.787         8.33         1.1           2013/06 17:33         W2	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	2012/5/5 11 22	~		004.455	005050	10.1			9.19	133.2	0.6		8.34	
100         24.28         60.2         86.7         2.4         32.76         7.92         4.           2013/66 10.22         C3         ME         82233         80851         1.000         26.08         7.63         110.3         0.05         28.13         8.22         2.           2013/66 10.22         C3         ME         82233         80851         1.000         26.04         6.57         94.8         0.00         29.60         8.15         2.0           2013/66 17:48         W1         MF         832954         807726         2.6         1.300         22.66         4.46         63.9         1.1         33.75         7.93         2.           2013/66 17:33         W2         MF         832954         807726         2.6         1.300         26.70         7.72         1.12.7         0.5         7.76         8.83         1.           2013/66 17:33         W2         MF         832679         807986         12.7         6.50         25.23         8.05         1.1         33.75         7.93         1.           2013/66 17:39         W2         MF         832679         807986         12.7         6.55         30.24         8.05         1.	100         24.28         6.02         86.7         2.4         32.76         7.92         4.8           2013/66 10.22         C3         ME         832233         808851         1.000         26.01         7.63         110.03         0.3         27.67         8.25         2.1           2013/66 10.22         C3         ME         832233         808851         14.5         7.250         25.43         6.455         93.0         0.00         29.65         8.15         2.6           2013/66 17.48         W1         MF         832954         807726         2.6         1.300         26.60         4.46         6.39         1.1         33.75         7.93         2.8           2013/66 17.48         W1         MF         832954         807726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.2         1.2         1.2         0.61         27.63         8.33         1.4           2013/66 17.33         W2         MF         832679         807896         12.7         6.350         25.31         9.39         1.6         0.5         30.1         8.01         1.6         1.1         1.0         27.63	2013/6/6 11:38	C2	ME	831475	807858	10.1					0.6			4.4
100         24.28         60.2         86.7         2.4         32.76         7.92         4.           2013/66 10.22         C3         ME         82233         80851         1.000         26.08         7.63         110.3         0.05         28.13         8.22         2.           2013/66 10.22         C3         ME         82233         80851         1.000         26.04         6.57         94.8         0.00         29.60         8.15         2.0           2013/66 17:48         W1         MF         832954         807726         2.6         1.300         22.66         4.46         63.9         1.1         33.75         7.93         2.           2013/66 17:33         W2         MF         832954         807726         2.6         1.300         26.70         7.72         1.12.7         0.5         7.76         8.83         1.           2013/66 17:33         W2         MF         832679         807986         12.7         6.50         25.23         8.05         1.1         33.75         7.93         1.           2013/66 17:39         W2         MF         832679         807986         12.7         6.55         30.24         8.05         1.	100         24.28         6.02         86.7         2.4         32.76         7.92         4.8           2013/66 10.22         C3         ME         832233         808851         14.5         7.250         25.43         6.02         94.8         0.0         29.60         8.15         2.6           2013/66 10.22         C3         ME         832233         808851         14.5         7.250         25.43         6.45         93.0         0.0         29.65         8.15         2.6           2013/66 17.48         W1         MF         832954         807726         2.6         1.300         26.60         4.46         6.99         1.1         33.75         7.93         2.8           2013/66 17.48         W1         MF         832954         807726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.3           2013/66 17.33         W2         MF         832679         807386         12.7         6.35         32.31         9.39         16.5         30.6         15.3         0.44         8.33         1.4           2013/66 17.20         W3         MF         832679         807386         12.7<														
2013/6/6 10:22         C3         ME         85223         808851         14.5         1000         26.18         7.63         1003         0.3         27.77         8.25         2.           2013/6/6 10:22         C3         ME         85223         808851         14.5         7.250         25.43         6.45         93.0         0.00         29.60         8.15         2.4           2013/6/6 17:48         W1         MF         832954         807726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.1           2013/6/6 17:38         W1         MF         832954         807726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.1           2013/6/6 17:33         W2         MF         832954         807986         2.6         1.300         26.70         8.49         123.9         0.6         27.63         8.33         1.1           2013/6/6 17:33         W2         MF         832954         807986         12.4         10.00         26.67         7.38         115.3         0.6         27.29         8.24         3.2           <	2013/66 10:22         C3         ME         832233         808851         14.5         1000         26.18         7.63         110.3         0.03         27.67         8.25         2.3           2013/66 10:22         C3         ME         832233         808851         14.5         1000         26.04         7.25         10.06         0.05         28.13         8.22         2.3           2013/66 17:48         W1         MF         832954         807726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.3         1.3         1.4           2013/66 17:33         W2         MF         832954         807726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.3           2013/66 17:33         W2         MF         832679         807986         12.7         1000         26.84         7.35         107.4         0.4         27.64         8.33         1.4           2013/66 17:33         W2         MF         832679         807886         12.4         1000         26.86         7.22         12.39         0.6         27.63         8.33         <														4.8
2013/66 10:22         C3         ME         83223         80881         14.5         10.00         26.04         7.51         108.6         0.5         28.13         8.22         4.2           2013/66 17:48         W1         MF         832954         807726         2.6         1.300         23.66         4.46         63.9         1.1         33.75         7.93         2.1           2013/66 17:48         W1         MF         832954         807726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.1           2013/66 17:33         W2         MF         832954         807726         2.6         1.300         26.70         8.49         112.39         0.6         27.87         8.33         1.1           2013/66 17:33         W2         MF         832679         807986         12.7         10.00         26.81         7.35         10.74         0.4         27.64         8.33         1.1           2013/66 17:33         W2         MF         832679         807986         12.7         8.43         1.100         24.81         6.22         89.6         5.6         34.23         7.83         1.1 <t< td=""><td>2013/6/6 10:22         C3         ME         832233         80881         14.5         1000         26.04         7.51         108.6         0.5         28.13         8.22         2.5           2013/6/6 17:48         W1         MF         832954         807726         2.6         1.3500         23.60         5.94         85.1         1.0         33.75         7.93         2.8           2013/6/6 17:48         W1         MF         832954         807726         2.6         1.300         26.70         7.72         10.5         27.86         8.29         1.3         1.33         1.4         33.75         7.93         2.8           2013/6/6 17:33         W2         MF         832679         807986         1.27         1.300         26.70         7.72         10.7         2.786         8.33         1.4           2013/6/6 17:33         W2         MF         832679         807986         12.7         10.00         26.84         7.35         10.74         0.4         27.44         8.33         1.4           2013/6/6 17:20         W3         MF         832679         807986         12.4         10.00         26.84         7.33         0.6         3.423         7.83</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td></t<>	2013/6/6 10:22         C3         ME         832233         80881         14.5         1000         26.04         7.51         108.6         0.5         28.13         8.22         2.5           2013/6/6 17:48         W1         MF         832954         807726         2.6         1.3500         23.60         5.94         85.1         1.0         33.75         7.93         2.8           2013/6/6 17:48         W1         MF         832954         807726         2.6         1.300         26.70         7.72         10.5         27.86         8.29         1.3         1.33         1.4         33.75         7.93         2.8           2013/6/6 17:33         W2         MF         832679         807986         1.27         1.300         26.70         7.72         10.7         2.786         8.33         1.4           2013/6/6 17:33         W2         MF         832679         807986         12.7         10.00         26.84         7.35         10.74         0.4         27.44         8.33         1.4           2013/6/6 17:20         W3         MF         832679         807986         12.4         10.00         26.84         7.33         0.6         3.423         7.83											1			
2013/66 10:22         C3         ME         83223         80881         14.5         7.250         25.46         6.57         94.8         0.0         29.05         8.15         2.4           2013/66 17:48         W1         MF         832954         80726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.1         33.75         7.93         2.1           2013/66 17:48         W1         MF         832954         80726         2.6         1.300         26.70         8.44         63.9         1.1         33.75         7.93         2.1           2013/66 17:38         W1         MF         832954         80726         2.6         1.300         26.70         8.44         123.9         0.7         27.87         8.33         1.1           2013/66 17:33         W2         MF         832671         807986         12.7         6.350         25.31         9.39         125.6         0.55         34.23         7.81         1.1           2013/66 17:20         W3         MF         832951         807886         12.4         6.202         9.08         1.3         30.98         7.94         3.2      <	2013666 10:22         C3         ME         832233         808851         14.5         72.50         25.46         6.57         94.8         0.00         29.60         8.15         2.6           7.250         25.43         6.45         93.0         0.00         29.65         8.15         2.6           13.500         23.66         5.94         85.1         1.0         33.75         7.93         2.86           2013/66 17:48         W1         MF         832954         80726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.39         1.3           2013/66 17:33         W2         MF         832679         807986         12.7         6.50         25.31         9.39         135.6         0.5         30.24         8.83         1.4           2013/66 17:33         W2         MF         832679         807986         12.7         6.50         25.23         8.05         116.3         0.5         30.31         8.01         1.6           2013/66 17:20         W3         MF         832051         807886         12.4         1000         26.86         7.22         105.3         0.4         27.9         8.24 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2.3</td>							-							2.3
2013/66 10:22         C3         ME         832253         80881         14.5         7.250         25.43         6.45         93.0         0.0         29.65         8.15         7.33           2013/66 17:48         W1         MF         832954         807726         2.6         1.300         23.66         4.46         63.9         1.1         33.75         7.93         2.3           2013/66 17:48         W1         MF         832954         807726         2.6         1.300         26.70         8.49         123.9         0.7         27.87         8.33         1.3           2013/66 17:33         W2         MF         832679         807986         12.7         6.350         25.31         9.39         135.6         0.5         30.24         8.05         1.1           2013/66 17:30         W2         MF         832679         807886         12.7         6.350         25.31         9.39         135.6         0.5         30.24         8.05         1.1           2013/66 17:20         W3         MF         832051         807886         12.4         6.350         22.1         10.53         0.4         27.19         8.24         3.3         1.1           2	2013/66         ME         83223         80881         14.5         7.250         25.43         6.45         93.0         0.00         29.66         8.15         2.4           2013/66         17.48         W1         MF         832954         807726         2.6         13.500         23.66         5.94         85.1         1.0         33.75         7.93         2.8           2013/66         17.48         W1         MF         832954         807726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.33         1.4           2013/66         17.33         W2         MF         832679         807986         12.7         1000         26.84         7.35         107.4         0.4         27.64         8.33         1.4           2013/66         17.33         W2         MF         832679         807986         12.7         1000         26.84         7.35         107.4         0.4         27.64         8.33         1.4           2013/66         17.20         W3         MF         832051         807886         12.7         10.00         26.84         7.35         11.63         0.5         32.31         8.01														
2013/66 17:48         W1         MF         832954         80726         2.6         1.300         23.69         5.94         85.1         1.0         33.75         7.93         2.1           2013/66 17:48         W1         MF         832954         80726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.1           2013/66 17:33         W2         MF         832679         807986         1.27         1.000         26.84         7.55         107.4         0.4         27.64         8.33         1.2           2013/66 17:33         W2         MF         832679         807986         1.27         6.350         25.23         8.05         116.3         0.5         30.31         80.1         1.1           1.000         26.84         7.35         1.035.6         0.56         34.29         7.83         1.1         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         2.05         5.6         34.29         7.83         1.1         1.00         2.01         1.00         2.01         0.06         27.99         8.06	13:500         23:69         5.94         85:1         1.0         33:75         7.93         2.8           2013/66 17:48         W1         MF         832954         807726         2.6         1.300         26:70         7.72         112.7         0.5         27.86         8.39         1.3           2013/66 17:33         W2         MF         832679         807986         12.7         1000         26:84         7.35         107.4         0.4         27.64         8.33         1.4           2013/66 17:33         W2         MF         832679         807986         12.7         1000         26.84         7.35         107.4         0.4         27.64         8.33         1.4           1000         26.79         8.49         12.39         0.6         27.63         8.33         1.4           1000         26.84         7.35         10.56         0.5         30.31         8.01         1.6           11.700         23.75         4.83         0.6         27.63         8.33         1.4           2013/66 17:20         W3         MF         832051         807886         12.4         1000         26.97         7.89         115.3         0.6	2013/6/6 10:22	C3	ME	832233	808851	14.5	-							2.6
2013/6/6 17:48         W1         MF         832954         807726         2.6         13.500         23.66         4.46         63.9         1.1         33.75         7.93         2.1           2013/6/6 17:48         W1         MF         832954         807726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.1           2013/6/6 17:33         W2         MF         832954         807726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.1           2013/6/6 17:33         W2         MF         832954         807866         12.7         6.350         25.31         9.39         135.6         0.5         30.24         8.05         1.1           2013/6/6 17:20         W3         MF         832051         807886         12.4         6.020         24.98         6.22         89.6         5.6         34.29         7.83         1.1           2013/6/6 17:20         W3         MF         832051         807886         12.4         6.200         24.98         6.21         1.3         30.08         7.94         3.           2013/6/6 17:20 <td>2013/66 17:48         W1         MF         832954         807726         2.6         1.300         23.66         4.46         63.9         1.1         33.75         7.93         22.8           2013/66 17:48         W1         MF         832954         807726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.3           2013/66 17:33         W2         MF         832679         807986         12.7         6.530         25.31         9.39         135.6         0.5         30.24         8.05         1.6           2013/66 17:30         W2         MF         832679         807886         12.7         6.530         25.23         8.05         1.63         0.5         30.24         8.05         1.6           2013/66 17:20         W3         MF         832671         807886         12.4         6.200         24.95         7.19         1.13         30.05         7.23         1.13         30.04         8.05         1.6           2013/66 17:20         W3         MF         83271         807886         12.4         10.00         26.86         7.22         10.53         0.6         72.19         8.25</td> <td></td>	2013/66 17:48         W1         MF         832954         807726         2.6         1.300         23.66         4.46         63.9         1.1         33.75         7.93         22.8           2013/66 17:48         W1         MF         832954         807726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.3           2013/66 17:33         W2         MF         832679         807986         12.7         6.530         25.31         9.39         135.6         0.5         30.24         8.05         1.6           2013/66 17:30         W2         MF         832679         807886         12.7         6.530         25.23         8.05         1.63         0.5         30.24         8.05         1.6           2013/66 17:20         W3         MF         832671         807886         12.4         6.200         24.95         7.19         1.13         30.05         7.23         1.13         30.04         8.05         1.6           2013/66 17:20         W3         MF         83271         807886         12.4         10.00         26.86         7.22         10.53         0.6         72.19         8.25														
2013/6/6 17:48         W1         MF         832954         807726         2.6         1.300         26.70         7.72         112.7         0.5         27.86         8.29         1.330           2013/6/6 17:48         W1         MF         832954         807726         2.6         1.300         26.70         8.49         123.9         0.7         27.87         8.33         1.4           2013/6/6 17:33         W2         MF         832679         807866         12.7         (6.550         25.23         8.05         116.3         0.5         30.31         8.01         1.1           2013/6/6 17:30         W3         MF         832051         807866         12.4         (6.550         25.23         8.05         116.3         0.5         30.31         8.01         1.1           2013/6/6 17:20         W3         MF         832051         807886         12.4         (6.200         24.95         7.19         10.38         0.4         27.19         8.25         32           2013/6/6 17:20         W3         MF         833721         807886         12.4         1.4         1.4         1.4         1.4         1.4         1.4         1.4         1.4         1.4	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $														2.8
2013/6/6 17:43         W1         MF         832954         807/26         2.6         1.300         26.70         8.49         123.9         0.7         27.87         8.33         1.5           2013/6/6 17:33         W2         MF         832679         807986         12.7         1000         26.84         7.35         107.4         0.4         27.63         8.33         1.1           2013/6/6 17:33         W2         MF         832679         807986         12.7         6.350         25.31         9.39         135.6         0.5         30.24         8.05         1.1           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         22.816         6.22         89.6         5.6         34.29         7.83         1.1           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.97         7.89         11.53         0.4         27.19         8.25         3.2           2013/6/6 17:20         W3         MF         832051         807886         12.4         10.00         26.97         7.89         1.3         0.08         7.19         1.3         1.4         1.4	2013/6/6 17:33         W1         MF         832954         807/26         2.6         1.300         26.70         8.49         123.9         0.7         27.87         8.33         1.1           2013/6/6 17:33         W2         MF         832679         807986         1.27         1.000         26.70         8.49         123.9         0.7         27.87         8.33         1.4           2013/6/6 17:33         W2         MF         832679         807986         12.7         1.000         26.79         8.49         123.9         0.6         27.63         8.33         1.4           2013/6/6 17:30         W2         MF         832671         807986         12.7         1.000         26.70         7.89         11.53         0.5         30.31         8.01         1.6           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.97         7.89         11.5         0.6         27.29         8.24         3.2           2013/6/6 17:20         W3         MF         832051         807886         12.4         3.3         0.04         27.19         8.24         3.2           2013/6/6 17:20         W3         MF		_					15.500	25.00	1.10	05.9	1.1	55.15	1.75	
2013/6/6 17:43         W1         MF         832954         807/26         2.6         1.300         26.70         8.49         123.9         0.7         27.87         8.33         1.5           2013/6/6 17:33         W2         MF         832679         807986         12.7         1000         26.84         7.35         107.4         0.4         27.63         8.33         1.1           2013/6/6 17:33         W2         MF         832679         807986         12.7         6.350         25.31         9.39         135.6         0.5         30.24         8.05         1.1           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         22.816         6.22         89.6         5.6         34.29         7.83         1.1           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.97         7.89         11.53         0.4         27.19         8.25         3.2           2013/6/6 17:20         W3         MF         832051         807886         12.4         10.00         26.97         7.89         1.3         0.08         7.19         1.3         1.4         1.4	2013/6/6 17:33         W1         MF         832954         807/26         2.6         1.300         26.70         8.49         123.9         0.7         27.87         8.33         1.1           2013/6/6 17:33         W2         MF         832679         807986         1.27         1.000         26.70         8.49         123.9         0.7         27.87         8.33         1.4           2013/6/6 17:33         W2         MF         832679         807986         12.7         1.000         26.70         8.49         123.9         0.5         27.63         8.33         1.4           2013/6/6 17:30         W2         MF         832051         807986         12.7         1.000         26.70         7.89         11.53         0.5         30.24         8.05         1.1.6           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.87         7.19         103.8         1.1         31.05         7.92         4.24           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.86         7.19         103.8         1.1         31.05         7.92         4.24         1.4 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1 300</td> <td>26 70</td> <td>7 7 2</td> <td>112.7</td> <td>0.5</td> <td>27.86</td> <td>8 29</td> <td></td>							1 300	26 70	7 7 2	112.7	0.5	27.86	8 29	
2013/66 17:33         W2         MF         832679         807986         1.2         1.000         26.84         7.35         107.4         0.4         27.64         8.33         1.1           2013/66 17:33         W2         MF         832679         807986         12.7         6.350         25.31         9.39         135.6         0.5         30.31         8.01         1.1           2013/66 17:30         W3         MF         832679         807886         1.1700         23.81         6.22         89.6         5.6         34.23         7.83         1.1           2013/66 17:20         W3         MF         832051         807886         1.24         1.000         26.86         7.22         105.3         0.6         27.29         8.24         3.2           2013/66 17:20         W3         MF         832051         807886         1.24         1.000         26.87         7.29         1013.8         1.11         31.05         7.29         8.24         3.2           2013/6/6 17:20         W3         MF         833721         808185         14.7         1.400         24.01         5.28         7.61         2.24         33.58         7.79         4.4	2013/6/6 17:33         W2         MF         832679         807986         12.7         1000         26.84         7.35         107.4         0.4         27.64         8.33         1.4           2013/6/6 17:33         W2         MF         832679         807986         12.7         6.350         25.31         9.39         135.6         0.5         30.24         8.05         1.6           2013/6/6 17:20         W3         MF         832051         807886         12.7         6.350         25.23         8.05         116.3         0.5         30.31         8.01         1.6           2013/6/6 17:20         W3         MF         832051         807886         12.4         1000         26.86         7.22         105.3         0.6         27.29         8.24         3.2           2013/6/6 17:20         W3         MF         832051         807886         12.4         1000         26.97         7.19         103.8         1.1         31.05         7.79         3.2           2013/6/6 17:20         W3         MF         833721         808185         14.7         7.35         25.8         8.13         118.6         0.1         27.47         8.30         1.4	2013/6/6 17:48	W1	MF	832954	807726	2.6	-							1.3
2013/6/6 17:33         W2         MF         832679         807986         12.7         1.000         26.79         8.49         123.9         0.6         27.63         8.33         1.1           2013/6/6 17:33         W2         MF         832679         807986         12.7         6.350         25.31         9.39         135.6         0.5         30.24         8.05         11.63         0.5         30.31         8.01         11.63         0.5         30.24         8.05         11.63         0.5         30.24         8.05         11.00         23.81         6.22         89.6         5.6         34.23         7.83         11.3           2013/6/6 17:20         W3         MF         832051         807886         12.4         6.20         92.495         7.19         103.8         1.1         31.05         7.92         3.3           2013/6/6 17:20         W3         MF         833721         807886         14.7         6.200         24.95         7.19         103.8         1.1         31.05         7.92         3.3           2013/6/6 18:03         C1         MF         833721         808185         14.7         7.350         25.15         8.01         11.6         0.2	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$														
2013/6/6 17:33         W2         MF         832679         807986         12.7         6.350         25.31         9.39         135.6         0.5         30.24         8.05         1.4           2013/6/6 17:33         W2         MF         832679         807986         12.7         6.350         25.31         9.39         135.6         0.5         30.24         8.05         1.4           2013/6/6 17:20         W3         MF         832051         807886         11.700         22.375         4.83         69.5         5.6         34.29         7.81         1.1           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.97         7.89         115.3         0.4         27.99         8.24         3.3           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.97         7.89         11.3         30.98         7.94         3.3           1.000         26.19         7.19         103.8         1.11         31.05         7.92         3.3           2013/6/6 18:03         C1         MF         833721         808185         14.7         5.7         8.13	2013/6/6 17:33         W2         MF         832679         807986         12.7         6.350         25.31         9.39         135.6         0.5         30.24         8.05         1.6           2013/6/6 17:33         W2         MF         832679         807986         12.7         6.350         25.23         8.05         116.3         0.5         30.31         8.01         1.6           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.86         7.22         105.3         0.6         27.29         8.24         3.2           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.97         7.89         115.3         0.4         27.19         8.24         3.2           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.97         7.89         11.3         30.98         7.94         3.1           1.400         24.010         5.28         7.61         2.4         33.57         7.79         4.6           2013/6/6 18:03         C1         MF         833721         808185         14.7         7.350														1.4
2013/06 17:33         W2         MF         82/26/9         80/98         12.7         6.350         25.23         8.05         116.3         0.5         30.31         8.01         11.7           2013/06 17:30         W3         MF         82/26/9         80/98         10.70         23.81         6.22         89.6         5.6         34.29         7.83         11.70           2013/06 17:20         W3         MF         832051         807886         12.4         10.00         26.86         7.22         105.3         0.6         27.29         82.44         3.7           2013/06 17:20         W3         MF         832051         807886         12.4         6.200         24.95         7.19         103.8         1.1         31.05         7.792         3.7           2013/06 17:20         W3         MF         833721         80785         14.7         6.200         24.95         7.19         10.38         1.1         31.05         7.79         3.7           2013/06 18:03         C1         MF         833721         808185         14.7         1.000         26.83         8.13         11.86         0.1         2.747         8.30         1.1           2013/06 18:03<	2013/6/6 17:33         W2         MF         82/079         80/986         12.7         6.350         25.23         8.05         116.3         0.5         30.31         8.01         1.1           2013/6/6 17:30         W3         MF         832051         807886         11.700         23.81         6.22         89.6         5.6         34.29         7.83         1.8           2013/6/6 17:20         W3         MF         832051         807886         12.4         6.050         24.95         7.19         103.8         1.1         31.05         7.92         3.1           2013/6/6 17:20         W3         MF         832051         807886         12.4         12.4         6.200         24.95         7.19         103.8         1.1         31.05         7.92         3.1           2013/6/6 17:07         W3         MF         833721         808185         14.7         7.350         25.15         8.01         11.66         0.1         27.41         8.33         1.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         7.350         25.15         8.01         11.66         0.1         27.41         8.33         1.4         1.2														
2013/6/6 17:20         W3         MF         832051         807886         11.700         23.81         6.22         89.6         5.6         34.23         7.83         1.1           2013/6/6 17:20         W3         MF         832051         807886         11.700         23.81         6.22         89.6         5.6         34.29         7.81         1.1           2013/6/6 17:20         W3         MF         832051         807886         12.4         1000         26.66         7.22         105.3         0.6         27.29         8.24         3.3           2013/6/6 17:20         W3         MF         832051         807886         12.4         10.000         26.97         7.89         11.5.3         0.4         27.19         8.25         3.3           2013/6/6 17:20         MF         833721         807886         12.4         33.57         7.79         4.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         7.350         25.15         8.01         11.56         0.01         27.41         8.33         11.4           2013/6/6 18:03         C1         MF         831721         807311         10.00         26.97	11.700         23.81         6.22         89.6         5.6         34.23         7.83         1.8           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         23.75         4.83         69.5         5.6         34.29         7.81         3.2           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.97         7.89         115.3         0.6         27.29         8.24         3.2           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.97         7.89         115.3         0.04         27.19         8.25         3.3           2013/6/6 18:03         C1         MF         833721         808185         14.7         1.000         26.83         8.13         118.6         0.1         27.41         8.33         1.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         7.350         25.15         8.01         115.6         0.7         30.65         8.05         2.4           2013/6/6 17:07         C2         MF         831473         807731         10.7	2013/6/6 17:33	W2	MF	832679	807986	12.7								1.6
2013/6/6 17:20         W3         MF         832051         807886         11.700         23.75         4.83         69.5         5.6         34.29         7.81         1.1           2013/6/6 17:20         W3         MF         832051         807886         1000         26.97         7.22         105.3         0.6         27.29         8.24         3.3           2013/6/6 17:20         W3         MF         832051         807886         12.4         6.200         24.95         7.19         103.8         1.11         31.05         7.92         3.3           2013/6/6 17:20         W3         MF         832051         807886         12.4         6.200         24.95         7.19         103.8         1.11         31.05         7.92         3.3           2013/6/6 18:03         C1         MF         833721         808185         14.7         7.350         25.15         8.01         115.6         0.7         30.65         8.05         2.2           2013/6/6 18:03         C2         MF         831473         807731         10.7         5.350         2.48         6.99         101.0         0.7         30.28         8.05         2.4         3.3         3.10         7.91	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $														
2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.86         7.22         105.3         06         27.29         8.24         3.3           2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.97         7.89         115.3         0.44         27.19         8.24         3.3           2013/6/6 17:20         W3         MF         832051         807886         12.4         10.00         24.98         6.29         90.8         1.1         31.05         7.92         3.           2013/6/6 18:03         C1         MF         833721         808185         14.7         1.000         26.83         8.13         118.6         0.1         27.41         8.33         1.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         7.350         25.15         8.01         115.6         0.7         30.65         8.05         2.2           2013/6/6 18:03         C2         MF         831473         807731         10.7         13.700         24.17         5.79         83.4         0.8         33.10         7.91         3.	2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.86         7.22         105.3         0.6         27.29         8.24         3.2           2013/6/6 17:20         W3         MF         832051         807886         12.4         10.00         26.97         7.89         115.3         0.4         27.19         8.24         3.2           2013/6/6 17:20         W3         MF         832051         807886         12.4         10.00         26.97         7.89         115.3         0.4         27.19         8.24         3.2           2013/6/6 18:03         C1         MF         833721         807886         12.4         10.00         26.83         8.13         118.6         0.1         27.41         8.33         1.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         10.00         26.77         8.65         126.1         0.2         27.47         8.30         1.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         5.79         83.4         0.8         33.10         7.91         3.4           2013/6/6 18:03         C2 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>1.8</td>									1					1.8
2013/6/6 17:20         W3         MF         832051         807886         12.4         1.000         26.97         7.89         115.3         0.4         27.19         8.25         3.3           2013/6/6 17:20         W3         MF         832051         807886         12.4         6.200         24.95         7.19         103.8         1.1         31.05         7.92         3.           2013/6/6 18:03         C1         MF         83721         807886         114.00         24.01         5.28         76.1         2.4         33.58         7.76         44.4           2013/6/6 18:03         C1         MF         833721         808185         114.00         24.01         5.28         76.1         2.4         33.58         7.76         44.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         7.350         25.15         8.01         115.6         0.1         27.41         8.33         1.4           2013/6/6 18:03         C2         MF         831473         807731         10.00         26.94         9.49         138.6         0.0         27.37         8.13         3.           2013/6/6 18:21         C2         MF </td <td><math display="block">\begin{array}{c ccccccccccccccccccccccccccccccccccc</math></td> <td></td> <td>-</td>	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$														-
2013/6/6 17:20         W3         MF         832051         807886         12.4         6.200         24.95         7.19         103.8         1.1         31.05         7.92         3.           2013/6/6 17:20         H	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$														3.2
2013/6/6 17:20         W3         MF         85/2051         80/886         12.4         6.200         24.98         6.29         90.8         1.3         30.98         7.94         5.9           2013/6/6 17:20         MF         85/2051         80/886         12.4         6.200         24.98         6.29         90.8         1.3         30.98         7.94         4.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         11.400         24.00         3.93         56.5         2.5         33.58         7.76         4.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         1.000         26.77         8.65         126.1         0.02         27.47         8.30         1.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         1.000         26.99         101.0         0.7         30.28         8.09         21.4           2013/6/6 17:07         C2         MF         831473         80731         10.7         5.350         24.22         5.08         73.2         0.66         32.92         7.91         3.4           2013/6/6 18:01 <t< td=""><td>2013/6/6 17:20         W3         MF         83/2051         80/886         12.4         6.200         24.98         6.29         90.8         1.3         30.98         7.94         3.1           2013/6/6 17:20         W3         MF         83/3721         80/886         12.4         6.200         24.98         6.29         90.8         1.3         30.98         7.94         3.1           2013/6/6 18:03         C1         MF         833721         80/8185         14.7         1.000         26.77         8.65         12.61         0.2         27.47         8.30         14.6           2013/6/6 18:03         C1         MF         833721         808185         14.7         1.000         26.77         8.65         12.61         0.2         27.47         8.30         12.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         1.3700         24.17         5.79         83.4         0.8         33.10         7.91         3.4           2013/6/6 17:07         C2         MF         831473         807731         10.7         1.000         26.91         9.47         138.6         0.0         27.32         8.13         3.1      <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<></td></t<>	2013/6/6 17:20         W3         MF         83/2051         80/886         12.4         6.200         24.98         6.29         90.8         1.3         30.98         7.94         3.1           2013/6/6 17:20         W3         MF         83/3721         80/886         12.4         6.200         24.98         6.29         90.8         1.3         30.98         7.94         3.1           2013/6/6 18:03         C1         MF         833721         80/8185         14.7         1.000         26.77         8.65         12.61         0.2         27.47         8.30         14.6           2013/6/6 18:03         C1         MF         833721         808185         14.7         1.000         26.77         8.65         12.61         0.2         27.47         8.30         12.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         1.3700         24.17         5.79         83.4         0.8         33.10         7.91         3.4           2013/6/6 17:07         C2         MF         831473         807731         10.7         1.000         26.91         9.47         138.6         0.0         27.32         8.13         3.1 <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>							-							
2013/6/6 18:03         C1         A         33.57         7.79         4.4           2013/6/6 18:03         C1         MF         833721         808185         1.000         26.83         8.13         118.6         0.1         27.41         8.33         1.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         1.000         26.77         8.65         126.1         0.02         27.47         8.30         1.4           2013/6/6 18:03         C1         MF         833721         808185         14.7         7.350         25.15         8.01         115.6         0.7         30.65         8.05         2.3           2013/6/6 18:03         C1         MF         833721         808185         14.7         5.79         83.4         0.8         33.10         7.91         3.3           2013/6/6 17:07         C2         MF         831473         807731         10.7         5.350         24.92         5.08         73.2         0.6         32.92         7.91         3.4           2013/6/6 17:07         C2         MF         831473         807731         10.00         26.94         9.49         138.6         0.00         27.32 <td><math display="block">\begin{array}{ c c c c c c c c c c c c c c c c c c c</math></td> <td>2013/6/6 17:20</td> <td>W3</td> <td>MF</td> <td>832051</td> <td>807886</td> <td>12.4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>3.1</td>	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	2013/6/6 17:20	W3	MF	832051	807886	12.4								3.1
2013/6/6 18:03         C1         MF         833721         808185         14.7         1.000         26.83         8.13         118.6         0.1         27.41         8.33         1.           2013/6/6 18:03         C1         MF         833721         808185         14.7         1.000         26.83         8.13         118.6         0.1         27.41         8.33         1.           2013/6/6 18:03         C1         MF         833721         808185         14.7         7.350         25.15         8.01         115.6         0.7         30.65         8.05         2.3           2013/6/6 18:03         C2         MF         831473         807731         14.7         10.00         26.94         9.49         138.6         0.0         27.32         8.13         3.3           2013/6/6 17:07         C2         MF         831473         807731         10.7         10.00         26.91         9.47         138.3         0.22         27.37         8.13         3.           2013/6/6 18:21         C3         MF         83244         80876         11.7         6.53         9.44         0.7         31.44         7.79         3.           2013/6/6 18:21         C3	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$														
$ 2013/6/6\ 18:03 \ C1 \ MF \ 833721 \ Re \ 808185 \ MF \ 833721 \ Re \ 808185 \ Re \ 801 \ Re \ 8011$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $									1					4.6
2013/6/6 18:03         C1         MF         833721         808185         14.7         1.000         26.77         8.65         126.1         0.2         27.47         8.30         1.1           2013/6/6 18:03         C1         MF         833721         808185         14.7         7.350         25.15         8.01         115.6         0.7         30.65         8.05         2.1           2013/6/6 18:03         C2         MF         831473         808185         14.7         7.350         25.28         6.99         101.0         0.7         30.28         8.09         2.1           2013/6/6 17:07         C2         MF         831473         807731         10.7         1.000         26.94         9.49         138.6         0.0         27.32         8.13         3.           2013/6/6 17:07         C2         MF         831473         807731         10.7         1.000         26.91         9.47         138.3         0.2         27.37         8.13         3.           2013/6/6 18:21         C3         MF         831473         807731         10.7         10.7         5.350         24.83         7.50         108.2         1.0         31.54         7.76         3.	$\begin{array}{c c c c c c c c c c c c c c c c c c c $														
2013/6/6 18:03         C1         MF         833721         808185         14.7         7.350         25.15         8.01         115.6         0.7         30.65         8.05         2.1           2013/6/6 18:03         C1         MF         833721         808185         14.7         7.350         25.15         8.01         115.6         0.7         30.65         8.05         2.1           2013/6/6 17:07         C2         MF         831473         807731         14.7         7.350         25.15         8.01         115.6         0.7         30.65         8.05         2.1           2013/6/6 17:07         C2         MF         831473         807731         10.07         26.94         9.49         138.6         0.00         27.37         8.13         3.1           2013/6/6 17:07         C2         MF         831473         807731         10.7         10.00         26.94         9.49         138.6         0.00         27.37         8.13         3.1           2013/6/6 17:07         C2         MF         831473         807731         10.7         10.00         26.92         9.33         134.8         0.08         31.44         7.79         3.1           2013/6/6	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$							-							1.4
2013/6/6 18:03         C1         MF         833/21         808185         14.7         7.350         25.28         6.99         101.0         0.7         30.28         8.09         2.7           2013/6/6 18:03         C1         MF         833/21         808185         14.7         7.350         25.28         6.99         101.0         0.7         30.28         8.09         2.7           2013/6/6 17:07         C2         MF         831473         807731         10.00         26.94         9.49         138.6         0.00         27.32         8.13         3.           2013/6/6 17:07         C2         MF         831473         807731         10.7         10.00         26.91         9.47         138.3         0.2         27.37         8.13         3.           2013/6/6 17:07         C2         MF         831473         807731         10.7         10.00         26.91         9.47         138.3         0.2         27.37         8.13         3.           2013/6/6 17:07         C2         MF         831473         807731         10.7         10.00         26.91         9.33         134.8         0.08         31.44         7.79         3.           2013/6/6 18:2	$\begin{array}{c c c c c c c c c c c c c c c c c c c $							-							
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	2013/6/6 18:03	C1	MF	833721	808185	14.7								2.8
2013/6/6 17:07         C2         MF         831473         807731         10.7         13.700         24.22         5.08         73.2         0.6         32.92         7.91         3.7           2013/6/6 17:07         C2         MF         831473         807731         10.7         10.00         26.94         9.49         138.6         0.0         27.32         8.13         3.           2013/6/6 17:07         C2         MF         831473         807731         10.7         10.70         26.91         9.47         138.3         0.2         27.37         8.13         3.           2013/6/6 17:07         C2         MF         831473         807731         10.7         5.350         24.92         9.33         134.8         0.8         31.44         7.79         3.           9.700         24.12         6.29         90.7         5.7         33.46         7.63         3.5           9.700         23.97         5.48         78.9         5.4         33.65         7.58         3.5           9.700         26.92         8.03         117.1         0.5         27.05         8.33         2.           10.00         26.92         8.03         117.1	$\begin{array}{c c c c c c c c c c c c c c c c c c c $														
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $														3.4
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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $		1					-							<u> </u>
2013/6/6 18:21         C3         MF         832244         808876         15.1         9.700         24.12         6.29         90.7         5.7         33.46         7.63         33.46         7.63         33.46         7.63         33.46         7.63         33.46         7.63         33.46         7.63         33.46         7.63         33.46         7.58         33.46         7.58         33.46         7.58         33.46         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.58         33.45         7.55         24.92         6.53         94.4         0.7         31.64         8.01         2.56         31.67         7.99         2.56         31.41         4.63         66.67         1.55         33.13         7.90         33.43         33.45         33.43         33.45         33.43         33.45         33.45	9.700         24.12         6.29         90.7         5.7         33.46         7.63         3.2           9.700         23.97         5.48         78.9         5.4         33.65         7.58         3.2           9.700         23.97         5.48         78.9         5.4         33.65         7.58         3.2           2013/6/6 18:21         C3         MF         832244         808876         15.1         1.000         26.90         7.39         107.8         0.4         27.12         8.32         2.1           2013/6/6 18:21         C3         MF         832244         808876         15.1         15.1         1.000         26.90         7.39         107.8         0.4         27.12         8.32         2.1           1.000         26.92         8.03         117.1         0.5         27.05         8.33         2.5           7.550         24.68         6.62         95.3         0.5         31.67         7.99         2.5           14.100         24.18         4.63         66.7         1.5         33.13         7.90         3.2	2013/6/6 17:07	C2	MF	831473	807731	10.7			1					3.1
2013/6/6 18:21         C3         MF         832244         808876         15.1         9.700         23.97         5.48         78.9         5.4         33.65         7.58         5.4           2013/6/6 18:21         C3         MF         832244         808876         15.1         1.000         26.90         7.39         107.8         0.4         27.12         8.32         2.           1.000         26.92         8.03         117.1         0.5         27.05         8.33         2.           1.000         26.92         8.03         117.1         0.5         27.05         8.33         2.           1.000         26.92         8.03         117.1         0.5         27.05         8.33         2.           1.000         26.92         8.03         117.1         0.5         27.05         8.33         2.           1.000         24.92         6.53         94.4         0.7         31.64         8.01         2.           14.100         24.18         4.63         66.7         1.5         33.13         7.90         3.3	2013/6/6 18:21         C3         MF         832244         808876         15.1         9.700         23.97         5.48         78.9         5.4         33.65         7.58         33.2         33.45         7.58         33.2         2.1           2013/6/6 18:21         C3         MF         832244         808876         15.1         1.000         26.90         7.39         107.8         0.4         27.12         8.32         2.1           1.000         26.92         8.03         117.1         0.5         27.05         8.33         2.1           7.550         24.92         6.53         94.4         0.7         31.64         8.01         2.5           14.100         24.18         4.63         66.7         1.5         33.13         7.90         3.2		1												<u> </u>
2013/6/6 18:21         C3         MF         832244         808876         15.1         1.000         26.90         7.39         107.8         0.4         27.12         8.32         2.           2013/6/6 18:21         C3         MF         832244         808876         15.1         15.	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		1					-							3.2
2013/6/6 18:21         C3         MF         832244         808876         15.1         1.000         26.92         8.03         117.1         0.5         27.05         8.33         2.           2013/6/6 18:21         C3         MF         832244         808876         15.1         7.550         24.92         6.53         94.4         0.7         31.64         8.01         2.           14.100         24.18         4.63         66.7         1.5         33.13         7.90         3.3	2013/6/6 18:21         C3         MF         832244         808876         15.1         1.000         26.92         8.03         117.1         0.5         27.05         8.33         2.1           2013/6/6 18:21         C3         MF         832244         808876         15.1         15		+												┢───
2013/6/6 18:21         C3         MF         832244         808876         15.1         7.550         24.92         6.53         94.4         0.7         31.64         8.01         2           14.100         24.18         4.63         66.7         1.5         33.13         7.99         3	2013/6/6 18:21         C3         MF         832244         808876         15.1         7.550         24.92         6.53         94.4         0.7         31.64         8.01         2.5           14.100         24.18         4.63         66.7         1.5         33.13         7.90         3.2           14.100         24.14         4.32         62.3         1.3         33.24         7.90         3.2		1					-							2.1
2015/06 18:21         C3         MF         832/24         8088/9         15.1         7.550         24.68         6.62         95.3         0.5         31.67         7.99         2.3           14.100         24.18         4.63         66.7         1.5         33.13         7.90         3.3	2015/0/0 18:21         C.3         Mif         832244         8088/0         15.1         7.550         24.68         6.62         95.3         0.5         31.67         7.99         2.5           14.100         24.18         4.63         66.7         1.5         33.13         7.90         3.2           14.100         24.14         4.32         62.3         1.3         33.24         7.90         3.2		1												┣───
14.100 24.18 4.63 66.7 1.5 33.13 7.90	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2013/6/6 18:21	C3	MF	832244	808876	15.1								2.5
	14.100 24.14 4.32 62.3 1.3 33.24 7.90 3.2		1					-							<u> </u>
	14.100 24.14 4.32 62.3 1.3 35.24 7.90		1							1					3.2

### **Construction of Sewage Treatment Works** at Yung Shue Wan and Sok Kwu Wan



### Sok Kwu Wan

Date

8-Jun-13

Date / Time	Teastian	Tide*	Co-or	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS
Date / Time	Location	1 ide+	East	North	m	п	ç	mg/L	%	NTU	ppt	unit	mg/l
2013/6/8 12:12	W1	ME	832962	807738	2.3	1.150	26.80	7.74	114.1	0.9	29.29	8.24	2.2
2013/0/0 12.12		IVIL	052702	001150	2.5	1.150	26.84	7.85	115.7	1.2	29.26	8.21	2.2
						1.000	27.00 27.05	7.98 7.98	118.1 118.1	0.7	29.34 29.31	8.21 8.20	3.8
2012/6/0 12 21	11/2		022654	007000	10.5	6.250	25.34	7.56	110.3	0.3	31.97	8.06	4.7
2013/6/8 12:21	W2	ME	832654	807988	12.5	6.250	25.31	6.55	95.5	0.3	32.01	8.04	4.7
						11.500	23.99 23.95	4.85 4.26	70.5 61.7	0.4	35.08 35.09	7.88	4.8
						11.500 1.000	23.95	4.20	119.0	0.5	28.98	7.90 8.28	
						1.000	27.15	8.26	122.3	0.3	29.08	8.30	4.0
2013/6/8 12:36	W3	ME	832053	807887	11.9	5.950	25.83	7.53	110.2	0.2	30.91	8.13	4.7
						5.950	25.85	7.09 4.06	103.8	0.3	30.98	8.11	
						10.900 10.900	24.11 24.03	3.89	58.9 56.5	1.9 1.8	34.65 34.83	7.90 7.89	4.8
						1.000	27.29	8.00	118.7	0.1	29.12	8.29	5.2
						1.000	27.37	8.24	122.4	0.0	29.09	8.27	5.3
2013/6/8 11:57	C1	ME	833700	807196	14.1	7.050	25.91	7.47	109.4	0.4	30.82	8.11	7.2
						7.050	26.12 23.96	7.18 5.23	105.3 75.9	0.3	30.40 35.16	8.15 7.91	
						13.100	23.96	4.86	70.5	1.0	35.18	7.89	8.2
						1.000	27.66	7.06	105.5	0.3	29.17	8.30	2.1
						1.000	27.61	7.91	118.1	0.4	29.18	8.31	2.1
2013/6/8 12:50	C2	ME	831462	807725	10.1	5.050 5.050	26.04 26.03	8.20 7.56	120.1 110.6	0.6	30.41 30.37	8.18 8.18	6.5
						9.100	24.88	6.33	92.1	1.0	32.75	7.96	7.4
						9.100	24.97	5.40	78.5	1.3	32.62	7.99	7.4
						1.000	27.31	8.43	124.9	0.7	28.66	8.28	3.1
						1.000 7.300	27.34 25.00	8.40 6.44	124.5 93.5	0.6	28.70 32.07	8.30 8.00	
2013/6/8 11:38	C3	ME	832228	808850	14.6	7.300	24.98	5.96	86.5	0.7	32.12	8.02	5.4
						13.600	23.84	4.07	58.9	2.1	35.03	7.88	6.8
						13.600	23.79	3.94	57.1	2.3	35.09	7.88	0.8
						1.200	26.73	6.20	91.5	0.9	29.81	8.24	
2013/6/8 17:53	W1	MF	832857	807850	2.4	1.200	26.73	6.99	103.2	1.1	29.80	8.24	1.0
						1.000	26.81	6.66	98.6	0.4	29.96	8.25	6.8
						1.000	26.79	7.42	109.8	0.5	29.96	8.26	0.8
2013/6/8 17:37	W2	MF	832677	808006	12.2	6.100 6.100	26.04 25.99	7.72	113.5 104.6	0.2	30.99 31.03	8.14 8.15	7.2
						11.200	23.89	4.30	62.5	2.3	35.58	7.88	
						11.200	24.06	3.95	57.5	2.1	35.43	7.90	7.5
						1.000	27.01	7.32	108.7	0.5	30.02	8.27	4.4
						1.000 6.250	27.03 26.08	8.02 8.49	119.1 125.0	0.6	29.99 31.13	8.28 8.17	
2013/6/8 17:20	W3	MF	832033	807890	12.5	6.250	26.08	7.78	114.5	1.4	31.13	8.16	6.2
						11.500	23.77	4.57	66.5	1.9	36.31	7.90	9.1
						11.500	23.74	4.16	60.5	2.2	36.24	7.87	9.1
						1.000	27.19 27.11	7.19 8.38	106.6 124.0	0.9	29.11 29.17	8.35 8.33	5.0
						7.400	25.67	7.26	124.0	0.8	30.82	8.10	
2013/6/8 18:07	C1	MF	833716	808184	14.8	7.400	25.66	6.58	96.0	0.7	30.86	8.10	5.3
						13.800	23.76	4.63	67.1	1.1	35.45	7.91	5.2
						13.800	23.77	4.38	63.4	1.4	35.45	7.91	5.2
						1.000	26.93 26.83	7.95 8.40	117.4 124.0	0.4	29.32 29.52	8.33 8.31	4.8
2012/6/0.17.04	<b>C</b> 2		021450	907766	11.0	5.650	26.38	8.14	119.9	0.4	30.47	8.19	2.2
2013/6/8 17:04	C2	MF	831459	807766	11.3	5.650	26.33	7.79	114.6	0.7	30.51	8.20	3.3
						10.300	24.02	6.29	91.6	2.3	35.54	7.91	4.4
						10.300	24.01 27.07	5.24 7.51	76.2 111.3	2.4	35.44 29.32	7.91 8.31	
						1.000	27.07	7.98	111.5	1.0	29.32	8.32	2.5
2013/6/8 18:28	C3	MF	832231	808855	15.1	7.550	25.61	7.11	103.7	7.6	30.90	8.07	4.4
2013/0/0 10.20		1411.	052251	000000	13.1	7.550	25.57	6.43	93.6	7.6	30.91	8.08	4.4
						14.100	23.77	5.11 4.42	74.1	14.1	35.41	7.91 7.91	4.5
MF- Mid Flood Tide	1	I			L	14.100	23.80	4.42	64.1	14.1	35.38	1.91	

### **Construction of Sewage Treatment Works** at Yung Shue Wan and Sok Kwu Wan



### Sok Kwu Wan

10-Jun-13 Date

Date / Time	Location	Tide*	Co-ore	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS
Date / Time	Location	TIGE.	East	North	m	m	°C	mg/L	%	NTU	ppt	unit	mg/l
2013/6/10 13:49	W1	ME	832973	807735	2.4	1.200	25.89	5.45	77.6	0.4	29.43	8.02	1.0
2013/0/10 13:19		1.112	002710	007755	2	1.200	25.97	5.36	78.5	0.6	29.14	8.04	
						1.000	25.78	6.47	94.1	0.3	29.99	8.01	1.1
						1.000 6.650	25.78 25.49	5.55 4.98	80.7 72.5	0.2	29.99 31.02	8.01 7.99	
2013/6/10 13:31	W2	ME	832693	807986	13.3	6.650	25.49	4.98	72.5	0.8	31.02	7.99	0.8
						12.300	25.22	4.88	71.3	1.5	32.68	7.96	
						12.300	25.58	4.25	61.9	1.7	30.86	7.99	4.5
						1.000	25.67	4.77	69.4	1.1	30.34	8.02	1.1
						1.000	25.68	4.90	71.4	1.3	30.39	8.01	1.1
2013/6/10 13:15	W3	ME	832058	807888	13.1	6.550	25.63	4.86	70.9	0.7	30.80	8.01	2.3
2015/0/10 15.15	** 5	IVIL	052050	007000	15.1	6.550	25.58	4.83	70.4	0.9	30.86	8.01	2.3
						12.100	24.28	3.66	53.2	4.3	34.46	7.90	2.3
	_					12.100	24.35	3.32	48.3	4.6	34.31	7.91	
						1.000	25.98	5.87	85.2	0.5	28.96	8.03	1.1
						1.000 7.550	25.96 25.40	5.49 5.17	79.6 75.1	0.7	28.97 30.97	8.02 7.98	
2013/6/10 14:05	C1	ME	833709	808199	15.1	7.550	25.40	4.66	67.6	0.0	30.97	7.98	1.3
						14.100	23.90	3.21	46.5	1.5	34.86	7.87	
						14.100	24.84	3.10	44.7	1.3	31.59	7.94	1.3
						1.000	25.70	6.71	97.7	1.0	30.34	8.01	1.0
						1.000	25.70	5.97	86.8	0.8	30.31	8.02	1.2
2013/6/10 13:00	C2	ME	831471	807736	11.4	5.520	25.56	5.20	75.8	0.5	30.94	8.00	1.3
2015/0/10 15:00	C2	IVIE	031471	807750	11.4	5.520	25.59	5.11	74.4	0.6	30.84	8.01	1.5
						10.400	24.97	4.87	71.0	2.3	32.82	7.95	2.3
	_					10.400	24.94	4.43	64.5	2.5	32.83	7.96	2.0
						1.000	25.95	6.62	96.0	0.5	28.87	8.02	1.0
						1.000	25.98	6.46	93.7	0.4	28.85	8.03	
2013/6/10 14:26	C3	ME	832241	808878	16	8.000	25.65	5.48	79.6	1.1	30.15	8.00	1.4
						8.000 15.000	25.66 23.67	5.27 3.95	76.6 57.0	2.7	30.11 35.20	8.01 7.87	
						15.000	23.69	3.95	57.1	2.4	35.17	7.86	1.4
						15.000	25.07	5.75	57.1	2.7	55.17	7.00	i and a second
2012/5/10.0.25			000050	005546	2.6	1.300	26.03	5.52	77.1	0.4	31.70	8.01	
2013/6/10 9:25	W1	MF	832953	807746	2.6	1.300	26.02	5.72	79.7	0.6	31.72	8.01	0.7
						1.000	26.04	6.17	91.0	3.8	31.72	8.00	1.6
						1.000	26.03	5.71	84.2	3.8	31.72	8.02	1.0
2013/6/10 9:10	W2	MF	832655	807979	13.1	6.550	25.69	5.27	77.5	0.4	32.27	8.02	1.4
2013/0/10 9:10	112	1011	052055	001717	10.1	6.550	25.86	5.12	75.5	0.6	32.14	8.01	1.1
						12.100	23.89	4.20	61.3	1.2	36.11	7.90	1.7
	_					12.100	23.91	3.92	57.1	1.3	36.02	7.90	
						1.000	25.97 25.98	5.65 5.60	83.5 82.8	0.2	32.07 32.02	7.99 7.98	1.7
						6.450	23.98	5.58	81.7	0.5	35.06	7.94	
2013/6/10 8:55	W3	MF	832040	807899	12.9	6.450	24.38	5.18	75.8	0.5	35.23	7.95	1.0
						11.900	23.88	4.61	67.3	1.6	36.59	7.88	1.0
						11.900	23.90	3.82	55.8	1.7	36.46	7.88	1.0
						1.000	25.70	5.56	81.5	0.5	31.74	8.01	1.6
						1.000	25.70	5.33	78.1	0.7	31.73	8.03	1.0
2013/6/10 9:42	C1	MF	833722	808184	14.7	7.350	24.31	5.24	76.5	1.2	34.91	7.94	1.3
2010/0/10 7/12	0.1		000122	000101		7.350	24.35	4.57	66.6	1.0	34.66	7.95	
						13.700	23.85	3.52	51.2	2.4	35.68	7.90	1.1
						13.700 1.000	23.86 25.18	3.31 5.98	48.1 87.3	2.5 0.4	35.68 32.52	7.91 8.00	<u> </u>
						1.000	25.18	5.98	87.3	0.4	32.52	8.00	1.4
						5.000	24.43	4.91	71.7	0.9	34.65	7.94	1
2013/6/10 8:40	C2	MF	831443	807729	10	5.000	24.43	4.16	60.8	1.0	34.66	7.95	1.6
						9.000	23.92	3.09	45.1	1.0	36.14	7.90	
						9.000	23.92	2.99	43.6	1.3	36.12	7.90	2.4
						1.000	25.71	4.93	72.3	0.2	31.54	8.02	1.2
						1.000	25.70	5.03	73.8	0.2	31.55	8.02	1.2
2013/6/10 10:01	C3	MF	832236	808880	15.2	7.600	25.04	4.90	71.7	0.6	33.39	7.99	2.3
2013/0/10 10:01			002200	000000	10.2	7.600	25.02	4.40	64.4	0.8	33.11	8.00	2.5
						14.200	23.98	3.82	55.5	1.8	35.39	7.91	2.4
	1	I				14.200	23.98	3.47	50.5	1.7	35.39	7.89	1 The second s

### **Construction of Sewage Treatment Works** at Yung Shue Wan and Sok Kwu Wan



### Sok Kwu Wan

14-Jun-13 Date

		m: 1 +	Co-ore	dinates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS
Date / Time	Location	Tide*	East	North	m	m	ĉ	mg/L	%	NTU	ppt	unit	mg/l
2013/6/14 15:38	W1	ME	832970	807721	2.4	1.200	25.12	5.74	82.5	0.8	29.97	8.09	2.6
						1.200	25.08	5.27	75.8	0.9	30.03	8.08	
						1.000	25.11 25.11	5.21 5.31	74.8 76.3	0.8	29.95 29.96	8.07 8.09	1.9
						6.300	24.98	5.14	73.9	0.8	30.31	8.09	
2013/6/14 15:19	W2	ME	832665	808002	12.6	6.300	24.99	4.98	71.5	0.7	30.30	8.05	1.8
						11.600	24.97	4.77	68.6	1.3	30.42	8.04	1.5
						11.600	24.93	4.75	68.2	1.3	30.43	8.03	1.5
						1.000	25.05	5.51	79.0	1.1	29.92	8.05	2.2
						1.000	25.07	5.52	79.2	1.3	29.92	8.07	2.2
2013/6/14 15:03	W3	ME	832057	807901	12.7	6.350	24.96	5.80	83.3	1.2	30.19	8.02	1.8
						6.350 11.700	24.97 24.90	5.58 4.55	80.2 65.3	1.3 2.2	30.20 30.36	8.04 8.01	
						11.700	24.90	4.53	65.0	2.2	30.30	8.01	1.6
						1.000	24.90	5.66	72.2	1.3	30.40	8.01	
						1.000	25.12	5.41	73.1	1.1	30.04	8.11	1.6
2012/6/14 15-55	C1	ME	022710	202170	14.4	7.200	24.94	5.16	67.9	1.3	30.42	8.07	1.4
2013/6/14 15:55	C1	ME	833718	808179	14.4	7.200	24.95	4.96	65.9	1.6	30.43	8.06	1.4
						13.400	24.89	4.62	62.1	1.6	30.85	8.05	1.3
						13.400	24.89	4.64	66.3	1.8	29.52	8.06	1.5
						1.000	25.08	5.47	78.4	1.5	29.55	7.99	1.0
						1.000	25.07	5.43	77.9	1.7	29.62	7.99	
2013/6/14 14:50	C2	ME	831472	807729	10.5	5.250 5.250	25.00 24.99	4.94 4.79	70.9 68.8	1.3	30.06 30.06	8.02 8.03	1.2
						9.500	24.99	4.79	67.0	1.1	30.00	8.03	
						9.500	24.95	4.60	66.0	1.5	30.17	8.01	1.8
						1.000	25.15	4.94	71.1	0.5	30.00	8.10	
						1.000	25.14	5.04	72.6	0.8	30.02	8.10	1.1
2013/6/14 16:12	C3	ME	832243	808874	14.7	7.350	24.91	4.45	63.9	0.9	30.49	8.06	1.0
2015/0/14 10.12	CS	ME	032243	000074	14.7	7.350	24.89	4.58	65.8	0.9	30.53	8.04	1.0
						13.700	24.84	4.11	58.6	2.0	29.31	8.03	1.6
						13.700	24.86	4.21	60.6	2.4	30.96	8.05	
2012/6/14 0 12	11/1	ME	822054	007720	2.0	1.400	25.44	6.67	96.1	0.7	29.34	8.23	1.0
2013/6/14 9:13	W1	MF	832954	807738	2.8	1.400	25.44	6.54	94.2	0.6	29.35	8.21	1.0
						1.000	25.44	6.28	90.4	0.8	29.37	8.23	1.2
						1.000	25.47	6.25	90.2	0.6	29.35	8.23	1.2
2013/6/14 9:24	W2	MF	832673	807976	13.6	6.800	25.28	5.95	85.7	1.0	29.81	8.17	1.2
						6.800	25.29	5.69	82.1	0.9	29.86	8.17	
						12.600 12.600	24.71 24.69	5.10 4.75	73.4 68.3	2.0	31.48 31.48	8.06 8.06	1.1
						12.000	24.09	6.64	95.4	0.7	28.91	8.23	
						1.000	25.47	6.50	93.5	0.5	28.89	8.23	0.8
2012/5/11/2 2 22			0000.45	005005	12.2	6.600	25.12	6.31	91.0	1.1	30.43	8.12	1.4
2013/6/14 9:39	W3	MF	832047	807887	13.2	6.600	25.10	6.03	86.9	1.3	30.43	8.11	1.4
						12.200	24.78	5.12	73.7	0.9	31.40	8.06	1.2
						12.200	24.75	4.90	70.6	0.9	31.43	8.06	1.2
						1.000	25.43	6.23	89.7	0.5	29.21	8.19	0.9
						1.000	25.47	6.29	90.6	0.8	29.19	8.19	
2013/6/14 8:57	C1	MF	833716	808164	14.6	7.300 7.300	25.17	6.06 5.72	87.2	0.6	29.84	8.12 8.13	1.3
						13.600	25.16 24.68	5.33	82.3 76.6	0.5	29.87 31.30	8.13	
						13.600	24.65	4.84	69.6	0.9	31.32	8.01	1.1
						1.000	25.43	6.30	90.5	0.9	28.83	8.18	0.0
							25.42	6.13	88.1	1.1	28.91	8.21	0.8
						1.000	Z3.4Z	0.15	00.1			0.21	
2013/6/14 9-51	C	ME	831420	807745	11.8	1.000	25.36	5.96	85.9	0.8	29.75	8.18	0.8
2013/6/14 9:51	C2	MF	831439	807745	11.8	5.900 5.900	25.36 25.26	5.96 5.81	85.9 83.7	0.8 0.7	29.75 29.92	8.18 8.16	0.8
2013/6/14 9:51	C2	MF	831439	807745	11.8	5.900 5.900 10.800	25.36 25.26 24.83	5.96 5.81 4.95	85.9 83.7 71.3	0.8 0.7 1.4	29.75 29.92 31.19	8.18 8.16 8.07	
2013/6/14 9:51	C2	MF	831439	807745	11.8	5.900 5.900 10.800 10.800	25.36 25.26 24.83 24.82	5.96 5.81 4.95 4.36	85.9 83.7 71.3 62.8	0.8 0.7 1.4 1.5	29.75 29.92 31.19 31.26	8.18 8.16 8.07 8.07	0.8
2013/6/14 9:51	C2	MF	831439	807745	11.8	5.900 5.900 10.800 10.800 1.000	25.36 25.26 24.83 24.82 25.41	5.96 5.81 4.95 4.36 6.38	85.9 83.7 71.3 62.8 91.6	0.8 0.7 1.4 1.5 0.7	29.75 29.92 31.19 31.26 28.90	8.18 8.16 8.07 8.07 8.13	
2013/6/14 9:51	C2	MF	831439	807745	11.8	5.900 5.900 10.800 10.800 1.000 1.000	25.36 25.26 24.83 24.82 25.41 25.44	5.96 5.81 4.95 4.36 6.38 6.30	85.9 83.7 71.3 62.8 91.6 90.5	0.8 0.7 1.4 1.5 0.7 0.9	29.75 29.92 31.19 31.26 28.90 28.94	8.18 8.16 8.07 8.07 8.13 8.15	1.9
2013/6/14 9:51 2013/6/14 8:38	C2 C3	MF	831439	807745	11.8	5.900 5.900 10.800 10.800 1.000 1.000 7.700	25.36 25.26 24.83 24.82 25.41 25.44 25.16	5.96 5.81 4.95 4.36 6.38 6.30 6.22	85.9 83.7 71.3 62.8 91.6 90.5 89.3	0.8 0.7 1.4 1.5 0.7 0.9 0.6	29.75 29.92 31.19 31.26 28.90 28.94 29.73	8.18 8.16 8.07 8.07 8.13 8.15 8.11	1.9
						5.900 5.900 10.800 10.800 1.000 1.000	25.36 25.26 24.83 24.82 25.41 25.44	5.96 5.81 4.95 4.36 6.38 6.30	85.9 83.7 71.3 62.8 91.6 90.5	0.8 0.7 1.4 1.5 0.7 0.9	29.75 29.92 31.19 31.26 28.90 28.94	8.18 8.16 8.07 8.07 8.13 8.15	1.9 0.8

### **Construction of Sewage Treatment Works** at Yung Shue Wan and Sok Kwu Wan



### Sok Kwu Wan

18-Jun-13 Date

Date / Time	Location	Tide*	Co-ore	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS
Date / Time	Location	Tide.	East	North	m	m	c	mg/L	%	NTU	ppt	unit	mg/l
2013/6/18 8:56	W1	ME	832953	807739	2.3	1.150	26.18	7.44	109.0	1.2	30.16	8.03	1.0
						1.150	26.16	7.20	105.6	1.0	30.18	8.02	
						1.000	26.10 26.10	6.74 6.76	98.7 98.9	1.0	30.23 30.25	7.99 7.99	1.1
						6.250	26.27	6.93	102.2	0.2	30.85	8.08	
2013/6/18 9:08	W2	ME	832677	807961	12.5	6.250	26.34	7.06	104.1	0.6	30.78	8.08	1.0
						11.500	26.27	6.68	98.4	0.8	30.91	8.08	1.4
	_					11.500	26.34	6.45	95.2	1.0	30.87	8.09	
						1.000	26.58 26.65	6.93 6.60	102.4 97.7	0.0	30.43 30.36	7.98 8.00	1.5
						6.100	26.03	6.62	97.5	0.1	30.30	8.00	
2013/6/18 9:23	W3	ME	832047	807899	12.2	6.100	26.24	6.56	96.5	0.5	30.81	8.04	0.8
						11.200	26.08	6.70	98.5	0.5	31.06	8.07	1.4
	_					11.200	26.11	6.55	96.4	0.6	31.06	8.07	1.4
						1.000	26.31	6.93	101.8	0.0	30.05	7.99	0.8
						1.000 7.200	26.27 26.15	6.39 6.60	93.8 96.9	0.0	30.04 30.52	7.97 8.03	
2013/6/18 8:39	C1	ME	833729	808164	14.4	7.200	26.12	6.57	96.3	0.2	30.52	8.02	1.0
						13.400	26.07	6.29	92.3	0.3	30.73	8.05	1.4
						13.400	26.02	6.03	88.5	0.4	30.81	8.06	1.4
						1.000	26.23	6.92	101.6	0.0	30.42	7.98	0.7
						1.000	26.27	6.74	99.0	0.2	30.36	7.99	0.7
2013/6/18 9:37	C2	ME	831458	807747	10.3	5.150	25.89	6.52	95.4	0.8	30.80	8.01	1.1
						5.150 9.300	25.92 26.04	6.22 6.31	91.1 92.8	0.7	30.80 31.13	8.00 8.07	
						9.300	26.04	6.28	92.8	0.1	31.13	8.07	1.0
						1.000	26.21	7.38	108.0	1.0	29.82	7.91	1.2
						1.000	26.20	6.89	100.9	1.3	29.85	7.92	1.2
2013/6/18 8:19	C3	ME	832222	808890	14.6	7.300	26.07	6.72	98.4	0.0	30.33	7.98	0.9
2015/0/18 8.19	C	IVIL	032222	000090	14.0	7.300	26.06	6.61	96.8	0.1	30.36	7.97	0.9
						13.600	26.04	6.55	96.1	0.5	30.69	8.04	1.2
						13.600	26.12	6.60	96.9	0.8	30.61	8.03	
						1.200	26.38	6.78	99.9	0.0	30.53	7.72	
2013/6/18 14:01	W1	MF	832970	807841	2.4	1.200	26.32	6.72	98.9	0.0	30.56	7.71	0.8
						1.000	26.76	7.22	107.0	0.8	30.43	7.73	1.0
						1.000	26.37	6.90	101.7	0.7	30.63	7.76	1.0
2013/6/18 13:46	W2	MF	832669	808001	12.7	6.350	26.25	7.29	107.8	0.1	31.39	7.77	0.7
2015/0/10 15.40	** 2	1411	052007	000001	12.7	6.350	26.28	7.00	103.5	0.3	31.40	7.78	0.7
						11.700	26.13	6.60	97.4	1.0	31.63	7.78	2.6
	-					11.700 1.000	26.12 26.63	6.15 6.41	90.7 95.2	1.3 0.0	31.62 30.96	7.76 7.66	
						1.000	26.65	6.51	95.2	0.0	30.96	7.66	1.2
						6.150	26.52	6.69	99.3	0.5	31.25	7.66	4.0
2013/6/18 13:34	W3	MF	832036	807878	12.3	6.150	26.44	6.60	97.7	0.8	31.25	7.66	1.0
						11.300	26.11	6.33	93.5	1.6	31.74	7.67	0.8
						11.300	26.16	6.02	89.0	1.3	31.71	7.69	0.0
						1.000	26.89	6.69	99.2	0.0	30.31	7.83	0.9
	1					1.000 7.700	26.87 26.21	6.45 6.76	95.8 99.7	0.1	30.31 31.27	7.84 7.89	-
2013/6/18 14:16	C1	MF	833723	808154	15.4	7.700	26.21	6.48	99.7	0.3	31.27	7.89	1.2
						14.400	26.23	6.73	99.4	0.9	31.45	7.93	1.0
						14.400	26.26	6.15	90.8	0.7	31.37	7.90	1.2
						1.000	27.22	5.92	88.9	0.4	31.27	7.37	1.2
						1.000	27.20	6.27	94.0	0.5	31.29	7.36	1.2
2013/6/18 13:23	C2	MF	831442	807739	10.2	5.100	25.96	6.42	94.5	0.0	31.67	7.24	0.9
						5.100 9.200	25.88 26.12	6.15 5.78	90.5 85.6	0.2	31.79 32.05	7.24 7.29	
	1					9.200	26.12	5.78	85.6	0.8	32.03	7.29	1.2
						1.000	26.89	6.58	97.7	0.9	30.31	7.82	
						1.000	26.90	6.66	98.9	0.3	30.32	7.82	2.0
2013/6/18 14:36	C3	MF	832208	808887	15.8	7.900	26.14	6.64	97.8	0.7	31.31	7.91	1.6
2013/0/16 14.30	CS	IVIF	652208	000007	13.0	7.900	26.13	6.32	93.1	0.8	31.28	7.91	1.0
						14.800	26.24	5.95	87.9	1.1	31.35	7.91	1.7
						14.800	26.23	6.13	90.5	1.3	31.36	7.91	

### **Construction of Sewage Treatment Works** at Yung Shue Wan and Sok Kwu Wan



### Sok Kwu Wan

20-Jun-13 Date

Deta (Time	Territor	T: 1. *	Co-oro	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS
Date / Time	Location	Tide*	East	North	m	m	ç	mg/L	%	NTU	ppt	unit	mg/l
2013/6/20 9:58	W1	ME	832971	807738	2.4	1.200	27.58	8.14	121.6	0.0	29.51	8.15	3.9
						1.200	27.58 27.60	8.08 7.74	120.7 115.8	0.3	29.50 29.43	8.13 8.13	
						1.000	27.60	7.74	115.8	0.4	29.43	8.13	2.3
						6.300	26.84	6.70	99.7	0.5	30.76	8.05	
2013/6/20 10:09	W2	ME	832652	807976	12.6	6.300	26.81	6.38	94.8	0.9	30.72	8.05	2.1
						11.600	26.47	5.78	85.5	4.8	31.23	8.06	
						11.600	26.50	5.71	84.6	4.9	31.22	8.03	2.3
						1.000	27.42	7.87	117.3	0.6	29.49	8.14	1.5
						1.000	27.49	7.72	115.2	0.7	29.40	8.14	1.5
2013/6/20 10:20	W3	ME	832054	807886	12.2	6.100	27.38	7.61	113.8	0.1	30.27	8.12	1.5
2013/0/20 10.20	VV 5	IVIL	652054	807880	12.2	6.100	27.37	7.33	109.6	0.2	30.27	8.12	1.5
						11.200	26.45	5.80	85.9	5.5	31.33	8.05	2.1
						11.200	26.29	5.34	79.0	6.0	31.48	8.04	2.1
						1.000	27.37	7.21	107.3	0.6	29.34	8.06	1.9
						1.000	27.34	7.12	105.8	0.3	29.34	8.06	
2013/6/20 9:40	C1	ME	833724	808185	14.4	7.200	27.54	7.10	106.2 107.6	0.0	29.75	8.08	1.9
						7.200 13.400	27.49 26.63	7.21 7.00	107.6	0.0	29.67 30.59	8.08 7.98	
						13.400	26.71	6.30	93.3	0.4	30.59	7.98	2.4
						1.000	28.13	7.28	110.2	0.2	30.04	8.13	
						1.000	27.91	7.57	110.2	0.0	30.18	8.13	1.2
						5.050	26.93	7.56	114.2	1.2	30.61	8.07	
2013/6/20 10:31	C2	ME	831453	807729	10.1	5.050	26.68	6.86	101.7	1.2	30.71	8.04	1.1
						9.100	26.36	5.86	86.8	5.1	31.44	8.07	
						9.100	26.40	5.65	83.7	5.3	31.41	8.07	1.4
						1.000	27.52	7.78	115.9	0.2	29.22	8.03	
						1.000	27.44	7.98	118.9	0.5	29.26	8.03	1.4
2012/6/20 0 22	<b>C12</b>		000014	000070	147	7.350	27.75	7.90	118.8	0.0	29.94	8.09	1.5
2013/6/20 9:22	C3	ME	832214	808878	14.7	7.350	27.71	7.80	117.2	0.1	29.95	8.07	1.5
						13.700	26.57	6.58	97.4	1.1	30.63	7.96	1.5
						13.700	26.54	6.38	94.3	0.7	30.64	7.96	1.5
2013/6/20 16:38	W1	MF	832954	807740	2.7	1.350	27.32	7.57	7.6	0.9	29.12	8.12	2.8
2010/0/20 10:00			052751	007710	217	1.350	27.14	7.91	7.9	1.1	29.21	8.12	2.0
						1.000	27.08	8.82	130.4	0.0	29.14	8.09	2.8
						1.000	27.05	8.59	127.1	0.2	29.17	8.10	
2013/6/20 16:22	W2	MF	832661	807993	12.1	6.050 6.050	26.75 26.80	7.87 7.36	116.5 109.0	0.3	30.07 30.08	7.99 8.00	2.1
						11.100	26.80					8.00	
											21.10	7.00	
								6.70	99.4 93.4	1.8	31.19	7.99	2.2
						11.100	26.56	6.30	93.4	2.0	31.23	7.99	
						11.100 1.000	26.56 28.52	6.30 6.66	93.4 101.0	2.0 0.2	31.23 29.39	7.99 8.19	2.2 2.4
						11.100 1.000 1.000	26.56 28.52 28.55	6.30 6.66 8.20	93.4 101.0 124.6	2.0 0.2 0.3	31.23 29.39 29.36	7.99 8.19 8.21	2.4
2013/6/20 16:10	W3	MF	832052	807890	11.8	11.100 1.000	26.56 28.52	6.30 6.66	93.4 101.0	2.0 0.2	31.23 29.39	7.99 8.19	
2013/6/20 16:10	W3	MF	832052	807890	11.8	11.100 1.000 1.000 5.900	26.56 28.52 28.55 27.18	6.30 6.66 8.20 8.08	93.4 101.0 124.6 120.5	2.0 0.2 0.3 1.0	31.23 29.39 29.36 30.19	7.99 8.19 8.21 8.01	2.4 3.0
2013/6/20 16:10	W3	MF	832052	807890	11.8	11.100 1.000 1.000 5.900 5.900	26.56 28.52 28.55 27.18 27.14	6.30 6.66 8.20 8.08 7.68	93.4 101.0 124.6 120.5 114.3	2.0 0.2 0.3 1.0 1.1	31.23 29.39 29.36 30.19 30.06	7.99 8.19 8.21 8.01 8.00	2.4
2013/6/20 16:10	W3	MF	832052	807890	11.8	11.100 1.000 5.900 5.900 10.800	26.56 28.52 28.55 27.18 27.14 26.58	6.30 6.66 8.20 8.08 7.68 6.90	93.4 101.0 124.6 120.5 114.3 102.6	2.0 0.2 0.3 1.0 1.1 7.0	31.23 29.39 29.36 30.19 30.06 31.27	7.99 8.19 8.21 8.01 8.00 7.94	2.4 3.0 2.7
2013/6/20 16:10	W3	MF	832052	807890	11.8	11.100 1.000 5.900 5.900 10.800 10.800 1.000 1.000	26.56 28.52 28.55 27.18 27.14 26.58 26.51 26.99 26.96	6.30 6.66 8.20 8.08 7.68 6.90 6.25 8.06 8.52	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4	2.0 0.2 0.3 1.0 1.1 7.0 7.2 0.0 0.0	31.23 29.39 29.36 30.19 30.06 31.27 31.41 29.95 29.98	7.99 8.19 8.21 8.01 7.94 7.94 8.08 8.07	2.4 3.0
						11.100 1.000 5.900 5.900 10.800 1.000 1.000 6.800	26.56 28.52 28.55 27.18 27.14 26.58 26.51 26.99 26.96 26.71	6.30 6.66 8.20 8.08 7.68 6.90 6.25 8.06 8.52 6.89	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2	2.0 0.2 0.3 1.0 1.1 7.0 7.2 0.0 0.0 1.3	31.23 29.39 29.36 30.19 30.06 31.27 31.41 29.95 29.98 30.80	7.99 8.19 8.21 8.00 7.94 7.94 8.08 8.07 7.99	2.4 3.0 2.7 2.8
2013/6/20 16:10 2013/6/20 16:45	W3 C1	MF MF	832052 833718	807890 808186	11.8	11.100 1.000 5.900 5.900 10.800 1.000 1.000 6.800 6.800	26.56 28.52 28.55 27.18 27.14 26.58 26.51 26.99 26.96 26.71 26.72	6.30 6.66 8.20 8.08 7.68 6.90 6.25 8.06 8.52 6.89 6.57	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2 97.4	2.0 0.2 0.3 1.0 1.1 7.0 7.2 0.0 0.0 1.3 1.5	31.23 29.39 29.36 30.19 30.06 31.27 31.41 29.95 29.98 30.80 30.75	7.99 8.19 8.21 8.00 7.94 7.94 8.08 8.07 7.99 7.99	2.4 3.0 2.7
						11.100 1.000 5.900 5.900 10.800 1.000 1.000 6.800 6.800 12.600	26.56 28.52 28.55 27.18 27.14 26.58 26.51 26.99 26.96 26.71 26.92 26.72 26.54	6.30 6.66 8.20 8.08 7.68 6.90 6.25 8.06 8.52 6.89 6.57 6.10	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2 97.4 90.5	2.0 0.2 0.3 1.0 1.1 7.0 7.2 0.0 0.0 1.3 1.5 0.7	31.23 29.39 29.36 30.19 30.06 31.27 31.41 29.95 29.98 30.80 30.75 31.07	7.99 8.19 8.21 8.00 7.94 7.94 8.08 8.07 7.99 7.99 7.99 7.99	2.4 3.0 2.7 2.8 2.7
						11.100 1.000 5.900 5.900 10.800 1.000 1.000 6.800 6.800 12.600 12.600	26.56 28.52 28.55 27.18 27.14 26.58 26.51 26.99 26.99 26.96 26.71 26.72 26.54 26.50	6.30 6.66 8.20 8.08 7.68 6.90 6.25 8.06 8.52 6.89 6.57 6.10 5.98	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2 97.4 90.5 88.6	2.0 0.2 0.3 1.0 1.1 7.0 7.2 0.0 0.0 1.3 1.5 0.7 0.8	31.23 29.39 29.36 30.19 30.06 31.27 31.41 29.95 29.98 30.80 30.75 31.07 31.10	7.99 8.19 8.21 8.00 7.94 7.94 8.08 8.07 7.99 7.99 7.99 7.97	2.4 3.0 2.7 2.8
						11.100 1.000 1.000 5.900 5.900 10.800 1.000 1.000 6.800 6.800 12.600 1.2.600 1.000	26.56 28.52 28.55 27.18 26.51 26.59 26.51 26.99 26.96 26.71 26.72 26.54 26.54 26.50 28.05	6.30 6.66 8.20 8.08 7.68 6.90 6.25 8.06 8.52 6.89 6.57 6.10 5.98 8.54	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2 97.4 90.5 88.6 128.7	$\begin{array}{c} 2.0 \\ 0.2 \\ 0.3 \\ 1.0 \\ 1.1 \\ 7.0 \\ 7.2 \\ 0.0 \\ 0.0 \\ 1.3 \\ 1.5 \\ 0.7 \\ 0.8 \\ 0.6 \\ \end{array}$	31.23 29.39 29.36 30.19 30.06 31.27 31.41 29.95 29.98 30.80 30.75 31.07 31.10 29.55	7.99 8.19 8.21 8.01 7.94 7.94 8.08 8.07 7.99 7.99 7.99 7.97 7.97 8.17	2.4 3.0 2.7 2.8 2.7
						11.100 1.000 1.000 5.900 5.900 10.800 1.000 6.800 6.800 12.600 1.000 1.000	26.56 28.52 28.55 27.18 27.14 26.58 26.51 26.99 26.96 26.71 26.72 26.54 26.54 26.54 26.50 28.05 27.86	6.30 6.66 8.20 8.08 7.68 6.90 6.25 8.06 8.52 6.89 6.57 6.10 5.98 8.54 8.94	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2 97.4 90.5 88.6 128.7 134.4	2.0 0.2 0.3 1.0 1.1 7.0 7.2 0.0 0.0 1.3 1.5 0.7 0.8 0.6 0.4	31.23           29.39           29.36           30.19           30.06           31.27           31.41           29.95           29.98           30.80           30.75           31.07           31.10           29.55           29.64	7.99 8.19 8.21 8.01 7.94 7.94 8.08 8.07 7.99 7.99 7.99 7.99 7.97 8.17 8.14	2.4 3.0 2.7 2.8 2.7 2.5
						11.100 1.000 5.900 5.900 10.800 10.800 1.000 6.800 6.800 12.600 12.600 1.000 1.000 4.850	26.56 28.52 28.55 27.18 27.14 26.58 26.51 26.99 26.96 26.71 26.72 26.54 26.50 28.05 27.86 27.85	6.30 6.66 8.20 8.08 7.68 6.90 6.25 8.06 8.52 6.89 6.57 6.10 5.98 8.54 8.94 8.94	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2 97.4 90.5 88.6 128.7 134.4 135.0	$\begin{array}{c} 2.0 \\ 0.2 \\ 0.3 \\ 1.0 \\ 1.1 \\ 7.0 \\ 7.2 \\ 0.0 \\ 0.0 \\ 1.3 \\ 1.5 \\ 0.7 \\ 0.8 \\ 0.6 \\ 0.4 \\ 1.4 \end{array}$	31.23 29.39 29.36 30.19 30.06 31.27 31.41 29.95 29.98 30.80 30.75 31.07 31.07 31.10 29.55 29.64 30.34	7.99 8.19 8.21 8.01 8.00 7.94 7.94 8.08 8.07 7.99 7.99 7.99 7.97 7.97 8.17 8.14 8.05	2.4 3.0 2.7 2.8 2.7 2.5
2013/6/20 16:45	C1	MF	833718	808186	13.6	11.100 1.000 5.900 5.900 10.800 10.800 1.000 6.800 6.800 12.600 12.600 1.000 4.850 4.850	26.56 28.52 28.55 27.18 27.14 26.58 26.51 26.99 26.96 26.71 26.72 26.54 26.50 28.05 27.86 27.85 27.94	6.30 6.66 8.20 8.08 7.68 6.90 6.25 8.06 8.52 6.89 6.57 6.10 5.98 8.54 8.54 8.94 8.94 8.79	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2 97.4 90.5 88.6 128.7 134.4 135.0 132.8	$\begin{array}{c} 2.0 \\ 0.2 \\ 0.3 \\ 1.0 \\ 1.1 \\ 7.0 \\ 7.2 \\ 0.0 \\ 0.0 \\ 1.3 \\ 1.5 \\ 0.7 \\ 0.8 \\ 0.6 \\ 0.4 \\ 1.4 \\ 1.6 \end{array}$	31.23 29.39 29.36 30.19 30.06 31.27 31.41 29.95 29.98 30.80 30.75 31.07 31.10 29.55 29.64 30.34 30.28	7.99 8.19 8.21 8.00 7.94 7.94 8.08 8.07 7.99 7.99 7.99 7.97 7.97 8.17 8.14 8.05 8.05	2.4 3.0 2.7 2.8 2.7 2.5 2.7 2.5
2013/6/20 16:45	C1	MF	833718	808186	13.6	11.100 1.000 5.900 5.900 10.800 10.800 1.000 6.800 6.800 12.600 12.600 12.600 1.000 4.850 4.850 8.700	26.56 28.52 28.55 27.18 27.14 26.58 26.51 26.99 26.96 26.71 26.72 26.54 26.50 28.05 27.86 27.85 27.94 27.36	6.30           6.66           8.20           8.08           7.68           6.90           6.25           8.06           8.52           6.89           6.57           6.10           5.98           8.54           8.94           8.79           6.38	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2 97.4 90.5 88.6 128.7 134.4 135.0 132.8 95.4	$\begin{array}{c} 2.0 \\ 0.2 \\ 0.3 \\ 1.0 \\ 1.1 \\ 7.0 \\ 7.2 \\ 0.0 \\ 0.0 \\ 1.3 \\ 1.5 \\ 0.7 \\ 0.8 \\ 0.6 \\ 0.4 \\ 1.4 \\ 1.6 \\ 3.3 \\ \end{array}$	31.23         29.39         29.36         30.19         30.06         31.27         31.41         29.95         29.98         30.80         30.75         31.07         31.10         29.55         29.64         30.34         30.28         30.46	7.99 8.19 8.21 8.00 7.94 7.94 8.08 8.07 7.99 7.99 7.99 7.97 7.97 8.17 8.14 8.05 8.05 7.89	2.4 3.0 2.7 2.8 2.7 2.5 2.7 2.5
2013/6/20 16:45	C1	MF	833718	808186	13.6	11.100 1.000 5.900 5.900 10.800 10.800 1.000 6.800 12.600 12.600 12.600 12.600 12.600 12.600 1.000 4.850 4.850 8.700 8.700	26.56 28.52 28.55 27.18 27.14 26.58 26.51 26.99 26.96 26.71 26.72 26.54 26.50 28.05 27.86 27.86 27.94 27.36 27.34	6.30           6.66           8.20           8.08           7.68           6.90           6.25           8.06           8.52           6.89           6.57           6.10           5.98           8.54           8.94           8.94           8.79           6.38           6.50	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2 97.4 90.5 88.6 128.7 134.4 135.0 132.8 95.4 97.4	$\begin{array}{c} 2.0 \\ 0.2 \\ 0.3 \\ 1.0 \\ 1.1 \\ 7.0 \\ 7.2 \\ 0.0 \\ 0.0 \\ 1.3 \\ 1.5 \\ 0.7 \\ 0.8 \\ 0.6 \\ 0.4 \\ 1.4 \\ 1.6 \\ 3.3 \\ 3.1 \\ \end{array}$	31.23 29.39 29.36 30.19 30.06 31.27 31.41 29.95 29.98 30.80 30.75 31.07 31.10 29.55 29.64 30.28 30.46 30.45	7.99 8.19 8.21 8.01 7.94 7.94 8.08 8.07 7.99 7.99 7.97 7.97 7.97 8.17 8.14 8.05 8.05 7.89 7.90	2.4 3.0 2.7 2.8 2.7 2.5 2.7 2.5 2.7 3.1
2013/6/20 16:45	C1	MF	833718	808186	13.6	11.100 1.000 1.000 5.900 5.900 10.800 1.000 1.000 1.000 1.000 1.2.600 1.000 1.000 4.850 4.850 8.700 8.700 1.000	26.56 28.52 28.55 27.18 26.51 26.99 26.96 26.71 26.72 26.54 26.50 28.05 27.86 27.85 27.94 27.36 27.34 27.07	6.30           6.66           8.20           8.08           7.68           6.90           6.25           8.06           8.52           6.89           6.57           6.10           5.98           8.54           8.94           8.79           6.38           6.50           6.74	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2 97.4 90.5 88.6 128.7 134.4 135.0 132.8 95.4 97.4 100.2	$\begin{array}{c} 2.0 \\ 0.2 \\ 0.3 \\ 1.0 \\ 1.1 \\ 7.0 \\ 7.2 \\ 0.0 \\ 0.0 \\ 1.3 \\ 1.5 \\ 0.7 \\ 0.8 \\ 0.6 \\ 0.4 \\ 1.4 \\ 1.6 \\ 3.3 \\ 3.1 \\ 0.4 \end{array}$	31.23 29.39 29.36 30.19 30.06 31.27 31.41 29.95 29.98 30.80 30.75 31.07 31.10 29.55 29.64 30.34 30.28 30.46 30.45 29.94	7.99 8.19 8.21 8.01 7.94 7.94 8.08 8.07 7.99 7.99 7.97 7.97 8.17 8.14 8.05 8.05 7.89 7.90 8.05 7.90 8.07	2.4 3.0 2.7 2.8 2.7 2.5 2.7 2.5 2.7 3.1
2013/6/20 16:45 2013/6/20 15:56	C1 C2	MF	833718 831471	808186	13.6 9.7	11.100 1.000 1.000 5.900 5.900 10.800 1.000 1.000 6.800 12.600 12.600 1.000 4.850 4.850 8.700 8.700 1.000 1.000	26.56 28.52 28.55 27.18 27.14 26.58 26.51 26.99 26.96 26.71 26.72 26.54 26.54 26.50 28.05 27.86 27.85 27.94 27.36 27.34 27.34 27.07 27.06	6.30           6.66           8.20           8.08           7.68           6.90           6.25           8.06           8.52           6.89           6.57           6.10           5.98           8.54           8.94           8.79           6.38           6.50           6.74	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2 97.4 90.5 88.6 128.7 134.4 135.0 132.8 95.4 97.4 100.2 101.9	$\begin{array}{c} 2.0 \\ 0.2 \\ 0.3 \\ 1.0 \\ 1.1 \\ 7.0 \\ 7.2 \\ 0.0 \\ 0.0 \\ 1.3 \\ 1.5 \\ 0.7 \\ 0.8 \\ 0.6 \\ 0.4 \\ 1.4 \\ 1.6 \\ 3.3 \\ 3.1 \\ 0.4 \\ 0.6 \\ \end{array}$	31.23         29.39         29.36         30.19         30.06         31.27         31.41         29.95         29.98         30.80         30.75         31.07         31.10         29.55         29.64         30.34         30.28         30.46         30.45         29.94	7.99 8.19 8.21 8.01 7.94 7.94 8.08 8.07 7.99 7.99 7.99 7.97 7.97 8.17 8.14 8.05 7.89 7.90 8.07 8.07 8.07	2.4 3.0 2.7 2.8 2.7 2.5 2.7 3.1 2.6 2.4
2013/6/20 16:45	C1	MF	833718	808186	13.6	11.100 1.000 1.000 5.900 5.900 10.800 1.000 1.000 6.800 6.800 12.600 12.600 1.000 4.850 4.850 4.850 8.700 8.700 1.000	26.56 28.52 28.55 27.18 27.14 26.58 26.51 26.99 26.96 26.71 26.72 26.54 26.54 26.54 26.54 27.85 27.86 27.85 27.86 27.85 27.94 27.36 27.34 27.07 27.06 26.67	6.30           6.66           8.20           8.08           7.68           6.90           6.25           8.06           8.52           6.89           6.57           6.10           5.98           8.54           8.94           8.79           6.38           6.50           6.74           6.86           6.41	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2 97.4 90.5 88.6 128.7 134.4 135.0 132.8 95.4 97.4 100.2 101.9 95.0	$\begin{array}{c} 2.0 \\ 0.2 \\ 0.3 \\ 1.0 \\ 1.1 \\ 7.0 \\ 7.2 \\ 0.0 \\ 0.0 \\ 1.3 \\ 1.5 \\ 0.7 \\ 0.8 \\ 0.6 \\ 0.4 \\ 1.4 \\ 1.6 \\ 3.3 \\ 3.1 \\ 0.4 \\ 0.6 \\ 0.2 \\ \end{array}$	31.23 29.39 29.36 30.19 30.06 31.27 31.41 29.95 29.98 30.80 30.75 31.07 31.07 31.10 29.55 29.64 30.34 30.28 30.46 30.45 29.94 29.94 30.82	7.99 8.19 8.21 8.01 7.94 7.94 8.08 8.07 7.99 7.99 7.99 7.97 7.97 8.17 8.14 8.05 8.05 7.89 7.90 8.07 8.07 8.07 8.07 8.05 7.90 8.07 8.05 7.90 8.05 7.90 8.07 8.05 7.90 8.05 7.90 8.07 8.05 8.05 7.90 8.07 8.05 8.05 7.90 8.07 8.07 8.07 8.07 8.07 8.07 8.07 7.99 8.17 8.17 8.14 8.05 8.05 7.90 8.07 7.90 8.07 7.99 8.17 8.14 8.05 8.05 7.90 8.07 7.90 8.07 8.07 8.07 7.99 8.17 8.14 8.05 8.05 7.90 8.07 7.90 8.07 7.90 8.05 7.90 7.90 8.07 7.90 8.05 8.05 7.89 7.90 8.07 8.07 8.07 8.07 8.07 8.07 8.07 8.07 8.07 8.07 8.07 8.07 8.07 8.06 8.05 8.07 8.06 8.06 8.06 8.06	2.4 3.0 2.7 2.8 2.7 2.5 2.7 3.1 2.6
2013/6/20 16:45 2013/6/20 15:56	C1 C2	MF	833718 831471	808186	13.6 9.7	11.100 1.000 1.000 5.900 5.900 10.800 1.000 1.000 6.800 12.600 12.600 1.000 4.850 4.850 8.700 8.700 1.000 1.000	26.56 28.52 28.55 27.18 27.14 26.58 26.51 26.99 26.96 26.71 26.72 26.54 26.54 26.50 28.05 27.86 27.85 27.94 27.36 27.34 27.34 27.07 27.06	6.30           6.66           8.20           8.08           7.68           6.90           6.25           8.06           8.52           6.89           6.57           6.10           5.98           8.54           8.94           8.79           6.38           6.50           6.74	93.4 101.0 124.6 120.5 114.3 102.6 92.8 119.7 126.4 102.2 97.4 90.5 88.6 128.7 134.4 135.0 132.8 95.4 97.4 100.2 101.9	$\begin{array}{c} 2.0 \\ 0.2 \\ 0.3 \\ 1.0 \\ 1.1 \\ 7.0 \\ 7.2 \\ 0.0 \\ 0.0 \\ 1.3 \\ 1.5 \\ 0.7 \\ 0.8 \\ 0.6 \\ 0.4 \\ 1.4 \\ 1.6 \\ 3.3 \\ 3.1 \\ 0.4 \\ 0.6 \\ \end{array}$	31.23         29.39         29.36         30.19         30.06         31.27         31.41         29.95         29.98         30.80         30.75         31.07         31.10         29.55         29.64         30.34         30.28         30.46         30.45         29.94	7.99 8.19 8.21 8.01 7.94 7.94 8.08 8.07 7.99 7.99 7.99 7.97 7.97 8.17 8.14 8.05 7.89 7.90 8.07 8.07 8.07	2.4 3.0 2.7 2.8 2.7 2.5 2.7 3.1 2.6 2.4

### **Construction of Sewage Treatment Works** at Yung Shue Wan and Sok Kwu Wan



### Sok Kwu Wan

22-Jun-13 Date

Data (Time	Terretien	m: 1. *	Co-or	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS
Date / Time	Location	Tide*	East	North	m	m	ĉ	mg/L	%	NTU	ppt	unit	mg/l
2013/6/22 11:24	W1	ME	832981	807719	2.8	1.447	27.40	8.89	132.8	2.4	29.84	8.22	2.4
						1.282	27.32	8.91	133.0	1.0	29.90	8.22	
						1.076 0.978	27.26	8.08 7.95	120.0 118.1	2.4	29.41 29.42	8.19 8.18	3.2
						5.946	27.28	7.50	111.6	1.5	29.42	8.19	
2013/6/22 11:35	W2	ME	832661	807969	11.8	5.977	27.28	7.55	112.4	1.1	29.68	8.19	3.2
						10.735	26.96	7.51	111.9	2.0	30.86	8.18	2.8
						10.790	27.05	7.50	111.8	1.5	30.55	8.18	2.0
						1.051	27.49	9.04	134.9	1.5	29.43	8.23	4.3
						1.022 6.825	27.53 27.41	9.03 8.94	134.9 133.5	1.1 2.0	29.41 29.68	8.24 8.21	
2013/6/22 11:51	W3	ME	832024	807909	11.3	6.910	27.41	8.79	135.5	1.5	29.08	8.21	3.0
						10.261	26.88	7.78	115.9	2.2	30.99	8.14	2.6
						10.279	26.85	7.79	116.0	2.4	31.02	8.15	3.6
						0.892	29.81	8.20	120.5	1.5	29.81	8.22	1.8
						1.035	29.83	8.22	122.8	1.0	29.83	8.23	1.0
2013/6/22 11:12	C1	ME	833682	808164	15	7.565	29.98	7.82	116.7	2.3	29.98	8.21	2.2
						7.620	30.00 30.08	7.82	116.7 117.5	1.3	30.00	8.22	
						14.032	30.08	7.88 7.86	117.3	3.3 3.4	30.08 30.02	8.21 8.20	1.9
						0.956	27.88	7.81	117.4	0.7	28.65	8.19	
						0.962	27.85	7.85	117.3	0.9	28.68	8.20	2.4
2012/6/22 12:06	C2	ME	831448	007764	10.4	6.277	26.98	7.81	116.1	0.6	30.58	8.07	2.5
2013/6/22 12:06	C2	ME	851448	807764	10.4	6.191	27.00	7.82	116.2	1.1	30.57	8.07	2.3
						9.461	26.77	6.25	92.9	3.8	30.86	8.04	2.6
						9.439	26.75	6.26	93.0	3.8	30.89	8.05	
						1.114	27.37 27.41	7.66 7.64	114.3 114.1	1.2	29.89 29.86	8.22 8.21	2.5
						1.063 7.715	27.41	7.64	114.1	2.0	29.80	8.20	
2013/6/22 10:54	C3	ME	832202	808838	14.2	7.967	27.26	7.51	112.0	1.4	30.04	8.19	2.3
						13.237	27.26	7.29	108.9	3.5	30.12	8.19	25
						13.029	27.26	7.31	109.1	3.8	30.13	8.19	2.5
						1.201	25.24	0.50	120.0	1.0	20.00	0.00	
2013/6/22 17:39	W1	MF	832960	807759	2.6	1.304 1.292	27.36	8.58 8.50	128.0	1.3 1.2	29.88 29.87	8.23 8.23	2.9
						0.958	27.37 27.26	7.50	126.9 111.5	1.2	29.87	8.23	
						0.900	27.23	7.51	111.5	1.0	29.40	8.19	2.5
2012///22 15 20			000.007	005050		5.642	27.28	7.68	114.3	2.2	29.68	8.19	
2013/6/22 17:28	W2	MF	832687	807972	11.3	5.528	27.30	7.58	113.0	2.6	29.67	8.20	2.4
						10.329	27.20	7.51	112.0	1.6	30.11	8.18	3.0
						10.393	27.14	7.41	110.5	2.0	30.25	8.17	5.0
						1.121	27.35	8.09	120.5	1.5	29.50	8.20	2.5
						0.901 5.572	27.33 27.34	8.11 8.09	120.7 120.5	2.6 3.0	29.52 29.58	8.19 8.20	
2013/6/22 17:16	W3	MF	832049	807877	11.7	5.613	27.34	8.09	120.3	3.0	29.58	8.20	3.1
						10.603	27.07	8.08	120.2	4.2	30.86	8.15	2.4
						10.808	26.98	8.10	120.9	4.2	30.95	8.16	3.4
						1.012	27.38	7.73	115.4	1.1	29.85	8.22	2.4
						1.012	27.38	7.73	115.4	1.1	29.85	8.22	2.1
2013/6/22 17:48	C1	MF	833683	808191	14.8	7.487	27.29	7.82	116.7	2.0	30.01	8.20	2.5
						7.410 13.900	27.30 27.25	7.84 7.61	116.9 113.5	2.1	30.01 30.10	8.21 8.21	
						13.818	27.33	7.58	113.2	2.3	30.04	8.20	2.0
						0.968	27.91	9.12	136.6	0.5	28.89	8.31	1.0
						0.931	27.87	9.33	139.7	0.7	28.91	8.32	1.9
2013/6/22 17:04	C2	MF	831487	807784	9.6	5.240	27.41	9.11	136.0	2.3	29.82	8.16	3.0
2010,0122 11.UT	02	1411	001107	001104	2.0	5.224	27.43	8.80	131.4	0.5	29.81	8.16	5.0
						8.357	26.93	7.72	115.0	3.7	30.84	8.13	2.7
	╉──┤					8.264 0.986	26.91 27.32	7.78 8.65	115.9 129.1	3.1 1.2	30.86 29.94	8.12 8.23	
						0.700	21.32						2.7
						1 077	27 34	7 86	17/4	I X	29.91	8.21	
2010///25 - 5 - 5	~					1.077 7.276	27.34 27.30	7.86 7.63	117.4 113.8	1.8 1.5	29.91 29.98	8.21 8.20	
2013/6/22 18:06	C3	MF	832224	808844	14.4	1.077 7.276 7.304	27.34 27.30 27.31	7.86 7.63 7.51	117.4 113.8 112.1	1.8 1.5 2.1	29.91 29.98 29.99	8.21 8.20 8.20	2.2
2013/6/22 18:06	C3	MF	832224	808844	14.4	7.276	27.30	7.63	113.8	1.5	29.98	8.20	2.2

### **Construction of Sewage Treatment Works** at Yung Shue Wan and Sok Kwu Wan



### Sok Kwu Wan

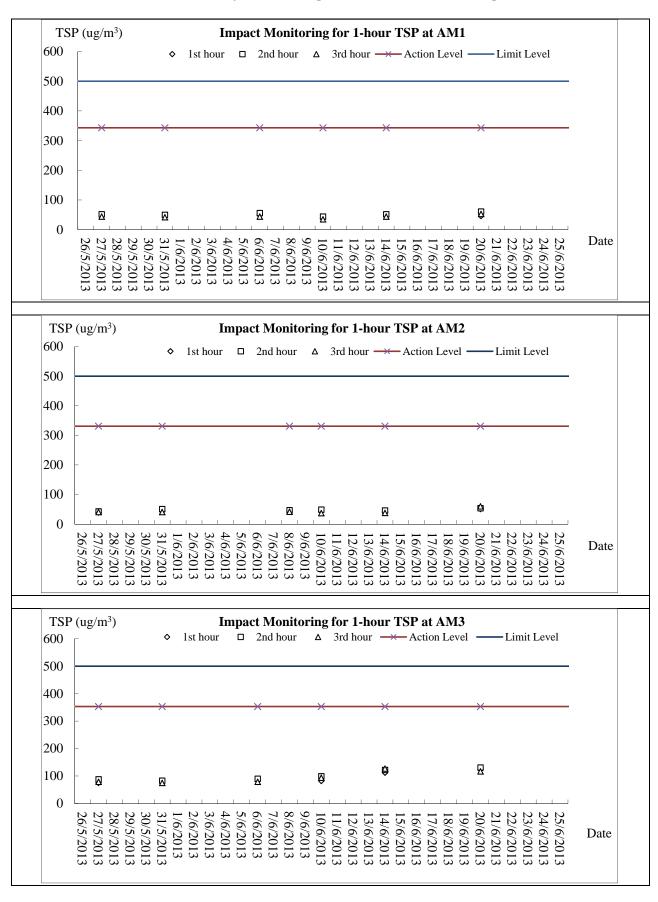
24-Jun-13 Date

Image         Image <t< th=""><th>Data (Mina</th><th>Territori</th><th>TT: 1. *</th><th>Co-or</th><th>linates</th><th>Water Depth</th><th>Sampling Depth</th><th>Temp</th><th>DO Conc</th><th>DO Saturation</th><th>Turbidity</th><th>Salinity</th><th>pH</th><th>SS</th></t<>	Data (Mina	Territori	TT: 1. *	Co-or	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS
000904 (1/2)         001         001         K Kobe         1013         213         133	Date / Time	Location	Tide*	East	North	m	m	ĉ	mg/L	%	NTU	ppt	unit	mg/l
101         101 <td>2013/6/24 12:35</td> <td>W1</td> <td>ME</td> <td>832964</td> <td>807753</td> <td>2.5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1.9</td>	2013/6/24 12:35	W1	ME	832964	807753	2.5								1.9
b)         b)<														
20136024         W2         ME         82963         80799         13.4         6678         72.22         7355         112.6         2.1         30.11         8.13         2.7           2013602412:11         W3         ME         82963         807847         72.00         76.35         112.6         2.41         30.11         8.13         29           2013602412:11         W3         ME         82004         807873         72.14         8.84         130.7         5.4         2.43         30.11         8.13         29           2013602412:11         W3         ME         80797         72.14         8.84         10.0         2.84         8.86         2.2         30.01         8.12         3.1           2013602412:45         C1         ME         82064         80797         72.0         72.0         10.01         8.12         7.2         10.07         8.03         10.0         3.03         8.15         2.1         3.03         8.15         2.1         3.03         8.15         2.1         3.03         8.16         2.2         3.00         8.11         2.1         3.00         8.11         2.1         3.00         8.11         2.1         3.00         8.11<														1.9
201360241224         647         572         755         112.5         2.44         938.8         8.11         2.17           201360241211         W3         ME         82040         60787         727         7.63         1140         4.1         30.1         8.13         2.9           201360241211         W3         ME         82040         60787         727         7.64         1140         4.1         30.1         8.13         2.9           2013602412141         W3         ME         82040         60787         72.8         8.86         120.2         2.0         30.01         8.12         3.1         1.99         30.01         8.12         3.1         1.99         30.01         8.12         3.1         1.99         30.01         8.12         2.1         1.0         1.0         8.00         1.0         8.00         1.0         8.00         1.0         8.00         1.0         8.00         1.0         8.00         1.0         8.00         1.0         8.00         1.0         8.12         2.1         1.0         8.00         1.0         8.12         2.1         1.0         8.12         1.0         8.12         1.0         1.0         8.12         1.0 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>														
10         10         10         10         10         30         3014         8.13         29           20136024 12:11         W3         M8         8.00         100         7.14         8.84         1007         3.44         2.82         3.01         8.13         2.0           20136024 12:11         W3         M8         8.009         2.0         3.001         8.12         3.1           20136024 12:14         W3         M8         8.009         2.0         3.001         8.12         3.00         8.12         3.0         8.12         3.0         8.12         3.0         8.12         3.0         8.12         3.0         8.12         3.0         8.12         3.0         8.12         3.0         8.12         3.0         8.12         3.0         8.12         3.0         8.12         3.0         8.12         3.0         8.12         3.0	2013/6/24 12:24	W2	ME	832663	807949	13.4								2.7
100         100         17.27         7.64         11.00         4.1         30.17         8.13         129           201362412:11         W3         ME         82904         807873         11.31         71.4         684         1302         3.4         28.8         8099         22           201362412:10         W3         ME         82040         807873         11.31         71.41         130.2         3.4         28.9         80.01         8.12         210           201362412:40         C1         ME         83368         88190         17.27         7.64         110.0         4.1         30.11         8.15         21           201362412:40         C1         ME         83368         88190         17.27         7.64         110.0         2.4         80.31         8.15         21           201362411:57         C2         ME         83149         88771         11.4         13.07         22.8         7.24         110.7         2.4         80.0         81.0         2.5           201362411:57         C2         ME         83149         87771         11.4         14.6         7.73         81.1         121.0         2.5         2.06         81.														
2013624         121         39.4         1095         27.13         9.41         19.29         2.4         2003         8.12         2.13           2013624         12.11         10.11 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2.9</td>														2.9
20136024         1211         1211         1211         1211         1211         1211         1211         1211         12100         1210         1210							1.131	27.14	8.84	130.7	3.4	28.81	8.09	2.2
20136024 12:11         W3         ME         80000         80/873         15.1         64.05         27.26         80.06         1202         20         3001         8.12         5.1           20136024 12:46         C1         ME         833665         898190         14.7         12.391         27.34         7.98         119.3         2.0         30.01         8.12         2.1           20136024 12:46         C1         ME         833665         898190         14.7         7.355         77.28         7.08         119.4         3.6         8.86         8.88         2.2           20136024 11:57         C2         ME         831469         89771         11.14         7.556         7.724         17.42         100.4         8.16         2.7           20136024 11:57         C2         ME         831469         89771         11.14         5697         7.73         8.12         118.8         12.2         1.7         2.936         8.11         2.1         2.1         8.10         2.5           20136024 13:59         C3         ME         85242         89893         15.1         1.14         7.37         113.8         3.0         8.12         1.6         3.0 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>1.095</td><td>27.13</td><td>9.41</td><td>139.2</td><td>3.4</td><td>28.92</td><td>8.09</td><td>2.2</td></t<>							1.095	27.13	9.41	139.2	3.4	28.92	8.09	2.2
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	2013/6/24 12:11	W3	ME	832040	807873	13.1	6.697		8.11		2.8		8.12	3.1
201360241246         C1         ME         833665         808190         14.7         1099         72.31         7.98         119.4         5.6         23.89         8.77         2.1           201360241246         C1         ME         833665         808190         14.7         7.353         72.28         7.02         10.07         2.5         33.00         8.15         2.2           201360241157         C2         ME         831669         80771         11.4         7.351         7.729         7.24         10.94         3.2         3.00         8.15         2.7           201360241157         C2         ME         831669         80771         11.4         7.30         8.35         120.0         1.4         2200         8.10         2.5           201360241157         C2         ME         83168         80771         1.14         7.373         11.8         12.0         2.2         11.8         2.2         2.0201.8         8.10         2.7           201360241359         C3         ME         83247         80877         1.7         1.7         1.7         1.8         5.0         3.001         8.12         1.6           20136624 8.29         W1	2015/0/24 12.11	***5	IVIL	052040	007075	15.1								5.1
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $														2.1
20136024 12:40         C1         MB         833685         808100         14.7         11.09         72.20         73.33         27.22         74.24         110.7         25.6         28.66         8.08         2.2           20136024 11:57         C2         MB         83364         77.29         77.34         100.4         53.5         30.06         8.15         2.7           20136024 11:57         C2         MB         831409         807771         11.44         11.68         77.37         8.11         121.0         2.90.1         8.10.0         2.5           20136024 11:57         C2         MB         83179         2.77         13.14         17.31         11.88         2.2         2.97.1         8.10.0         2.5           20136024 13:59         C3         MB         832729         7.87         11.13         13.8         3.0         2.80.1         8.07         2.6           20136024 8:29         W1         MF         832977         80749         2.2         10.21         7.73         11.8         3.1         2.81.2         8.07         2.6           20136624 8:29         W1         MF         832977         80749         2.2         10.21         7.7														2.11
2013/624         C1         ME         83568         808100         14.7         7.335         7.23         7.24         7.14         1107         2.5         30.07         8.13         2         2.2           313/0         72.39         7.24         10.7         20         30.07         8.13         2.7         30.07         8.13         2.7         30.07         8.13         2.7           2013/624         1157         C2         ME         81499         80771         11.4         7.336         8.55         120.9         1.4         2.61         8.10         2.5         30.07         8.11         3.0           2013/624         11.57         C2         ME         80771         11.4         7.37         8.55         120.9         1.1         1.0         2.5         201.7         8.10         2.7           2013/624         13.09         C3         ME         822.42         80893         1.51         1.168         7.72         2.6         3.00         8.12         4.6           40.07         2.2         0.214         1.73         113.8         3.0         2.604         8.07         2.6           2013/624         8.30         MF														2.3
20136/24 12:46         Cl         ME         83368         88190         1.4.7         7.336         7.22         17.2         10.1         8.10         2.7           3300         7.29         7.29         7.29         10.0         4.35         30.01         8.16         2.7           31306         7.20         7.84         10.08         3.5         30.06         8.15         2.7           20136/24 11:57         C2         ME         831469         80771         11.4         14.6         27.20         8.81         12.10         2.5         30.06         8.10         2.5           20136/24 13:09         C3         ME         83297         807749         2.4         10.01         2.72         7.8         11.8         3.1         2.01         2.0         7.8         1.10         2.6           20136/24 13:09         C3         ME         82292         80893         15.1         7.42         7.73         7.13         8.3         11.8         3.1         2.10         2.6           20136/24 8.29         W1         MF         832977         80749         2.2         10.01         7.73         13.8         3.1         2.927         3.0.01														
100         13707         27.29         7.29         7.29         7.20         8.10         2.5         3.00         8.16         2.17           20136/24 11:57         C2         ME         831469         80771         11.4         7.20         7.85         11.00         2.5         2.20         7.81         3.00         8.10         3.0           20136/24 13:09         C3         ME         83242         80889         10.11         7.71         11.38         3.01         2.81.2         8.00         8.12         2.7           20136/24 13:09         C3         ME         83297         807749         2.2         0.912         2.714         7.73         11.38         3.01         2.81.2         8.00         8.12         4.60           20136/24 8:29         W1         MF         83297         807749         2.2         1.021         2.730         8.81         10.19         5.3         30.71	2013/6/24 12:46	C1	ME	833685	808190	14.7								2.2
2013/6/24 11:57         C2         ME         831/49         807710         11.48         77.20         7.24         10.85         3.5         30.66         8.15         2.7           2013/6/24 11:57         C2         ME         831/49         807711         11.48         77.30         8.55         12.09         1.4         29.61         8.10         2.5           2013/6/24 13:59         C2         ME         831/49         807711         11.48         77.30         18.85         2.12         29.71         8.11         3.00           2013/6/24 13:59         C3         ME         832242         808893         15.1         77.37         113.8         3.10         22.1         2.7         2.4         20.01         8.12         4.6           2013/6/24 8:29         W1         MF         832977         80779         2.2         9.91         7.14         7.73         113.8         3.10         2.2.1         4.00         8.11         4.0           2013/6/24 8:29         W1         MF         832977         80779         2.2         9.91         7.73         113.8         3.10         1.2.1         4.00         8.11         1.9         5.1         4.6														
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $														2.7
2013/624 11:57         C2         ME         831/69         80771         11.16         27.30         8.55         12.09         1.4         29.61         8.10         2.5           2013/624 11:57         C2         ME         831/69         80771         11.4         11.4         11.00         1.7         29.16         8.11         3.0           2013/624 13:09         C3         ME         832242         80893         15.1         7.43         7.73         113.8         3.0         28.04         8.07         2.6           2013/624 13:09         C3         ME         832977         807749         2.2         0.91         27.14         7.73         113.8         3.0         28.04         8.07         2.6           2013/624 8:29         W1         MF         832977         807749         2.2         0.912         27.33         8.47         123.9         2.0         2.993         8.11         1.15           2013/624 8:39         W2         MF         832977         807749         2.2         0.912         2.733         8.47         123.9         2.0         2.993         8.11         1.5           2013/624 8:39         W2         MF         832077														
2013/6/24 11:57         C2         ME         831409         807711         11.4         5.697         72.37         8.11         112.0         2.5         29.71         8.10         3.0           2013/6/24 11:57         C2         ME         831409         80771         11.4         5.690         71.9         1130.7         2.4         29.75         8.10         2.7           2013/6/24 13:09         C3         ME         832242         80893         15.1         7.73         113.8         3.0         28.04         8.07         2.6           2013/6/24 8:29         W1         MF         832977         807749         2.2         0.912         27.13         7.73         113.8         3.1         2.8         4.00         8.12         4.6           2013/6/24 8:29         W1         MF         832977         807749         2.2         0.912         27.33         8.47         10.4         2.4         30.00         8.12         4.0           2013/6/24 8:29         W1         MF         832952         80808         12.9         6.510         12.7.9         118.1         1.2         2.9975         8.11         1.5           2013/6/24 8:39         W2         MF														2.5
$ \begin{array}{c} 20136024 13.09 \\ 20136024 13.09 \\ C3 \\ ME \\ \begin{array}{c} 82242 \\ 82242 \\ 82242 \\ 82242 \\ 82242 \\ 82849 \\ MF \\ \begin{array}{c} 82242 \\ 82242 \\ 82242 \\ 82849 \\ \end{array} \end{array} \begin{array}{c} 7.79 \\ 82242 \\ 82849 \\ MF \\ \begin{array}{c} 82242 \\ 82242 \\ 82849 \\ 82242 \\ 82849 \\ MF \\ \begin{array}{c} 82242 \\ 82242 \\ 82849 \\ 82242 \\ 82849 \\ MF \\ \begin{array}{c} 82242 \\ 82242 \\ 82849 \\ 8244 \\ 82242 \\ 82849 \\ MF \\ \begin{array}{c} 82242 \\ 82242 \\ 82849 \\ 8244 \\ 844 \\$	2012/6/24 11 57	<b>C</b> 22		001460	007771	11.4			8.11	121.0	2.5			2.0
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	2013/6/24 11:57	C2	ME	831469	807771	11.4	5.780	27.29	8.12	118.9		29.76	8.11	3.0
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $							10.213	27.29	7.98	118.8	2.2	29.75	8.12	27
2013/6/24 13:09         C3         ME         832242         808893         15.1         0.978         27.13         77.3         113.8         3.1         28.12         8.07         2.6           2013/6/24 8:29         W1         MF         832977         807749         2.2         0.912         27.33         8.47         123.9         2.0         29.93         8.12         1.6           2013/6/24 8:29         W1         MF         832977         807749         2.2         0.912         27.33         8.47         123.9         2.0         29.93         8.12         1.5           2013/6/24 8:39         W2         MF         832652         808008         12.9         1.010         27.30         8.31         1.22.7         2.4         29.95         8.11         1.5           2013/6/24 8:39         W2         MF         832652         808008         12.9         1.021         27.30         8.31         1.22.7         2.4         29.95         8.11         1.5           2013/6/24 8:39         W2         MF         832652         808008         12.9         17.32         7.92         11.96         1.0         29.97         8.11         1.5           2013/6/24 8							10.316	27.36	7.97	130.7	2.4	29.71	8.10	2.7
2013/6/24 13:09         C3         ME         8.32242         808893         11:1 $             \begin{bmatrix}             0.978 & 27.13 & 7.73 & 113.8 & 3.1 & 28.12 & 8.07 \\             7.491 & 7.21 & 7.03 & 104.7 & 2.8 & 30.03 & 8.12 \\             7.499 & 72.28 & 7.03 & 104.8 & 2.4 & 30.00 & 8.13 & 4.6            2013/6/24 8:29         W1         MF         832977 & 80779         2.2         0.912 & 27.33 & 8.47 & 123.9 & 2.0 & 29.93 & 8.12 & 1.5          1.0           2013/6/24 8:29         W1         MF         832977 & 80779         2.2         0.912 & 27.33 & 8.47 & 123.9 & 2.0 & 29.93 & 8.12 & 1.5          1.5           2013/6/24 8:39         W2         MF         832652 & 808008         1.2         1.00 & 27.32 & 8.21 & 12.7 & 1.0 & 29.95 & 8.11 & 1.5          1.9           2013/6/24 8:39         W2         MF         832652 & 808008         12.9         6.591 & 27.30 & 7.91 & 118.4 & 1.2 & 29.97 & 8.11 & 1.5          1.9           2013/6/24 8:39         W3         MF         832017 & 807883 & 12.6         6.591 & 27.37 & 7.97 & 119.0 & 1.4 & 29.39 & 8.12 & 1.0          1.069 & 27.37 & 7.97 & 119.0 & 1.4 & 29.97 & 8.11 & 1.5            2013/6/24 8:53         W3         MF         832017 & 807883 & 12.6 & 6.591 & 27.37 & 7.97 & 119.0 & 1.4 & 29.09 & 8.12 & 1.0          1.069 & 27.37 & 7.97 & 119.0 & 1.4 & 29.09 & 8.12 & 1.0            2013/6/24 8:53         W3         MF$														26
2013/6/24 13:09         C3         ME         83/24/2         8089/3         15.1         7.499         27.28         7.03         104.8         2.4         30.00         8.13         4.6           2013/6/24 8:29         W1         MF         83/297         807749         2.2         0.81         101.9         5.6         30.68         8.15         4.0           2013/6/24 8:29         W1         MF         83/297         807749         2.2         0.912         27.33         8.47         123.9         2.0         29.93         8.12         1.5           2013/6/24 8:39         W2         MF         832652         80808         12.9         6.501         27.30         8.31         122.7         2.4         29.95         8.12         1.9           2013/6/24 8:39         W2         MF         832652         80808         12.9         6.510         27.30         7.93         118.4         1.2         29.99         8.11         1.5           11926         27.37         7.93         118.4         1.2         29.99         8.11         1.4           2013/6/24 8:53         W3         MF         832017         80788         12.6         10.69         27.37														2.0
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	2013/6/24 13:09	C3	MF	832242	808893	15.1								46
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	2015/0/21 15:09	0.5	IVIL	052212	000075	10.1								
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $														4.0
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$							14.059	27.29	6.80	101.9	5.5	30.71	8.15	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$							0.012	27.22	8 17	122.0	2.0	20.03	Q 10	
2013/6/24 8:39         W2         MF         832652         80808         12.9         1.100         27.32         8.22         12.7         1.0         29.95         8.12         1.9           2013/6/24 8:39         W2         MF         832652         80808         12.9         6.510         27.32         7.91         118.1         1.2         29.96         8.11         1.5           2013/6/24 8:53         W3         MF         832017         807883         11.926         27.37         7.90         118.4         1.2         29.99         8.11         1.4           2013/6/24 8:53         W3         MF         832017         807883         12.6         1.069         27.37         7.97         119.0         1.4         29.93         8.12         1.0           2013/6/24 8:53         W3         MF         832017         807883         12.6         1.069         27.37         7.97         119.0         1.4         29.93         8.12         1.0           2013/6/24 8:53         W3         MF         833719         807883         12.6         12.42         7.71         115.5         0.4         30.37         8.14         1.4           2013/6/24 8:20         C1 </td <td>2013/6/24 8:29</td> <td>W1</td> <td>MF</td> <td>832977</td> <td>807749</td> <td>2.2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1.5</td>	2013/6/24 8:29	W1	MF	832977	807749	2.2								1.5
2013/6/24 8:39         W2         MF         832652         80808         12.9         0.930         27.31         8.02         119.6         1.0         29.96         8.11         1.9           2013/6/24 8:39         W2         MF         832652         80808         12.9         6.591         27.32         7.91         118.1         1.2         29.97         8.11         1.5           2013/6/24 8:33         W3         MF         832017         807883         11.90         1.4         29.99         8.11         1.4           2013/6/24 8:53         W3         MF         832017         807883         12.6         6.309         27.35         7.88         117.7         1.5         29.94         8.11         1.0           2013/6/24 8:53         W3         MF         832017         807883         12.6         6.309         27.35         7.88         117.7         1.5         29.94         8.11         1.0           2013/6/24 8:50         C1         MF         833719         80789         12.6         6.309         27.35         7.88         113.5         0.4         30.37         8.14         1.4           2013/6/24 8:20         C1         MF         833719 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>														
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$														1.9
2013/6/24 8:39         W2         MF         82/25/2         808/08         12.9         6.510         27.30         7.93         118.4         1.2         29.99         8.11         1.5           2013/6/24 8:39         W3         MF         83/2017         807883         11.926         27.33         8.30         124.3         0.3         30.46         8.14         1.4           2013/6/24 8:53         W3         MF         83/2017         807883         12.6         10/09         27.37         7.97         119.0         1.4         29.93         8.12         1.0           2013/6/24 8:53         W3         MF         83/2017         807883         12.6         10/09         27.37         7.97         119.0         1.4         29.93         8.12         1.0           2013/6/24 8:50         W3         MF         83/219         807883         12.6         10.69         27.37         7.97         115.5         0.1         30.08         8.14         1.4           2013/6/24 8:20         C1         MF         83/719         808194         14.9         14.9         2.00         137.3         0.8         29.73         8.10         1.0           2013/6/24 9:07 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>														
2013/6/24 8:53         W3         MF         832017         807883         11.508         27.43         7.95         119.2         0.6         30.37         8.14         1.4           2013/6/24 8:53         W3         MF         832017         807883         12.6         1.069         27.37         7.97         119.0         1.4         29.93         8.12         1.0           2013/6/24 8:53         W3         MF         832017         807883         12.6         1.069         27.35         7.71         115.5         0.8         30.01         8.12         1.0           2013/6/24 8:50         C1         MF         833719         807894         14.9         1.51         27.42         7.71         115.5         0.1         30.28         8.14         1.4           2013/6/24 8:20         C1         MF         833719         808194         14.9         14.97         7.788         11.30         0.04         30.37         8.14         1.4           2013/6/24 8:20         C1         MF         831449         80756         14.248         27.43         6.98         104.4         0.7         30.40         8.13         1.5           2013/6/24 9:07         C2         MF	2013/6/24 8:39	W2	MF	832652	808008	12.9								1.5
2013/6/24 8:53 $ W3 $ $ W3 $ $ W3 $ $ W3 $ $ W3 $ $ W7 $ $ W3 $ $ W3 $ $ W7 $ $ W3 $ $ W3 $ $ W7 $ $ W3 $ $ W3 $ $ W7 $ $ W3 $ $ W7 $ $ W3 $ $ W3 $ $ W7 $ $ W3 $ $ W7 $ $ W3 $ $ W7 $ $ W3 $ $ W7 $ $ W3 $ $ W7 $ $ W3 $ $ W7 $ $ W3 $ $ W7 $ $ W7 $ $ W3 $ $ W7 $ $ W3 $ $ W7 $ $ W3 $ $ W7 $ $ W7 $ $ W3 $ $ W7 $ $ W$							11.926	27.37	8.30	124.3	0.3	30.46	8.14	1.4
2013/6/24 8:53         W3         MF         832017         807883         12.6         0.959         27.35         7.88         117.7         1.5         29.94         8.11         1.0           2013/6/24 8:53         W3         MF         832017         807883         12.6         6.262         27.35         7.71         115.5         0.8         30.00         8.12         1.0           2013/6/24 8:20         C1         MF         83719         808194         14.9         7.71         115.5         0.4         30.37         8.14         1.4           2013/6/24 8:20         C1         MF         833719         808194         14.9         7.71         9.20         137.3         0.8         29.73         8.10         1.0           2013/6/24 8:20         C1         MF         833719         808194         14.9         7.78         7.74         17.3         0.8         29.83         8.11         1.3           2013/6/24 9:07         C2         MF         831449         807756         11.1         1.046         27.43         6.98         104.4         0.7         30.40         8.12         1.3           2013/6/24 9:07         C2         MF         831449							11.508	27.43	7.95	119.2	0.6	30.37	8.14	1.4
2013/6/24 8:53         W3         MF         832017         807883         12.6         0.959         27.35         7.88         117.7         1.5         29.94         8.11         11.7           2013/6/24 8:53         W3         MF         832017         807883         12.6         6.262         27.35         7.71         115.2         1.4         30.00         8.12         1.0           2013/6/24 8:50         C1         MF         833719         808194         14.9         11.751         27.42         7.71         115.5         0.4         30.01         8.12         1.0           2013/6/24 8:20         C1         MF         833719         808194         14.9         14.9         0.927         27.45         8.06         120.3         1.1         29.70         8.10         1.0           2013/6/24 8:20         C1         MF         833719         808194         14.9         14.248         27.33         6.98         104.4         0.7         30.40         8.11         1.3           2013/6/24 9:07         C2         MF         831449         80756         11.1         1.146         27.43         7.68         115.2         0.8         29.83         8.12         1.3 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1.069</td> <td>27.37</td> <td>7.97</td> <td>119.0</td> <td>1.4</td> <td>29.93</td> <td>8.12</td> <td>1.0</td>							1.069	27.37	7.97	119.0	1.4	29.93	8.12	1.0
$\begin{array}{c c c c c c c c c c c c c c c c c c c $							0.959		7.88		1.5		8.11	1.0
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	2013/6/24 8:53	W3	MF	832017	807883	12.6								1.0
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	2010/0/210000			052011	007000	12.0								
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$											1			1.4
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$														
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$														1.0
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$														
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2013/6/24 8:20	C1	MF	833719	808194	14.9			1					1.3
$\begin{array}{c c c c c c c c c c c c c c c c c c c $									1					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$														1.5
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$														1.0
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$							1.046	27.43	7.68		0.8	29.83	8.12	1.5
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2013/6/24 0.07	C	ME	831//0	807756	11.1			7.74		1.3	30.02	8.13	1.0
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2015/0/24 9.07	C2	IVIT	051449	807750	11.1								1.0
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$														22
2013/6/24 8:06         C3         MF         832208         808880         14.2         0.998         27.43         7.93         118.2         0.5         29.54         8.05         2.1           2013/6/24 8:06         C3         MF         832208         808880         14.2         5.139         27.36         7.52         112.2         2.5         29.72         8.08         2.1           12.883         27.39         7.37         110.2         1.0         30.21         8.12         2.2														2.2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$														2.1
2013/6/24 8:06         C.5         MF         852208         808880         14.2         4.965         27.35         7.93         118.2         1.2         29.71         8.08         2.1           12.883         27.39         7.37         110.2         1.0         30.21         8.12         2.2														
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2013/6/24 8:06	C3	MF	832208	808880	14.2								2.1
							12.883	27.39	7.37	110.2	0.2	30.21	8.12	2.2



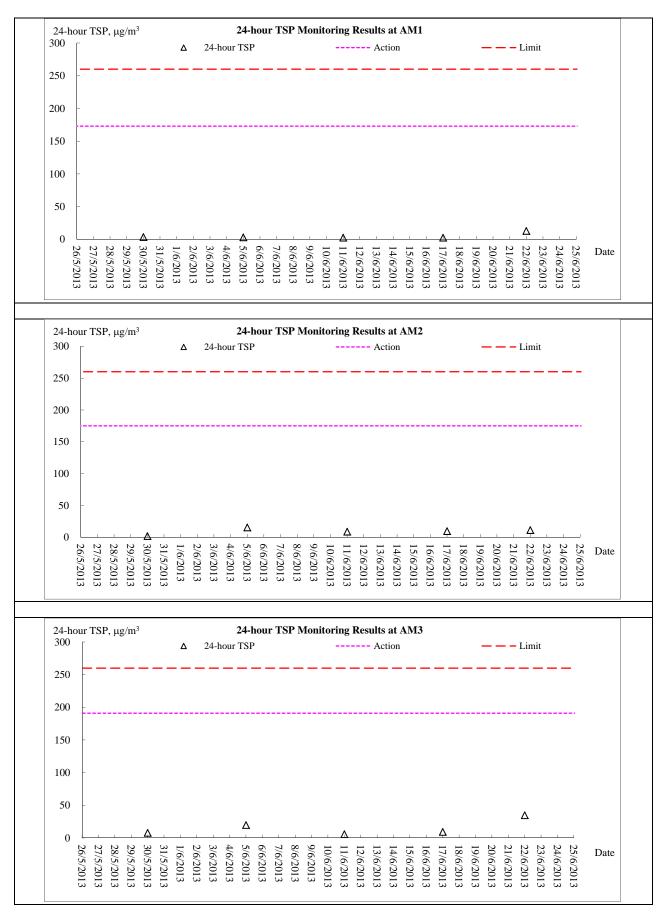
# Appendix H

## **Graphical Plots of Monitoring Results**



### Air Quality Monitoring – 1 hour TSP Monitoring

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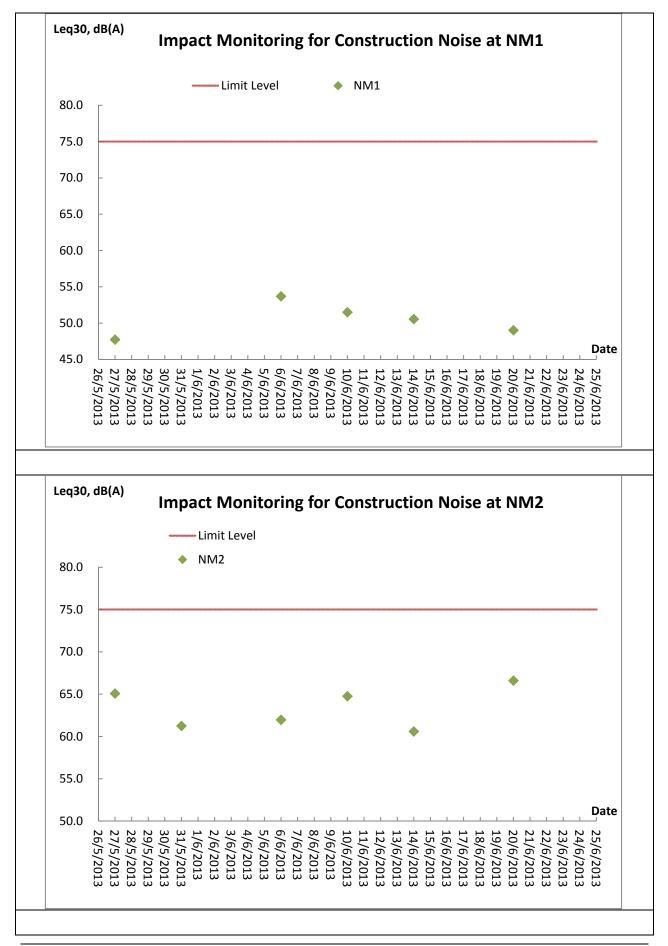


#### Air Quality Monitoring – 24 hour TSP Monitoring



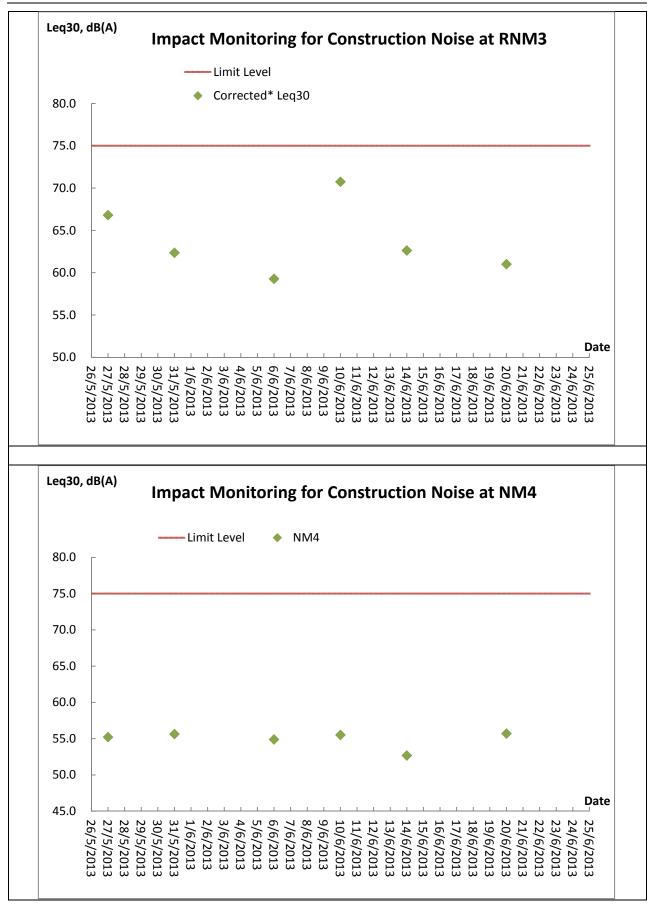


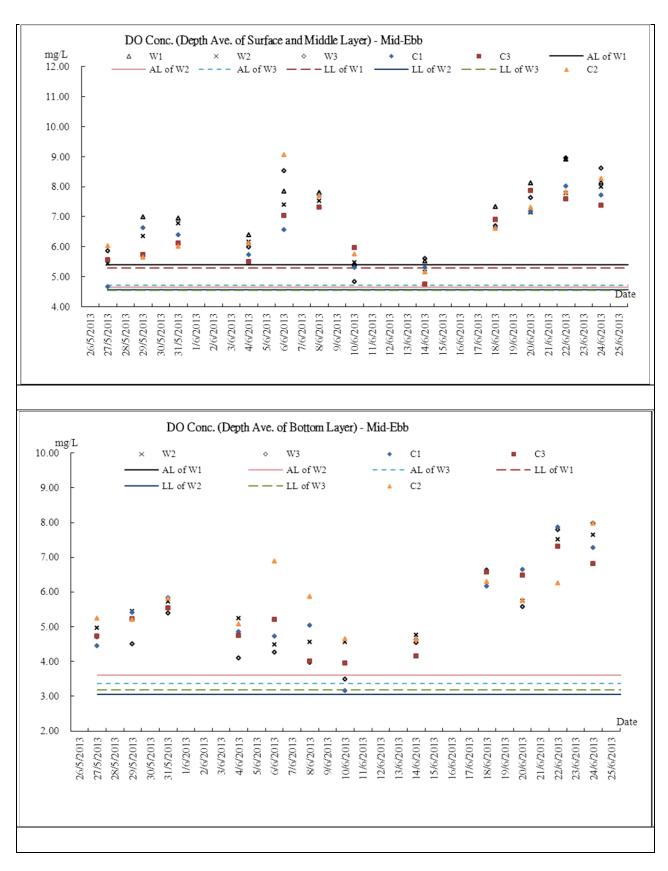
#### **Construction Noise Monitoring**



#### 

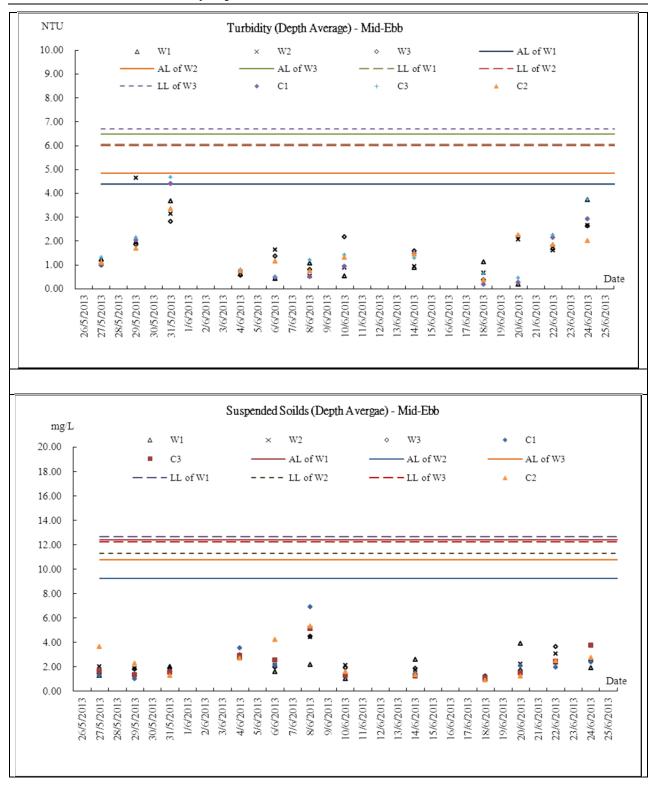






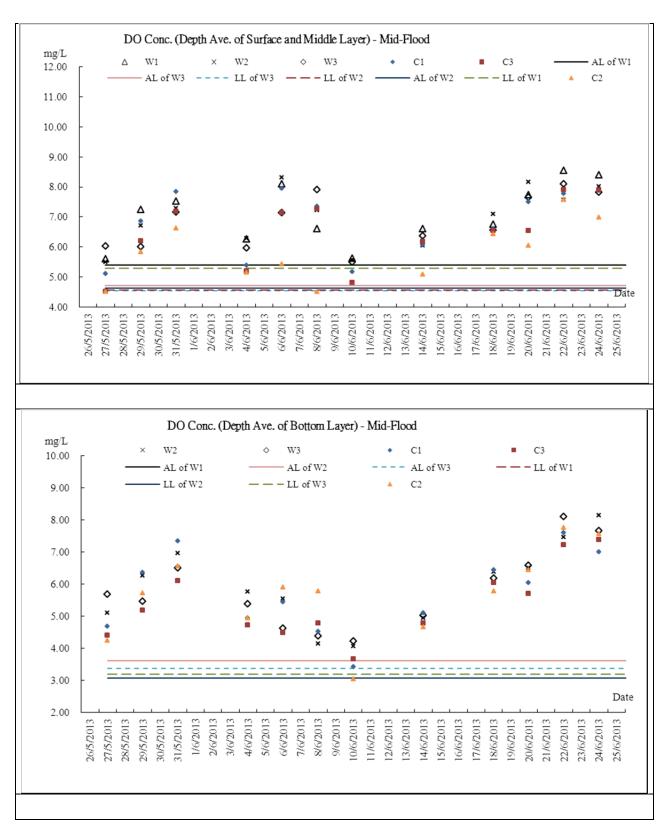
### Marine Water Quality Monitoring - Mid-Ebb Tide

AUES



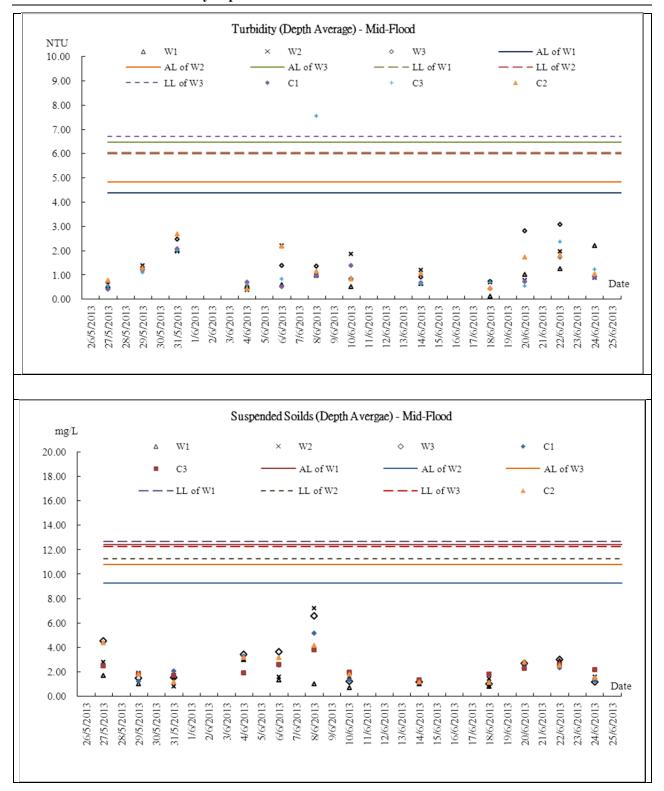
**AUES** 

#### Contract No. DC/2009/13 – Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan Sok Kwu Wan – EM&A Monthly Report –June 2013



### Marine Water Quality Monitoring - Mid-Flood Tide

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#### Contract No. DC/2009/13 – Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan Sok Kwu Wan – EM&A Monthly Report –June 2013



# Appendix I

## **Meteorological Information**

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### Meteorological Data Extracted from HKO during the Reporting Period

Date		Weather
26-May-13	Sun	Hot, sunny intervals. moderate south to southeasterly winds.
27-May-13	Mon	Fine, very hot, light to moderate southerly winds.
28-May-13	Tue	Fine, very hot, light to moderate southerly winds.
29-May-13	Wed	Fine, very hot, light to moderate southerly winds.
30-May-13	Thu	Fine, very hot, light to moderate southerly winds.
31-May-13	Fri	Fine, very hot, light to moderate southerly winds.
1-Jun-13	Sat	Fine, very hot, light to moderate southerly winds.
2-Jun-13	Sun	Fine, very hot, light to moderate southerly winds.
3-Jun-13	Mon	Cloudy, showers, squally thunderstorms, moderate south to southwesterly winds.
4-Jun-13	Tue	Fine, very hot, light to moderate southerly winds.
5-Jun-13	Wed	Fine, very hot, light to moderate southerly winds.
6-Jun-13	Thu	Fine, very hot, light to moderate southerly winds.
7-Jun-13	Fri	Cloudy, showers, squally thunderstorms, moderate south to southwesterly winds.
8-Jun-13	Sat	Cloudy, showers, squally thunderstorms, moderate south to southwesterly winds.
9-Jun-13	Sun	Cloudy, showers, moderate north to northeasterly winds
10-Jun-13	Mon	Cloudy, showers, moderate north to northeasterly winds
11-Jun-13	Tue	Cloudy, showers, moderate north to northeasterly winds
12-Jun-13	Wed	Cloudy, a few showers, moderate to fresh northeasterly winds.
13-Jun-13	Thu	Cloudy, a few showers, moderate to fresh northeasterly winds.
14-Jun-13	Fri	Cloudy, rain, moderate to fresh easterly winds, strong offshore and on high ground.
15-Jun-13	Sat	Cloudy, rain, moderate to fresh easterly winds, strong offshore and on high ground.
16-Jun-13	Sun	Hot, sunny periods, a few showers, mderate east to southeasterly winds
17-Jun-13	Mon	Hot, sunny periods , a few showers, moderate east to southeasterly winds
18-Jun-13	Tue	Hot, sunny periods, isolated showers, Moderate southeasterly winds.
19-Jun-13	Wed	Hot, sunny periods, isolated showers, Moderate southeasterly winds.
20-Jun-13	Thu	Hot, sunny periods , a few showers, moderate east to southeasterly winds
21-Jun-13	Fri	Hot, sunny periods , a few showers, moderate east to southeasterly winds
22-Jun-13	Sat	Hot, sunny periods, isolated showers, Moderate southeasterly winds.
23-Jun-13	Sun	Cloudy, rain, Moderate to fresh southerly winds.
24-Jun-13	Mon	Cloudy, rain, Moderate to fresh southerly winds.
25-Jun-13	Tue	Hot, isolated showers, moderate to fresh southwesterly winds



# Appendix J

## Monthly Summary Waste Flow Table

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### Monthly Summary Waste Flow Table for June 2013

			Actu	al Quant	ities of Ir	nert C&D	Material	s Genera	ted Mont	hly				A	Actual Qu	uantities	of C&D	Wastes	Generat	ed Mont	hly	
Month	Total Q Gene (a) = (c)	•	Hard Ro Large I Cono (t	Broken crete	Reused Con	tract	Reused Proj (c	ects	Dispo Publi (e	c Fill	Import (1		Me	tals	Paj cardi packa	-	Plas	stics		mical aste	Oth e.g. ru	ners, 1bbish
	(in '00	$00m^3$ )	(in '00	$00m^3$ )	(in '00	00m <sup>3</sup> )	(in '00	$00m^{3})$	(in '00	00m <sup>3</sup> )	(in '00	$00m^{3})$	(in '0	00kg)	(in '0	00kg)	(in '0	00kg)	(in '0	00kg)	(in to	onne)
	YSW	SKW	YSW	SKW	YSW	SKW	YSW	SKW	YSW	SKW	YSW	SKW	YSW	SKW	YSW	SKW	YSW	SKW	YSW	SKW	YSW	SKW
2013	13.341	50.328	0.160	0.410	0.740	2.802	0.000	0.000	12.601	47.526	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	<mark>400.410</mark>	<mark>103.440</mark>
Jan	0.332	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.332	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.040	9.840
Feb	0.082	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.082	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.530	6.530
Mar	0.056	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.430	4.920
Apr	0.425	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.425	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.800	32.200
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.790	4.650
Jun	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.430	48.240
<mark>Sub-total</mark>	14.236	50.328	0.160	0.417	0.740	2.802	0.000	0.000	13.497	47.526	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	443.430	209.820
Jul																						
Aug																						
Sep																						
Oct																						
Nov																						
Dec																						
Total	14.236	50.328	0.160	0.417	0.740	2.802	0.000	0.000	13.497	47.526	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	443.430	209.820
10141	64.5	564	0.5	77	3.5	42	0.0	00	61.(	)23	0.0	00	0.0	00	0.0	000	0.0	000	0.0	000	653.	.250

*Remark:* Assume 1.0  $m^3$  vehicle dump load = 1.6 tonnes C&D materials

YSW: Yung Shue Wan SKW: Sok Kwu Wan



# Appendix K

### Weekly Site Inspection Checklist

Proje	ect:	TCS/00512/09	Inspected	Ьу		Checkiis	t No.	TCS512B-28 May 2013
	-	Construction of Sewage Treatment Works at	ETL/ ET's	•	tative	Mr. F. N.		
	-	Yung Shue Wan and Sok Kwu Wan	RE's Repr			Mr. Alfrec	Cheung/	Joseph Ng
			Contracto			<u>Mr. M. F</u>	K. Leung	
Date	-	28 May 2013	IEC's Repart Time:	resentativ	e	14:00		
PAF	RT A:	GENERAL INFORMATION					ronment	al Permit No.
Wea	ather:	Sunny Fine Cloudy	Rainy				81/2007A	
Tem	perature:	······································						
Hun	nidity:	High V Moderate Low						
Win	-	Strong Breeze Light	Calm					
Area 1	Inspect	(wu Wan						
	JUK P							
PART	ГВ:	SITE AUDIT					• • •	
Note:		bs.: Not Observed; Yes: Compliance; No: Non-Compliance; Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
Section	ол 1: W.	ater Quality						
1.01	ls an e	offluent discharge license obtained for the Project?		$\checkmark$				
1.02	Is the	effluent discharged in accordance with the discharge licence?		$\checkmark$				
1.03	Is the	discharge of turbid water avoided?		$\checkmark$				
1.04	Are th reduce	here proper desilting facilities in the drainage systems to eSS levels in effluent?		$\checkmark$				,
1.05		ere channels, sandbags or bunds to direct surface run-off to entation tanks?		$\checkmark$				
1.06		ere any perimeter channels provided at site boundaries to pt storm runoff from crossing the site?		$\checkmark$				
1.07	ls drair	nage system well maintained?		$\checkmark$				
1.08		avation proceeds, are temporary access roads protected by distone or gravel?					$\checkmark$	
1.09	Are ter	nporary exposed slopes properly covered?					$\checkmark$	
1.10	Are ea	rthworks final surfaces well compacted or protected?		$\checkmark$				
1.11	Are ma	anholes adequately covered or temporarily sealed?		$\checkmark$				
1.12	Are the	ere any procedures and equipment for rainstorm protection?		$\checkmark$				
1.13	Are wh	eel washing facilities well maintained?					$\checkmark$	
1.14	ls runo	ff from wheel washing facilities avoided?					$\checkmark$	
1.15	Are the	re toilets provided on site?		$\checkmark$				
1.16	Are toil	ets properly maintained?		$\checkmark$				
1.17	Are the roofed	vehicle and plant servicing areas paved and located within areas?					$\checkmark$	
1.18	ls the o	il/grease leakage or spillage avoided?		$\checkmark$				
1.19		ere any measures to prevent leaked oil from entering the esystem?		$\checkmark$				
		ere any measures to collect spilt cement and concrete gs during concreting works?		$\checkmark$				
		re any oil interceptors/grease traps in the drainage systems cle and plant servicing areas, canteen kitchen, etc?					$\checkmark$	
1.22	Are the	oil interceptors/grease traps maintained properly?			П		$\square$	······································

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Envi	ironmental Team – Weekly Site Inspection and A	Audit Cl	necklist	– Sok	Kwu Wa	n	AUES
Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
1.23	Is used bentonite recycled where appropriate?					$\checkmark$	BAAR
	Designated settlement even for supofflybal weak weaks is assuida-					-	

1.23	Is used bentonite recycled where appropriate?				$\checkmark$	
1.24	Designated settlement area for runoff/wheel wash waste is provide and located at the streambed with 1-2m deep, 12m long and around 50m3 capacities for sedimentation.				$\checkmark$	
1.25	No excavation is undertaken in the settlement area.				$\checkmark$	
1.26	Concreting wastes water should be neutralized below the pH Action Levels before discharge.				$\checkmark$	
1.27	Mobile toilets should provide on site and located away the stream course.		$\checkmark$			
1.28	License collector should be employed for handling the sewage of mobile toilet.		$\checkmark$			
1.29	Is ponding /stand water avoided?		$\checkmark$			
Secti	ion 2: Air Quality					· · · · · · · · · · · · · · · · · · ·
2.01	Are there wheel washing facilities with high pressure jets provided at every vehicle exit point?				$\checkmark$	
2.02	Are vehicles washed to remove any dusty materials from their bodies and wheels before leaving construction sites?		$\checkmark$			
2.03	Are the excavated materials sprayed with water during handling?				$\checkmark$	
2.04	Are stockpiles of dusty materials sprayed with water, covered or placed in sheltered areas?				$\checkmark$	
2.05	Is the exposed earth properly treated within six months after the last construction activities?				$\checkmark$	
2.06	Are the access roads sprayed with water to maintain the entire road surface wet or paved?				$\checkmark$	
2.07	Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water?				$\checkmark$	,
2.08	Is the load on vehicles covered entirely by clean impervious sheeting?				$\checkmark$	
2.09	Is the loading of materials to a level higher than the side and tail boards during transportation by vehicles avoided?				$\checkmark$	· · · · · · · · · · · · · · · · · · ·
2.10	Is the road leading to the construction site within 30m of the vehicle entrance kept clear of dusty materials?				$\checkmark$	
2.11	Is dark smoke emission from plant/equipment avoided?		$\checkmark$			
2.12	Are de-bagging, batching and mixing processes carried out in sheltered areas during the use of bagged cement?				$\checkmark$	
2.13	Are site vehicles travelling within the speed limit not more than 15km/hour?				$\checkmark$	
2.14	Are hoardings of not less than 2.4m high provided along the site boundary, which adjoins areas accessible to the public?		$\checkmark$			
2.15	Is open burning avoided?		$\checkmark$			
2.16	Excavated materials from the stream must be removed from the site on the same day. The materials shall be stored in covered impermeable skips awaiting removal from site.					
Sectio	n 3: Noise					
3.01	Are noisy equipment and activities positioned as far as practicable from the sensitive receivers?				$\checkmark$	:
3.02	Is silenced equipment adopted?				$\checkmark$	
3.03	Is idle equipment turned off or throttled down?	$\checkmark$				
3.04	Are all plant and equipment well maintained and in good condition?		$\checkmark$			
3.05	Are noise barriers or enclosures provided at areas where construction activities cause noise impact on sensitive receivers?				$\checkmark$	
3.06	Are hand held breakers fitted with valid noise emission labels during operation?				$\square$	
3.07	Are air compressors fitted with valid noise emission labels during operation?				$\square$	
3.08	Are flaps and panels of mechanical equipment closed during operation?				$\checkmark$	

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No	te: Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
3.0	g Are Construction Noise Permit(s) applied for percussive piling works?					$\checkmark$	
3.1	Are Construction Noise Permit(s) applied for general construction works during restricted hours?					$\checkmark$	
3.1	the entrances?					$\checkmark$	·
3.1	Use of quiet plant had been used on site to minimise the construction noise impact to the surrounding residences/dwellings (Level 1 mitigation measures). Temporary/Moveable noise barrier or site hoarding are provide or					$\square$	
3.1	a erect at the site boundary to minimise the noise impact of the closest NSRs or stationary equipments shield by the noise barrier which cannot visible from NSRs (Level 2 mitigation measure)					$\checkmark$	
3.1	Temporary/Moveable noise barrier equal to or more than 3m height with 10kg/m2 are provide for noise mitigation measures (Level 2 mitigation measures).					$\checkmark$	
Sec	tion 4: Waste/Chemical Management						<u> </u>
4.07	Waste Management Plan had been submit to Engineer for approval.		$\checkmark$				
4.02	Are receptacles available for general refuse collection?		$\checkmark$				
4.03	Is general refuse sorting or recycling implemented?		$\checkmark$				
4.04	Is general refuse disposed of properly and regularly?		$\checkmark$				···
4.05	Is the Contractor registered as a chemical waste producer?					$\checkmark$	
4.06	Are the chemical waste containers and storage area properly labelled?					$\checkmark$	
4.07	Are the chemical wastes stored in proper storage areas?					$\checkmark$	
4.08	Is the chemical container or equipment provided with drip tray?					$\checkmark$	
4.09	Is the chemical waste storage area used for storage of chemical waste only?					$\checkmark$	
4.10	Are incompatible chemical wastes stored in different areas?					$\checkmark$	·····
4.11	Are the chemical wastes disposed of by licensed collectors?					$\checkmark$	
4.12	Are trip tickets for chemical wastes disposal available for inspection?					$\square$	
4.13	Are chemical/fuel storage areas bounded?					$\checkmark$	
4.14	Are designated areas identified for storage and sorting of construction wastes?					$\square$	
4.15	Are construction wastes sorted (inert and non-inert) on site?		$\checkmark$				
4.16	Are construction wastes reused?		$\checkmark$				
4.17	Are construction wastes disposed of properly?		$\checkmark$				
4.18	Are site hoardings and signboards made of durable materials instead of timber?		$\checkmark$				
4.19	Is trip ticket system implemented for the disposal of construction wastes and records available for inspection?		$\checkmark$				
4.20	Are appropriate procedures followed if contaminated material exists?					$\square$	
4.21	Is relevant license/ permit for disposal of construction waste or excavated materials available for inspection?					$\square$	
4.22	Site cleanliness and appropriate waste management training had provided for the site workers.		$\checkmark$				
4.23	Contaminated sediments will be managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.					$\square$	
Sectio	n 5: Landscape & Visual					-	
5.01	Are retained and transplanted trees in health condition?					☑ _	

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Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
5.02	Are retained and transplanted trees properly protected?				$\square$		· · · · · · · · · · · · · · · · · · ·
5.03	Are surgery works carried out for the damaged trees?	$\checkmark$					
5.04	Is damage to trees outside site boundary due to construction activities avoided?		$\checkmark$	· ·			
5.05	Is the night-time lighting controlled to minimize glare to sensitive receivers?					Image: A start of the start	
Sectio	n δ: Others					<del></del>	

5.05	Is the night-time lighting controlled to minimize glare to sensitive receivers?			$\square$
Section	n 6: Others			
6.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?			☑ _

#### (Sok Kwu Wan)

#### Remarks:

#### Findings of Site Inspection: (28 May 2013)

No adverse environmental impacts were observed. However, stignant water due to rain was observed. Mosquito Contral measures are reminded

Follow up (28/5/2013) Not required for general reminders,

Alles

() (Alfred-Cheung/ (Wond FN) (Mr. M. K. Leung) () Joseph Ng) CW YUTA) 28 May 20/3

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Proje	ect:	TCS/00512/09	Inspected	by		Checklis	it No	TCS512B-4 June 2013			
		Construction of Sewage Treatment Works at	ETL/ ET's	Represen	tative	Mr. F. N.					
	-	Yung Shue Wan and Sok Kwu Wan	RE's Repr					Joseph Ng			
	-		Contractor	•		Mr. M. K. Leung					
Date:	-	4 June 2013	Time:	eseman	e	10:00					
PAF	RT A:	GENERAL INFORMATION				Env	ironmenta	al Permit No.			
Wea	ather:	Sunny Fine Cloudy	Rainy			V EP- 2	81/2007A				
Tem	perature:	°C									
	nidity:	High Moderate Low									
Win	d: Inspect	Strong Breeze Light	Calm								
1		(wu Wan									
PART	"В:	SITE AUDIT									
Note:	Follow	s.: Not Observed; Yes: Compliance; No: Non-Compliance; Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks			
		ater Quality	_	<u> </u>	<u> </u>	_					
1.01	ls an e	offluent discharge license obtained for the Project?		$\checkmark$							
1.02	Is the e	effluent discharged in accordance with the discharge licence?		$\checkmark$							
1.03	Is the o	discharge of turbid water avoided?		$\checkmark$							
1.04		here proper desilting facilities in the drainage systems to a SS levels in effluent?		$\checkmark$							
1.05		ere channels, sandbags or bunds to direct surface run-off to entation tanks?		$\checkmark$							
1.06		ere any perimeter channels provided at site boundaries to ppt storm runoff from crossing the site?		$\checkmark$							
1.07	ls drair	nage system well maintained?		$\checkmark$							
1.08		avation proceeds, are temporary access roads protected by d stone or gravel?					$\checkmark$				
1.09	Are ter	nporary exposed slopes properly covered?					$\checkmark$				
1.10	Are ea	rthworks final surfaces well compacted or protected?		$\checkmark$							
1.11	Are ma	anholes adequately covered or temporarily sealed?		$\checkmark$							
1.12	Are the	ere any procedures and equipment for rainstorm protection?		$\checkmark$							
1.13	Are wh	eel washing facilities well maintained?					$\checkmark$				
1.14	ls runof	ff from wheel washing facilities avoided?					$\checkmark$				
1.15	Are the	re toilets provided on site?		$\checkmark$							
1.16	Are toil	ets properly maintained?		$\checkmark$							
1.17	Are the roofed a	vehicle and plant servicing areas paved and located within areas?					$\checkmark$				
1.18	Is the o	il/grease leakage or spillage avoided?		$\checkmark$							
1.19		ere any measures to prevent leaked oil from entering the esystem?		$\checkmark$							
1.20		ere any measures to collect spilt cement and concrete gs during concreting works?		$\checkmark$							
1 21	Are the	re any oil interceptors/grease traps in the drainage systems cle and plant servicing areas, canteen kitchen, etc?					$\checkmark$				
		oil interceptors/grease traps maintained properly?					$\checkmark$				

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Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
1.23	Is used bentonite recycled where appropriate?					$\checkmark$	
1.24	Designated settlement area for runoff/wheel wash waste is provide and located at the streambed with 1-2m deep, 12m long and around 50m3 capacities for sedimentation.					$\checkmark$	
1.25	No excavation is undertaken in the settlement area.					$\checkmark$	
1.26	Concreting wastes water should be neutralized below the pH Action Levels before discharge.					$\checkmark$	
1.27	Mobile toilets should provide on site and located away the stream course.		$\checkmark$				
1.28	License collector should be employed for handling the sewage of mobile toilet.		$\checkmark$				
1.29	Is ponding /stand water avoided?		$\checkmark$				Note 1
Sectio	n 2: Air Quality						
2.01	Are there wheel washing facilities with high pressure jets provided at every vehicle exit point?					$\checkmark$	
2.02	Are vehicles washed to remove any dusty materials from their bodies and wheels before leaving construction sites?		$\checkmark$				
2.03	Are the excavated materials sprayed with water during handling?					$\checkmark$	
2.04	Are stockpiles of dusty materials sprayed with water, covered or placed in sheltered areas?					$\checkmark$	
2.05	Is the exposed earth properly treated within six months after the last construction activities?					$\checkmark$	
2.06	We the access roads sprayed with water to maintain the entire road surface wet or paved?					$\checkmark$	
2.07	Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water?					$\checkmark$	
2.08	Is the load on vehicles covered entirely by clean impervious sheeting?					$\checkmark$	
2.09	Is the loading of materials to a level higher than the side and tail boards during transportation by vehicles avoided?					$\checkmark$	
2.10	Is the road leading to the construction site within 30m of the vehicle entrance kept clear of dusty materials?					$\checkmark$	
2.11	Is dark smoke emission from plant/equipment avoided?		$\checkmark$				
2.12	Are de-bagging, batching and mixing processes carried out in sheltered areas during the use of bagged cement?					$\checkmark$	
2.13	Are site vehicles travelling within the speed limit not more than 15km/hour?					$\checkmark$	
2.14	Are hoardings of not less than 2.4m high provided along the site boundary, which adjoins areas accessible to the public?		$\checkmark$				
2.15	Is open burning avoided?		$\checkmark$				
2.16	Excavated materials from the stream must be removed from the site on the same day. The materials shall be stored in covered impermeable skips awaiting removal from site.					$\checkmark$	
Sectio	n 3: Noise						
3.01	Are noisy equipment and activities positioned as far as practicable from the sensitive receivers?					$\checkmark$	
3.02	Is silenced equipment adopted?					$\checkmark$	
3.03	Is idle equipment turned off or throttled down?	$\checkmark$					
3.04	Are all plant and equipment well maintained and in good condition?		$\checkmark$				
	Are noise barriers or enclosures provided at areas where construction activities cause noise impact on sensitive receivers?					$\checkmark$	
3 06	Are hand held breakers fitted with valid noise emission labels during operation?					$\checkmark$	
3.07	Are air compressors fitted with valid noise emission labels during operation?					$\checkmark$	
	Are flaps and panels of mechanical equipment closed during operation?					$\checkmark$	



Note	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
3.09	Are Construction Noise Permit(s) applied for percussive piling works?					$\checkmark$	
3.10	Are Construction Noise Permit(s) applied for general construction works during restricted hours?					$\checkmark$	
3.11	Are valid Construction Noise Permit(s) posted at site entrances?					$\checkmark$	
3.12	Use of quiet plant had been used on site to minimise the construction noise impact to the surrounding residences/dwellings (Level 1 mitigation measures). Temporary/Moveable noise barrier or site hoarding are provide or					$\checkmark$	
3.13	erect at the site boundary to minimise the noise impact of the closest NSRs or stationary equipments shield by the noise barrier which cannot visible from NSRs (Level 2 mitigation measure)					$\checkmark$	
3.14	Temporary/Moveable noise barrier equal to or more than 3m height with 10kg/m2 are provide for noise mitigation measures (Level 2 mitigation measures).					$\checkmark$	
Secti	on 4: Waste/Chemical Management						
4.01	Waste Management Plan had been submit to Engineer for approval.		$\checkmark$				
4.02	Are receptacles available for general refuse collection?		$\checkmark$				
4.03	Is general refuse sorting or recycling implemented?		$\checkmark$				
4.04	Is general refuse disposed of properly and regularly?		$\checkmark$				
4.05	Is the Contractor registered as a chemical waste producer?					$\checkmark$	
4.06	Fige the chemical waste containers and storage area properly labelled?					$\checkmark$	
4.07	Are the chemical wastes stored in proper storage areas?					$\checkmark$	
4.08	Is the chemical container or equipment provided with drip tray?					$\checkmark$	
4.09	Is the chemical waste storage area used for storage of chemical waste only?					$\checkmark$	
4.10	Are incompatible chemical wastes stored in different areas?					$\checkmark$	
4.11	Are the chemical wastes disposed of by licensed collectors?					$\checkmark$	
4.12	Are trip tickets for chemical wastes disposal available for inspection?					$\checkmark$	
4.13	Are chemical/fuel storage areas bounded?					$\checkmark$	
4.14	Are designated areas identified for storage and sorting of construction wastes?					$\checkmark$	
4.15	Are construction wastes sorted (inert and non-inert) on site?		$\checkmark$				
4.16	Are construction wastes reused?		$\checkmark$				
4.17	Are construction wastes disposed of properly?		$\checkmark$				
4.18	Are site hoardings and signboards made of durable materials instead of timber?		$\checkmark$				
4.19	Is trip ticket system implemented for the disposal of construction wastes and records available for inspection?		$\checkmark$				
4.20	Are appropriate procedures followed if contaminated material exists?					$\overline{\checkmark}$	
4.21	Is relevant license/ permit for disposal of construction waste or excavated materials available for inspection?					$\checkmark$	
4.22	Site cleanliness and appropriate waste management training had provided for the site workers.		$\checkmark$				
4.23	Contaminated sediments will be managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.						
Sectio	n 5: Landscape & Visual					-	
5.01	Are retained and transplanted trees in health condition?					<u> </u>	

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Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
5.02	Are retained and transplanted trees properly protected?				$\checkmark$		
5.03	Are surgery works carried out for the damaged trees?	$\checkmark$					
5.04	Is damage to trees outside site boundary due to construction activities avoided?		$\checkmark$				
5.05	Is the night-time lighting controlled to minimize glare to sensitive receivers?					$\checkmark$	
Section 6: Others							
6.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?						

### (Sok Kwu Wan)

Remarks: (Note 1)

### Findings of Site Inspection: ( 4 June 2013)

No adverse environmental impacts were observed. However, stagnated rain water was observed in the concrete-walled space within 1/F of the sewage treatment plant. Mesquito control measures, parts cularly dirying off the stagnant water, are reminded.

Follow up ( 4 June 20/13 Not required for general FE MINDERS,

IEC's representative	RE's representative	ET's representative	EO's representative	Contractor's representativ	'e
	đ.	ANY	Ĺ		
( )	(Alfred Cheung/	(Wong F N)	(Mr. M. K. Leung)	(	)
	Joseph Ng)	04 June 2013			

Project: TCS/		CS/00512/09 Inspected by				Checklist No. TCS512B-11 June 20					
		Construction of Sewage Treatment Works at	ETL/ ET's	Represent	ative	Mr. F. N.					
	-	Yung Shue Wan and Sok Kwu Wan	RE's Repre	esentative		Mr. Alfred	Cheung/	Joseph Ng			
	-		Contractor	•		Mr. M. K. Leung					
Date:	-		IEC's Repr	esentative	9						
			Time:		en de la companya en la companya en la companya en la companya en la companya en la companya en la companya en						
	RT A; ather:	GENERAL INFORMATION	Deierr					al Permit No.			
	perature;		Rainy			EP-2	81/2007A				
	nidity:	V   High   Moderate   Low									
Win			Calm								
Area Inspected											
1	1 Sok Kwu Wan										
PART	PART B: SITE AUDIT										
Note:		s.: Not Observed; Yes: Compliance; No: Non-Compliance; Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks			
Section		ater Quality	0.00					Remarks			
1.01	ls an e	offluent discharge license obtained for the Project?		$\checkmark$							
1.02	Is the	effluent discharged in accordance with the discharge licence?		$\checkmark$							
1.03	Is the	discharge of turbid water avoided?		$\checkmark$							
1.04		nere proper desilting facilities in the drainage systems to a SS levels in effluent?		$\checkmark$							
1.05	sedim	ere channels, sandbags or bunds to direct surface run-off to entation tanks?		$\checkmark$							
1.06		ere any perimeter channels provided at site boundaries to ept storm runoff from crossing the site?		$\checkmark$							
1.07	ls drai	nage system well maintained?		$\checkmark$							
1.08		eavation proceeds, are temporary access roads protected by ed stone or gravel?					$\checkmark$				
1.09	Are te	nporary exposed slopes properly covered?					$\checkmark$				
1.10	Are ea	rthworks final surfaces well compacted or protected?		$\checkmark$							
1.11	Are m	anholes adequately covered or temporarily sealed?		$\checkmark$							
1.12	Are th	ere any procedures and equipment for rainstorm protection?		$\checkmark$							
1.13	Are wh	neel washing facilities well maintained?					$\checkmark$				
1.14	ls runc	ff from wheel washing facilities avoided?					$\checkmark$				
1.15	Are the	ere toilets provided on site?		$\checkmark$							
1.16	Are toi	lets properly maintained?		$\checkmark$							
1.17		e vehicle and plant servicing areas paved and located within areas?					$\checkmark$				
1.18	ls the	oil/grease leakage or spillage avoided?		$\checkmark$							
1.19		ere any measures to prevent leaked oil from entering the ge system?		$\checkmark$							
1.20		ere any measures to collect spilt cement and concrete gs during concreting works?		$\checkmark$							
1.21		ere any oil interceptors/grease traps in the drainage systems icle and plant servicing areas, canteen kitchen, etc?					$\checkmark$				
1.22	Are the	e oil interceptors/grease traps maintained properly?					$\checkmark$				

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Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
1.23	Is used bentonite recycled where appropriate?					$\checkmark$	
1.24	Designated settlement area for runoff/wheel wash waste is provide and located at the streambed with 1-2m deep, 12m long and around 50m3 capacities for sedimentation.					$\checkmark$	
1.25	No excavation is undertaken in the settlement area.					$\checkmark$	
1.26	Concreting wastes water should be neutralized below the pH Action Levels before discharge.					$\checkmark$	
1.27	Mobile toilets should provide on site and located away the stream course.		$\checkmark$				
1.28	License collector should be employed for handling the sewage of mobile toilet.		$\checkmark$				
1.29	Is ponding /stand water avoided?		$\checkmark$				
Sectio	n 2: Air Quality						
2.01	Are there wheel washing facilities with high pressure jets provided at every vehicle exit point?					$\checkmark$	
2.02	Are vehicles washed to remove any dusty materials from their bodies and wheels before leaving construction sites?		$\checkmark$				
2.03	Are the excavated materials sprayed with water during handling?					$\checkmark$	
2.04	Are stockpiles of dusty materials sprayed with water, covered or placed in sheltered areas?					$\checkmark$	
2.05	-Is the exposed earth properly treated within six months after the last construction activities?					$\checkmark$	
2.06	Are the access roads sprayed with water to maintain the entire road surface wet or paved?					$\checkmark$	
2.07	Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water?					$\checkmark$	
2.08	Is the load on vehicles covered entirely by clean impervious sheeting?					$\checkmark$	
2.09	Is the loading of materials to a level higher than the side and tail boards during transportation by vehicles avoided?					$\checkmark$	
2.10	Is the road leading to the construction site within 30m of the vehicle entrance kept clear of dusty materials?					$\checkmark$	
2.11	Is dark smoke emission from plant/equipment avoided?		$\checkmark$				
2.12	Are de-bagging, batching and mixing processes carried out in sheltered areas during the use of bagged cement?					$\checkmark$	
2.13	Are site vehicles travelling within the speed limit not more than 15km/hour?					$\checkmark$	
2.14	Are hoardings of not less than 2.4m high provided along the site boundary, which adjoins areas accessible to the public?		$\checkmark$				
2.15	Is open burning avoided?		$\checkmark$				
2.16	Excavated materials from the stream must be removed from the site on the same day. The materials shall be stored in covered impermeable skips awaiting removal from site.					$\checkmark$	
Sectio	on 3: Noise						
3.01	Are noisy equipment and activities positioned as far as practicable from the sensitive receivers?					$\checkmark$	
3.02	Is silenced equipment adopted?					$\checkmark$	
3.03	Is idle equipment turned off or throttled down?	$\checkmark$					
3.04	Are all plant and equipment well maintained and in good condition?		$\checkmark$				
3.05	Are noise barriers or enclosures provided at areas where construction activities cause noise impact on sensitive receivers?					$\checkmark$	
3.06	Are hand held breakers fitted with valid noise emission labels during operation?					$\checkmark$	
3.07	Are air compressors fitted with valid noise emission labels during operation?					$\checkmark$	
3.08	Are flaps and panels of mechanical equipment closed during operation?					$\checkmark$	

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	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance;	Not			Follow		Photo/
Note:	Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Obs.	Yes	No	Up	N/A	Photo/ Remarks
3.09	Are Construction Noise Permit(s) applied for percussive piling works?					$\checkmark$	
3.10	Are Construction Noise Permit(s) applied for general construction works during restricted hours?					$\checkmark$	
3.11	Are valid Construction Noise Permit(s) posted at site entrances?					$\checkmark$	
3.12	Use of quiet plant had been used on site to minimise the construction noise impact to the surrounding residences/dwellings (Level 1 mitigation measures).					$\checkmark$	
3.13	Temporary/Moveable noise barrier or site hearding are provide or erect at the site boundary to minimise the noise impact of the closest NSRs or stationary equipments shield by the noise barrier which cannot visible from NSRs (Level 2 mitigation measure)					$\checkmark$	
3.14	Temporary/Moveable noise barrier equal to or more than 3m height with 10kg/m2 are provide for noise mitigation measures (Level 2 mitigation measures).					$\checkmark$	
Sectio	n 4: Waste/Chemical Management						
4.01	Waste Management Plan had been submit to Engineer for approval.		$\checkmark$				
4.02	Are receptacles available for general refuse collection?		$\checkmark$				
4.03	Is general refuse sorting or recycling implemented?		$\checkmark$				
4.04	Is general refuse disposed of properly and regularly?		$\checkmark$				
4.05	Is the Contractor registered as a chemical waste producer?					$\checkmark$	
4.06	Are the chemical waste containers and storage area properly labelled?					$\checkmark$	
4.07	Are the chemical wastes stored in proper storage areas?					$\checkmark$	
4.08	Is the chemical container or equipment provided with drip tray?					$\checkmark$	
4.09	Is the chemical waste storage area used for storage of chemical waste only?					$\checkmark$	
4.10	Are incompatible chemical wastes stored in different areas?					$\checkmark$	
4.11	Are the chemical wastes disposed of by licensed collectors?					$\checkmark$	
4.12	Are trip tickets for chemical wastes disposal available for inspection?					$\checkmark$	
4.13	Are chemical/fuel storage areas bounded?					$\checkmark$	
4.14	Are designated areas identified for storage and sorting of construction wastes?					$\checkmark$	
4.15	Are construction wastes sorted (inert and non-inert) on site?		$\checkmark$				
4.16	Are construction wastes reused?		$\checkmark$				
4.17	Are construction wastes disposed of properly?		$\checkmark$				
4.18	Are site hoardings and signboards made of durable materials instead of timber?		$\checkmark$				
4.19	Is trip ticket system implemented for the disposal of construction wastes and records available for inspection?		$\checkmark$				
4.20	Are appropriate procedures followed if contaminated material exists?					$\checkmark$	
4.21	Is relevant license/ permit for disposal of construction waste or excavated materials available for inspection?					$\checkmark$	
4.22	Site cleanliness and appropriate waste management training had provided for the site workers.		$\checkmark$				
4.23	Contaminated sediments will be managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.					$\checkmark$	
Sectio	n 5: Landscape & Vísual						_
5.01	Are retained and transplanted trees in health condition?					$\checkmark$	

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Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
5.02	Are retained and transplanted trees properly protected?				$\checkmark$		
5.03	Are surgery works carried out for the damaged trees?	$\checkmark$					
5.04	Is damage to trees outside site boundary due to construction activities avoided?		$\checkmark$				
5.05	Is the night-time lighting controlled to minimize glare to sensitive receivers?					$\checkmark$	
Sectio	on 6: Others						
6.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?					$\checkmark$	

#### (Sok Kwu Wan)

#### Remarks:

#### Findings of Site Inspection: (11 June 2013)

No adverse environmental impacts were observed.

Follow up ( ) | Jun 20/B . Not required.

IEC's representative	RE's representative	ET's representative	EO's representative	Contractor's representative
		CM C		
( )	(Alfred Cheung/ Joseph Ng ) - WY UTW	( / World F N ) 11 [ un 70] 3	(Mr. M. K. Leung)	( )

Project:       TCS/00512/09         Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan         Date:       18 June 2013         Date:       18 June 2013         PART A:       GENERAL INFORMATION         Weather:       ✓ Sunny         Fine       Cloudy         Temperature:       ✓ °C         Humidity:       High         ØBreeze       ✓ Light         Area Inspected       1         Sok Kwu Wan       SITE AUDIT			Inspected ETL/ ET's RE's Repr Contracto IEC's Rep Time: Rainy Calm	Represen esentativo r's Repres	e sentative	Mr. F. N. Mr. Alfree Mr. M. 14:00	Wong d Cheung, K. Leung	2S512B-18 June 2013 / Joseph Ng al Permit No.
Note:	Not Ob	s.: Not Observed; Yes: Compliance; No: Non-Compliance;	Not			Follow		Photo/
	FOIIOW	Up: Observations requiring follow-Up actions N/A: Not Applicable	Obs.	Yes	No	Up	N/A	Remarks
1.01		ffluent discharge license obtained for the Project?		$\overline{\mathbf{A}}$				
1.02	ls the e	ffluent discharged in accordance with the discharge licence?		$\overline{\mathbf{A}}$				
1.03		lischarge of turbid water avoided?		$\overline{\mathbf{V}}$				
1.04	Are th	ere proper desilting facilities in the drainage systems to SS levels in effluent?		$\overline{\checkmark}$				
1.05	Are there channels, sandbags or bunds to direct surface run-off to sedimentation tanks?			$\checkmark$				
1.06	Are there any perimeter channels provided at site boundaries to intercept storm runoff from crossing the site?			$\checkmark$				
1.07		age system well maintained?		$\checkmark$				
1.08		avation proceeds, are temporary access roads protected by I stone or gravel?					$\checkmark$	
1.09	Are tem	porary exposed slopes properly covered?					$\checkmark$	
1.10	Are ear	thworks final surfaces well compacted or protected?		$\checkmark$				
1.11	Are ma	nholes adequately covered or temporarily sealed?		$\checkmark$				
1.12	Are the	re any procedures and equipment for rainstorm protection?		$\checkmark$				
1.13	Are whe	eel washing facilities well maintained?					$\checkmark$	
1.14	ls runof	from wheel washing facilities avoided?					$\checkmark$	
1.15	Are the	e toilets provided on site?		$\checkmark$				
1.16	Are toile	ts properly maintained?		$\checkmark$				
	Are the roofed a	vehicle and plant servicing areas paved and located within reas?					$\checkmark$	
1.18	Is the oi	l/grease leakage or spillage avoided?		$\checkmark$				
		e any measures to prevent leaked oil from entering the system?		$\checkmark$				
1.20	Are the washing	re any measures to collect spilt cement and concrete s during concreting works?		$\checkmark$				
1.21	Are ther for vehic	e any oil interceptors/grease traps in the drainage systems le and plant servicing areas, canteen kitchen, etc?					$\checkmark$	
		oil interceptors/grease traps maintained properly?					$\overline{\checkmark}$	

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Note	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
1.23	Is used bentonite recycled where appropriate?					$\checkmark$	
1.24	Designated settlement area for runoff/wheel wash waste is provide and located at the streambed with 1-2m deep, 12m long and around 50m3 capacities for sedimentation.					$\checkmark$	
1.25	No excavation is undertaken in the settlement area.					$\checkmark$	
1.26	Concreting wastes water should be neutralized below the pH Action Levels before discharge.					$\checkmark$	
1.27	Mobile toilets should provide on site and located away the stream course.		$\checkmark$				
1.28	License collector should be employed for handling the sewage of mobile toilet.		$\checkmark$				
1.29	Is ponding /stand water avoided?		$\checkmark$				
Secti	on 2: Air Quality						
2.01	Are there wheel washing facilities with high pressure jets provided at every vehicle exit point?					$\checkmark$	
2.02	Are vehicles washed to remove any dusty materials from their bodies and wheels before leaving construction sites?		$\checkmark$				
2.03	Are the excavated materials sprayed with water during handling?					$\checkmark$	
2.04	Are stockpiles of dusty materials sprayed with water, covered or placed in sheltered areas?					$\checkmark$	
2.05	Is the exposed earth properly treated within six months after the last construction activities?					$\checkmark$	
2.06	Are the access roads sprayed with water to maintain the entire road surface wet or paved?					$\checkmark$	
2.07	Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water?					$\checkmark$	
2.08	Is the load on vehicles covered entirely by clean impervious sheeting?					$\checkmark$	
2.09	Is the loading of materials to a level higher than the side and tail boards during transportation by vehicles avoided?					$\checkmark$	
2.10	Is the road leading to the construction site within 30m of the vehicle entrance kept clear of dusty materials?					$\checkmark$	
2.11	Is dark smoke emission from plant/equipment avoided?		$\checkmark$		Ĺ,		
2.12	Are de-bagging, batching and mixing processes carried out in sheltered areas during the use of bagged cement?					$\checkmark$	
2.13	Are site vehicles travelling within the speed limit not more than 15km/hour?					$\checkmark$	
2.14	Are hoardings of not less than 2.4m high provided along the site boundary, which adjoins areas accessible to the public?		$\checkmark$				
2.15	Is open burning avoided?		$\checkmark$				
2.16	Excavated materials from the stream must be removed from the site on the same day. The materials shall be stored in covered impermeable skips awaiting removal from site.					$\checkmark$	
Sectio	n 3: Noise						
3.01	Are noisy equipment and activities positioned as far as practicable from the sensitive receivers?					$\checkmark$	
3.02	Is silenced equipment adopted?					$\checkmark$	
3.03	Is idle equipment turned off or throttled down?	$\checkmark$					
3.04	Are all plant and equipment well maintained and in good condition?		$\checkmark$				
	Are noise barriers or enclosures provided at areas where construction activities cause noise impact on sensitive receivers?					$\checkmark$	
- X (In	Are hand held breakers fitted with valid noise emission labels during operation?					$\checkmark$	
3117	Are air compressors fitted with valid noise emission labels during operation?					$\checkmark$	
	Are flaps and panels of mechanical equipment closed during operation?					$\checkmark$	

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Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
3.09	Are Construction Noise Permit(s) applied for percussive piling works?					$\checkmark$	
3.10	Are Construction Noise Permit(s) applied for general construction works during restricted hours?					$\checkmark$	
3.11	Are valid Construction Noise Permit(s) posted at site entrances?					$\checkmark$	
3.12	Use of quiet plant had been used on site to minimise the construction noise impact to the surrounding residences/dwellings (Level 1 mitigation measures).					$\checkmark$	
3.13	Temporary/Moveable noise barrier or site hoarding are provide or erect at the site boundary to minimise the noise impact of the closest NSRs or stationary equipments shield by the noise barrier which cannot visible from NSRs (Level 2 mitigation measure)					$\checkmark$	
3.14	Temporary/Moveable noise barrier equal to or more than 3m height with 10kg/m2 are provide for noise mitigation measures (Level 2 mitigation measures).					$\checkmark$	
Sectio	n 4: Waste/Chemical Management						
4.01	Waste Management Plan had been submit to Engineer for approval.		$\checkmark$				
4.02	Are receptacles available for general refuse collection?		$\checkmark$				
4.03	Is general refuse sorting or recycling implemented?		$\checkmark$				
4.04	Is general refuse disposed of properly and regularly?		$\checkmark$				
4.05	Is the Contractor registered as a chemical waste producer?					$\checkmark$	
4.06	Are the chemical waste containers and storage area properly labelled?					$\checkmark$	
4.07	Are the chemical wastes stored in proper storage areas?					$\checkmark$	
4.08	Is the chemical container or equipment provided with drip tray?					$\checkmark$	
4.09	Is the chemical waste storage area used for storage of chemical waste only?					$\checkmark$	
4.10	Are incompatible chemical wastes stored in different areas?					$\checkmark$	
4.11	Are the chemical wastes disposed of by licensed collectors?					$\checkmark$	
4.12	Are trip tickets for chemical wastes disposal available for inspection?					$\checkmark$	
4.13	Are chemical/fuel storage areas bounded?					$\checkmark$	
4.14	Are designated areas identified for storage and sorting of construction wastes?					$\checkmark$	
4.15	Are construction wastes sorted (inert and non-inert) on site?		$\checkmark$				
4.16	Are construction wastes reused?		$\checkmark$				
4.17	Are construction wastes disposed of properly?		$\checkmark$				
4.18	Are site hoardings and signboards made of durable materials instead of timber?		$\checkmark$				
4.19	Is trip ticket system implemented for the disposal of construction wastes and records available for inspection?		$\checkmark$				
4.20	Are appropriate procedures followed if contaminated material exists?					$\checkmark$	
4.21	Is relevant license/ permit for disposal of construction waste or excavated materials available for inspection?					$\checkmark$	
4.22	Site cleanliness and appropriate waste management training had provided for the site workers.		$\checkmark$				
4.23	Contaminated sediments will be managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.					$\checkmark$	
Sectio	n 5: Landscape & Visual						
5.01	Are retained and transplanted trees in health condition?					$\checkmark$	

Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
5.02	Are retained and transplanted trees properly protected?				$\checkmark$		
5.03	Are surgery works carried out for the damaged trees?	$\checkmark$					
5.04	Is damage to trees outside site boundary due to construction activities avoided?		$\checkmark$				
5.05	Is the night-time lighting controlled to minimize glare to sensitive receivers?					$\checkmark$	
Sectio	n 6: Others						
6.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?					$\checkmark$	

#### (Sok Kwu Wan)

#### Remarks:

IEC's representative

#### Findings of Site Inspection: (18 June 2013)

No adverse environmental impacts were observed.

Follow up ( 18/06/2013) Not reputed for general remindors

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IEC S representative	RE's representative	ET's representative	EO's representative	Contractor's representative
( )	(Alfred Cheung/ Joseph Ng )	(My 5) + Wong FN) (8 July 2013	(Mr. M. K. Leung)	( )

EO's representative

Z: Jobs/2010/TCS00512(DC-2009-13)-Lama/600/site inspection/Sok Kwu Wan/2013/June 2013/TCS512B- Sok Kwu Wan\_18 June 2013.doc

RE's representative ET's representative

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Projec	t:	TCS/00512/09	Inspected I	by		Checklist	No. <u>TCS</u>	512B-25 June 2013
		Construction of Sewage Treatment Works at	ETL/ ET's F	•	tive	<u>Mr. F. N. V</u>		
		Yung Shue Wan and Sok Kwu Wan	RE's Repre		ntotivo		<u>Cheung/ J</u> . Leung	oseph Ng
			Contractor	-	manve	1011. 101. 10	, Leang	
Date:		25 June 2013	Time:		-20	1		
PAR	Г А:	GENERAL INFORMATION		(	J	Envi	ronmental	Permit No.
Weat	her:	Sunny V Fine Cloudy	Rainy		[	✓ EP-28	31/2007A	
Temp	erature	<u> </u>						
Humi	dity:	High Moderate Low						
Wind Area I		Strong Breeze Light	Calm					
Area i	-	Kwu Wan						
L	SUKI							
PART	B:	SITE AUDIT						
Note:	Not O Follov	bs.: Not Observed; Yes: Compliance; No: Non-Compliance; v Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
Sectio		/ater Quality						
1.01	ls an	effluent discharge license obtained for the Project?						
1.02	Is the	effluent discharged in accordance with the discharge licence?		$\checkmark$			·	
1.03	Is the	discharge of turbid water avoided?		$\checkmark$				
1.04		here proper desilting facilities in the drainage systems to e SS levels in effluent?	)	$\checkmark$				
1.05		nere channels, sandbags or bunds to direct surface run-off to pentation tanks?	) []	$\checkmark$				
1.06	Are ti interc	nere any perimeter channels provided at site boundaries to epit storm runoff from crossing the site?	) []	$\checkmark$				
1.07	ls dra	inage system well maintained?		$\checkmark$				
1.08	As ex crush	cavation proceeds, are temporary access roads protected by ed stone or gravel?					$\checkmark$	
1.09	Arete	emporary exposed slopes properly covered?					$\checkmark$	
1.10	Are e	arthworks final surfaces well compacted or protected?		$\checkmark$				
1.11	Are m	nanholes adequately covered or temporarily sealed?		$\checkmark$				
1.12	Are th	nere any procedures and equipment for rainstorm protection?		$\checkmark$				
1.13	Are w	heel washing facilities well maintained?					$\checkmark$	
1.14	ls run	off from wheel washing facilities avoided?					$\checkmark$	
1.15	Are th	nere toilets provided on site?		$\checkmark$				
1.16	Are to	ilets properly maintained?		$\checkmark$				
1.17		ne vehicle and plant servicing areas paved and located within d areas?	n 🗌					
1.18	ls the	oil/grease leakage or spillage avoided?		$\checkmark$				
1.19	drain	here any measures to prevent leaked oil from entering the age system?		$\checkmark$				
1.20	wash	here any measures to collect spilt cement and concreteings during concreting works?		$\checkmark$				
1.21	Are tl for ve	nere any oil interceptors/grease traps in the drainage system hicle and plant servicing areas, canteen kitchen, etc?	s				$\checkmark$	
1.22	Are tl	ne oil interceptors/grease traps maintained properly?					$\checkmark$	

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Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
1.23	Is used bentonite recycled where appropriate?					$\checkmark$	
1.24	Designated settlement area for runoff/wheel wash waste is provide and located at the streambed with 1-2m deep, 12m long and around 50m3 capacities for sedimentation.					$\checkmark$	
1.25	No excavation is undertaken in the settlement area.					$\checkmark$	
1.26	Concreting wastes water should be neutralized below the pH Action Levels before discharge.					$\checkmark$	
1.27	Mobile toilets should provide on site and located away the stream course.		$\checkmark$				
1.28	License collector should be employed for handling the sewage of mobile toilet.		$\checkmark$				
1.29	Is ponding /stand water avoided?		$\checkmark$				
Sectio	n 2: Air Quality						
2.01	Are there wheel washing facilities with high pressure jets provided at every vehicle exit point?					$\checkmark$	
2.02	Are vehicles washed to remove any dusty materials from their bodies and wheels before leaving construction sites?		$\checkmark$				
2.03	Are the excavated materials sprayed with water during handling?					$\checkmark$	
2.04	Are stockpiles of dusty materials sprayed with water, covered or placed in sheltered areas?					$\checkmark$	
2.05	Is the exposed earth properly treated within six months after the last construction activities?					$\checkmark$	
2.06	Are the access roads sprayed with water to maintain the entire road surface wet or paved?					$\checkmark$	
2.07	Is the surface where any drilling, cutting, polishing or breaking operation continuously sprayed with water?					$\checkmark$	
2.08	Is the load on vehicles covered entirely by clean impervious sheeting?					$\checkmark$	
2.09	Is the loading of materials to a level higher than the side and tail boards during transportation by vehicles avoided?					$\checkmark$	
2.10	Is the road leading to the construction site within 30m of the vehicle entrance kept clear of dusty materials?					$\checkmark$	
2.11	Is dark smoke emission from plant/equipment avoided?		$\checkmark$				
2.12	Are de-bagging, batching and mixing processes carried out in sheltered areas during the use of bagged cement?					$\checkmark$	
2.13	Are site vehicles travelling within the speed limit not more than 15km/hour?					$\checkmark$	
	Are hoardings of not less than 2.4m high provided along the site boundary, which adjoins areas accessible to the public?		$\checkmark$				
2.15	Is open burning avoided?		$\checkmark$				
2.16	Excavated materials from the stream must be removed from the site on the same day. The materials shall be stored in covered impermeable skips awaiting removal from site.					$\checkmark$	
Sectior	1 3: Noise						
	Are noisy equipment and activities positioned as far as practicable from the sensitive receivers?					$\checkmark$	
3.02	Is silenced equipment adopted?					$\checkmark$	
3.03	Is idle equipment turned off or throttled down?	$\checkmark$					
3.04	Are all plant and equipment well maintained and in good condition?						
3.05	Are noise barriers or enclosures provided at areas where construction activities cause noise impact on sensitive receivers?					$\checkmark$	
	Are hand held breakers fitted with valid noise emission labels during operation?					$\checkmark$	
	Are air compressors fitted with valid noise emission labels during operation?					$\checkmark$	
3 08	Are flaps and panels of mechanical equipment closed during operation?					$\checkmark$	

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No	Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
3.0	WORKS?					$\checkmark$	
3.1	Are Construction Noise Permit(s) applied for general construction works during restricted hours?					$\checkmark$	
3.1	the state of the s					$\checkmark$	
3.1	(Level 1 mitigation measures).					$\checkmark$	
3.13	Temporary/Moveable noise barrier or site hoarding are provide or erect at the site boundary to minimise the noise impact of the closest NSRs or stationary equipments shield by the noise barrier which cannot visible from NSRs (Level 2 mitigation measure)					$\checkmark$	
3.14	Temporary/Moveable noise barrier equal to or more than 3m height					$\checkmark$	
Sec	tion 4: Waste/Chemical Management						
4.01	Waste Management Plan had been submit to Engineer for approval.		$\checkmark$				
4.02	Are receptacles available for general refuse collection?		$\checkmark$				
4.03	Is general refuse sorting or recycling implemented?		$\checkmark$				
4.04	Is general refuse disposed of properly and regularly?		$\checkmark$				
4.05	Is the Contractor registered as a chemical waste producer?					$\checkmark$	
4.06	Are the chemical waste containers and storage area properly labelled?					$\checkmark$	
4.07	Are the chemical wastes stored in proper storage areas?					$\checkmark$	
4.08	Is the chemical container or equipment provided with drip tray?					$\checkmark$	
4.09	Is the chemical waste storage area used for storage of chemical waste only?					$\checkmark$	
4.10	Are incompatible chemical wastes stored in different areas?					$\checkmark$	
4.11	Are the chemical wastes disposed of by licensed collectors?					$\checkmark$	
4.12	Are trip tickets for chemical wastes disposal available for inspection?					$\checkmark$	
4.13	Are chemical/fuel storage areas bounded?					$\checkmark$	
4.14	Are designated areas identified for storage and sorting of construction wastes?					$\checkmark$	
4.15	Are construction wastes sorted (inert and non-inert) on site?		$\checkmark$				
4.16	Are construction wastes reused?		$\checkmark$				
4.17	Are construction wastes disposed of properly?		$\checkmark$				
4.18	Are site hoardings and signboards made of durable materials instead of timber?		$\checkmark$				
4.19	Is trip ticket system implemented for the disposal of construction wastes and records available for inspection?		$\checkmark$				
4.20	Are appropriate procedures followed if contaminated material exists?					$\checkmark$	
4.21	Is relevant license/ permit for disposal of construction waste or excavated materials available for inspection?					$\checkmark$	
4.22	Site cleanliness and appropriate waste management training had provided for the site workers.		$\checkmark$				
4.23	Contaminated sediments will be managed according to WBTC No.12/2000 and EWTB TC(W) No. 34/2002.					$\checkmark$	
Sectio	n 5: Landscape & Visual					-	
5.01	Are retained and transplanted trees in health condition?					$\checkmark$	

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Note:	Not Obs.: Not Observed; Yes: Compliance; No: Non-Compliance; Follow Up: Observations requiring follow-Up actions N/A: Not Applicable	Not Obs.	Yes	No	Follow Up	N/A	Photo/ Remarks
5.02	Are retained and transplanted trees properly protected?				$\checkmark$		
5.03	Are surgery works carried out for the damaged trees?	$\checkmark$					
5.04	Is damage to trees outside site boundary due to construction activities avoided?		$\checkmark$				
5.05	Is the night-time lighting controlled to minimize glare to sensitive receivers?					$\checkmark$	
Sectio	n 6: Others						
6.01	Are relevant Environmental Permits posted at all vehicle site entrances/exits?					$\checkmark$	

#### (Sok Kwu Wan)

#### Remarks:

#### Findings of Site Inspection: (25 June 2013)

Silt curtain installed around the seawater near sewage treatment plant was observed broken. Repair of the silt curtain is required to avoid muddy water from construction site entering the sea.

Follow up (02 July 2013) Broken Silk curtain was repaired.

and oz July 7013

IEC's representative	RE's representative	ET's representative	EO's representative	Contractor's representative	2
IEC's representative	(Alfred Cheung/ Joseph Ng )	ET's representative	(Mr. M. K. Leung.)	<i>Contractor's representative</i>	)
	25 June 201	3.			
Z+\Inhs\2010\TCS00512(DC-2009	<b>3</b>	wu Wan\2013\June 2013\TCS512B-	Sok Kwu Wan 25 June 2013.doc	Page 4 of 4	



### Appendix L

### **Implementation Schedule of Mitigation Measures**

#### **Implementation Schedule of Air Quality Measures**

EIA	EM&A		Location /	Implementation		lementa Stages**		Relevant Legislation
Ref	Ref	Environmental Protection Measures*	Timing	Agent	D	C O		& Guidelines
Constr	uction Phase					2		
3.32	2.34	Installation of 2m high solid fences around the construction site of Pumping Station P2.	Work site / during construction	Contractor		$\checkmark$		
3.34	2.34	<ul> <li>Adopting the following good site practices and follow the dust control requirements of the Air Pollution Control (Construction Dust) Regulation:</li> <li>Stockpiles of imported material kept on site should be contained within hoardings, dampened and / or covered during dry and windy weather;</li> <li>Material stockpiled alongside trenches should be covered with tarpaulins whenever works are close to village houses;</li> <li>Water sprays should be used during the delivery and handling of cement, sands, aggregates and the like.</li> <li>Any vehicle used for moving sands, aggregates and construction waste should have properly fitting side and tail boards. Materials should not be loaded to a level higher than the side and tail boards, and should be covered by a clean tarpaulin.</li> </ul>	Work site / during construction	All contractors		$\checkmark$		EIAO-TM, APCO, Air Pollution Control (Construction Dust) Regulation
3.36	Section 2	1 hour and 24 hour dust monitoring and site audit	Designated air monitoring locations / throughout construction period	Contractor/ Environmental Team		V		EM&A Manual

\* All recommendations and requirements resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project.

\*\* D=Design, C=Construction, O=Operation

#### Implementation Schedule of Noise Measures

EIA	EM&A	Environmental Protection Measures*	Location/Timing	Implementation	Implementation Stages **			Relevant Legislation &	
Ref	Ref			Agent	D	С	0	Guidelines	
Construct	tion Phase								
4.41-4.43	3.19	<ul> <li>Use of quiet PME for the construction of the pumping stations</li> <li>Use of temporary noise barrier during the construction of Pumping Station P1a</li> </ul>	Work site /during the construction of Pumping Stations	Contractor		$\checkmark$		EIAO-TM, NCO	
4.44 – 4.49	3.19	<ul> <li>Implementation of following measures during the sewer construction:</li> <li>Use of quiet PME or method;</li> <li>Restriction on the number plant (1 item for each type of plant); and</li> <li>Good Site Practices</li> <li>Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program.</li> <li>Mobile plant, if any, should be sited as far away from 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 utilized, wherever practicable, in screening noise from on-site construction activities.</li> </ul>	Work site /during the construction of Sewer.	Contractor					

## **AUES**

EIA	EM&A	A Environmental Protection Measures*	Location/Timing	Implementation	Implementation Stages **			Relevant Legislation &
Ref	Ref		Location, Thinng	Agent	D	С	0	Guidelines
4.50 – 4.53	3.19	<ul> <li>Use of noise screening structures such as acoustic shed and barrier wherever practicable and feasible in areas with sufficient clearance and headroom.</li> <li>Adoption of manual working method wherever practicable and feasible in areas where the worksites of the proposed sewer alignment are located less than 20 m from the residential NSRs and less than 30 m from the temple (THT) and the public library.</li> <li>Use of PME for the construction of the section of sewer between the NSR and the Pumping Station P1a should not be allowed during the excavation work of Pumping Station P1a.</li> </ul>	Work site /during the construction of Sewer.	Contractor		V		
4.60	Section 35	Noise monitoring	Designated noise monitoring locations / throughout construction period	Contractor/ Environmental Team		V		EM&A Manual

\* All recommendations and requirements resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project.

\*\* D=Design, C=Construction, O=Operation

#### **Implementation Schedule of Water Quality Control Measures**

EIA	EM&A	Environmental Protection Measures*	Location (duration /completion of	Implementation		lement Stages*		Relevant Legislation
Ref	Ref		measures)	Agent	D	С	0	and Guidelines
	uction Phas			1 -	1		r	1
5.77	4.35	No-dig method using Horizontal Directional Drilling (HDD) would be used for the installation of outfall pipe of about 480 m from shore to minimize the potential water quality impacts arising from the dredging works required for the submarine outfall construction. Silt curtains will be installed around the exit area of the pilot drill.	Marine works site / During construction of submarine outfall	Contractor		N		
5.73	4.36	Dredging Works	Marine works site	Contractor				
5.78		<ul> <li>Implementation of following measures during the dredging works:</li> <li>dredging should be undertaken using closed grab dredgers with a maximum total production rate of 55m<sup>3</sup>/hr;</li> <li>deployment of 2-layer silt curtains with the first layer enclosing the grab and the second layer at around 50m from the dredging area while dredging works are in progress;</li> <li>dredging operation should be undertaken during ebb tide only;</li> <li>all vessels should be sized such that adequate clearance (i.e. minimum clearance of 0.6m) is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash;</li> <li>all pipe leakages should be repaired promptly and plant should not</li> </ul>	and at the identified water sensitive receivers/ During construction					
		<ul> <li>excess material should be repaired promptly and prant should not be operated with leaking pipes;</li> <li>excess material should be cleaned from the decks and exposed fittings of barges before the vessel is moved;</li> <li>adequate freeboard (i.e. minimum of 200mm) should be maintained on barges to ensure that decks are not washed by wave action;</li> </ul>						
		• all barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material;						
		• loading of barges should be controlled to prevent splashing of dredged material to the surrounding water, and barges should not be filled to a level which will cause the overflow of materials or polluted water during loading or transportation; and						

## **AUES**

EIA	EM&A	Finuronmental Protection Measures	Location (duration /completion of	Implementation	Implementation Stages**			Relevant Legislation
Ref	Ref	Environmental i lotection wieasures	measures)	Agent	D	С	0	and Guidelines
		• the decks of all vessels should be kept tidy and free of oil or other substances that might be accidentally or otherwise washed overboard.						
5.79	4.37	Construction Run-off and Drainage	Construction works	Contractor		$\checkmark$		ProPECC
		Implementation of the following site practices outlined in ProPECC PN 1/94 for "Construction Site Drainage"	sites					PN 1/94
		• Provision of perimeter channels to intercept storm-runoff from outside the site. These should be constructed in advance of site formation works and earthworks.						
		• Works programmes should be designed to minimize works areas at any one time, thus minimizing exposed soil areas and reducing the potential for increased siltation and runoff.						
		• Sand / silt removal facilities such as sand traps, silt traps and sediment basins should be provided to remove the sand / silt particles from run-off. These facilities should be properly and regularly maintained. These facilities should be carefully planned to ensure that they would be installed at appropriate locations to capture all surface water generated on site.						
		• Careful programming of the works to minimise soil excavation works during rainy seasons.						
		• Exposed soil surface should be protected by paving or hydroseeding as soon as possible to reduce the potential of soil erosion.						
		• Trench excavation should be avoided in the wet season, and if necessary, these should be excavated and backfilled in short sections.						
		• Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric						
5.80	4.38	General Construction Activities	Construction works	Contractor			1	
		Debris and rubbish generated on-site should be collected, handled and disposed of properly to avoid entering the nearby coastal waters and stormwater drains. All fuel tanks and storage areas should be provided	sites					

## **AUES**

EIA	EM&A	Environmental Protection Measures*	Location (duration /completion of	Implementation	-	lement Stages*	Relevant Legislation	
Ref	Ref	Environmental riotection weasures	measures)	Agent	D	С	0	and Guidelines
		with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. Open drainage channels and culverts near the works areas should be covered to block the entrance of large debris and refuse.						
5.81	4.39	<u>Wastewater Arising from Workforce</u> Portable toilets should be provided by the Contractors, where necessary, to handle sewage from the workforce. The Contractor should also be responsible for waste disposal and maintenance practices.	Construction works sites	Contractor		V		
5.96	Section 4	Water quality monitoring	Designated water monitoring locations/ throughout construction period	Contractor		V		EM&A Manual

\* All recommendations and requirements resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project.

\*\* D=Design, C=Construction, O=Operation

#### **Implementation Schedule of Sediment Contamination Mitigation Measures**

EIA	EM&A	Environmental Protection Measures*	Location / Timing	Implementation	Im	plementa Stages**		Relevant Legislation &
Ref	Ref			Agent	D	С	0	Guidelines
6.17	5.3	Follow the requirement and procedures for dredged mud disposal specified under the WBTC No. 34/2002.	Marine works site / during dredging works	Contractor		V		WBTC No. 34/2002
6.18	5.4	Implement appropriate dredging methods which have been incorporated into the recommended water quality mitigation measures.	Marine works site, during dredging works	Contractor		$\checkmark$		
6.19	5.5	<ul> <li>During the transportation and disposal of the dredged sediment, the following measures should be taken:</li> <li>Bottom opening of barges should be fitted with tight fitting seals to prevent leakage of material. Excess material should be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved.</li> <li>Monitoring of the barge loading should be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels should be equipped with automatic self monitoring devices as specified by the DEP.</li> </ul>	Marine works site and at the identified sensitive receivers	Contractor		V		

\* All recommendations and requirements resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project.

\*\* D=Design, C=Construction, O=Operation

#### Implementation Schedule of Solid Waste Management Measures

EIA	EM&A		mental Protection Measures* Location / Timing Agent			plementa Stages *		Relevant Legislation &
Ref	Ref	Environmental Protection Measures*			D	С	0	Guidelines
Construct	tion Phase							
7.14	6.4	<ul> <li><u>Good site practices</u></li> <li>Nomination of an approved person, such as a site manager, to be responsible for implementation of good site practices, arranging for collection and effective disposal to an appropriate facility, of all wastes generated at the site</li> <li>Training (proper waste management and chemical handling procedure) should be provided for site staffs</li> <li>Appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers.</li> <li>Provision of sufficient waste disposal points and regular collection for disposal.</li> <li>Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Facility.</li> <li>Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.</li> <li>Maintain records of the quantities of wastes generated, recycled and disposed.</li> </ul>	Work sites/During construction	Contractor				Waste Disposal Ordinance (Cap.54)
7.15	6.5	To monitor the disposal of C&D waste at landfills and to control fly tipping, a trip-ticket system should be included as one of the contractual requirements and implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work. An Independent Environmental Checker should be responsible for auditing the results of the system.	Work sites/During construction	Contractor		N		WBTC No. 21/2002
7.16	6.6	<ul> <li>Recommendations to achieve waste reduction include:</li> <li>segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;</li> <li>to encourage collection of aluminium cans by individual collectors, separate labelled bins should be provided to segregate this waste from other general refuse generated</li> </ul>	Work sites/During construction	Contractor		N		WBTC No. 4/98, 5/98

#### Contract No. DC/2009/13 – Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan Sok Kwu Wan – EM&A Monthly Report –June 2013

## **AUES**

EIA	EM&A		Location /	Implementation	Implementation Stages **			Relevant Legislation &
Ref	Ref	Environmental Protection Measures*	Timing	Timing Agent		C	0	Guidelines
		<ul> <li>by the work force;</li> <li>any unused chemicals or those with remaining functional capacity should be recycled;</li> </ul>						
		<ul> <li>use of reusable non-timber formwork to reduce the amount of C&amp;D material;</li> <li>prior to disposal of C&amp;D waste, it is recommended that wood, steel and other metals should be separated for re-use and / or recycling to minimise the quantity of waste</li> </ul>						
		<ul> <li>to be disposed of to landfill;</li> <li>proper storage and site practices to minimise the potential for damage or contamination of construction materials; and</li> </ul>						
		• plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.						
7.18	6.7	<ul> <li><u>General Site Wastes</u></li> <li>A collection area for construction site waste should be provided where waste can be stored prior to removal from site</li> </ul>	Work sites/During construction	Contractor		$\checkmark$		Public Health and Municipal Services Ordinance (Cap. 132)
		• An enclosed and covered area for the collection of the waste is recommended to reduce 'wind blow' of light material						
7.19-7.20	6.8 - 6.9	<ul> <li><u>Chemical Wastes</u></li> <li>After use, chemical waste should be handled according to the Code of Practice on the Package, Labelling and Storage of Chemical Wastes</li> <li>Any unused chemicals or those with remaining functional capacity should be recycled</li> </ul>	Work sites/During construction	Contractor		V		Waste Disposal (Chemical Waste) (General) Regulation, Code of Practice on the Packaging Labelling and Storage of Chemical
		• Waste should be properly stored on site within suitably designed containers and should be collected by an approved licensed waste collectors for disposal at the Chemical Waste Treatment Facility or other licenced facility in accordance with the Waste Disposal (Chemical Waste) (General) Regulation under the Waste Disposal Ordance.						Wastes

#### Contract No. DC/2009/13 – Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan Sok Kwu Wan – EM&A Monthly Report –June 2013

## **AUES**

EIA	EM&A		Location /	Implementation	Implementation Stages **			Relevant Legislation &	
Ref	Ref	Environmental Protection Measures*	Timing	Agent	D	С	0	Guidelines	
		• Any service shop and minor maintenance facilities should be located on hard standing within a bunded area, and sumps and oil interceptors should be provided.							
		• Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should be undertaken within the designated areas equipped control these discharges							
7.21-7.22	6.10 – 6.11	<ul> <li>Construction and Demolition Material</li> <li>The C&amp;D waste should be separated on-site into three categories:</li> <li>&gt; public fill, the inert portion of the C&amp;D material (e.g. concrete and rubble), which should be re-used on-site or disposed of at a public filling area;</li> <li>&gt; C&amp;D waste for re-use and / or recycling, the non-inert portion of the C&amp;D material, (e.g. steel and other metals, woods, glass and plastic);</li> <li>&gt; C&amp;D waste which cannot be re-used and / or recycled (e.g. wood, glass and plastic)</li> <li>• Where possible, inert material should be re-used on-site</li> <li>• Where practicable, steel and other metals should be separated for re-use and/or recycling prior to disposal of C&amp;D material</li> </ul>	During all construction phases	Contractors		V		WBTC No. 4/98, 5/98, 21/2002, 25/99, 12/2000	

\* All recommendations and requirements resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project.

\*\* D=Design, C=Construction, O=Operation

#### **Implementation Schedule of Ecological Impact Measures**

EIA Ref	EM&A Ref	Finvironmental Protection Measures*		Environmental Protection Measures*			Relevant Legislation & Guidelines	
			Thing	Agent	D	С	0	Guidennes
-	tion Phase				1		1	
8.157	7.2	<ul> <li><u>Terrestrial Ecology</u></li> <li>Labeling and fencing of the uncommon tree species</li> <li>Avoidance of use of woodland habitats as Works Area, in particular where trees are located</li> </ul>	Work sites / during construction phase	Contractor		N		
8.159 – 8.160	7.3	Subtidal Ecology         Use of HDD technique         Dredging         • Use of closed-grab dredger         • Deploy silt curtains during dredging.	Marine works site / during dredging works	Contractor		V		
8.161	7.4	<ul> <li>Site runoff</li> <li>Construction and maintenance of sand / silt removal facilities</li> <li>Silt curtains</li> <li>Timing of earthworks</li> <li>Coverage of sand / fill piles during storms.</li> <li>Barriers along the landward side of Pumping Station P2 site boundary (to prevent site runoff from entering area with Romer's Tree Frog)</li> </ul>	All work sites / during construction phase	Contractor		V		

\* All recommendations and requirements resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project.

\*\* D=Design, C=Construction, O=Operation

#### **Implementation Schedule of Fisheries Impact Measures**

EIA	EM&A	Environmental Protection Measures*				ementa stages**		Relevant Legislation
Ref	Ref		Timing	Agent	D	С	0	& Guidelines
9.29	8.3	Use of closed grab dredging and silt curtains around the immediate dredging area and low dredging rates as recommended in Water Quality of the EIA report	Marine works site, during dredging works	Contractor		$\checkmark$		TM on EIA Process
9.32	Section 8	Water quality monitoring (see Implementation Schedule for Water Quality Control Measures)	Designated monitoring locations / throughout construction period and 1 year following operation of the STW	Contractor and Environmental Team		V	V	EM&A Manual

\* All recommendations and requirements resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project.

\*\* D=Design, C=Construction, O=Operation

#### **Implementation Schedule of Landscape and Visual Impact Measures**

EIA Ref	EM&A Ref	Environmental Protection Measures*	Location /	/ Implementation Agent		lementa Stages *:		Relevant Legislation &
Kei	Kei		Timing	Agent	D	С	0	Guidelines
Constr	uction Pha	ase						
10.74	9.10	Retaining existing trees and minimizing damage to vegetation by close coordination and on site alignment adjusted of rising main and gravity sewer pipelines.	All sites	Contractor		V		WBTC No. 14/2002
		Careful and efficient transplanting of affected trees to temporary or final transplant location (the proposed tree to be transplanted is a semi-mature <i>Macaranga tanarius</i> and is located at the proposed Pumping Station P2 location).	All sites	Contractor		V		WBTC No. 14/2002
		Short excavation and immediate backfilling sections upon completion of works to reduce active site area.	All sites	Contractor		$\checkmark$		
		Screening of site construction works by use of hoarding that is appropriate to its site.	All sites	Contractor		$\checkmark$		WBTC No. 19/2001
		Conservation of topsoil for reuse.	All sites	Contractor		$\checkmark$		
		Night-time light source from marine fleets should be directed away from the residential units.	Outfall area.	Contractor				

\* All recommendations and requirements resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project.

\*\* D=Design, C=Construction, O=Operation

### Appendix M

### **Tree Inspection Report**

經緯園藝有限公司 Melofield Nursery & Landscape Contractor Ltd <sup>元朗下攸田村 125號</sup> 125, Ha Yau Tin Tsuen, Yuen Long, N.T.

TEL: (852) 2572-0048 FAX: (822)2573-9099 E-mail: melofield@netvigator.com

# Contract No. DC/2009/13 Project Name: Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan

## Sok Kwu Wan

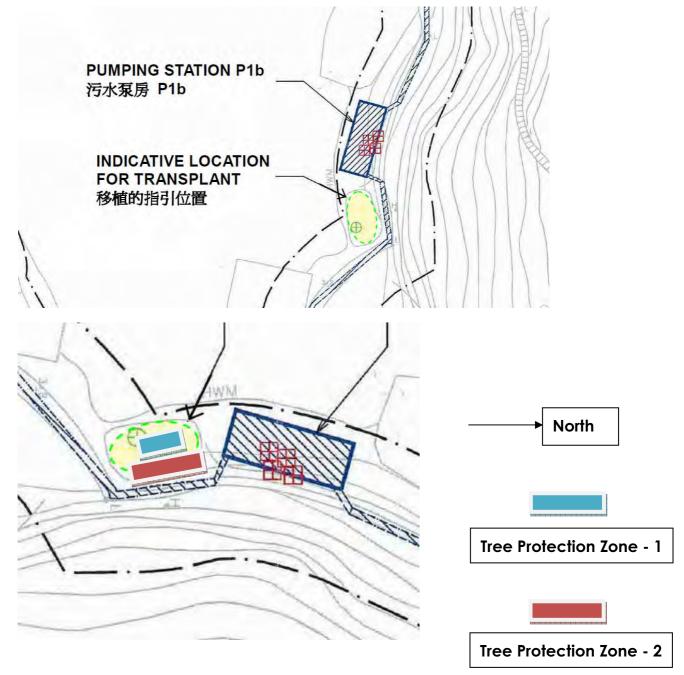
## **Tree Inspection Report for Celtis timorensis**

## Inspection Date : 31-05-2013



#### 1. Introduction

According to the requirement in the Environmental Permit EP-281/2007/A, the uncommon tree species, *Celtis timorensis*, found in the pumping station P1b area as shown in figure below shall be properly transplanted to the area immediately south of the Pumping Station P1b before commencement of construction of the Pumping Station P1b



This Tree Inspection Report describes the bi weekly monitoring result of the *Celtis timorensis*, which were additionally planted as the compensation of previously transplanted Celtis timorensis CT7, CT8, CT9 & CT10.

#### 2. Summary of Inspection

Date of Inspection	30 April 2013, around 15:30
Location	A soil ground adjacent to the Pumping
	Station P1b Chung Mei, at Sok Kwu Wan,
	Lamma Island.
Weather	Cloudy, the vegetations are located under
	the shade of existing tall trees.
The labeled Celtis timorensis	CT_2A, CT_3A, CT_5A & CT_6A
under Tree Protection Zone 2	

#### 3. Proposed Inspection Schedule

Month	Actual / proposed Inspection Date
October, 2011	10 and 24 October 2011
November, 2011	8 November 2011
December, 2011	14 and 30 December 2011
January 2012	31 January 2012
February 2012	15 and 29 February 2012
March 2012	15 and 31 March 2012
April 2012	16 and 30 April 2012
May 2012	15 and 31 May 2012
June 2012	15 and 30 June 2012
July 2012	16 and 30 July 2012
August 2012	15 and 31 August 2012
September 2012	15 and 29 September 2012
October 2012	15 and 31 October 2012
November 2012	15 and 30 November 2012
December 2012	15 and 30 December 2012
January 2013	15 and 30 January 2013
February 2013	15 and 28 February 2013
March 2013	15 and 30 March 2013
April 2013	15 and 30 April 2013
May 2013	15 and 31 May 2013

Tree No	Speciation	Health Status
CT_2A	Celtis timorensis	Poor
CT_3A	Celtis timorensis	Poor
CT_5A	Celtis timorensis	Good
CT_6A	Celtis timorensis	Good

#### 4. Summary of Inspection Result

#### Inspection parameters or criteria

- Good Leaves and stem grown very lush, additional or larger in size of leaves can be observed in each inspection
- Fair Green leaves can be found. No major unhealthy condition of the plant is observed. The condition is stable.
- Poor Fewer green leaves than usual are observed. No new leaf is grown and the condition keep stable. The bark is dry. The plant is weak.
- Very Poor No new green leaf or bud can be observed. The bark is dry. The plant is weak.

#### 5. Description of Inspection Results:

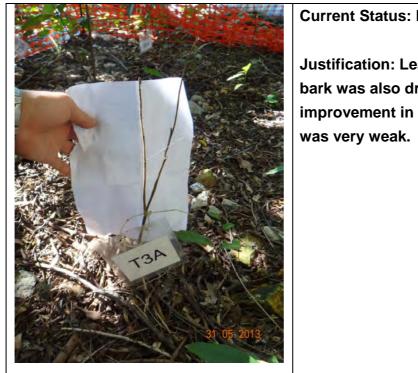
#### Tree ID:CT\_2A



#### **Current Status: Poor**

Justification: Leaves were dry. The bark was also dry. No significant improvement in health. The plant was very weak.

#### Tree ID: CT\_3A



**Current Status: Poor** 

Justification: Leaves were dry. The bark was also dry. No significant improvement in health. The plant

Tree ID: CT\_5A



**Current Status: Good** 

**Justification: Significant** improvement in health. The plant was healthy. Some leaves were damaged by insect.

Tree ID: CT\_6A



#### **Overall Condition**

In the Tree Protection Zone 2, The health of CT\_5A and CT\_6A were found satisfactory. Regular watering and weeding will be carried out during dry weather. They may better recover under this warm and rainy weather. Some newly grown green leaves were found eaten by insects. Remove any insect found on the plant physically to prevent the bud attacked by leaf-feeding insect. No pesticide should be used when the plants are weak.

Considering the condition of CT2A, CT3A were in poor condition, compensatory of additional Celtis timorensis is proposed and will be carried out in the coming warm weather season for better growing. 經緯園藝有限公司 Melofield Nursery & Landscape Contractor Ltd <sup>元朗下攸田村 125號</sup> 125, Ha Yau Tin Tsuen, Yuen Long, N.T.

TEL: (852) 2572-0048 FAX: (822)2573-9099 E-mail: melofield@netvigator.com

# Contract No. DC/2009/13 Project Name: Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan

## Sok Kwu Wan

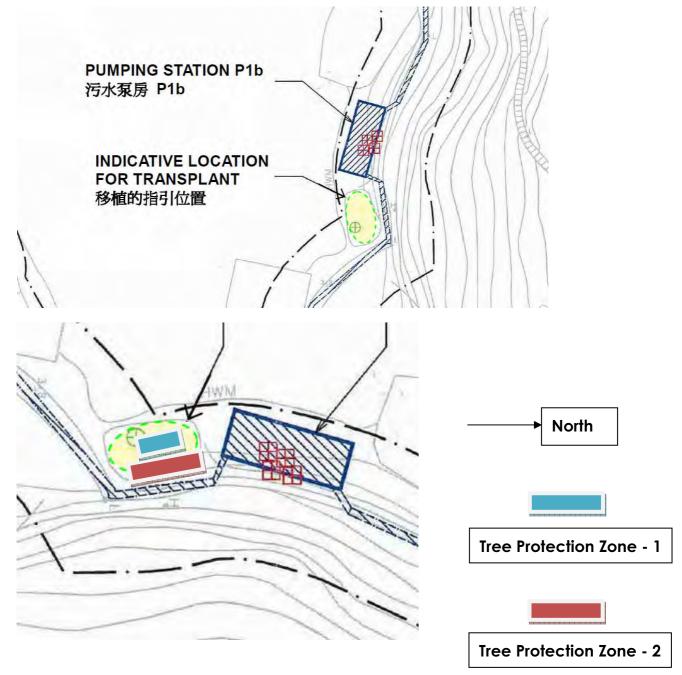
## **Tree Inspection Report for Celtis timorensis**

## Inspection Date : 15-06-2013



#### 1. Introduction

According to the requirement in the Environmental Permit EP-281/2007/A, the uncommon tree species, *Celtis timorensis*, found in the pumping station P1b area as shown in figure below shall be properly transplanted to the area immediately south of the Pumping Station P1b before commencement of construction of the Pumping Station P1b



This Tree Inspection Report describes the bi weekly monitoring result of the *Celtis timorensis*, which were additionally planted as the compensation of previously transplanted Celtis timorensis CT7, CT8, CT9 & CT10.

2. Summary of Inspection
--------------------------

Date of Inspection	15 June 2013, around 15:30
Location	A soil ground adjacent to the Pumping
	Station P1b Chung Mei, at Sok Kwu Wan,
	Lamma Island.
Weather	Cloudy, the vegetations are located under
	the shade of existing tall trees.
The labeled Celtis timorensis	CT_2A, CT_3A, CT_5A & CT_6A
under Tree Protection Zone 2	

#### 3. Proposed Inspection Schedule

Month	Actual / proposed Inspection Date	
October, 2011	10 and 24 October 2011	
November, 2011	8 November 2011	
December, 2011	14 and 30 December 2011	
January 2012	31 January 2012	
February 2012	15 and 29 February 2012	
March 2012	15 and 31 March 2012	
April 2012	16 and 30 April 2012	
May 2012	15 and 31 May 2012	
June 2012	15 and 30 June 2012	
July 2012	16 and 30 July 2012	
August 2012	15 and 31 August 2012	
September 2012	15 and 29 September 2012	
October 2012	15 and 31 October 2012	
November 2012	15 and 30 November 2012	
December 2012	15 and 30 December 2012	
January 2013	15 and 30 January 2013	
February 2013	15 and 28 February 2013	
March 2013	15 and 30 March 2013	
April 2013	15 and 30 April 2013	
May 2013	15 and 30 May 2013	
June 2013	15 June 2013	

Tree No	Speciation	Health Status
CT_2A	Celtis timorensis	Poor
CT_3A	Celtis timorensis	Poor
CT_5A	Celtis timorensis	Good
CT_6A	Celtis timorensis	Good

#### 4. Summary of Inspection Result

#### Inspection parameters or criteria

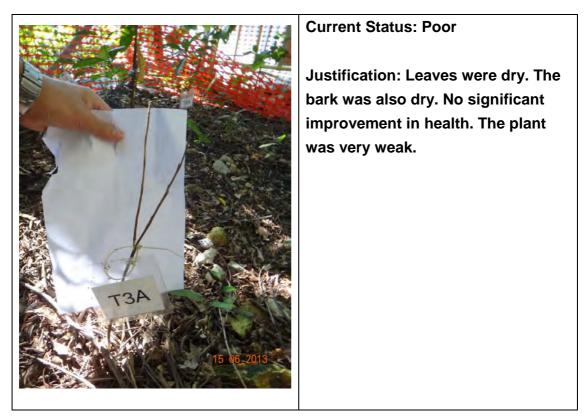
- Good Leaves and stem grown very lush, additional or larger in size of leaves can be observed in each inspection
- Fair Green leaves can be found. No major unhealthy condition of the plant is observed. The condition is stable.
- Poor Fewer green leaves than usual are observed. No new leaf is grown and the condition keep stable. The bark is dry. The plant is weak.
- Very Poor No new green leaf or bud can be observed. The bark is dry. The plant is weak.

#### 5. Description of Inspection Results:

#### Tree ID:CT\_2A



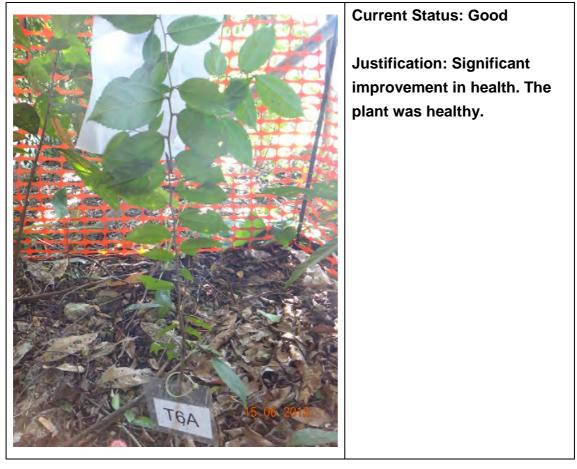
#### Tree ID: CT\_3A



Tree ID: CT\_5A



#### Tree ID: CT\_6A



#### **Overall Condition**

In the Tree Protection Zone 2, The health of CT\_5A and CT\_6A were found satisfactory. Regular watering and weeding will be carried out during dry weather. They may better recover under this warm and rainy weather. Some newly grown green leaves were found eaten by insects. Remove any insect found on the plant physically to prevent the bud attacked by leaf-feeding insect. No pesticide should be used when the plants are weak.

Considering the condition of CT2A, CT3A were in poor condition, compensatory of additional Celtis timorensis is proposed and will be carried out in the coming warm weather season for better growing.