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
BASELINE MONITORING REPORT VOLUME 2 – WATER QUALITY

PREPARED FOR
LEADER CIVIL ENGINEERING CORPORATION LIMITED

Quality Index

Date	Reference No.	Prepared By	Approved By
13 May 2011	TCS00512/09/600/R00182v4		
		Nicola Hon Environmental Consultant	T.W. Tam Environmental Team Leader

Version	Date	Description
1	7 March 2011	First Submission
2	18 April 2011	Amended against IEC's comments on 25 March 2011
3	3 May 2011	Amended against IEC's comments on 27 April 2011
4	13 May 2011	Amended against RE comments on 9 May 2011

Scott Wilson CDM Joint Venture

Chief Engineer/Harbour Area Treatment Scheme
Drainage Services Department
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2A Pok Fu Lam Road
Hong Kong

Your reference:

Our reference: 05117/6/16/375889

Date: 24 May 2011

BY FAX ONLY

Attention: Mr. C K Au

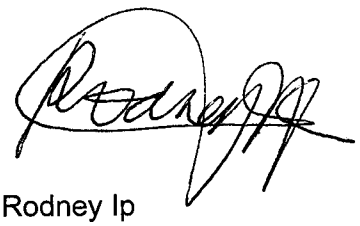
Dear Sirs,

Contract No. DC/2009/13
Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan
Sok Kwu Wan Portion Area
Baseline Monitoring Report Volume 2 – Water Quality

As there were some amendment on the previous verified report by the environmental team, Action-United Environmental Services and Consulting (AUES), this letter would supersede the previous verification letter (ref: 05117/6/16/375140) issued on 9 May 2011.

We refer to the Environmental Permit (EP-281/2007/A) and the email from the environmental team, AUES with the revised baseline monitoring report volume 2 – water quality, dated 24 May 2011 for the captioned project. We do not have further comment and have verified the captioned report.

Yours faithfully
SCOTT WILSON CDM JOINT VENTURE



Rodney Ip

ICWR/STKW/ecwc

cc Leader Civil Engineering (Attn: Mr Vincent Chan)
AUES (Attn: Mr T.W. Tam)
ER/LAMMA (Attn: Mr Neil Wong)
CDM (Attn: Mr Mark Sin)

EXECUTIVE SUMMARY

ES.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.

ES.02. This 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 Permits (No. EP-281/2007/A and EP-282/2007) for the Project have been obtained by the DSD on 29 June 2007 for the relevant construction works.

ES.03. The major works of the Project is to construct a sewage treatment facility at Sok Kwu Wan and Yung Shue Wan with a capacity of 1,430m^3/day and 2,850m^3/day respectively to provide secondary treatment for the sewage generated in Lamma Island. It also involves 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 laying of underground sewerage pipes.

ES.04. Action-United Environmental Services and Consulting (AUES) has been commissioned by Leader as the Environmental Team (ET) to implement the relevant EM&A program.

ES.05. 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. EP-281/2007/A);
(b) Proposed EM&A Programme for Baseline and Impact Monitoring – Yung Shue Wan (under EP No. EP-282/2007)

ES.06. According to the related Environmental Monitoring & Audit Manual and the Environmental Permit No. EP-281/2007/A, the scope of environmental monitoring for Sok Kwu Wan during the construction phase should be comprised of air quality, construction noise and water quality and terrestrial ecology (uncommon tree species) survey as well as the environmental site audit. All the above works should be undertaken by an Environmental Team (ET) in accordance with the Environmental Monitoring and Audit Manual of Sok Kwu Wan.

ES.07. Base on the requirements stated in the EM&A Manual of the Project, the baseline water quality monitoring should be carried out for consecutive six months before commencement of any marine works. To match with the progress of the Project, the baseline monitoring for air quality and noise were carried out separately.

ES.08. Before the Project got awarded, there was one concurrent project Contract No. DC/2007/18 – "*Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works*" by DSD at Sok Kwu Wan. The advance air quality and noise monitoring data collected by the ET of Contract DC/2007/18 were used to establish environmental baseline criteria for the Project. The *Baseline Air and Noise Monitoring report (Volume 1)* has been submitted to and verified by IEC and endorsed by EPD in July 2010.

ES.09. This Baseline Monitoring Report Volume 2 - Water Quality addresses the background condition of the marine water quality at Sok Kwu Wan Portion Work Site before the construction stage of the submarine outfall. Furthermore, the performance criteria for the operation phase of Sok Kwu Wan Sewerage Treatment Plant (STP) are also presented in this report.

ES.10. The baseline marine water quality monitoring had been undertaken at the designated locations for 6 consecutive months from **August 2010** to **January 2011**. During the period of the baseline monitoring, there were no marine works (submarine outfall construction) undertaken or other external influencing factors which significantly concerned.

ES.11. This report summarizes the key findings and presents the process and rationale behind

determining a set of Action and Limit Levels (A/L Levels) of marine water quality based on the baseline data. These A/L Levels will serve as the yardsticks for assessing the acceptability of the environmental impact for the submarine outfall construction phase and the STP operation stage monitoring. They are statistical in nature and derived according to the criteria set out in the EM&A Manual.

ES.12. The derived Action and Limit Levels of water quality during Construction Phase of submarine outfall and STP operation are given in ***Tables ES-1*** and ***ES-2***.

Table ES-1 Action and Limit Levels of Water Quality Monitoring during Construction Phase of Submarine Outfall

Parameter	Performance Criteria	Impact Station		
		W1	W2	W3
DO Concentration (Surface and Middle) (mg/L)	Action Level	3.82	4.14	4.23
	Limit Level	3.49	3.89	3.59
DO Concentration (Bottom) (mg/L)	Action Level	N/A	3.60	3.37
	Limit Level	N/A	3.06	3.18
Turbidity (Depth-Average) (NTU)	Action Level	4.39	4.84	6.48
	Limit Level	6.06	5.99	6.71
Suspended Solids (Depth-Average) (mg/L)	Action Level	12.41	9.24	10.79
	Limit Level	12.68	11.28	12.25

Notes:

- *The proposed Action/Limit Levels of DO are adopted to be used 5%-ile/1%-ile of baseline data;*
- *The proposed Action/Limit Levels of Turbidity and SS are adopted to be used 95%-ile/99%-ile of baseline data; and*
- *All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered necessary.*

Table ES-2 Action and Limit Levels of Water Quality Monitoring during Operation Stage of the STP

Parameter	Performance Criteria	Impact Station		
		W1	W2	W3
DO Concentration (Surface and Middle) (mg/L)	Action Level	3.82	4.14	4.23
	Limit Level	3.49	3.89	3.59
DO Concentration (Bottom) (mg/L)	Action Level	N/A	3.60	3.37
	Limit Level	N/A	3.06	3.18
Turbidity (Depth-Average) (NTU)	Action Level	4.39	4.84	6.48
	Limit Level	6.06	5.99	6.71
Suspended Solids (Depth-Average) (mg/L)	Action Level	12.41	9.24	10.79
	Limit Level	12.68	11.28	12.25
Ammonia as N (Depth – Average) (mg/L)	Action Level	0.051	0.042	0.047
	Limit Level	0.054	0.045	0.053
Total Inorganic Nitrogen as N (Depth-Average) (mg/L)	Action Level	0.401	0.385	0.396
	Limit Level	0.464	0.453	0.442
E. coli Depth-Average (1cfu/100ml)	Action Level	35	232	69
	Limit Level	610	610	610

Notes:

- *The proposed Action/Limit Levels of DO are adopted to be used 5%-ile/1%-ile of baseline data;*
- *The proposed Action/Limit Levels of Turbidity, SS, Ammonia and TIN are adopted to be used 95%-ile/99%-ile of baseline data;*
- *E-coli performance criteria of Action and Limit Levels are respectively proposed to use 95%-ile baseline data and 610 cfu/100mL geometric mean; and*
- *All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered necessary.*

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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 Permits (No. EP-281/2007/A and EP-282/2007) for the Project have been obtained by the DSD on 29 June 2007 for the relevant construction works.

1.02 The major works of the Project is to construct a sewage treatment facility at Sok Kwu Wan and Yung Shue Wan with a capacity of 1,430m^3/day and 2,850m^3/day respectively to provide secondary treatment for the sewage generated in Lamma Island. It also involves 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 laying of underground sewerage pipes. 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 program. 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. EP-281/2007/A varied on 23 September 2009)

(b) Proposed EM&A Programme for Baseline and Impact Monitoring – Yung Shue Wan (under EP No. EP-282/2007)

1.05 According to the related Environmental Monitoring & Audit Manual and the Environmental Permit No. EP-281/2007/A, the scope of environmental monitoring for Sok Kwu Wan during the construction phase should be comprised of air quality, construction noise and water quality and terrestrial ecology (uncommon tree species) survey as well as the environmental site audit. As part of the EM&A program, baseline monitoring is required to determine the ambient environmental conditions.

1.06 Before the Project got awarded, there was one concurrent project Contract No. DC/2007/18 – "*Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works*" by DSD at Sok Kwu Wan. The advance air quality and noise monitoring data collected by the ET of Contract DC/2007/18 were used to establish environmental baseline criteria for the Project. The *Baseline Air and Noise Monitoring report (Volume 1)* has been submitted to and verified by IEC and endorsed by EPD in July 2010.

1.07 This Baseline Monitoring Report Volume 2 - Water Quality addresses the background condition of the marine water quality at Sok Kwu Wan Portion Work Site before the construction stage of the submarine outfall. Furthermore, the performance criteria for the operation phase of Sok Kwu Wan Sewerage Treatment Plant (STP) are also presented in this report.

1.08 The baseline marine water quality monitoring had been undertaken at the designated locations for 6 consecutive months from **August 2010** to **January 2011** in accordance with the EM&A Manual stipulation. During the period of the baseline monitoring, there were no marine works

(submarine outfall construction) undertaken or other external influencing factors which significantly concerned.

1.09 This report summarizes the key findings and presents the process and rationale behind determining a set of Action and Limit Levels (A/L Levels) of marine water quality based on the baseline data. These A/L Levels will serve as the yardsticks for assessing the acceptability of the environmental impact for the submarine outfall construction phase and the STP operation stage monitoring. They are statistical in nature and derived according to the criteria set out in the EM&A Manual.

REPORT STRUCTURE

1.10 The "Baseline Monitoring Report Volume 2 – Water Quality" is structured into the following sections:

SECTION 1 **INTRODUCTION**

SECTION 2 **SUMMARY OF BASELINE MONITORING REQUIREMENTS**

SECTION 3 **BASELINE MONITORING METHODOLOGIES**

SECTION 4 **BASELINE WATER QUALITY MONITORING RESULTS**

SECTION 5 **CONCLUSION & RECOMMENDATION**

2 SUMMARY OF BASELINE MONITORING REQUIREMENTS

ENVIRONMENTAL ASPECT

2.01 The EM&A baseline monitoring program cover the following environmental issues:

- Air quality;
- Construction noise;
- Marine Water quality; and
- Ecology survey

2.02 The ET implements the EM&A programme in accordance with the aforementioned requirements. This report only presents the EM&A requirements for the Marine Water Quality monitoring while other aspects such as air quality, noise and ecology monitoring were presented in another submissions. Detailed EM&A program for marine water quality monitoring are presented in the following sub-sections.

2.03 A summary of the Marine Water monitoring parameters is presented in ***Table 2-1***.

Table 2-1 Summary of the Marine Water monitoring parameters of EM&A Requirements

Measurement	Parameters
In-situ	• Dissolved Oxygen Concentration (mg/L); • Dissolved Oxygen Saturation (%); • Turbidity (NTU); • pH unit; • Salinity (ppt); • Water depth (m); and • Temperature (ºC).
Laboratory Analysis	• Suspended Solids (mg/L) • Ammonia-Nitrogen (mg/L) • Total Inorganic Nitrogen as N (mg/L) • E Coli (cfu/100mL)

MONITORING LOCATIONS

Marine Water Quality

2.04 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 coordinates of marine water quality monitoring stations is described in ***Table 2-2*** and the graphical is shown in ***Appendix C*** and would be performed for EM&A programme.

Table 2-2 Location of the Renewed Air Quality Monitoring Station

Monitoring Station	Description	Coordinates	
		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

2.05 The Baseline monitoring was basically carried out in accordance with the requirements in *EM&A Manual Sections* 4.6. The marine water quality monitoring requirements are listed as follows:

Marine Water Monitoring

Parameters:	Duplicate in-situ measurements: water depth, temperature, Dissolved Oxygen, pH, turbidity and salinity; HOKLAS-accredited laboratory analysis: Suspended Solids, Ammonia as N (NH_3-N), Total Inorganic Nitrogen (TIN) and *E-coli*.
Frequency:	2 occasions per month (mid-ebb and mid-flood tides)
Sampling 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:	6 months (cover dry and wet seasons) before commencement of the marine work (submarine outfall construction)

MONITORING EQUIPMENT

Water Quality Monitoring

i. **Dissolved Oxygen and Temperature Measuring Equipment** – The instrument should be a portable and weatherproof dissolved oxygen (DO) measuring instrument complete with cable, sensor and a DC power source. The equipment should be capable of measuring as a DO level in the range of 0 – 20mg L-1 and 0 – 200% saturation; and a temperature of 0 – 45 degree Celsius.

ii. **pH Meter** – The instrument should consist of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device. It should be readable to 0.1 pH in arrange of 0 to 14.

iii. **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.

iv. **Water Sampling Equipment** – A water sampler should comprise a transparent PVC cylinder with a capacity 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.

v. **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.

vi. **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.

vii. **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).

viii. **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.

ix. **Suspended Solids, Ammonia-Nitrogen, Total Inorganic Nitrogen** and ***E.Coli* Analysis** – Analysis of those parameters shall be carried out in a HOKLAS or other international accredited laboratory following the analytical methods listed in ***Table 2-3***

Table 2-3 Analytical Methods to be applied to Marine Water Quality Samples.

Determinant	Standard	Detection Limit
SS (mg/L)	APHA 2540D	0.5mg/L
NH3-N (mg/L)	ASTM D3590-89 B(FIA)	0.005mg/L
E-Coli	In-house method, membrane filtration with CHRIMagar Liquid E.coli-coliform culture	1cfu/100mL

DERIVATION OF ACTION/LIMIT (A/L) LEVELS

2.06 The baseline data obtained would be used for determining the environmental acceptance criteria for impact monitoring. A summary of derivation of Action/Limit (A/L) Levels for water quality is shown in ***Table 2-4***.

Table 2-4 Derivation of Action and Limit Levels for Water Quality

Parameters	Action	Limit
DO in mg/L (Surface, Middle and Bottom)	Surface and Middle 5%-ile of baseline data for surface and middle layer Bottom 5%-ile of baseline data for bottom layer	Surface and Middle • For non-FCZ Station - 4 mg/L or 1%-ile of baseline data for surface and middle layer; • For FCZ Station - 5 mg/L or 1%-ile of baseline data for surface and middle layer; Bottom 2 mg/L or 1%-ile of baseline data for bottom layer
Turbidity in NTU (depth-averaged)	95%-ile of baseline data or 120% of upstream and downstream control station's turbidity at the same tide of the same day	99%-ile of baseline data or 130% of upstream and downstream control station's turbidity at the same tide of the same day
SS in mg/ L (depth-averaged)	95%-ile of baseline data or 120% of upstream and downstream control station's SS at the same tide of the same day	99%-ile of baseline data or 130% of upstream and downstream control station's SS at the same tide of the same day
Ammonia as N in mg/L (depth-average)	95%-ile of baseline data or 0.021 mg/L	99%-ile of baseline data or 0.021 mg/L
E.coli in cfu/100mL (depth-average)	95%-ile of baseline data	99%-ile of baseline data or 610 cfu/100mL as geometric mean
TIN in mg/L (depth-average)	95%-ile of baseline data	99%-ile of baseline data

Notes:

- *"Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths;*
- *For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits;*
- *For turbidity, SS, Ammonia as N, TIN as N and E.coli non-compliance of the water quality limits occurs when monitoring result is higher than the limits.*

2.07 These A/L Levels is served as the yardsticks for assessing the acceptability of the environmental impact for the submarine outfall construction phase and the STP operation stage monitoring. They are statistical in nature and derived according to the criteria set out in the EM&A Manual. Should non-compliance of the any parameters criteria occur, the relevant action should be undertaken as stipulated in the EM&A Manual ***Table 4-4*** "*Event/Action Plan (Water Quality)*", which is attached in ***Appendix D***.

3 BASELINE MONITORING METHODOLOGIES

3.01 The baseline marine water quality monitoring was carried out for consecutive 6 months at the designated locations from August 2010 to January 2010. During the period of the baseline monitoring, there were no marine works (submarine outfall construction) undertaken or other external influencing factors which significantly concerned.

LOCATION OF BASELINE MONITORING

3.02 The baseline marine water quality monitoring has been undertaken at the designated locations as recommended in the *Section 4.5 of EM&A Manual*. The detail information about the monitoring stations could be referred to ***Tables 2-2*** while the graphical of monitoring locations is shown in ***Appendix C***.

MONITORING EQUIPMENT AT BASELINE MONITORING

3.03 The monitoring equipments adopted for the EM&A program was proposed by ET and verified by IEC prior the commencement of monitoring work. The equipments used for baseline monitoring is listed in ***Table 3-1*** as below.

Table 3-1 Monitoring Equipments Used in EM&A Program

Marine Water quality	
A Digital Global Positioning System	GPS12 Garmin
Water Depth Detector	Eagle Sonar
Water Sampler	A 2-litre transparent PVC cylinder with latex cups at both ends
Thermometer & DO meter	YSI Model 6820 Multi-parameter Water Quality Monitoring System or YSI 550A DO Meter
pH meter	YSI Model 6820 Multi-parameter Water Quality Monitoring System or Hanna HI 98128
Turbidimeter	YSI Model 6820 Multi-parameter Water Quality Monitoring System or Hach 2100p
Salinometer	YSI Model 6820 Multi-parameter Water Quality Monitoring System or ATAGO Hand Refractometer.
Sample Container	High density polythene bottles (provided by laboratory)
Storage Container	'Willow' 33-litter plastic cool box with Ice pad
Suspended Solids; Ammonia as N (NH_3-N), Total Inorganic Nitrogen (TIN) and *E-co*li	HOKLAS-accredited laboratory (ALS Technichem (HK) Pty Ltd)

MONITORING PROCEDURES

3.04 The marine water quality monitoring was conducted at the five designated locations at Sok Kwu Wan. The sampling procedure including the in-situ monitoring are presented as below:

Sampling Procedure

3.05 A Digital Global Positioning System (GPS) was used to identify the designated monitoring stations prior water sampling. A portable, battery-operated echo sounder was used for the determination of water depth at each station. At each station, marine water samples were collected at three depths: 1m below water surface, 1m above sea bottom and at mid-depth when the water depth exceeds 6m. Samples at 1m below water surface and 1m above sea bottom were collected when the water depth is between 3m and 6m. Only 1 sample at mid-depth was taken when the water depth is below 3m.

3.06 The marine water sampler was lowered into the water body at the predetermined depth. The trigger system of the sampler was activated with a messenger. The opening ends of the sampler then were closed accordingly and water samples were collected.

3.07 The sample container was rinsed with a portion of the water sample. The water sample then was transferred to the high-density polythene bottles as provided by the laboratory, labeled with a unique sample number and sealed with a screw cap.

3.08 Before commencement of the sampling, general information such as the date and time of sampling, weather condition and tidal condition as well as the personnel responsible for the monitoring were be recorded on the monitoring field data sheet.

3.09 A 'Willow' 33-liter plastic cool box packed with ice was used to preserve the collected water samples prior to arrival at the laboratory for chemical determination. The water temperature of the cool box was maintained at a temperature as close to 4^0C as possible without being frozen. Samples collected were delivered to the laboratory upon collection.

In-situ Measurement

Positioning of Monitoring Locations

3.10 A digital Global Positioning System (GPS) was used during marine water monitoring to ensure the monitoring vessel is at the correct location when taking measurement and samples.

Depth, Dissolved Oxygen (DO), Temperature, Turbidity, Salinity and pH value

3.11 The *YSI Model 6820 Multi-parameter Water Quality Monitoring System* was used for marine water in-situ measurement, which automates the measurements and data logging of depth, temperature, dissolved oxygen, dissolved oxygen saturation, turbidity, pH and salinity simultaneously. Before each round of monitoring, the dissolved oxygen probe was calibrated by the wet bulb method and the turbidity and salinity probes checked with distilled water.

3.12 The laboratory has be comprehensive quality assurance and quality control programmes. For QA/QC procedures, one duplicate samples of every batch of 20 samples is analyzed as followed the HOKLAS accredited requirement.

3.13 The Multi-parameter Water Quality Monitoring System was calibrated by HOKLAS accredited laboratory of three month interval. All valid calibration certificates during marine water monitoring period showed in ***Appendix E***.

LABORATORY ANALYSIS

3.14 All water samples were analyzed with various chemical tests as specified in the EM&A Manual by a local HOKLAS-accredited testing laboratory (ALS Technichem (HK) Pty Ltd HOKLAS registration no. 66). Duplicate samples from each independent sampling event are required for all parameters and the samples were mixed and analyzed in one set of laboratory analysis. The mixed process is undertaken by the laboratory. The determination works started within 24 hours after collection of the water samples or within the holding time as advised by the laboratory.

3.15 The detection limits and testing method of each parameter are shown below in ***Table 3-2***. The certification of laboratory with HOKLAS accredited analytical tests are provided in ***Appendix E***.

Table 3-2 Testing Method and Detection limits of the Laboratory

Determinant	Testing Method	Detection Limit
Suspended solid	Determination use HOKLAS accredited analytical methods namely ALS Method EA-025 (based on APHA 2540 D)	0.5mg/L
Total Inorganic Nitrogen	By Calculation (it is the sum of ammonia and total oxidizable nitrogen in sample	0.01mg/L
Total Oxidizable Nitrogen	Determination use HOKLAS accredited analytical methods namely ALS Method EA-059A (based on APHA 4500 NO3:F)	0.01mg/L
Ammonia nitrogen	Determination use HOKLAS accredited Laboratory analytical methods namely ALS Method EK-055A (based on APHA 4500NH_3: G)	0.005 mg/L
**E.coli*	Determination use HOKLAS accredited analytical methods namely ALS Method EM-002 (based on DoE Section 7.8 & 7.9 plus in-situ urease test)	1cfu/100ml

Remarks: (*) water samples were determined within 24 hours by the laboratory upon receipt

DATA MANAGEMENT AND DATA QA/QC CONTROL

3.16 The baseline monitoring data were handled by the ET's in-house data recording and management system.

3.17 The monitoring data recorded in the equipment were downloaded directly from the equipment at the end of each monitoring day. The downloaded monitoring data were input into a computerized database properly maintained by the ET. The laboratory results were input directly into the computerized database and checked by personnel other than those who input the data.

3.18 For monitoring parameters that require laboratory analysis, the local laboratory is to follow the QA/QC requirements as set out under the HOKLAS scheme for the relevant laboratory testing.

4 BASELINE WATER QUALITY MONITORING RESULTS

4.01 The baseline marine water quality monitoring was carried out from **August 2010** to **January 2011** for consecutive six months. The baseline monitoring schedule is presented in ***Appendix F***. For easy reference, the data sheets for water quality monitoring including the in-situ measurements and laboratory analysis results are shown in ***Appendix G*** and full reports of the laboratory results are provided in ***Appendix H***. The monitoring results for all water quality parameters are summarized in ***Tables 4-1***.

Table 4-1 Summary of Water Quality Monitoring Results

Designated Monitoring Station	C1	C2	C3	W1	W2	W3
Dissolved Oxygen – Depth Average of Surface & Middle Layers (mg/L)						
5%-ile	4.18	4.10	3.94	3.82	4.14	4.23
1%-ile	3.94	4.00	3.86	3.49	3.89	3.59
Average	6.07	6.61	6.08	6.33	6.17	6.01
Min	3.88	3.98	3.86	3.47	3.84	3.41
Max	10.52	11.82	7.42	9.27	11.48	8.68
Dissolved Oxygen – Bottom Layer (mg/L)						
5%-ile	3.46	3.86	3.81	NA	3.60	3.37
1%-ile	3.11	3.74	3.71	NA	3.06	3.18
Average	5.46	5.97	5.64	NA	5.67	5.56
Min	3.01	3.73	3.68	NA	2.92	3.17
Max	9.97	10.39	10.02	NA	10.76	8.26
Turbidity – Depth Average (NTU)						
95%-ile	5.73	4.51	6.61	4.39	4.84	6.48
99%-ile	7.64	6.08	7.24	6.06	5.99	6.71
Average	3.60	2.92	3.37	3.16	3.44	3.40
Min	1.58	1.30	1.08	1.40	1.38	1.48
Max	8.17	6.53	7.35	6.55	6.33	6.75
Suspended Solids – Depth Average (mg/L)						
95%-ile	8.22	9.86	9.02	12.41	9.24	10.79
99%-ile	10.44	12.10	10.68	12.68	11.28	12.25
Average	5.03	4.36	5.02	4.94	4.76	4.98
Min	0.90	0.70	1.27	0.50	1.10	0.50
Max	11.10	12.73	11.17	12.70	11.87	12.67
Ammonia as N – Depth Average (mg/L)						
95%-ile	0.040	0.075	0.046	0.051	0.042	0.047
99%-ile	0.051	0.099	0.047	0.054	0.045	0.053
Average	0.019	0.025	0.017	0.018	0.017	0.020
Min	0.005	0.005	0.005	0.005	0.005	0.005
Max	0.054	0.105	0.047	0.055	0.046	0.054
Total Inorganic Nitrogen – Depth Average (mg/L)						
95%-ile	0.384	0.385	0.377	0.401	0.385	0.396
99%-ile	0.415	0.457	0.401	0.464	0.453	0.442
Average	0.190	0.200	0.184	0.193	0.188	0.190
Min	0.063	0.027	0.060	0.040	0.063	0.067
Max	0.420	0.477	0.407	0.480	0.473	0.453
***E-coli* – Depth Average (cfu/100mL)**						
95%-ile	126	22	97	35	232	69
99%-ile	146	45	557	85	325	134
Average	28	7	48	11	33	15
Min	1	1	1	1	1	1
Max	150	52	693	100	343	152
Salinity (ppt)						
Min	30.53	28.66	30.25	29.22	29.88	29.60
Max	34.43	34.48	34.12	34.20	34.46	34.43
pH value (Unit)						
Min	8.15	7.98	8.03	8.01	7.96	7.99
Max	8.54	8.59	8.54	8.56	8.54	8.56

4.02 As the water depth at Impact Station W1 is less than 3m, in-situ measurement and sampling was undertaken at mid-depth level only according to the water quality monitoring requirement.

4.03 The meteorological data during the baseline water quality monitoring are summarized in ***Appendix I***.

PROPOSED ACTION/LIMIT LEVELS FOR WATER QUALITY

4.04 The proposed Action and Limit Levels for water quality are presented in ***Table 4-2***. The derivation of water quality performance criteria were based on the ***Table 2-4***.

Table 4-2 Action and Limit Levels for Water Quality Monitoring

Parameter	Performance Criteria	Impact Station		
		W1	W2	W3
DO Concentration (Surface and Middle) (mg/L)	Action Level	3.82	4.14	4.23
	Limit Level	3.49	3.89	3.59
DO Concentration (Bottom) (mg/L)	Action Level	N/A	3.60	3.37
	Limit Level	N/A	3.06	3.18
Turbidity (Depth-Average) (NTU)	Action Level	4.39	4.84	6.48
	Limit Level	6.06	5.99	6.71
Suspended Solids (Depth-Average) (mg/L)	Action Level	12.41	9.24	10.79
	Limit Level	12.68	11.28	12.25
Ammonia as N (Depth – Average) (mg/L)	Action Level	0.051	0.042	0.047
	Limit Level	0.054	0.045	0.053
Total Inorganic Nitrogen (Depth-Average) (mg/L)	Action Level	0.401	0.385	0.396
	Limit Level	0.464	0.453	0.442
E. coli Depth-Average (1cfu/100ml)	Action Level	35	232	69
	Limit Level	610	610	610

Notes:

- *The proposed Action/Limit Levels of DO are adopted to be used 5%-ile/1%-ile of baseline data;*
- *The proposed Action/Limit Levels of Turbidity, SS, Ammonia and TIN are adopted to be used 95%-ile/99%-ile of baseline data;*
- *E-coli performance criteria of Action and Limit Levels are respectively proposed to use 95%-ile baseline data and 610 cfu/100mL geometric mean; and*
- *All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered necessary.*

DISCUSSION AND RECOMMENDATIONS

4.05 The baseline monitoring data obtained at each monitoring locations reflected the typical water quality of the Project which covered both wet and dry seasons (August to January next year). The established environmental performance criteria, i.e. Action & Limit Levels, are therefore applicable to the Event and Action Plan during to the commencement of construction activities of the Project in whole period. Similarly, this also applies to Sok Kwu Wan STP operation stage.

4.06 In view of the relevant EIA report Section 5.4.1, it is understood that the major potential construction impacts for water quality is due to the dredging works for pipe laying for the submarine outfall, hence increasing suspended solids concentrations in the water body. Other parameters such as TIN, ammonia nitrogen (NH_3-N) and *E-coli* concentrations, it is considered those monitoring are not required during the construction phase as they are only concerned during the operation phase of the STW.

4.07 The environmental performance criteria may need to be re-established if it is evident that the baseline conditions have changed significantly. An updated baseline data should then be sought for re-establishment of the updated environmental performance criteria for the Event and Action Plan to be smoothly implemented as specially in the STP operation.

5 CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

5.01 The baseline marine water quality monitoring program at Sok Kwu Wan Portion Work Site was carried out in between **August 2010** and **January 2011** for consecutive six months at the designated monitoring stations in accordance with the EM&A Manual and the approved EM&A Methodology- Proposed EM&A Programme for Baseline and Impact Monitoring at Sok Kwu Wan. During the baseline monitoring, there were no marine work activities such as construction submarine outfall undertaken under this Project. A Master Construction Program of the Project is provided in ***Appendix J***.

5.02 Based on the baseline water quality monitoring results, the recommended environmental performance criteria during construction phase are summarized as follow the table.

Table 5-1 Recommended Action and Limit Levels of Water Quality Monitoring During the Construction Phase

Parameter	Performance Criteria	Impact Station		
		W1	W2	W3
DO Concentration (Surface and Middle) (mg/L)	Action Level	3.82	4.14	4.23
	Limit Level	3.49	3.89	3.59
DO Concentration (Bottom) (mg/L)	Action Level	N/A	3.60	3.37
	Limit Level	N/A	3.06	3.18
Turbidity (Depth-Average) (NTU)	Action Level	4.39	4.84	6.48
	Limit Level	6.06	5.99	6.71
Suspended Solids (Depth-Average) (mg/L)	Action Level	12.41	9.24	10.79
	Limit Level	12.68	11.28	12.25

Notes:

- *The proposed Action/Limit Levels of DO are adopted to be used 5%-ile/1%-ile of baseline data;*
- *The proposed Action/Limit Levels of Turbidity and SS are adopted to be used 95%-ile/99%-ile of baseline data;*
- *All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered necessary.*

5.03 Furthermore, the environmental performance criteria during the SPT operation phase also is recommended as follow the table.

Table 5-2 Recommended Action and Limit Levels of Water Quality Monitoring During the SPT Operation Phase

Parameter	Performance Criteria	Impact Station		
		W1	W2	W3
DO Concentration (Surface and Middle) (mg/L)	Action Level	3.82	4.14	4.23
	Limit Level	3.49	3.89	3.59
DO Concentration (Bottom) (mg/L)	Action Level	N/A	3.60	3.37
	Limit Level	N/A	3.06	3.18
Turbidity (Depth-Average) (NTU)	Action Level	4.39	4.84	6.48
	Limit Level	6.06	5.99	6.71
Suspended Solids (Depth-Average) (mg/L)	Action Level	12.41	9.24	10.79
	Limit Level	12.68	11.28	12.25
Ammonia as N (Depth – Average) (mg/L)	Action Level	0.051	0.042	0.047
	Limit Level	0.054	0.045	0.053
Total Inorganic Nitrogen (Depth-Average) (mg/L)	Action Level	0.401	0.385	0.396
	Limit Level	0.464	0.453	0.442
E. coli Depth-Average (1cfu/100ml)	Action Level	35	232	69
	Limit Level	610	610	610

Notes:

- *The proposed Action/Limit Levels of DO are adopted to be used 5%-ile/1%-ile of baseline data;*
- *The proposed Action/Limit Levels of Turbidity, SS, Ammonia and TIN are adopted to be used 95%-ile/99%-ile of baseline data;*
- *E-coli performance criteria of Action and Limit Levels are respectively proposed to use 95%-ile*

baseline data and 610 cfu/100mL geometric mean; and

- *All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered necessary.*

RECOMMENDATIONS

5.04 The baseline monitoring water quality was conducted throughout both wet and dry seasons (August 2010 to January 2011) in Hong Kong. The established Action & Limit Levels will serve as the yardsticks for assessing the acceptability of the environmental impact during the construction phase of the submarine outfall. Once non-compliance of marine water quality criteria, namely Action and Limit Levels was triggered, actions in accordance with the Event and Action Plan would be carried out. The set out marine water quality criteria is also adopted for post-construction phase and operation phase of the Project.

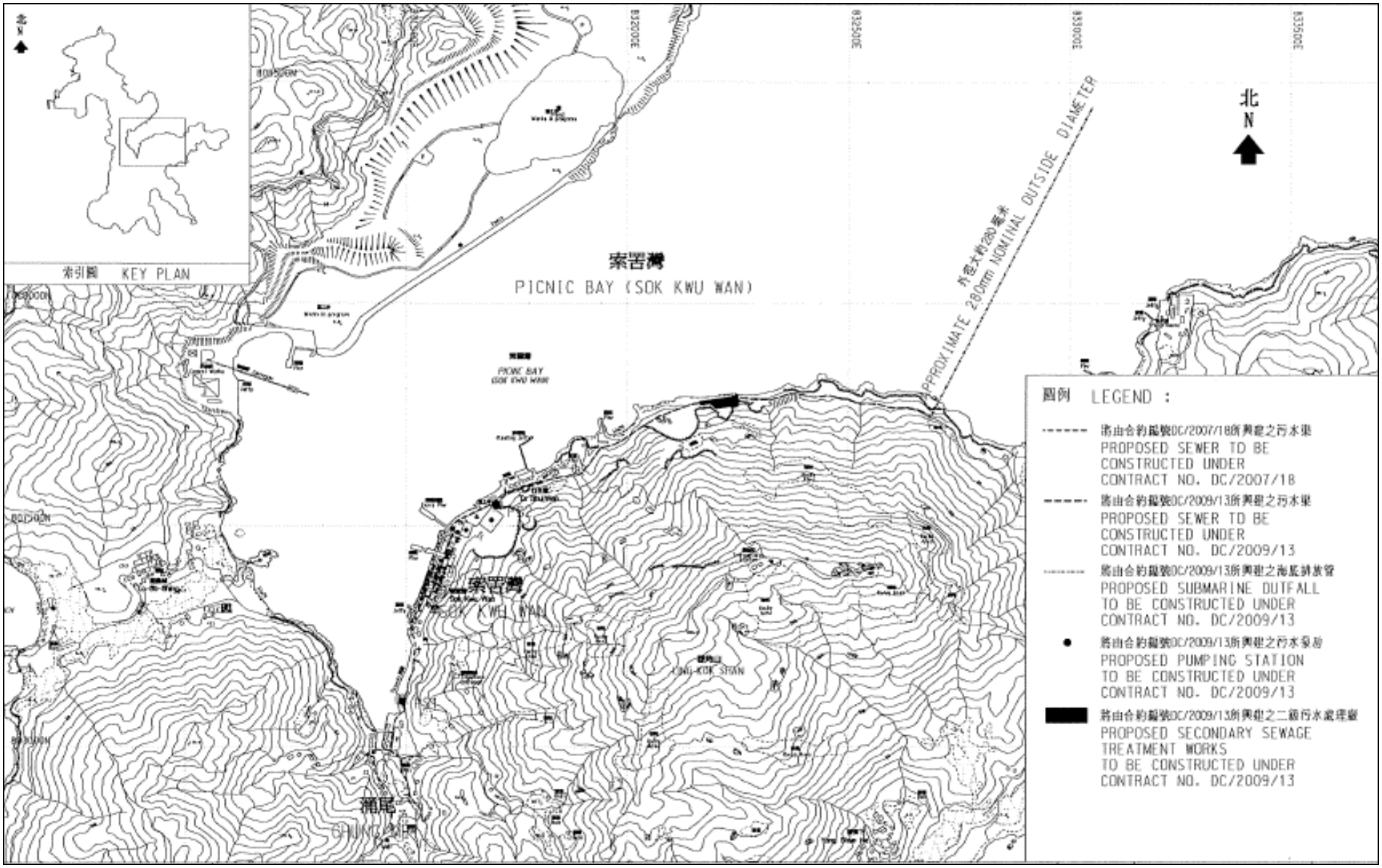
5.05 Review of the baseline conditions may need to be conducted regularly if the changes in baseline conditions are evident, the environmental performance criteria should be re-established by agreement of the ER and IEC and submit to EPD for endorsement.

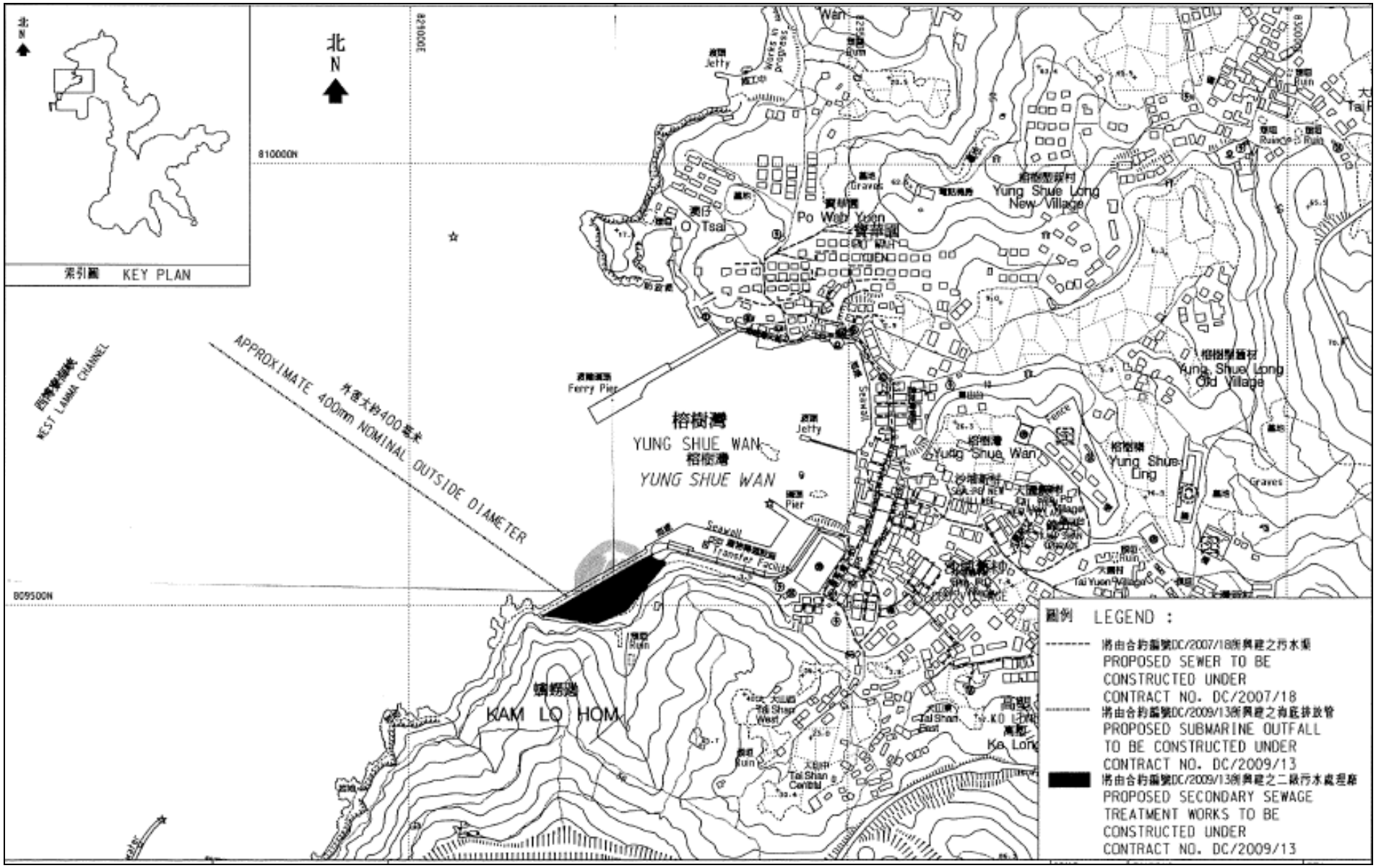
5.06 Impact water quality monitoring should be undertaken three day per week at mid-flood and mid-ebb tides during each survey. According to EM&A Manual Section 4.5.1, three control stations C1, C2 and C3 were identified which located at the upstream and downstream of the works area and experienced different tidal movements. Base on Table 4-2 of the EM&A Manual, it is recommended that control stations C1 and C2 are performed during the monitoring at mid-flood tide and C2 and C3 are proposed during the monitoring at mid-ebb tide.

5.07 However, in order to have a more thorough Water Quality Monitoring reference data near the Fish Culture Zone, an extra sampling point (i.e., C3 at mid-flood tide and C2 at mid-ebb tide) will be conducted voluntary during the construction phase of the submarine outfall at Sok Kwu Wan. The collected data will also be reported in the corresponding monthly EM&A report.

Appendix A

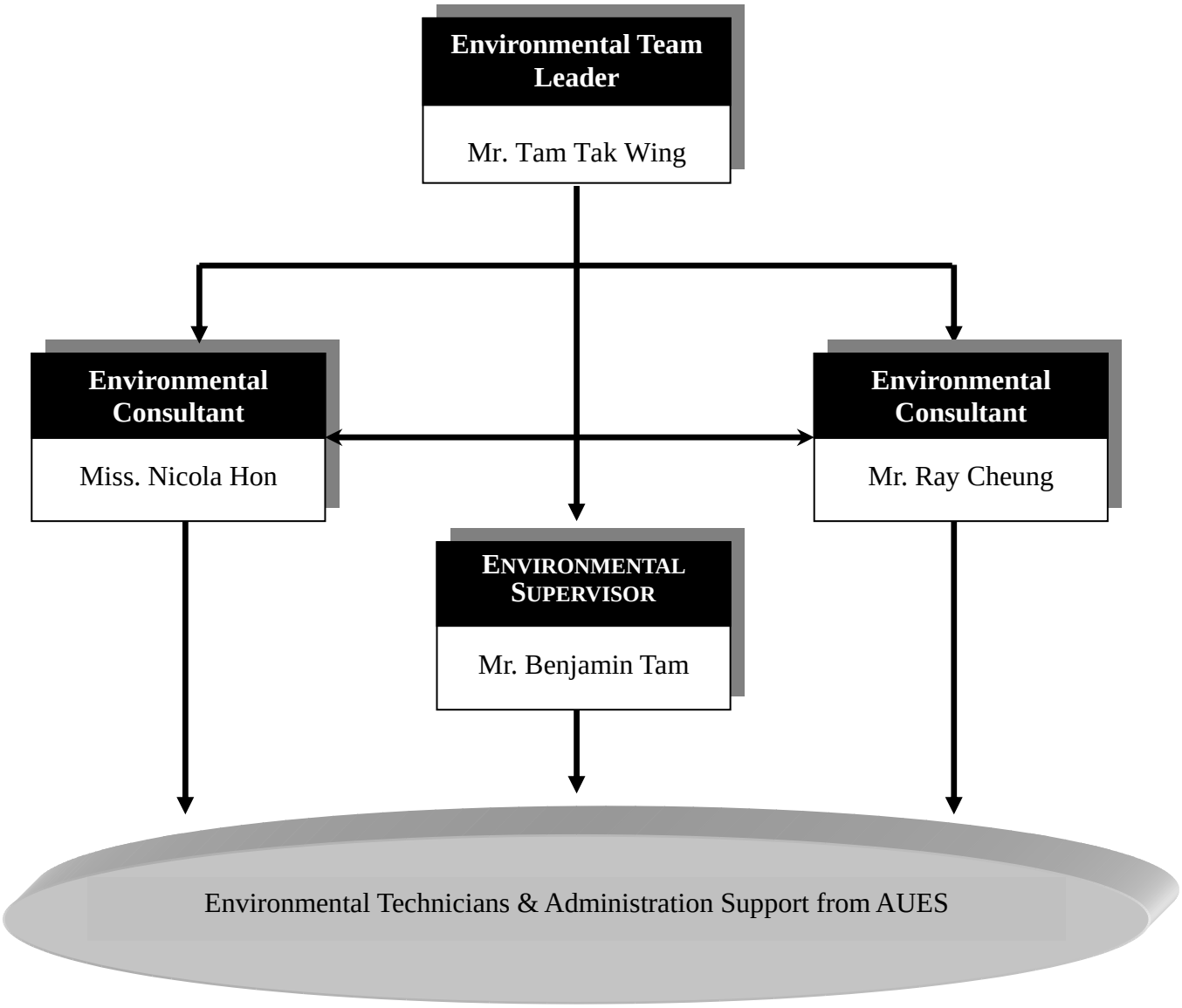
Project Site Layout Plan


索罟灣
PICNIC BAY (SOK KWU WAN)
索引圖 KEY PLAN
北
N
APPROXIMATE 280mm NOMINAL OUTSIDE DIAMETER
圖例 LEGEND :
將由合約編號DC/2007/18所興建之污水渠
PROPOSED SEWER TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2007/18
將由合約編號DC/2009/13所興建之污水渠
PROPOSED SEWER TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2009/13
將由合約編號DC/2009/13所興建之海底排放管
PROPOSED SUBMARINE OUTFALL TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2009/13
將由合約編號DC/2009/13所興建之污水泵房
PROPOSED PUMPING STATION TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2009/13
將由合約編號DC/2009/13所興建之二級污水處理廠
PROPOSED SECONDARY SEWAGE TREATMENT WORKS TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2009/13
索罟灣
SOK KWU WAN
鴻漁涌
HUNG YUE TSUNG


北
N
索引圖 KEY PLAN
810000N
809500N
APPROXIMATE 400mm NOMINAL OUTSIDE DIAMETER
外徑大約400毫米
榕樹灣
YUNG SHUE WAN
YUNG SHUE WAN
KAM LO HOM
Yung Shue Long New Village
Yung Shue Long Old Village
Po Wah Yuen
O Tsai
Ferry Pier
Jetty
Pier
Seawall
Transfer Facility
Graves
Ruins
Tai Shan West
Tai Shan East
Tai Shan Central
Ko Long
圖例 LEGEND :
將由合約編號DC/2007/18所興建之污水渠
PROPOSED SEWER TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2007/18
將由合約編號DC/2009/13所興建之海底排放管
PROPOSED SUBMARINE OUTFALL TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2009/13
將由合約編號DC/2009/13所興建之二級污水處理廠
PROPOSED SECONDARY SEWAGE TREATMENT WORKS TO BE CONSTRUCTED UNDER CONTRACT NO. DC/2009/13

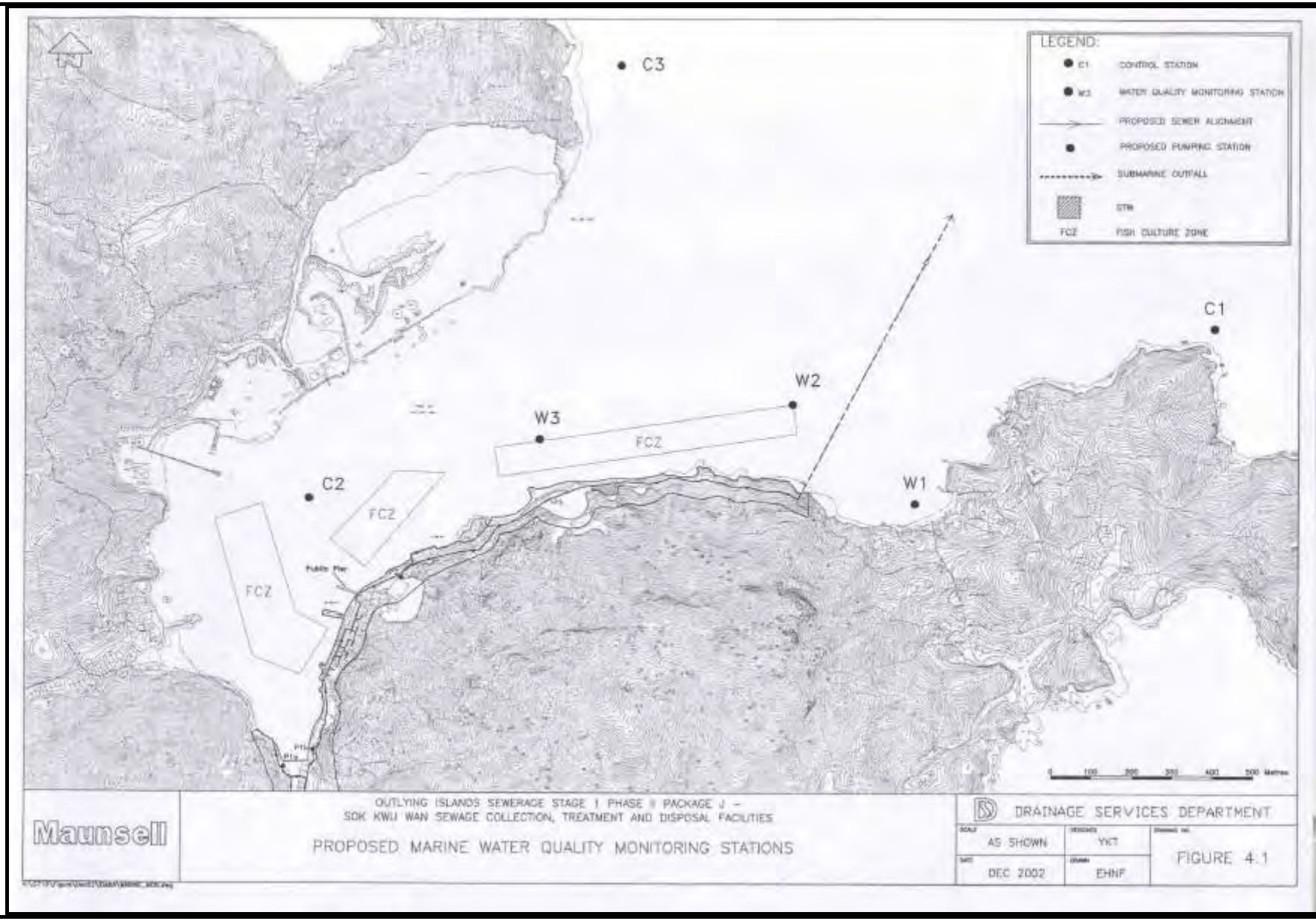
Appendix B

Organization Chart of Environmental Team


Environmental Team Leader
Mr. Tam Tak Wing
Environmental Consultant
Miss. Nicola Hon
Environmental Consultant
Mr. Ray Cheung
ENVIRONMENTAL SUPERVISOR
Mr. Benjamin Tam
Environmental Technicians & Administration Support from AUES

Appendix C

Marine Water Quality monitoring stations


LEGEND:
C1 CONTROL STATION
W1 WATER QUALITY MONITORING STATION
PROPOSED SEWER ALIGNMENT
PROPOSED PUMPING STATION
SUBMARINE OUTFALL
STW
FCZ FISH CULTURE ZONE
C3
C1
W2
W3
C2
W1
FCZ
FCZ
FCZ
Public Pier
Maunsell
OUTLYING ISLANDS SEWERAGE STAGE 1 PHASE II PACKAGE J –
SOK KWU WAN SEWAGE COLLECTION, TREATMENT AND DISPOSAL FACILITIES
PROPOSED MARINE WATER QUALITY MONITORING STATIONS
DRAINAGE SERVICES DEPARTMENT
AS SHOWN
YKT
DEC 2002
EHNF
FIGURE 4.1

Appendix D

Event/Action Plan

EVENT	ACTION			
	ET	IC(E)	ER	CONTRACTOR
ACTION LEVEL				
1. Exceedance for one sampling day	1. Repeat in-situ measurement on the next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform ICE, Contractor, ER, EPD and AFCD; and 4. Check monitoring data, all plant, equipment and Contractor's working methods.	1. Check monitoring data submitted by ET and Contractor's working methods	1. Confirm receipt of notification of non-compliance in writing; and 2. Notify Contractor	1. Information the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; and 3. Amend working methods if appropriate
2. Exceedance for two or more consecutive sampling days	1. Same as the above; 2. Inform ICE, Contractor, ER, EPD and AFCD; 3. Discuss mitigation measures with IC(E), RE and Contractor; 4. Ensure well implementation of mitigation measures; and 5. Increase the monitoring frequency to daily until no exceedance of Action Level	1. Same as the above; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly; and 4. Supervise the implementation of mitigation measures.	1. Discuss with IC(E) on the proposed mitigation measures; 2. Ensure well implementation of mitigation measures; and 3. Assess the effectiveness of the implemented mitigation measures	1. Same as the above; 2. Check all plant and equipment and consider changes of working methods; 3. Submit proposal of additional mitigation measures to ER within 3 working days of notification and discuss with ET, IC(E), and ER; and 4. Implement the agreed mitigation measures
LIMIT LEVEL				
1. Exceedance for one sampling day	1. Repeat in-situ measurement on the next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform ICE, Contractor, ER, EPD and AFCD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; and 5. Discuss mitigation measures with IC(E), RE and Contractor	1. Check monitoring data submitted by ET and Contractor's working method 2. Discuss with ER and Contractor on possible remedial actions; and 3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly	1. Confirm receipt of notification failure in writing; and 2. Discuss with IC(E), ET and 3. Contractor on the proposed mitigation measures; and 4. Request Contractor to review the working methods	1. Inform the ER and confirm notification of the failure in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; and 4. Submit proposal of mitigation measures to ER within 3 working days of notification and discuss with ET and ER
2. Exceedance for two or more consecutive sampling days	1. Same as the above; 2. Ensure mitigation measures are implemented; and 3. Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days	1. Same as the above; and 2. Supervise the Implementation of mitigation measures	1. Same as the above; 2. Ensure well implementation of mitigation measures 3. Make agreement on the mitigation measures to be implemented; and 4. 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	1. Same as the above; 2. Take immediate action to avoid further exceedance; 3. Implement the agreed mitigation measures; 4. Resubmit proposals of mitigation measures if problem still not under control; and 5. 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.

Appendix E

Calibration Certificates

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

ALS TECHNICHEM (HK) Pty Ltd
Environmental Division

CERTIFICATE OF ANALYSIS

CONTACT:	MR BEN TAM	**Batch:**	HK1016920a
CLIENT:	ACTION UNITED ENVIRO SERVICES	**LABORATORY:**	HONG KONG
ADDRESS:	RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG., HONG KONG.	**DATE RECEIVED:**	27/07/2010
		DATE OF ISSUE:	02/08/2010
		SAMPLE TYPE:	EQUIPMENT
ORDER No.:		**No. of SAMPLES:**	1
PROJECT:			

COMMENTS

The calibration procedure used for the analysis has been applied for the calibration of the above instrument.

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

Address

ALS Technichem (HK) Pty Ltd
11/F
Chung Shun Knitting Centre
1-3 Wing Yip Street
Kwai Chung
HONG KONG

Phone: 852-2610 1044
Fax: 852-2610 2021
Email: hongkong@alsenviro.com

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

Other ALS Environmental Laboratories

AUSTRALIA		*AMERICAS*
Brisbane	*Hong Kong*	*Vancouver*
Melbourne	*Singapore*	*Santiago*
Sydney	*Kuala Lumpur*	*Arntofagasta*
Newcastle	*Bogor*	*Lima*

Abbreviations: *% SPK REC denotes percentage spike recovery*
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery

CERTIFICATE OF ANALYSIS

Batch: HK1016920a
Date of Issue: 02/08/2010
Client: ACTION UNITED ENVIRO SERVICES
Client Reference:

Calibration of Mulitimeter

Item : YSI SONDE Model No.: YSI6820
ALS Lab ID: HK1016920a -001 Equipment No.: NA
Date of Calibration: 27 July, 2010 Serial No.: 02J0912(Sonde)02K0788AA(Data Locker)

Testing Results :

pH

Expected Reading	Recording Reading
4.00	3.87
7.00	7.08
10.00	9.98
Allowing Deviation	± 0.2 unit

Testing Method:
APHA (20th edition), 4500-H^+B

Conductivity

Expected Reading	Recording Reading
146.9 uS/cm	155 uS/cm
6667 uS/cm	6545 uS/cm
12890 uS/cm	12680 uS/cm
58670 uS/cm	56581 uS/cm
Allowing Deviation	± 10%

Testing Method:
APHA (20th edition), 2510B

Temperature

Expected Reading	Recording Reading
12.5 °C	12.21 °C
22.5 °C	22.91 °C
36.0 °C	36.00 °C
Allowing Deviation	±2.0°C

Testing Method:
In-House Method

Salinity

Expected Reading	Recording Reading
0 g/L	0.00 g/L
10 g/L	10.46 g/L
20 g/L	20.88 g/L
30 g/L	31.47 g/L
Allowing Deviation	± 10%

Testing Method:
APHA (20th edition), 2520 A and B

DO

Expected Reading	Recording Reading
7.30 mg/L	7.40 mg/L
5.97 mg/L	5.93 mg/L
4.84 mg/L	4.87 mg/L
Allowing Deviation	± 0.2 mg/L

Testing Method:
APHA (20th edition), 4500-OC & G

Turbidity

Expected Reading	Recording Reading
0 NTU	0.4 NTU
4 NTU	4.2 NTU
10 NTU	10.0 NTU
20 NTU	21.3 NTU
50 NTU	51.6 NTU
100 NTU	100.7 NTU
Allowing Deviation	± 10%

Testing Method:
APHA (19th edition), 2130B

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

ALS Technichem (HK) Pty Ltd
ALS Environmental

ALS Technichem (HK) Pty Ltd

CERTIFICATE OF ANALYSIS

CONTACT:	MR BEN TAM	**Work Order:**	HK1025194
CLIENT:	ACTION UNITED ENVIRO SERVICES	**Amendment :**	1
ADDRESS:	RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T., HONG KONG.	**LABORATORY:**	HONG KONG
		DATE RECEIVED:	26/10/2010
		DATE OF ISSUE:	17/01/2011
		SAMPLE TYPE:	EQUIPMENT
		No. of SAMPLES:	1

COMMENTS

The calibration procedure used for the analysis has been applied for the calibration of the above instrument.

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

Address

ALS Technichem (HK) Pty Ltd

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1-3 Wing Yip Street
Kwai Chung
HONG KONG

Phone: 852-2610 1044
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Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

Other ALS Environmental Laboratories

AUSTRALIA		*AMERICAS*
Brisbane	*Hong Kong*	*Vancouver*
Melbourne	*Singapore*	*Santiago*
Sydney	*Kuala Lumpur*	*Amtofagasta*
Newcastle	*Bogor*	*Lima*

Abbreviations: *% SPK REC denotes percentage spike recovery*
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery

CERTIFICATE OF ANALYSIS

Work Order: HK1025194
Amendment: 1
Date of Issue: 17/01/2011
Client: ACTION UNITED ENVIRO SERVICES
Client Reference:

Calibration of Multimeter

Item : YSI Sonde
ALS Lab ID: HK1025194-001
Date of Calibration: 28 October, 2010

Model No.: YSI 6820
Equipment No. N/A
Serial No.: 02J0912 (Sonde) 02K0788AA (Data Locker)

Testing Results :

pH

Expected Reading	Recording Reading
4.00	4.08
7.00	7.13
10.0	10.1
Allowing Deviation	± 0.2 unit

Testing Method:
APHA (20th edition), 4500-H^+B

Temperature

Expected Reading	Recording Reading
15.0 °C	15.0 °C
22.0 °C	22.0 °C
33.0 °C	32.9 °C
Allowing Deviation	±2.0^{0}C

Testing Method:
In-House Method

Salinity

Expected Reading	Recording Reading
10.0 g/L	10.4 g/L
20.0 g/L	20.7 g/L
30.0 g/L	31.2 g/L
Allowing Deviation	± 10%

Testing Method:
APHA (20th edition), 2520 A and B

Dissolved Oxygen

Expected Reading	Recording Reading
5.83 mg/L	5.66 mg/L
6.55 mg/L	6.41 mg/L
7.88 mg/L	7.82 mg/L
Allowing Deviation	± 0.2 mg/L

Testing Method:
APHA (20th edition), 4500-OC & G

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

Hong Kong Accreditation Service
香港認可處

Certificate of Accreditation
認可證書

This is to certify that
特此證明

ALS TECHNICHEM (HK) PTY LIMITED

11/F., Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, New Territories, Hong Kong
香港新界葵涌永業街1-3號忠信針織中心11樓

has been accepted by the HKAS Executive, on the recommendation of the Accreditation Advisory Board, as a
為香港認可處執行機關根據認可諮詢委員會建議而接受的

HOKLAS Accredited Laboratory
「香港實驗所認可計劃」認可實驗所

This laboratory meets the requirements of ISO / IEC 17025 : 2005 – General requirements for the competence of testing and calibration laboratories and it has been accredited for performing specific tests or calibrations as listed in the HOKLAS Directory of Accredited Laboratories within the test category of
此實驗所符合ISO / IEC 17025 : 2005 –《測試及校正實驗所能力的通用規定》所訂的要求，獲認可進行載於香港實驗所認可計劃《認可實驗所名冊》內下述測試類別中的指定測試或校正工作

Environmental Testing
環境測試

This laboratory is accredited in accordance with the recognised International Standard ISO / IEC 17025 : 2005.
本實驗所乃根據公認的國際標準 ISO / IEC 17025 : 2005 獲得認可。
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (see joint IAF-ILAC-ISO Communiqué).
這項認可資格演示在指定範疇所需的技術能力及實驗所質量管理體系的運作（見國際認可論壇、國際實驗所認可合作組織及國際標準化組織的聯合公報）。

The common seal of the Hong Kong Accreditation Service is affixed hereto by the authority of the HKAS Executive
香港認可處根據認可處執行機關的權限在此蓋上通用印章

CHAN Sing Sing, Terence, Executive Administrator
執行幹事 陳成城
Issue Date : 5 May 2009
簽發日期：二零零九年五月五日

Registration Number : HOKLAS 066
註冊號碼：

Date of First Registration : 15 September 1995
首次註冊日期：一九九五年九月十五日

This certificate is issued subject to the terms and conditions laid down by HKAS
本證書按照香港認可處訂立的條款及條件發出

L 000552

Appendix F

Scheduled Baseline Monitoring

Baseline Water Quality Monitoring Schedule – Sok Kwu Wan

Scheduled Monitoring Day		Scheduled Time for Measurements	
		Mid-Flood	Mid-Ebb
19 August 10	*Thursday	18:00	09:00
25 August 10	*Wednesday	18:00	12:47
10 September 10	Friday	7:18	13:30
29 September 10	Wednesday	10:15	15:30
12 October 10	Tuesday	10:05	15:32
19 October 10	Tuesday	16:44	9:56
16 November 10	*Tuesday	15:00	7:41
25 November 10	Thursday	9:20	14:18
16 December 10	Thursday	14:02	7:37
30December 10	Thursday	13:40	7:40
20 January 11	Thursday	18:02	12:31
25 January 11	Tuesday	10:30	16:45

***** Due to safety precaution, the subsequent monitoring time at the most early will be 8:00 and the latest will be 17:00

Appendix G

Water quality monitoring data sheet

Contract No. DC/2009/13

Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwn Wan

AUES

Sok Kwu Wan

Baseline Data 19-Aug-10

Date / Time	Location	Tide*	Co-ordinates		Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS	Ammonia N	TIN	E.coli
			East	North	m	m	℃	mg/L	%	NTU	ppt	unit	mg/l	mg/l	mg/l	1CFU/100ml
08/19/10 09:21:22	W1	ME	832971	807747	1.6	0.772	28.09	7.13	107.6	1.4	29.61	8.31	3.1	0.021	0.23	<1
08/19/10 09:21:38						0.882	28.11	7.25	109.4	1.4	29.63	8.30				
08/19/10 09:03:36	W2	ME	832603	807977	11.9	1.113	28.09	7.13	107.5	0.9	29.57	8.30	8.4	0.018	0.23	3
08/19/10 09:03:49						1.116	28.09	7.23	109.0	1.0	29.58	8.31				
08/19/10 09:04:46						8.370	28.06	7.15	107.9	1.1	29.72	8.30	7.4	0.015	0.22	3
08/19/10 09:05:06						8.401	28.07	7.13	107.6	0.7	29.69	8.30				
08/19/10 09:05:42						10.817	27.87	5.90	89.0	3.3	30.34	8.25	6.7	0.020	0.22	3
08/19/10 09:05:50						10.799	27.87	6.13	92.6	2.9	30.35	8.25				
08/19/10 08:51:50	W3	ME	832067	807907	12.1	1.163	28.21	7.31	110.2	1.4	29.25	8.31	6.1	0.051	0.23	23
08/19/10 08:52:07						1.133	28.18	7.38	111.3	1.2	29.29	8.32				
08/19/10 08:53:02						6.339	28.08	7.28	109.7	1.6	29.44	8.31	11.3	0.038	0.24	12
08/19/10 08:53:14						6.344	28.07	7.25	109.4	1.7	29.43	8.30				
08/19/10 08:54:00						11.012	27.86	6.31	95.1	3.2	30.31	8.23	6.3	0.042	0.23	4
08/19/10 08:54:14						11.319	27.82	6.17	93.1	4.0	30.40	8.21				
08/19/10 09:31:30	C1	ME	833706	808177	13.5	1.087	28.10	7.10	107.0	1.6	29.36	8.31	8.7	0.020	0.23	<1
08/19/10 09:31:37						1.133	28.10	7.24	109.1	1.3	29.36	8.31				
08/19/10 09:32:32						6.868	28.05	7.25	109.3	1.1	29.57	8.29	6	0.028	0.31	1
08/19/10 09:32:42						6.687	28.05	7.23	109.0	1.2	29.53	8.29				
08/19/10 09:33:53						12.318	26.80	4.13	62.2	2.1	33.15	8.10	8.1	0.036	0.34	<1
08/19/10 09:34:11						12.181	26.80	4.10	61.7	2.2	33.15	8.10				
08/19/10 08:35:22	C2	ME	831480	807744	9.9	1.167	28.18	8.35	125.5	0.8	28.66	8.34	6	0.027	0.33	13
08/19/10 08:35:41						1.128	28.21	8.51	127.9	0.7	28.68	8.35				
08/19/10 08:36:44						5.368	28.05	7.32	110.2	1.1	29.43	8.29	6.7	0.049	0.41	5
08/19/10 08:37:00						5.511	28.06	7.23	108.9	1.0	29.43	8.29				
08/19/10 08:38:12						8.944	27.69	5.64	84.9	2.4	30.54	8.17	6.8	0.027	0.27	1
08/19/10 08:38:25						8.934	27.69	5.60	84.3	1.8	30.55	8.17				
08/19/10 08:16:16	C3	ME	832217	808855	16.5	1.064	28.06	7.69	115.5	0.8	28.90	8.29	7.4	0.052	0.31	<1
08/19/10 08:16:30						1.105	28.07	7.70	115.6	0.8	28.92	8.30				
08/19/10 08:17:40						8.202	28.03	7.15	107.5	1.2	29.19	8.26	5.6	0.049	0.29	<1
08/19/10 08:17:59						8.277	28.04	7.15	107.5	1.2	29.19	8.26				
08/19/10 08:19:45						15.359	24.07	4.07	58.9	9.6	34.31	7.94	5.7	0.037	0.27	19
08/19/10 08:19:51						15.453	23.88	3.52	50.8	11.7	34.42	7.93				
08/19/10 17:38:25	W1	MF	832962	807750	1.8	0.821	28.46	7.89	119.6	2.0	29.23	8.35	9.1	0.028	0.35	1
08/19/10 17:38:40						0.936	28.50	8.12	123.0	2.3	29.21	8.35				
08/19/10 17:29:53	W2	MF	832607	807984	11.9	1.096	28.47	8.85	133.9	1.1	28.98	8.40	3.8	0.038	0.25	11
08/19/10 17:30:09						1.088	28.47	8.90	134.6	1.1	28.98	8.40				
08/19/10 17:31:02						5.754	27.84	6.56	98.8	1.6	29.99	8.23	8.5	0.040	0.25	1
08/19/10 17:31:19						5.891	27.82	6.59	99.2	1.9	30.02	8.23				
08/19/10 17:32:19						10.666	26.65	4.29	64.0	2.5	31.98	8.05	9.3	0.051	0.28	1
08/19/10 17:32:44						10.632	26.67	4.23	63.1	2.4	31.96	8.05				
08/19/10 17:14:52	W3	MF	832044	807895	11	1.093	28.54	8.97	135.5	0.9	28.62	8.39	6.4	0.014	0.23	<1
08/19/10 17:15:06						1.092	28.54	9.08	137.2	0.8	28.63	8.39				
08/19/10 17:15:56						5.568	28.66	8.29	125.8	2.4	28.90	8.33	9.6	0.020	0.23	2
08/19/10 17:16:10						5.602	28.66	8.38	127.2	2.7	28.92	8.33				
08/19/10 17:17:35						10.143	27.09	4.57	68.4	5.8	31.12	8.09	13.6	0.024	0.24	<1
08/19/10 17:18:14						9.982	26.99	4.64	69.4	6.3	31.41	8.07				
08/19/10 17:48:20	C1	MF	833695	808184	16.2	1.055	28.23	7.77	117.4	1.3	29.50	8.34	6.1	0.030	0.26	14
08/19/10 17:48:34						1.074	28.22	7.83	118.4	1.2	29.52	8.34				
08/19/10 17:49:40						7.997	27.63	6.61	99.4	1.2	30.32	8.24	6.8	0.034	0.27	3
08/19/10 17:49:58						8.025	27.77	6.66	100.3	1.2	30.19	8.27				
08/19/10 17:50:51						14.895	25.35	3.49	51.5	4.1	34.03	8.00	11.8	0.039	0.28	13
08/19/10 17:50:59						15.280	25.33	3.36	49.7	4.4	34.05	8.00				
08/19/10 17:03:06	C2	MF	831471	807760	10.1	1.111	28.54	9.22	139.1	0.6	28.35	8.36	6.1	0.022	0.28	<1
08/19/10 17:03:31						1.110	28.54	9.22	139.2	0.9	28.36	8.36				
08/19/10 17:04:24						5.159	28.54	9.15	138.2	0.9	28.53	8.36	16.3	0.019	0.26	<1
08/19/10 17:04:42						5.154	28.53	9.11	137.7	0.8	28.53	8.36				
08/19/10 17:05:46						9.155	28.32	7.01	105.9	4.7	29.09	8.20	5.3	0.022	0.25	1
08/19/10 17:05:59						9.254	28.31	6.96	105.1	4.2	29.12	8.20				
08/19/10 18:03:17	C3	MF	832220	808872	14.2	1.281	28.48	8.54	129.3	0.8	29.09	8.42	10	0.017	0.28	<1
08/19/10 18:03:28						1.025	28.39	8.49	128.5	1.3	29.27	8.39				
08/19/10 18:04:58						7.257	27.51	5.94	89.2	1.3	30.56	8.20	5.3	0.028	0.29	60
08/19/10 18:05:06						7.143	27.51	5.93	89.1	1.5	30.51	8.20				
08/19/10 18:06:17						13.447	26.59	3.95	59.2	8.6	32.73	8.07	5.4	0.024	0.27	26
08/19/10 18:06:32						13.421	26.56	3.91	58.5	8.1	32.76	8.06				

Remarks: MF - Middle Flood tida
ME - Middle Ebb tida

Contract No. DC/2009/13

Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwn Wan

AUES

Sok Kwu Wan

Baseline Data 25-Aug-10

Date / Time	Location	Tide*	Co-ordinates		Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS	Ammonia N	TIN	E.coli
			East	North	m	m	℃	mg/L	%	NTU	ppt	unit	mg/l	mg/l	mg/l	1CFU/100ml
08/25/10 12:45:58	W1	ME	832954	807732	2.8	1.401	28.17	6.26	95.3	3.8	30.91	8.20	5.3	0.015	0.16	2
08/25/10 12:46:04						1.406	28.15	6.20	94.4	3.9	30.92	8.20				
08/25/10 12:32:38	W2	ME	832625	807984	12.2	1.020	28.26	6.39	97.1	2.3	30.43	8.16	2.7	0.022	0.19	<1
08/25/10 12:34:38						1.005	28.28	6.28	95.3	2.5	30.51	8.17				
08/25/10 12:33:18						6.065	27.95	6.10	92.5	1.4	31.09	8.18	2.2	0.017	0.17	<1
08/25/10 12:35:06						6.105	27.93	6.04	91.6	2.1	30.97	8.18				
08/25/10 12:33:57						11.127	27.63	5.46	82.8	10.6	31.94	8.15	4.4	0.026	0.17	2
08/25/10 12:35:58						11.212	27.68	5.37	81.6	9.8	31.89	8.15				
08/25/10 12:15:02	W3	ME	832059	807906	11.8	0.976	27.93	5.41	81.8	2.0	29.98	8.09	1.2	0.029	0.2	4
08/25/10 12:19:32						0.995	27.90	5.36	80.9	2.4	30.17	8.06				
08/25/10 12:15:45						6.959	27.86	5.63	85.6	1.6	31.45	8.08	2.5	0.031	0.19	10
08/25/10 12:20:01						6.013	27.92	5.51	83.6	1.3	31.27	8.10				
08/25/10 12:19:00						11.036	27.51	5.16	78.2	6.0	32.10	8.05	9.3	0.044	0.16	6
08/25/10 12:20:39						11.038	27.56	5.14	78.0	6.9	32.09	8.08				
08/25/10 12:59:16	C1	ME	833713	808173	12.2	0.979	28.13	6.47	100.3	2.9	30.42	8.24	3.4	0.008	0.17	2
08/25/10 13:01:59						1.037	28.21	6.40	97.2	3.1	30.38	8.25				
08/25/10 12:59:59						6.093	28.11	6.48	98.3	2.8	30.63	8.24	3.5	0.013	0.17	3
08/25/10 13:02:35						6.091	28.04	6.31	95.6	2.9	30.63	8.23				
08/25/10 13:01:24						11.236	28.03	6.32	95.8	2.8	30.73	8.23	3.4	0.010	0.17	6
08/25/10 13:04:54						11.207	27.98	6.23	94.1	2.6	30.77	8.22				
08/25/10 12:01:13	C2	ME	831464	807745	10.1	1.043	28.05	5.80	88.2	1.0	29.54	7.97	5	0.035	0.18	<1
08/25/10 12:02:44						1.002	28.08	5.67	85.5	1.1	29.61	7.94				
08/25/10 12:01:36						5.030	27.75	5.77	87.5	2.4	30.69	8.00	3.4	0.040	0.21	4
08/25/10 12:03:03						5.003	27.76	5.62	84.9	2.4	30.72	7.99				
08/25/10 12:02:01						8.935	27.61	5.88	89.0	2.8	31.61	7.99	1.2	0.056	0.24	<1
08/25/10 12:03:42						9.050	27.56	5.78	87.7	3.3	31.72	7.99				
08/25/10 13:21:28	C3	ME	832240	808862	11.9	1.016	28.08	5.97	90.6	2.0	30.80	8.22	2.7	0.023	0.19	<1
08/25/10 13:22:56						1.004	28.00	5.91	89.6	2.2	30.85	8.22				
08/25/10 13:21:57						6.005	27.87	6.27	95.0	2.1	30.93	8.23	2.4	0.024	0.18	2
08/25/10 13:23:19						5.944	27.91	6.04	91.6	2.1	30.97	8.22				
08/25/10 13:22:27						10.877	27.78	5.70	86.3	2.6	31.19	8.18	3.2	0.024	0.18	1
08/25/10 13:23:48						10.909	27.81	5.63	85.3	2.5	31.15	8.19				
08/25/10 17:52:12	W1	MF	832971	807719	2.9	1.421	27.89	6.58	99.4	3.2	30.62	8.25	3.6	0.023	0.24	24
08/25/10 17:52:24						1.411	27.89	6.56	99.2	3.3	30.62	8.25				
08/25/10 17:43:17	W2	MF	832621	807800	12.6	0.998	28.34	6.44	97.7	3.5	30.97	8.29	3.2	0.016	0.17	3
08/25/10 17:46:16						0.992	28.31	6.32	96.4	3.7	31.02	8.27				
08/25/10 17:45:02						6.271	27.96	6.17	93.9	3.9	31.49	8.26	6	0.027	0.17	3
08/25/10 17:46:45						6.242	28.01	6.27	95.5	3.4	31.47	8.26				
08/25/10 17:45:38						11.575	27.62	5.51	83.6	6.3	32.16	8.21	2.5	0.019	0.18	2
08/25/10 17:47:11						11.302	27.66	5.62	84.9	5.8	32.05	8.21				
08/25/10 17:22:55	W3	MF	832061	807902	12.1	1.040	28.42	6.06	92.5	1.9	30.88	8.29	2	0.031	0.19	<1
08/25/10 17:30:48						1.018	28.51	6.09	93.1	1.7	30.85	8.26				
08/25/10 17:23:29						6.045	27.94	5.86	89.2	2.7	31.66	8.22	2.2	0.041	0.2	<1
08/25/10 17:31:10						6.066	27.92	5.91	89.9	2.3	31.64	8.22				
08/25/10 17:30:14						11.022	27.81	5.15	78.5	7.7	32.10	8.19	2.7	0.032	0.19	<1
08/25/10 17:37:24						10.954	27.65	5.03	75.2	7.1	32.39	8.18				
08/25/10 18:01:28	C1	MF	833711	808179	12.1	0.991	27.71	7.02	105.6	3.1	30.18	8.26	3.3	0.056	0.32	58
08/25/10 18:03:39						1.003	27.61	7.01	105.2	2.8	30.28	8.23				
08/25/10 18:01:57						6.106	27.64	6.63	98.8	3.1	30.50	8.24	3.1	0.053	0.31	53
08/25/10 18:04:10						6.104	27.59	6.51	97.9	3.0	30.52	8.23				
08/25/10 18:03:06						11.145	27.60	6.37	96.1	3.4	30.90	8.23	3.5	0.054	0.31	48
08/25/10 18:04:37						11.153	27.61	6.41	96.5	2.9	30.78	8.23				
08/25/10 17:08:12	C2	MF	831460	807749	10.3	0.964	28.46	5.69	87.1	2.4	30.78	8.30	2.7	0.023	0.27	<1
08/25/10 17:14:30						1.030	28.33	5.62	85.8	2.8	30.81	8.27				
08/25/10 17:11:26						5.221	27.94	5.83	88.8	1.9	31.65	8.24	1.6	0.051	0.31	<1
08/25/10 17:14:57						5.187	27.95	5.71	87.4	1.9	31.57	8.24				
08/25/10 17:14:03						9.020	27.72	5.48	82.9	4.3	32.52	8.19	2.2	0.016	0.27	2
08/25/10 17:15:25						9.135	27.77	5.41	82.5	4.0	32.46	8.21				
08/25/10 18:21:12	C3	MF	832207	808872	12.4	1.027	27.67	6.76	101.7	2.7	30.27	8.25	3.8	0.039	0.18	46
08/25/10 18:22:20						1.085	27.67	6.51	97.9	2.8	30.30	8.24				
08/25/10 18:21:32						6.242	27.61	6.64	99.9	2.6	30.52	8.23	2.6	0.050	0.19	44
08/25/10 18:22:39						6.298	27.63	6.56	98.7	2.6	30.51	8.23				
08/25/10 18:21:47						11.440	27.61	6.49	97.7	2.9	30.75	8.22	3.4	0.053	0.19	49
08/25/10 18:22:59						11.385	27.63	6.39	96.3	2.9	30.81	8.23				

Remarks: MF - Middle Flood tida
ME - Middle Ebb tida

Contract No. DC/2009/13

Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwn Wan

AUES

Sok Kwu Wan

Baseline Data 10-Sep-10

Date / Time	Location	Tide*	Co-ordinates		Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS	Ammonia N	TIN	E.coli
			East	North	m	m	℃	mg/L	%	NTU	ppt	unit	mg/l	mg/l	mg/l	1CFU/100ml
2010/10/9 13:27:40	W1	ME	832961	807728	2.1	1.086	26.21	3.43	51.1	3.1	32.92	8.01	5.3	<0.005	0.25	16
2010/10/9 13:27:48						1.099	26.21	3.50	52.1	3.0	32.92	8.01				
2010/10/9 13:19:44	W2	ME	832611	807971	12.5	1.179	27.23	4.09	61.5	2.2	31.40	8.00	4.2	<0.005	0.3	3
2010/10/9 13:20:07						1.194	27.37	4.27	64.3	1.9	31.33	8.00				
2010/10/9 13:20:53						6.285	25.82	3.53	52.3	3.4	33.23	7.97	2.6	0.014	0.3	21
2010/10/9 13:21:04						6.263	25.83	3.47	51.5	3.8	33.23	7.97				
2010/10/9 13:21:55						11.433	25.22	2.93	43.1	8.9	33.83	7.92	3.6	<0.005	0.27	26
2010/10/9 13:22:12						11.501	25.21	2.91	42.9	8.9	33.83	7.92				
2010/10/9 13:10:24	W3	ME	832033	807901	10.2	1.122	27.33	4.65	69.6	2.4	30.66	7.95	2.3	0.007	0.32	4
2010/10/9 13:10:40						1.120	27.22	4.62	69.1	2.7	30.84	7.95				
2010/10/9 13:11:19						5.094	26.01	3.76	55.7	6.1	32.64	7.94	3.5	0.008	0.3	27
2010/10/9 13:11:39						5.158	25.98	3.69	54.6	7.1	32.67	7.94				
2010/10/9 13:12:16						9.096	25.42	3.24	47.8	10.6	33.25	7.90	4.3	0.008	0.3	29
2010/10/9 13:12:32						9.143	25.42	3.09	45.5	10.5	33.25	7.90				
2010/10/9 13:35:49	C1	ME	833716	808168	14.3	1.127	26.87	4.20	62.9	1.5	31.91	8.04	3.5	<0.005	0.28	17
2010/10/9 13:36:09						1.137	26.86	4.32	64.6	1.4	31.91	8.04				
2010/10/9 13:36:53						7.334	26.42	4.09	60.9	1.9	32.30	8.01	1.9	0.005	0.28	16
2010/10/9 13:37:07						7.173	26.41	4.04	59.1	2.5	29.43	8.01				
2010/10/9 13:37:57						13.979	25.98	3.67	54.5	2.0	33.08	8.00	2.2	<0.005	0.29	13
2010/10/9 13:38:17						13.538	26.01	3.64	54.1	1.8	33.07	8.01				
2010/10/9 13:01:25	C2	ME	831469	807740	9.6	1.115	27.12	4.37	65.2	2.2	30.52	7.88	1.8	0.026	0.36	6
2010/10/9 13:01:40						1.113	27.07	4.35	64.9	2.4	30.68	7.88				
2010/10/9 13:02:27						4.873	26.31	3.76	55.9	4.8	32.05	7.88	2.1	0.030	0.36	16
2010/10/9 13:02:38						4.866	26.36	3.82	56.7	4.4	31.96	7.88				
2010/10/9 13:03:12						8.600	26.02	3.78	56.0	6.0	32.55	7.89	2.5	0.023	0.35	13
2010/10/9 13:03:23						8.620	26.01	3.68	54.5	7.5	32.56	7.89				
2010/10/9 13:52:09	C3	ME	832227	808852	10.7	1.128	26.60	3.83	57.2	2.4	32.36	8.02	2.2	<0.005	0.28	13
2010/10/9 13:52:36						1.172	26.60	3.90	58.3	2.3	32.35	8.02				
2010/10/9 13:53:16						5.347	26.48	3.92	58.4	2.0	32.44	8.02	1.9	0.007	0.29	11
2010/10/9 13:53:30						5.378	26.47	3.94	58.8	2.2	32.44	8.02				
2010/10/9 13:54:05						9.804	26.18	3.71	55.2	2.5	33.02	8.00	4.2	<0.005	0.26	6
2010/10/9 13:54:21						9.754	26.16	3.65	54.3	2.6	33.04	8.00				
2010/10/9 08:51:30	W1	MF	832973	807724	2.2	1.180	26.76	3.51	52.4	6.4	31.78	8.01	3.4	0.040	0.41	100
2010/10/9 08:51:49						1.282	26.75	3.62	53.2	6.7	29.12	8.01				
2010/10/9 08:42:18	W2	MF	832615	807978	12.6	1.057	26.87	3.64	54.1	2.5	30.78	7.96	1.3	0.011	0.42	36
2010/10/9 08:42:31						1.058	26.88	3.70	55.0	2.3	30.79	7.96				
2010/10/9 08:43:23						6.958	26.74	4.41	66.1	1.1	32.40	8.09	2.2	0.010	0.4	80
2010/10/9 08:43:34						6.243	26.71	4.51	67.5	1.1	32.41	8.10				
2010/10/9 08:44:10						11.703	25.72	3.64	54.0	7.9	33.43	8.02	3.6	0.006	0.34	56
2010/10/9 08:44:26						11.532	25.72	3.44	51.0	8.3	33.43	8.02				
2010/10/9 08:27:17	W3	MF	832055	807886	10.5	1.128	27.01	3.48	51.8	1.6	30.51	7.95	1	0.029	0.37	16
2010/10/9 08:27:32						1.089	27.08	3.54	52.7	1.6	30.49	7.96				
2010/10/9 08:28:19						5.384	26.71	3.34	49.8	4.9	31.41	7.96	1.4	0.023	0.34	17
2010/10/9 08:28:32						5.380	26.71	3.29	49.1	5.0	31.41	7.96				
2010/10/9 08:29:22						9.428	26.14	3.20	47.5	7.2	32.44	7.98	1.9	0.021	0.35	92
2010/10/9 08:29:35						9.717	26.11	3.23	48.0	7.3	32.48	7.98				
2010/10/9 09:03:20	C1	MF	833701	808176	14.1	1.137	26.79	4.35	65.2	1.4	32.27	8.12	3.7	0.013	0.29	86
2010/10/9 09:03:30						1.214	26.79	4.37	65.5	1.4	32.27	8.12				
2010/10/9 09:04:21						7.961	25.79	3.44	50.2	9.1	30.71	8.04	3.8	0.010	0.28	76
2010/10/9 09:04:30						7.647	25.78	3.35	49.7	9.3	33.48	8.04				
2010/10/9 09:06:26						13.159	25.40	3.00	44.3	13.7	33.87	8.02	5.1	0.010	0.29	68
2010/10/9 09:06:36						13.169	25.42	3.02	44.6	14.1	33.84	8.02				
2010/10/9 08:15:42	C2	MF	831468	807741	9.6	1.046	27.14	6.70	99.7	1.4	29.85	7.92	1.8	0.019	0.35	20
2010/10/9 08:15:49						1.043	27.13	6.62	98.5	1.4	29.88	7.92				
2010/10/9 08:16:36						4.801	26.94	5.46	81.1	1.7	30.33	7.91	2.1	0.024	0.35	12
2010/10/9 08:16:44						4.779	26.96	5.30	78.8	1.7	30.32	7.92				
2010/10/9 08:17:27						8.458	27.04	5.05	75.2	2.6	30.48	7.91	2.2	0.025	0.36	34
2010/10/9 08:17:37						8.445	27.04	5.05	75.3	2.4	30.47	7.92				
2010/10/9 09:22:59	C3	MF	832209	808853	14.2	1.031	26.87	3.72	55.5	2.0	31.10	8.01	2.2	0.020	0.4	85
2010/10/9 09:23:30						1.047	26.79	3.78	56.3	2.3	31.37	8.04				
2010/10/9 09:24:34						7.126	26.53	3.96	59.1	1.7	32.33	8.08	1.8	0.017	0.39	79
2010/10/9 09:24:42						7.154	26.50	3.96	59.1	1.7	32.49	8.08				
2010/10/9 09:25:31						13.182	26.26	3.88	57.8	2.3	32.98	8.09	1.8	0.019	0.36	82
2010/10/9 09:25:47						13.188	26.24	3.85	57.4	2.3	32.99	8.09				

Remarks: MF - Middle Flood tida
ME - Middle Ebb tida

Contract No. DC/2009/13

Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwn Wan

AUES

Sok Kwu Wan

Baseline Data 29-Sep-10

Date / Time	Location	Tide*	Co-ordinates		Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS	Ammonia N	TIN	E.coli
			East	North	m	m	℃	mg/L	%	NTU	ppt	unit	mg/l	mg/l	mg/l	1CFU/100ml
09/29/10 15:57:36	W1	ME	832977	807739	2.4	1.355	27.01	7.39	110.2	2.3	30.80	8.22	7.7	<0.005	0.34	2
09/29/10 15:57:44						1.275	27.05	7.04	105.1	2.7	30.74	8.24				
09/29/10 15:50:29	W2	ME	832601	807993	12.1	1.128	26.97	6.36	94.6	2.1	30.48	8.18	15.5	<0.005	0.4	1
09/29/10 15:50:37						1.160	27.04	6.41	95.5	1.9	30.42	8.18				
09/29/10 15:51:11						6.154	26.58	6.29	93.6	3.1	31.66	8.19	6.5	0.006	0.41	<1
09/29/10 15:51:16						6.196	26.57	6.24	92.9	3.2	31.67	8.19				
09/29/10 15:51:35						11.129	26.34	6.10	90.8	4.7	32.50	8.22	13.6	0.022	0.32	17
09/29/10 15:51:40						11.242	26.34	6.07	90.4	4.5	32.50	8.22				
09/29/10 15:39:54	W3	ME	832039	807884	11.1	1.271	27.13	6.87	102.4	1.2	30.31	8.16	9.7	<0.005	0.4	<1
09/29/10 15:40:01						1.265	27.13	6.96	103.8	1.0	30.30	8.16				
09/29/10 15:40:35						5.631	26.63	5.91	87.7	5.2	31.00	8.12	12.1	0.005	0.4	<1
09/29/10 15:40:41						5.530	26.64	5.87	87.1	4.5	30.98	8.12				
09/29/10 15:41:18						10.092	26.13	6.02	89.2	12.3	32.33	8.17	10.8	0.006	0.41	<1
09/29/10 15:41:25						10.007	26.15	5.83	86.4	11.7	32.33	8.17				
09/29/10 16:10:12	C1	ME	833712	808168	15.4	1.098	26.99	6.20	92.3	1.8	30.60	8.21	10.3	0.009	0.42	1
09/29/10 16:10:31						1.085	27.00	6.36	94.1	1.8	29.53	8.21				
09/29/10 16:11:07						7.543	26.70	5.08	75.7	3.0	31.50	8.22	7.1	0.008	0.39	2
09/29/10 16:11:12						7.418	26.74	5.32	79.3	2.9	31.43	8.22				
09/29/10 16:11:40						15.047	25.46	4.53	66.8	7.7	33.48	8.14	5.9	0.026	0.38	15
09/29/10 16:11:43						14.100	25.46	4.46	65.4	7.4	32.49	8.14				
09/29/10 15:15:54	C2	ME	831461	807754	10.5	1.160	27.22	6.60	98.6	1.5	30.32	8.14	8.9	0.006	0.39	<1
09/29/10 15:16:02						1.257	27.26	6.77	101.1	1.4	30.30	8.14				
09/29/10 15:16:59						5.612	26.85	5.98	89.0	3.9	30.79	8.10	12.6	0.008	0.39	4
09/29/10 15:17:03						5.663	26.83	6.04	89.9	4.0	30.82	8.10				
09/29/10 15:17:31						9.477	26.15	5.42	80.1	14.3	31.90	8.11	8.4	0.006	0.39	<1
09/29/10 15:17:36						9.429	26.15	5.37	79.4	14.1	31.88	8.11				
09/29/10 15:05:15	C3	ME	832202	808853	14.9	1.259	26.73	6.99	103.2	1.6	29.79	8.13	13.6	<0.005	0.35	3
09/29/10 15:05:20						1.266	26.74	6.95	103.2	1.8	30.71	8.12				
09/29/10 15:05:50						7.741	26.72	6.56	97.4	1.1	30.86	8.19	8.6	0.007	0.35	<1
09/29/10 15:05:55						7.615	26.74	6.55	97.8	1.0	31.72	8.19				
09/29/10 15:06:10						13.757	26.40	6.01	89.4	2.9	32.11	8.16	4.9	0.008	0.33	<1
09/29/10 15:06:12						13.528	26.49	6.04	90.0	2.5	32.06	8.16				
09/29/10 10:49:42	W1	MF	832980	807721	2.4	1.371	26.64	5.71	84.7	2.8	31.00	8.10	6	0.019	0.48	<1
09/29/10 10:49:46						1.365	26.64	5.74	85.2	2.6	30.99	8.10				
09/29/10 10:39:07	W2	MF	832619	807979	12.5	1.065	26.61	5.47	81.2	2.6	31.11	8.07	11.7	0.020	0.47	<1
09/29/10 10:39:20						1.129	26.63	5.45	80.8	2.3	31.07	8.07				
09/29/10 10:39:57						6.763	26.47	5.28	78.6	5.9	31.94	8.11	5.5	0.023	0.48	<1
09/29/10 10:40:21						6.613	26.56	5.31	79.0	6.1	31.76	8.10				
09/29/10 10:41:08						11.520	26.34	5.25	78.0	11.1	32.20	8.12	10.8	0.021	0.47	<1
09/29/10 10:41:15						11.265	26.34	5.26	78.2	10.0	32.21	8.12				
09/29/10 10:17:47	W3	MF	832033	807879	11	1.060	26.67	5.59	83.1	0.9	31.12	7.99	4.4	0.011	0.45	<1
09/29/10 10:17:54						1.160	26.69	5.59	83.1	1.0	31.10	7.99				
09/29/10 10:18:16						5.578	26.59	5.56	82.6	1.7	31.29	7.99	6.6	0.015	0.45	<1
09/29/10 10:18:22						5.501	26.59	5.58	82.8	1.5	31.30	7.99				
09/29/10 10:18:54						10.061	26.63	6.03	89.7	2.9	31.45	7.99	7.9	0.019	0.46	<1
09/29/10 10:19:01						9.995	26.64	5.83	86.7	2.8	31.47	8.00				
09/29/10 11:01:37	C1	MF	833709	808191	14.4	1.053	26.66	5.65	84.0	2.0	31.19	8.13	4.5	0.051	0.44	4
09/29/10 11:01:44						0.881	26.66	5.69	84.5	1.9	31.19	8.14				
09/29/10 11:02:28						7.333	26.54	5.58	83.0	2.1	31.64	8.18	6.4	0.038	0.42	4
09/29/10 11:02:32						7.431	26.55	5.62	83.5	2.2	31.66	8.18				
09/29/10 11:03:34						13.513	26.34	5.29	78.6	4.2	31.87	8.15	5.8	0.024	0.4	<1
09/29/10 11:03:40						13.454	26.36	5.32	78.9	4.0	31.90	8.16				
09/29/10 10:26:58	C2	MF	831475	807740	11	1.086	26.70	5.79	86.1	1.2	31.17	8.05	11.7	0.099	0.54	<1
09/29/10 10:27:08						1.046	26.70	5.81	86.4	1.1	31.16	8.05				
09/29/10 10:27:43						5.122	26.79	5.66	84.4	2.2	31.46	8.07	15.7	0.013	0.45	<1
09/29/10 10:27:48						5.389	26.81	5.65	84.3	1.8	31.48	8.07				
09/29/10 10:28:15						10.076	26.73	5.29	79.0	7.8	31.74	8.06	10.8	0.020	0.44	<1
09/29/10 10:28:20						10.165	26.74	5.28	78.9	8.2	31.74	8.04				
09/29/10 09:33:15	C3	MF	832218	808845	15.2	1.095	26.67	5.46	80.4	1.7	29.65	8.04	9.6	<0.005	0.42	<1
09/29/10 09:33:25						1.041	26.69	5.57	82.1	1.5	29.63	8.04				
09/29/10 09:34:22						7.683	26.37	5.13	75.6	6.7	30.51	8.04	6.4	0.015	0.39	5
09/29/10 09:34:39						7.648	26.37	5.13	75.5	6.7	30.52	8.04				
09/29/10 09:35:26						14.103	26.32	5.19	76.4	12.4	30.60	8.02	5.9	<0.005	0.41	<1
09/29/10 09:35:32						14.188	26.34	5.16	76.1	12.2	30.57	8.02				

Remarks: MF - Middle Flood tida
ME - Middle Ebb tida

Contract No. DC/2009/13

Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwn Wan

AUES

Sok Kwu Wan

Baseline Data 12-Oct-10

Date / Time	Location	Tide*	Co-ordinates		Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS	Ammonia N	TIN	E.coli
			East	North	m	m	℃	mg/L	%	NTU	ppt	unit	mg/l	mg/l	mg/l	1CFU/100ml
2010/10/12 15:31:56	W1	ME	832958	807747	2.6	1.290	27.47	6.34	95.8	3.5	31.75	8.15	5.3	<0.005	0.16	4
2010/10/12 15:32:02						1.362	27.48	6.15	92.9	3.6	31.72	8.15				
2010/10/12 15:17:05	W2	ME	832600	807991	12.4	1.016	27.58	4.90	74.1	2.8	31.67	8.10	2.7	<0.005	0.16	6
2010/10/12 15:17:50						1.026	27.62	4.50	68.2	3.1	31.67	8.10				
2010/10/12 15:19:38						6.240	27.20	4.34	65.3	3.1	31.81	8.11	3	<0.005	0.16	<1
2010/10/12 15:20:23						6.305	27.14	4.41	66.3	3.1	31.84	8.11				
2010/10/12 15:20:53						11.451	27.15	3.88	58.5	8.5	32.26	8.15	3.5	<0.005	0.16	<1
2010/10/12 15:21:26						11.311	27.13	4.00	60.2	7.4	32.17	8.13				
2010/10/12 15:05:04	W3	ME	832042	807901	11.9	1.012	27.50	4.54	68.6	4.4	31.72	8.09	3.4	<0.005	0.16	8
2010/10/12 15:05:32						0.982	27.50	4.89	73.8	3.9	31.71	8.09				
2010/10/12 15:06:08						5.851	27.25	4.62	69.5	3.2	31.86	8.10	3.2	<0.005	0.16	3
2010/10/12 15:06:47						5.910	27.17	4.75	71.4	3.2	31.84	8.09				
2010/10/12 15:07:24						10.798	27.14	4.37	65.8	3.8	32.01	8.09	3.2	<0.005	0.16	4
2010/10/12 15:08:19						10.808	27.14	4.16	62.6	4.4	32.03	8.10				
2010/10/12 15:40:18	C1	ME	833691	808188	16	1.062	27.39	4.62	69.7	3.0	31.75	8.14	3.1	<0.005	0.16	55
2010/10/12 15:40:53						1.033	27.39	4.29	64.8	2.9	31.76	8.13				
2010/10/12 15:41:14						7.991	27.22	4.12	62.0	3.0	31.85	8.13	3.9	<0.005	0.16	85
2010/10/12 15:42:06						8.055	27.24	4.11	61.9	2.9	31.84	8.13				
2010/10/12 15:43:05						15.087	27.21	3.94	59.4	3.9	32.22	8.19	3.4	<0.005	0.16	53
2010/10/12 15:43:33						15.008	27.20	4.01	60.4	4.6	32.19	8.19				
2010/10/12 14:51:18	C2	ME	831460	807752	10	0.988	27.39	3.82	56.2	2.4	30.22	8.14	3.7	<0.005	0.16	11
2010/10/12 14:51:50						1.007	27.49	4.12	62.2	2.6	31.66	8.09				
2010/10/12 14:52:12						5.007	27.36	3.98	60.1	2.9	31.78	8.09	3.3	<0.005	0.16	11
2010/10/12 14:52:53						5.031	27.35	4.00	59.8	3.1	30.34	8.11				
2010/10/12 14:53:17						9.036	27.14	3.75	56.3	3.2	31.86	8.11	2.9	<0.005	0.16	10
2010/10/12 14:53:52						8.903	27.13	3.77	56.7	3.0	31.90	8.10				
2010/10/12 16:03:59	C3	ME	832233	808869	15.2	1.024	27.40	4.84	72.5	3.5	30.26	8.13	2.8	<0.005	0.16	47
2010/10/12 16:04:39						1.039	27.39	4.54	68.5	3.0	31.77	8.13				
2010/10/12 16:05:25						7.638	27.21	4.27	64.3	2.9	31.84	8.14	3.9	<0.005	0.16	74
2010/10/12 16:06:00						7.694	27.21	4.27	63.8	3.0	30.43	8.14				
2010/10/12 16:06:22						14.318	27.20	4.08	61.6	5.2	32.14	8.19	3.3	<0.005	0.16	68
2010/10/12 16:06:46						14.244	27.19	4.09	61.6	4.2	32.12	8.18				
2010/10/12 09:59:47	W1	MF	832968	807731	2.6	1.349	27.25	5.41	81.3	4.3	31.38	8.11	4.2	<0.005	0.17	13
2010/10/12 09:59:53						1.350	27.26	5.35	80.0	4.3	30.54	8.10				
2010/10/12 09:52:55	W2	MF	832605	807980	12.5	1.049	27.52	5.39	81.3	2.3	31.18	8.07	2.7	<0.005	0.16	5
2010/10/12 09:53:39						1.024	27.49	4.79	72.2	2.7	31.19	8.05				
2010/10/12 09:54:05						6.227	27.16	4.73	70.7	3.7	30.71	8.08	3.2	<0.005	0.16	27
2010/10/12 09:54:50						6.254	27.17	4.88	73.2	3.5	31.47	8.09				
2010/10/12 09:55:31						11.474	27.16	4.61	69.2	4.0	31.58	8.10	3.4	<0.005	0.16	24
2010/10/12 09:56:14						11.537	27.15	4.17	62.7	4.1	31.70	8.09				
2010/10/12 09:40:16	W3	MF	832050	807902	10.8	0.997	27.33	6.30	94.7	3.2	31.16	8.06	2.6	<0.005	0.15	4
2010/10/12 09:40:51						1.026	27.35	5.80	87.5	2.9	31.19	8.05				
2010/10/12 09:42:07						5.438	27.18	4.69	70.4	2.7	31.28	8.06	2.6	<0.005	0.16	4
2010/10/12 09:42:37						5.448	27.18	5.13	77.0	3.2	31.28	8.05				
2010/10/12 09:43:05						9.818	27.13	4.56	68.3	3.1	31.31	8.05	2.4	<0.005	0.16	13
2010/10/12 09:43:36						9.816	27.13	4.51	67.7	2.7	31.31	8.06				
2010/10/12 10:09:57	C1	MF	833712	808170	15.3	0.991	27.22	4.57	68.7	3.4	31.51	8.14	3.2	<0.005	0.15	87
2010/10/12 10:10:35						1.008	27.21	4.43	66.7	3.7	31.57	8.12				
2010/10/12 10:11:23						7.628	27.22	4.13	62.2	4.7	32.08	8.20	2.1	<0.005	0.15	74
2010/10/12 10:12:19						7.666	27.22	4.35	65.6	4.9	32.03	8.20				
2010/10/12 10:12:50						14.334	27.22	4.26	64.3	5.1	32.09	8.21	3.6	<0.005	0.15	86
2010/10/12 10:13:23						14.296	27.23	4.08	61.5	5.6	32.10	8.20				
2010/10/12 09:29:16	C2	MF	831477	807729	9	1.078	27.26	6.88	103.1	1.8	30.93	7.99	2.6	<0.005	0.15	5
2010/10/12 09:30:52						1.033	27.25	5.99	89.9	2.2	31.04	7.99				
2010/10/12 09:32:07						4.475	27.18	5.62	84.1	2.0	31.04	8.00	1.5	<0.005	0.15	7
2010/10/12 09:32:35						4.442	27.22	6.10	91.5	2.2	31.01	7.99				
2010/10/12 09:33:07						8.041	27.19	5.64	84.7	3.3	31.58	8.09	1.6	<0.005	0.15	8
2010/10/12 09:33:48						8.084	27.17	5.40	81.2	3.7	31.56	8.10				
2010/10/12 10:32:59	C3	MF	832200	808871	14.1	1.046	27.18	3.96	59.4	3.4	31.62	8.13	3.3	<0.005	0.15	100
2010/10/12 10:33:31						1.080	27.27	4.33	65.1	3.1	31.60	8.12				
2010/10/12 10:34:02						7.090	27.22	4.15	62.5	5.9	32.08	8.20	2.1	<0.005	0.14	89
2010/10/12 10:35:17						7.005	27.22	4.28	64.5	5.9	32.08	8.20				
2010/10/12 10:36:35						13.185	27.22	4.01	60.4	6.2	32.12	8.21	3.1	<0.005	0.15	110
2010/10/12 10:36:54						13.134	27.23	3.88	58.5	6.5	32.16	8.21				

Remarks: MF - Middle Flood tida
ME - Middle Ebb tida

Contract No. DC/2009/13

Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwn Wan

AUES

Sok Kwu Wan

Baseline Data 19-Oct-10

Date / Time	Location	Tide*	Co-ordinates		Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS	Ammonia N	TIN	E.coli
			East	North	m	m	℃	mg/L	%	NTU	ppt	unit	mg/l	mg/l	mg/l	1CFU/100ml
2010/10/19 09:12:36	W1	ME	832973	807730	1.4	0.636	27.08	5.36	80.6	2.5	31.91	8.27	<0.5	0.024	0.06	1
2010/10/19 09:12:48						0.721	27.08	5.16	77.6	2.9	31.91	8.27				
2010/10/19 09:20:59	W2	ME	832601	807998	12.3	1.097	27.17	5.35	80.6	2.2	32.16	8.29	1.4	0.020	0.07	1
2010/10/19 09:21:04						1.080	27.18	5.31	80.1	2.4	32.15	8.29				
2010/10/19 09:21:37						7.616	27.25	5.10	77.1	3.5	32.30	8.33	1	0.018	0.06	2
2010/10/19 09:21:48						7.645	27.25	4.99	75.3	3.5	32.30	8.32				
2010/10/19 09:22:48						11.396	27.25	4.89	73.9	5.9	32.37	8.34	2	0.018	0.06	2
2010/10/19 09:22:55						11.623	27.25	4.88	73.7	5.8	32.40	8.34				
2010/10/19 09:22:28	W3	ME	832040	807904	11.9	1.118	27.22	5.04	76.1	2.2	32.39	8.30	4.5	0.027	0.13	<1
2010/10/19 09:22:34						1.117	27.22	4.93	74.5	2.3	32.38	8.29				
2010/10/19 09:23:08						5.916	27.30	4.95	74.9	3.0	32.58	8.34	2.4	<0.005	0.05	8
2010/10/19 09:23:20						5.888	27.30	5.02	75.9	3.2	32.57	8.34				
2010/10/19 09:23:53						10.906	27.27	5.00	75.6	6.9	32.60	8.34	3.6	0.005	0.02	12
2010/10/19 09:24:08						10.837	27.27	4.98	75.3	5.9	32.59	8.34				
2010/10/19 08:57:42	C1	ME	833695	808178	15.4	1.190	27.12	5.72	85.7	2.9	31.38	8.21	3.4	0.020	0.07	<1
2010/10/19 08:57:49						1.131	27.12	5.52	82.8	3.1	31.38	8.21				
2010/10/19 08:58:47						7.769	27.11	4.97	74.5	3.3	31.43	8.22	3.1	0.022	0.06	3
2010/10/19 08:58:55						7.801	27.12	4.90	73.5	4.2	31.47	8.23				
2010/10/19 08:59:49						14.445	27.15	4.56	68.5	6.1	31.64	8.27	2.7	0.021	0.06	1
2010/10/19 08:59:58						14.447	27.15	4.58	68.8	6.2	31.64	8.27				
2010/10/19 09:45:51	C2	ME	831460	807735	10.1	1.039	27.23	5.00	75.6	2.0	32.36	8.29	3.5	0.023	0.04	9
2010/10/19 09:46:38						1.020	27.24	5.04	76.1	2.1	32.43	8.30				
2010/10/19 09:47:20						5.249	27.25	5.08	76.7	2.5	32.42	8.31	2.3	0.020	0.04	7
2010/10/19 09:47:35						5.027	27.24	5.06	76.5	2.3	32.44	8.31				
2010/10/19 09:48:19						9.101	27.25	5.09	77.0	4.1	32.66	8.36	2.6	0.020	0.04	9
2010/10/19 09:48:33						9.147	27.25	5.09	77.0	4.3	32.63	8.35				
2010/10/19 10:00:48	C3	ME	832213	808858	12.1	1.077	27.20	5.50	83.1	6.2	32.52	8.36	3.6	<0.005	0.06	<1
2010/10/19 10:00:57						1.082	27.21	5.43	82.0	6.3	32.54	8.35				
2010/10/19 10:01:44						5.902	27.18	5.41	81.8	6.3	32.65	8.37	3	0.005	0.08	2
2010/10/19 10:01:52						5.897	27.19	5.44	82.2	6.6	32.66	8.37				
2010/10/19 10:02:57						10.945	27.18	5.28	79.8	9.3	32.67	8.36	2.6	<0.005	0.06	<1
2010/10/19 10:03:03						10.801	27.18	5.28	79.8	9.4	32.64	8.36				
2010/10/19 16:53:26	W1	MF	832972	807737	2	1.008	27.30	5.91	89.2	2.6	31.86	8.35	4.1	0.024	0.04	20
2010/10/19 16:53:40						1.012	27.30	5.95	88.9	2.6	30.35	8.34				
2010/10/19 16:35:17	W2	MF	832614	807993	10.2	1.018	27.36	6.35	95.9	2.7	31.85	8.31	4.6	<0.005	0.07	1
2010/10/19 16:35:25						0.996	27.36	6.36	95.9	2.6	31.85	8.31				
2010/10/19 16:36:24						5.118	27.30	6.12	92.4	2.8	31.99	8.32	3.4	<0.005	0.07	2
2010/10/19 16:36:47						5.092	27.32	6.12	92.4	2.8	32.00	8.32				
2010/10/19 16:37:31						9.217	27.29	5.99	90.5	2.9	32.32	8.31	4	<0.005	0.08	2
2010/10/19 16:37:39						9.206	27.28	5.98	90.4	2.9	32.32	8.31				
2010/10/19 16:19:54	W3	MF	832054	807890	12	1.023	27.48	6.49	98.1	3.0	31.76	8.26	3.8	<0.005	0.06	1
2010/10/19 16:20:02						1.011	27.47	6.51	98.4	3.1	31.77	8.27				
2010/10/19 16:20:57						6.012	27.30	5.61	84.6	3.6	31.93	8.26	5	<0.005	0.07	8
2010/10/19 16:21:05						6.001	27.30	5.60	84.4	3.7	31.93	8.26				
2010/10/19 16:22:52						11.023	27.21	5.29	79.8	13.7	32.14	8.27	3.4	<0.005	0.07	4
2010/10/19 16:23:00						10.962	27.21	5.29	79.7	13.4	32.14	8.27				
2010/10/19 17:17:46	C1	MF	833697	808164	14.9	0.997	27.29	5.92	89.2	2.8	31.85	8.33	4.1	0.016	0.09	1
2010/10/19 17:17:54						1.004	27.29	5.95	89.6	2.7	31.84	8.33				
2010/10/19 17:18:43						7.500	27.20	5.48	82.6	5.4	32.11	8.32	3.6	0.014	0.09	2
2010/10/19 17:18:56						7.515	27.20	5.42	81.7	5.4	32.12	8.32				
2010/10/19 17:19:22						13.855	27.17	5.30	80.1	6.7	32.55	8.32	3.3	0.016	0.09	1
2010/10/19 17:20:22						13.874	27.16	5.28	79.7	6.2	32.61	8.32				
2010/10/19 16:02:43	C2	MF	831472	807751	9.4	1.001	27.35	6.13	92.4	1.9	31.66	8.21	2.9	0.012	0.02	2
2010/10/19 16:02:50						1.005	27.35	6.06	91.3	1.8	31.66	8.21				
2010/10/19 16:03:31						4.716	27.27	5.50	82.8	2.1	31.78	8.21	3.8	0.013	0.03	4
2010/10/19 16:03:40						4.698	27.27	5.48	82.6	2.2	31.79	8.21				
2010/10/19 16:04:28						8.421	27.27	5.17	77.3	3.9	30.44	8.23	3.2	0.014	0.03	2
2010/10/19 16:04:36						8.411	27.28	5.09	76.8	4.3	31.98	8.23				
2010/10/19 15:45:46	C3	MF	832213	808861	11.9	1.003	27.35	8.01	120.5	2.6	31.29	8.24	8.5	0.008	0.06	3
2010/10/19 15:45:54						1.039	27.34	7.89	118.6	2.5	31.27	8.22				
2010/10/19 15:46:39						5.902	27.23	6.38	95.9	2.5	31.70	8.18	5.9	0.005	0.06	7
2010/10/19 15:46:46						5.899	27.23	6.45	95.8	2.7	29.20	8.18				
2010/10/19 15:47:47						10.754	27.23	6.01	90.4	3.3	31.72	8.17	7.4	0.007	0.06	2
2010/10/19 15:47:53						10.737	27.23	5.99	90.1	3.3	31.72	8.18				

Remarks: MF - Middle Flood tida
ME - Middle Ebb tida

Contract No. DC/2009/13

Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwn Wan

AUES

Sok Kwu Wan

Baseline Data 16-Nov-10

Date / Time	Location	Tide*	Co-ordinates		Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS	Ammonia N	TIN	E.coli
			East	North	m	m	℃	mg/L	%	NTU	ppt	unit	mg/l	mg/l	mg/l	1CFU/100ml
2010/11/16 08:25:50	W1	ME	832955	807735	2.8	1.401	22.45	6.57	92.8	2.8	33.51	8.26	5.5	<0.005	0.15	4
2010/11/16 08:25:54						1.419	22.46	6.50	91.9	3.2	33.51	8.26				
2010/11/16 08:17:10	W2	ME	832594	807987	9.8	1.015	22.43	6.91	97.5	1.7	33.52	8.30	3.8	0.020	0.18	1
2010/11/16 08:17:15						1.034	22.55	6.99	98.8	1.9	33.41	8.24				
2010/11/16 08:18:00						4.881	22.37	7.05	99.3	1.4	33.48	8.30	5.3	<0.005	0.16	2
2010/11/16 08:18:03						4.926	22.37	7.05	99.3	1.4	33.48	8.30				
2010/11/16 08:19:00						8.755	22.34	7.14	100.5	1.8	33.52	8.31	15.3	<0.005	0.15	3
2010/11/16 08:19:06						8.772	22.34	7.13	100.5	2.0	33.52	8.31				
2010/11/16 08:06:55	W3	ME	832038	807904	11.4	0.997	22.78	8.09	114.7	1.3	33.13	8.20	1.6	<0.005	0.14	2
2010/11/16 08:07:00						0.994	22.78	8.05	114.0	1.1	33.13	8.20				
2010/11/16 08:07:32						5.724	22.47	8.02	113.1	1.2	33.27	8.27	3.9	0.030	0.19	1
2010/11/16 08:07:36						5.705	22.47	8.03	113.1	1.2	33.27	8.27				
2010/11/16 08:08:09						10.416	22.35	8.25	116.0	3.0	33.30	8.30	2.4	0.010	0.16	2
2010/11/16 08:08:22						10.395	22.35	8.26	116.0	3.4	33.31	8.30				
2010/11/16 08:34:38	C1	ME	833690	808185	12.1	1.054	22.35	6.38	90.0	1.8	33.64	8.31	8	<0.005	0.14	1
2010/11/16 08:34:42						1.023	22.36	6.35	89.7	1.7	33.64	8.31				
2010/11/16 08:36:40						6.054	22.33	6.39	90.2	1.8	33.72	8.32	7.1	<0.005	0.14	4
2010/11/16 08:36:44						5.993	22.34	6.39	90.3	1.8	33.72	8.32				
2010/11/16 08:37:46						11.041	22.34	6.33	89.4	1.9	33.77	8.32	9.4	<0.005	0.14	2
2010/11/16 08:37:49						11.074	22.33	6.33	89.4	1.9	33.77	8.32				
2010/11/16 07:57:37	C2	ME	831473	807725	8	0.999	22.78	10.09	142.6	2.6	32.90	8.14	4	0.040	0.21	6
2010/11/16 07:57:44						1.019	22.78	10.00	141.3	1.9	32.89	8.14				
2010/11/16 07:58:23						4.014	22.75	10.07	142.3	1.8	33.02	8.18	2.8	0.050	0.22	3
2010/11/16 07:58:31						4.015	22.74	10.06	142.2	1.8	33.03	8.19				
2010/11/16 07:58:55						7.013	22.58	9.94	140.0	4.2	33.10	8.21	3.4	0.040	0.21	6
2010/11/16 07:59:17						6.975	22.57	9.88	139.1	6.7	33.11	8.22				
2010/11/16 08:51:43	C3	ME	832199	808853	12.4	1.016	22.43	5.89	83.5	1.7	33.79	8.31	5.1	<0.005	0.14	<1
2010/11/16 08:51:49						1.033	22.43	5.88	83.4	1.6	33.79	8.31				
2010/11/16 08:52:49						6.191	22.39	5.88	83.3	1.7	33.88	8.31	7.3	<0.005	0.14	<1
2010/11/16 08:52:55						6.232	22.39	5.88	83.3	1.8	33.88	8.31				
2010/11/16 08:55:16						11.398	22.37	5.82	82.4	2.2	33.92	8.31	10	<0.005	0.14	1
2010/11/16 08:57:54						11.461	22.39	5.79	82.1	2.0	33.94	8.31				
2010/11/16 14:46:29	W1	MF	832953	807737	2.1	1.028	22.59	9.27	131.0	2.4	33.49	8.30	12.7	<0.005	0.14	<1
2010/11/16 14:46:45						0.983	22.56	9.26	130.8	2.3	33.49	8.29				
2010/11/16 14:38:06	W2	MF	832597	807985	11.3	1.031	22.77	11.80	167.1	1.5	33.46	8.32	6.3	<0.005	0.14	<1
2010/11/16 14:38:15						1.000	22.78	11.60	164.3	1.3	33.46	8.31				
2010/11/16 14:38:53						5.599	22.40	11.28	158.8	1.5	33.66	8.30	11.9	<0.005	0.14	<1
2010/11/16 14:38:57						5.617	22.39	11.24	158.2	1.4	33.66	8.30				
2010/11/16 14:39:37						10.297	22.37	10.78	151.7	1.3	33.76	8.29	2.5	<0.005	0.14	2
2010/11/16 14:39:41						10.343	22.37	10.74	151.3	1.3	33.76	8.29				
2010/11/16 14:23:16	W3	MF	832034	807900	11.3	0.958	22.92	7.28	103.7	1.5	33.31	8.17	9	<0.005	0.16	1
2010/11/16 14:23:25						1.001	22.94	7.21	102.8	1.5	33.32	8.17				
2010/11/16 14:24:04						6.133	22.43	7.00	98.8	2.6	33.53	8.19	8	<0.005	0.15	1
2010/11/16 14:24:13						6.233	22.43	6.91	97.5	2.6	33.54	8.19				
2010/11/16 14:24:51						10.258	22.37	6.86	96.8	3.5	33.62	8.20	13.4	<0.005	0.14	1
2010/11/16 14:25:09						10.378	22.37	6.83	96.5	4.1	33.63	8.20				
2010/11/16 14:55:24	C1	MF	833697	808188	12.6	1.009	22.13	10.91	152.4	1.6	33.37	8.35	7.1	<0.005	0.15	<1
2010/11/16 14:55:37						1.037	22.11	10.60	148.1	2.2	33.38	8.34				
2010/11/16 14:55:57						6.295	22.05	10.31	144.0	3.1	33.61	8.33	10.3	<0.005	0.15	<1
2010/11/16 14:56:05						6.295	22.05	10.27	143.6	3.1	33.62	8.32				
2010/11/16 14:56:32						11.621	22.04	9.99	139.6	3.6	33.71	8.32	4.1	<0.005	0.15	1
2010/11/16 14:56:36						11.630	22.04	9.95	139.2	4.3	33.71	8.32				
2010/11/16 14:01:48	C2	MF	834177	807726	10.8	1.004	23.16	11.91	169.5	0.5	32.95	8.06	6.4	0.030	0.2	<1
2010/11/16 14:01:53						1.012	23.16	11.86	168.8	0.5	32.95	8.06				
2010/11/16 14:02:25						5.401	22.55	11.75	165.3	1.5	33.22	8.13	2.4	0.020	0.18	1
2010/11/16 14:02:29						5.405	22.54	11.76	165.5	1.6	33.22	8.13				
2010/11/16 14:03:30						9.720	22.39	10.95	153.7	4.2	33.32	8.12	10	<0.005	0.14	1
2010/11/16 14:05:24						9.392	22.40	9.82	138.1	4.8	33.39	8.14				
2010/11/16 15:11:59	C3	MF	832196	808857	12.6	0.960	22.96	11.91	169.4	0.6	33.47	8.35	5.5	<0.005	0.14	<1
2010/11/16 15:12:07						1.031	22.98	11.52	163.9	0.6	33.47	8.34				
2010/11/16 15:12:59						6.405	22.44	11.10	156.6	1.4	33.81	8.33	7.4	<0.005	0.14	<1
2010/11/16 15:13:04						6.406	22.44	11.11	156.7	1.3	33.81	8.33				
2010/11/16 15:17:10						11.626	22.42	10.05	141.8	1.2	33.92	8.32	7.6	<0.005	0.14	<1
2010/11/16 15:17:14						11.625	22.42	9.98	140.9	1.4	33.92	8.32				

Remarks: MF - Middle Flood tida
ME - Middle Ebb tida

Contract No. DC/2009/13

Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwn Wan

AUES

Sok Kwu Wan

Baseline Data 25-Nov-10

Date / Time	Location	Tide*	Co-ordinates		Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS	Ammonia N	TIN	E.coli
			East	North	m	m	℃	mg/L	%	NTU	ppt	unit	mg/l	mg/l	mg/l	1CFU/100ml
2010/11/25 13:51:35	W1	ME	832962	807737	2.1	1.058	22.74	6.54	92.1	2.0	33.51	8.41	11.3	<0.005	0.14	36
2010/11/25 13:51:47						1.029	22.75	6.89	97.1	1.4	33.52	8.41				
2010/11/25 13:43:42	W2	ME	832627	807967	12.5	1.127	22.89	6.77	95.6	2.2	33.50	8.38	5.6	0.028	0.17	280
2010/11/25 13:43:54						1.129	22.89	6.91	97.5	1.9	33.51	8.38				
2010/11/25 13:44:53						6.208	22.42	6.48	89.5	1.8	31.16	8.34	10.3	0.044	0.18	350
2010/11/25 13:45:06						6.309	22.42	6.36	89.0	1.8	33.54	8.34				
2010/11/25 13:45:44						11.447	22.34	6.23	87.1	2.1	33.62	8.35	5.8	<0.005	0.13	160
2010/11/25 13:45:55						11.316	22.34	6.24	87.3	2.3	33.63	8.35				
2010/11/25 13:34:03	W3	ME	832033	807877	10.2	1.058	22.80	6.66	93.7	2.1	33.36	8.34	15.3	0.011	0.15	40
2010/11/25 13:34:10						1.087	22.81	6.75	95.0	1.8	33.36	8.35				
2010/11/25 13:34:50						5.143	22.53	6.58	92.2	1.6	33.38	8.33	14.3	0.034	0.16	120
2010/11/25 13:35:06						5.121	22.53	6.55	91.8	1.9	33.38	8.33				
2010/11/25 13:35:50						9.141	22.47	6.60	92.4	1.9	33.40	8.36	8.4	0.010	0.14	62
2010/11/25 13:36:03						9.132	22.47	6.63	92.9	1.8	33.41	8.36				
2010/11/25 14:01:19	C1	ME	833702	808189	14.2	1.110	22.51	6.29	88.2	2.3	33.60	8.35	7.2	0.027	0.16	240
2010/11/25 14:01:30						0.906	22.52	6.35	89.1	2.3	33.60	8.35				
2010/11/25 14:02:33						7.667	22.36	6.04	83.5	3.3	31.54	8.36	11.3	0.027	0.15	110
2010/11/25 14:02:38						7.636	22.35	6.04	84.5	3.3	33.67	8.36				
2010/11/25 14:04:06						13.321	22.36	5.89	82.5	2.3	33.72	8.36	5.6	0.026	0.14	100
2010/11/25 14:04:15						13.025	22.35	5.93	83.0	2.5	33.73	8.36				
2010/11/25 13:22:18	C2	ME	831486	807745	10.7	1.123	22.70	7.84	109.9	1.3	32.82	8.36	7.2	<0.005	0.11	59
2010/11/25 13:22:30						1.119	22.70	7.88	110.4	1.3	32.83	8.36				
2010/11/25 13:23:34						5.356	22.53	7.85	109.7	1.2	32.90	8.39	5	<0.005	0.08	52
2010/11/25 13:23:48						5.326	22.53	7.85	109.7	1.7	32.90	8.39				
2010/11/25 13:24:41						9.761	22.33	6.51	89.4	8.1	30.25	8.28	4.1	0.009	0.11	46
2010/11/25 13:24:50						9.732	22.33	6.34	88.4	8.4	33.04	8.28				
2010/11/25 14:24:48	C3	ME	832220	808854	14.3	1.151	22.49	6.31	88.6	2.6	33.78	8.39	9.8	0.018	0.13	71
2010/11/25 14:24:58						1.103	22.50	6.39	89.7	2.3	33.78	8.39				
2010/11/25 14:25:34						7.091	22.27	6.17	86.4	2.1	33.88	8.38	19.9	0.021	0.13	55
2010/11/25 14:25:42						7.231	22.27	6.16	86.2	2.1	33.88	8.38				
2010/11/25 14:26:18						13.252	22.23	5.95	83.2	4.1	33.90	8.38	3.8	<0.005	0.1	43
2010/11/25 14:26:31						13.384	22.23	5.97	83.5	3.9	33.90	8.39				
2010/11/25 09:20:41	W1	MF	832951	807749	2.2	1.189	22.49	6.08	85.2	3.7	33.62	8.33	12.6	0.006	0.15	32
2010/11/25 09:20:51						1.268	22.49	6.09	85.4	3.4	33.63	8.33				
2010/11/25 09:10:15	W2	MF	832611	807973	11.2	1.260	22.44	5.65	79.2	2.1	33.62	8.31	7.4	<0.005	0.14	290
2010/11/25 09:10:22						1.305	22.45	5.67	79.5	2.1	33.63	8.31				
2010/11/25 09:10:51						5.845	22.41	5.37	75.2	2.0	33.61	8.30	11.9	0.026	0.16	310
2010/11/25 09:11:01						5.855	22.41	5.37	75.2	1.9	33.61	8.30				
2010/11/25 09:11:38						10.225	22.36	5.31	74.3	4.0	33.65	8.32	6.9	0.020	0.15	430
2010/11/25 09:11:52						10.316	22.36	5.40	74.7	3.7	31.87	8.32				
2010/11/25 08:58:30	W3	MF	832030	807885	10.5	1.041	22.40	6.13	85.8	2.4	33.57	8.34	7.9	<0.005	0.12	100
2010/11/25 08:58:37						1.050	22.41	6.13	85.9	2.2	33.57	8.34				
2010/11/25 08:59:09						5.319	22.36	6.05	84.7	2.3	33.62	8.37	10.8	0.063	0.18	67
2010/11/25 08:59:18						5.268	22.36	6.12	85.6	2.0	33.62	8.38				
2010/11/25 09:00:00						9.415	22.31	6.52	90.3	5.8	31.83	8.42	12.4	<0.005	0.09	290
2010/11/25 09:00:09						9.539	22.32	6.51	91.1	7.7	33.67	8.43				
2010/11/25 09:30:19	C1	MF	833710	808184	12.3	1.072	22.42	6.08	85.2	2.6	33.65	8.31	8.4	0.030	0.17	210
2010/11/25 09:30:36						1.061	22.42	6.16	86.4	2.5	33.66	8.32				
2010/11/25 09:31:09						6.130	22.31	5.83	81.5	3.0	33.74	8.34	10.3	0.040	0.17	96
2010/11/25 09:31:22						6.076	22.31	5.82	81.5	3.3	33.74	8.34				
2010/11/25 09:32:05						11.328	22.22	5.80	81.1	4.3	33.81	8.36	14.6	0.020	0.13	96
2010/11/25 09:32:14						11.272	22.22	5.84	81.6	3.9	33.81	8.36				
2010/11/25 08:42:42	C2	MF	831455	807729	9.2	1.000	22.38	7.76	105.4	1.2	33.46	8.43	4.5	<0.005	0.03	2
2010/11/25 08:42:49						0.991	22.38	8.06	109.6	1.4	33.46	8.43				
2010/11/25 08:43:38						4.599	22.34	7.17	97.0	1.9	33.46	8.42	10.3	<0.005	0.03	4
2010/11/25 08:43:48						4.726	22.33	7.17	94.6	1.6	31.55	8.41				
2010/11/25 08:44:25						8.674	22.33	5.79	77.8	11.4	33.55	8.36	6.7	0.021	0.04	6
2010/11/25 08:44:41						8.767	22.33	5.54	74.3	8.1	33.54	8.36				
2010/11/25 08:25:05	C3	MF	832234	808851	14.7	1.064	22.42	8.04	108.5	2.0	32.74	8.27	5.9	0.022	0.16	640
2010/11/25 08:25:13						1.012	22.42	8.01	108.2	2.1	32.74	8.28				
2010/11/25 08:25:51						7.296	22.41	5.92	79.0	2.0	32.75	8.27	12.8	0.040	0.17	850
2010/11/25 08:26:02						7.394	22.42	5.96	79.5	2.2	32.75	8.27				
2010/11/25 08:26:49						13.886	22.41	5.43	72.2	2.3	32.77	8.27	8.2	0.030	0.16	590
2010/11/25 08:26:59						13.978	22.41	5.64	72.7	2.2	30.56	8.27				

Remarks: MF - Middle Flood tida
ME - Middle Ebb tida

Contract No. DC/2009/13

Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwn Wan

Sok Kwu Wan

Baseline Data 16-Dec-10

Date / Time	Location	Tide*	Co-ordinates		Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS	Ammonia N	TIN	E.coli
			East	North	m	m	℃	mg/L	%	NTU	ppt	unit	mg/l	mg/l	mg/l	1CFU/100ml
2010/12/16 09:00:10	W1	ME	832966	807737	2.4	1.225	19.84	5.95	89.2	3.9	33.80	8.45	4.7	0.055	0.14	5
2010/12/16 09:00:19						1.207	19.84	5.68	85.6	3.8	33.81	8.45				
2010/12/16 08:45:18	W2	ME	832600	807988	11.8	0.963	20.30	6.36	95.9	3.7	33.88	8.49	4.2	0.037	0.09	14
2010/12/16 08:45:27						1.054	20.33	5.85	89.0	3.8	33.90	8.48				
2010/12/16 08:47:03						5.783	20.38	5.21	80.6	3.9	33.95	8.50	5.8	0.048	0.12	9
2010/12/16 08:47:14						5.641	20.39	5.21	80.5	3.9	33.94	8.50				
2010/12/16 08:48:06						10.613	20.37	5.19	80.3	4.6	33.96	8.51	4.3	0.053	0.13	8
2010/12/16 08:48:25						10.713	20.39	5.18	80.2	4.7	33.96	8.51				
2010/12/16 08:28:02	W3	ME	832044	807899	12.6	0.983	20.21	5.51	83.9	2.5	33.63	8.47	2.4	0.055	0.12	3
2010/12/16 08:28:11						0.988	20.20	5.29	81.0	2.3	33.63	8.47				
2010/12/16 08:28:45						6.315	20.25	5.10	78.6	2.9	33.67	8.48	3.1	0.047	0.11	7
2010/12/16 08:28:57						6.282	20.24	5.08	78.3	2.6	33.66	8.49				
2010/12/16 08:29:38						11.650	20.31	5.08	78.5	3.5	33.74	8.50	5.4	0.042	0.1	9
2010/12/16 08:29:46						11.519	20.30	5.08	78.4	3.3	33.74	8.50				
2010/12/16 09:12:56	C1	ME	833709	808164	13.3	1.075	20.52	5.86	89.8	4.7	34.11	8.48	7.3	0.033	0.08	15
2010/12/16 09:13:18						1.046	20.50	5.58	85.9	4.5	34.09	8.49				
2010/12/16 09:14:36						6.241	20.54	5.38	83.4	4.8	34.11	8.51	6.6	0.037	0.09	14
2010/12/16 09:14:44						6.272	20.54	5.38	83.3	4.9	34.11	8.51				
2010/12/16 09:15:17						13.048	20.53	5.37	83.1	4.2	34.11	8.51	7	0.032	0.08	11
2010/12/16 09:15:25						12.669	20.52	5.37	83.1	4.3	34.10	8.51				
2010/12/16 08:03:46	C2	ME	831465	807741	8.6	1.046	19.84	5.84	87.0	2.0	32.86	8.36	4.1	0.103	0.22	18
2010/12/16 08:03:54						1.042	19.86	5.36	80.7	2.0	32.89	8.37				
2010/12/16 08:05:52						4.349	19.75	4.53	69.4	1.6	32.97	8.41	1.3	0.107	0.23	22
2010/12/16 08:06:04						4.373	19.76	4.53	69.5	1.7	32.97	8.41				
2010/12/16 08:07:09						7.612	19.72	4.56	69.8	1.8	33.03	8.42	2.5	0.104	0.22	20
2010/12/16 08:07:16						7.758	19.70	4.57	69.9	2.2	33.04	8.42				
2010/12/16 09:33:29	C3	ME	832225	808860	12	1.020	20.53	5.36	83.0	4.3	34.11	8.51	5.5	0.033	0.08	16
2010/12/16 09:33:37						1.088	20.54	5.35	82.9	4.3	34.11	8.51				
2010/12/16 09:34:05						5.948	20.54	5.34	82.8	4.5	34.12	8.51	5.1	0.034	0.08	10
2010/12/16 09:34:16						5.894	20.54	5.34	82.7	4.6	34.12	8.51				
2010/12/16 09:34:41						10.862	20.55	5.32	82.6	4.7	34.12	8.51	5.2	0.035	0.08	8
2010/12/16 09:34:49						10.944	20.55	5.32	82.6	4.6	34.12	8.51				
2010/12/16 14:03:54	W1	MF	832962	807730	2.7	1.343	19.54	6.58	97.2	3.6	34.19	8.48	3.5	0.051	0.12	3
2010/12/16 14:04:11						1.351	19.56	6.09	90.7	4.1	34.20	8.47				
2010/12/16 13:47:44	W2	MF	832602	807980	12.6	1.025	20.37	6.31	95.8	3.9	34.44	8.49	5.2	0.040	0.09	11
2010/12/16 13:47:56						1.076	20.39	5.87	89.9	3.9	34.46	8.49				
2010/12/16 13:48:35						6.387	20.39	5.41	83.7	3.9	34.47	8.49	2.9	0.034	0.08	7
2010/12/16 13:49:42						6.461	20.40	5.33	82.6	4.0	34.46	8.51				
2010/12/16 13:50:19						11.524	20.38	5.32	82.5	4.5	34.45	8.51	5.6	0.038	0.09	10
2010/12/16 13:50:35						11.516	20.39	5.32	82.4	4.6	34.45	8.51				
2010/12/16 13:30:27	W3	MF	832041	807890	12.4	0.985	20.15	5.46	83.8	2.2	34.47	8.48	6.9	0.052	0.12	5
2010/12/16 13:30:35						0.987	20.16	5.40	83.0	2.2	34.46	8.49				
2010/12/16 13:31:55						6.206	20.17	5.23	80.7	2.5	34.42	8.49	7.2	0.054	0.12	2
2010/12/16 13:32:08						6.225	20.17	5.25	80.9	2.3	34.42	8.50				
2010/12/16 13:33:07						11.439	20.16	5.22	80.5	3.6	34.42	8.50	2.7	0.056	0.13	6
2010/12/16 13:33:14						11.408	20.16	5.20	80.3	3.4	34.41	8.50				
2010/12/16 14:12:44	C1	MF	833700	808181	13.5	1.038	20.47	6.50	98.5	4.6	34.35	8.52	4.5	0.049	0.1	9
2010/12/16 14:12:54						0.937	20.52	6.13	93.7	4.6	34.37	8.50				
2010/12/16 14:13:55						6.702	20.52	5.27	82.0	3.8	34.39	8.50	5.5	0.034	0.08	7
2010/12/16 14:14:10						6.772	20.56	5.26	81.9	4.2	34.39	8.51				
2010/12/16 14:16:33						12.433	20.77	5.16	81.1	6.4	34.54	8.52	5.8	0.038	0.08	9
2010/12/16 14:18:47						12.488	20.76	5.17	81.2	5.5	34.52	8.52				
2010/12/16 13:10:09	C2	MF	831456	807739	9.2	1.021	20.04	5.80	88.2	2.8	34.49	8.46	10.7	0.075	0.16	8
2010/12/16 13:10:28						1.062	20.05	5.33	81.8	2.0	34.50	8.46				
2010/12/16 13:11:14						4.655	20.15	5.15	79.7	1.9	34.51	8.47	6.2	0.094	0.2	6
2010/12/16 13:11:22						4.607	20.16	5.16	79.7	2.0	34.51	8.48				
2010/12/16 13:11:58						8.186	20.07	5.15	79.4	2.9	34.45	8.47	5.2	0.074	0.16	5
2010/12/16 13:12:20						8.156	20.05	5.13	79.1	2.5	34.42	8.47				
2010/12/16 14:41:19	C3	MF	832229	808871	12.8	1.061	20.07	6.25	93.8	3.3	33.81	8.47	11.4	0.048	0.11	5
2010/12/16 14:41:26						1.047	20.09	6.09	91.7	3.3	33.82	8.47				
2010/12/16 14:41:53						6.025	20.23	5.83	88.7	3.8	34.01	8.48	7.9	0.044	0.1	7
2010/12/16 14:42:02						6.370	20.32	5.79	88.3	4.1	34.04	8.49				
2010/12/16 14:42:54						11.939	20.33	5.68	87.0	4.8	34.13	8.50	6.7	0.045	0.12	8
2010/12/16 14:43:01						11.847	20.32	5.68	86.9	4.4	34.12	8.50				

Remarks: MF - Middle Flood tida
ME - Middle Ebb tida

Contract No. DC/2009/13

Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwn Wan

Sok Kwu Wan

Baseline Data 30-Dec-10

Date / Time	Location	Tide*	Co-ordinates		Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS	Ammonia N	TIN	E.coli
			East	North	m	m	℃	mg/L	%	NTU	ppt	unit	mg/l	mg/l	mg/l	1CFU/100ml
2010/12/30 09:24:09	W1	ME	832958	807737	1.7	0.940	18.88	6.59	86.7	2.4	34.06	8.34	<0.5	<0.005	0.12	<1
2010/12/30 09:24:25						0.840	18.89	6.56	86.4	2.1	34.05	8.34				
2010/12/30 09:15:48	W2	ME	832611	807971	12.1	1.032	18.96	6.60	87.0	2.1	34.07	8.34	0.6	<0.005	0.13	<1
2010/12/30 09:15:56						1.000	18.95	6.53	86.1	2.3	34.07	8.34				
2010/12/30 09:16:44						6.144	18.90	6.24	82.2	2.2	34.15	8.34	2.2	<0.005	0.13	1
2010/12/30 09:16:52						6.114	18.90	6.25	82.4	2.4	34.15	8.34				
2010/12/30 09:17:22						11.122	18.86	6.10	80.4	3.6	34.18	8.32	<0.5	<0.005	0.13	1
2010/12/30 09:17:34						11.092	18.86	6.08	80.1	5.3	34.18	8.32				
2010/12/30 09:06:00	W3	ME	832061	807898	10.7	1.001	18.97	6.96	91.8	1.4	34.02	8.33	<0.5	<0.005	0.13	1
2010/12/30 09:06:07						1.044	18.97	6.66	87.8	1.4	34.02	8.33				
2010/12/30 09:06:41						5.337	18.90	6.27	82.7	1.6	34.09	8.32	<0.5	0.020	0.15	4
2010/12/30 09:06:49						5.375	18.90	6.23	82.0	1.5	34.09	8.32				
2010/12/30 09:07:44						9.648	18.89	6.11	80.5	1.5	34.11	8.32	<0.5	0.010	0.14	3
2010/12/30 09:07:52						9.726	18.89	6.11	80.5	1.5	34.12	8.32				
2010/12/30 09:33:40	C1	ME	833700	808168	12.2	1.057	18.96	6.61	87.1	1.7	34.05	8.37	1.7	<0.005	0.12	<1
2010/12/30 09:33:45						1.078	18.96	6.56	86.5	1.7	34.04	8.37				
2010/12/30 09:34:29						6.121	18.91	6.37	84.0	2.0	34.13	8.36	<0.5	<0.005	0.12	1
2010/12/30 09:34:39						6.278	18.91	6.36	83.9	2.0	34.13	8.36				
2010/12/30 09:35:16						11.223	18.90	6.33	83.5	2.1	34.15	8.37	0.5	<0.005	0.12	2
2010/12/30 09:35:29						11.110	18.90	6.32	83.3	2.1	34.15	8.36				
2010/12/30 08:55:25	C2	ME	831471	807755	9.1	1.055	19.02	7.14	94.2	1.7	33.92	8.33	0.5	<0.005	0.12	<1
2010/12/30 08:55:35						0.951	19.02	7.09	93.5	1.5	33.92	8.33				
2010/12/30 08:56:22						4.570	19.00	6.96	91.8	1.7	33.97	8.34	<0.5	<0.005	0.12	<1
2010/12/30 08:56:34						4.741	19.00	6.91	91.1	1.8	33.97	8.34				
2010/12/30 08:57:02						8.186	18.99	6.88	90.7	1.8	33.99	8.34	1.1	<0.005	0.12	<1
2010/12/30 08:57:17						8.152	18.99	6.89	90.9	1.8	33.99	8.34				
2010/12/30 08:37:18	C3	ME	832220	808877	15	1.058	18.89	7.33	96.3	2.0	33.69	8.28	1.5	<0.005	0.12	4
2010/12/30 08:37:27						1.139	18.89	7.33	96.4	2.2	33.70	8.28				
2010/12/30 08:38:26						7.491	18.89	7.16	94.2	2.2	33.76	8.27	1.9	<0.005	0.12	2
2010/12/30 08:38:34						7.497	18.89	7.16	94.2	2.3	33.76	8.28				
2010/12/30 08:39:38						13.990	18.89	7.15	94.0	2.1	33.79	8.28	<0.5	<0.005	0.13	4
2010/12/30 08:39:48						14.048	18.89	7.28	94.0	2.1	30.87	8.28				
2010/12/30 13:15:05	W1	MF	832967	807747	2	0.994	19.37	7.76	103.1	2.1	33.98	8.42	1.6	<0.005	0.12	<1
2010/12/30 13:15:13						1.024	19.34	7.70	102.3	2.2	33.99	8.41				
2010/12/30 13:22:57	W2	MF	832610	807993	12.2	1.051	19.06	7.39	97.6	1.9	33.99	8.32	<0.5	<0.005	0.12	<1
2010/12/30 13:23:08						1.085	19.04	7.31	96.6	1.9	33.99	8.31				
2010/12/30 13:23:49						6.227	18.95	7.18	94.8	2.0	34.15	8.31	4.5	<0.005	0.12	<1
2010/12/30 13:24:04						6.106	18.97	7.17	94.6	2.0	34.15	8.31				
2010/12/30 13:24:57						11.254	18.94	7.15	94.3	1.5	34.21	8.32	<0.5	<0.005	0.12	1
2010/12/30 13:25:08						11.177	18.95	7.15	94.3	1.8	34.22	8.32				
2010/12/30 13:31:10	W3	MF	832037	807895	10.9	1.015	19.29	7.12	94.4	1.6	33.98	8.33	<0.5	<0.005	0.13	<1
2010/12/30 13:31:20						1.117	19.33	7.10	94.2	1.5	34.00	8.33				
2010/12/30 13:31:49						5.422	19.07	7.09	93.7	1.5	34.13	8.33	<0.5	<0.005	0.12	<1
2010/12/30 13:31:56						5.441	19.06	7.06	93.3	1.5	34.13	8.34				
2010/12/30 13:32:33						9.996	19.03	6.93	91.6	2.3	34.21	8.31	<0.5	<0.005	0.13	<1
2010/12/30 13:32:45						9.883	19.03	6.84	90.4	2.6	34.21	8.31				
2010/12/30 13:03:20	C1	MF	833700	808175	11.7	1.039	19.05	7.33	96.8	2.2	33.96	8.44	1.2	<0.005	0.12	<1
2010/12/30 13:03:24						1.145	19.04	7.32	96.7	2.2	33.96	8.43				
2010/12/30 13:03:51						5.829	19.03	7.26	95.9	2.2	34.14	8.40	1.2	<0.005	0.13	<1
2010/12/30 13:03:58						5.669	19.03	7.26	95.9	2.1	34.14	8.40				
2010/12/30 13:04:33						10.728	18.97	7.20	95.1	2.5	34.19	8.38	7.7	<0.005	0.13	<1
2010/12/30 13:04:38						10.708	18.96	7.20	95.1	2.4	34.20	8.38				
2010/12/30 13:39:48	C2	MF	831473	807737	9.7	1.038	19.24	7.04	93.4	1.4	34.04	8.34	4.2	<0.005	0.13	2
2010/12/30 13:40:02						1.055	19.22	6.97	92.3	1.4	34.02	8.34				
2010/12/30 13:41:20						4.853	19.12	6.84	90.5	1.7	34.14	8.35	2.4	<0.005	0.13	1
2010/12/30 13:41:27						4.922	19.13	6.91	89.8	1.6	30.94	8.35				
2010/12/30 13:41:49						8.696	18.98	6.79	89.6	2.9	34.15	8.34	1	<0.005	0.13	<1
2010/12/30 13:41:54						8.720	18.95	6.74	89.0	3.3	34.17	8.33				
2010/12/30 12:44:46	C3	MF	832222	808875	15.4	1.145	19.23	7.70	99.6	1.7	29.87	8.38	2.4	<0.005	0.13	<1
2010/12/30 12:44:50						0.998	19.25	7.44	98.4	1.8	33.72	8.38				
2010/12/30 12:45:39						7.672	18.97	7.28	96.0	1.7	33.93	8.34	0.9	<0.005	0.13	<1
2010/12/30 12:45:44						7.717	18.96	7.27	95.9	1.7	33.95	8.34				
2010/12/30 12:46:11						14.435	18.89	7.21	94.9	1.9	34.00	8.33	<0.5	0.050	0.18	<1
2010/12/30 12:46:14						14.471	18.89	7.35	94.9	2.0	30.75	8.33				

Remarks: MF - Middle Flood tida
ME - Middle Ebb tida

Contract No. DC/2009/13

Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwn Wan

AUES

Sok Kwu Wan

Baseline Data 20-Jan-11

Date / Time	Location	Tide	Co-ordinates		Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS	Ammonia N	TIN	E.coli
			East	North	m	m	℃	mg/L	%	NTU	ppt	unit	mg/l	mg/l	mg/l	1CFU/100ml
2011/1/20 12:45:16	W1	ME	832948	807745	2.1	1.024	16.12	7.32	96.4	3.3	33.98	8.48	1.8	0.032	0.16	<1
2011/1/20 12:45:21						1.058	16.13	7.24	95.4	3.2	33.98	8.48				
2011/1/20 12:37:09	W2	ME	832615	807976	12.2	1.068	15.97	6.81	89.7	3.4	33.96	8.43	2.8	0.021	0.15	23
2011/1/20 12:37:12						1.185	15.97	6.78	89.3	3.4	33.96	8.43				
2011/1/20 12:37:32						6.139	15.96	6.70	88.3	3.4	33.98	8.43	1.4	0.032	0.16	21
2011/1/20 12:37:36						6.197	15.96	6.69	88.2	3.4	33.98	8.43				
2011/1/20 12:38:03						11.157	15.79	6.69	87.8	4.2	34.01	8.44	4.5	0.029	0.16	34
2011/1/20 12:38:08						11.186	15.75	6.69	87.8	4.7	34.01	8.44				
2011/1/20 12:26:54	W3	ME	832040	807912	11.4	1.070	16.05	7.20	94.6	3.7	33.92	8.44	3.8	0.038	0.18	8
2011/1/20 12:26:57						1.201	16.05	7.14	93.9	3.6	33.92	8.43				
2011/1/20 12:27:16						5.793	16.02	6.96	91.7	3.3	33.92	8.42	3.2	0.041	0.18	11
2011/1/20 12:27:26						5.695	16.03	6.92	91.1	3.3	33.93	8.42				
2011/1/20 12:28:12						10.355	16.05	6.81	89.9	2.6	33.98	8.43	2.2	0.041	0.18	<1
2011/1/20 12:29:14						10.327	16.04	6.74	88.9	2.7	33.98	8.42				
2011/1/20 12:54:04	C1	ME	833721	808163	18.8	1.088	16.00	6.94	91.4	3.0	34.00	8.46	4.1	0.032	0.17	17
2011/1/20 12:54:08						1.159	16.01	6.90	90.9	3.1	34.00	8.46				
2011/1/20 12:55:57						9.971	15.84	6.73	88.5	4.1	34.06	8.45	5.3	0.031	0.17	13
2011/1/20 12:55:59						9.836	15.85	6.72	88.4	4.1	34.05	8.45				
2011/1/20 12:57:13						17.789	15.85	6.70	88.2	5.1	34.04	8.45	3.9	0.030	0.16	22
2011/1/20 12:57:16						17.876	15.84	6.71	88.2	5.5	34.04	8.46				
2011/1/20 12:15:42	C2	ME	831449	807732	9.8	1.034	16.10	7.88	103.2	2.4	33.93	8.44	4.1	0.012	0.12	3
2011/1/20 12:15:46						1.137	16.11	7.80	102.3	2.4	33.93	8.44				
2011/1/20 12:16:07						4.852	16.06	7.60	99.6	2.5	33.94	8.43	1.8	0.009	0.13	6
2011/1/20 12:16:09						4.937	16.04	7.60	99.7	2.5	33.94	8.43				
2011/1/20 12:16:25						8.673	15.81	7.36	96.1	3.1	33.95	8.43	5.5	0.013	0.13	1
2011/1/20 12:16:29						8.703	15.75	7.30	95.3	3.3	33.97	8.43				
2011/1/20 11:54:15	C3	ME	832218	808879	16.4	1.212	15.82	6.60	86.7	2.2	33.74	8.38	3.3	0.011	0.14	11
2011/1/20 11:54:19						1.077	15.82	6.60	86.6	1.7	33.75	8.38				
2011/1/20 11:54:43						8.294	15.69	6.57	86.0	1.9	33.79	8.39	5.8	0.015	0.14	20
2011/1/20 11:54:51						8.314	15.69	6.57	86.0	2.2	33.79	8.39				
2011/1/20 11:55:23						15.427	15.62	6.58	86.0	5.5	33.81	8.39	6.6	<0.005	0.13	27
2011/1/20 11:55:26						15.311	15.62	6.58	86.0	5.5	33.81	8.39				
2011/1/20 17:23:31	W1	MF	832955	807713	2.3	1.185	16.04	6.86	90.4	3.2	33.91	8.41	3.6	0.048	0.19	2
2011/1/20 17:23:36						1.182	16.03	6.85	90.3	3.2	33.91	8.41				
2011/1/20 17:10:51	W2	MF	832626	807974	12.6	1.070	16.12	7.17	94.5	3.1	33.92	8.46	3	0.020	0.15	12
2011/1/20 17:10:55						1.022	16.13	7.27	95.7	3.0	33.91	8.45				
2011/1/20 17:11:30						6.805	15.88	7.24	94.9	3.8	34.00	8.43	4.2	0.030	0.17	10
2011/1/20 17:11:35						6.881	15.88	7.21	94.5	3.8	34.00	8.43				
2011/1/20 17:12:12						11.849	15.77	7.15	93.5	5.8	34.04	8.42	2.2	0.039	0.18	2
2011/1/20 17:12:31						11.615	15.77	7.10	92.9	5.5	34.04	8.42				
2011/1/20 17:04:15	W3	MF	832055	807902	12.5	1.086	16.17	6.48	86.0	3.0	33.92	8.35	2.5	0.036	0.18	1
2011/1/20 17:04:19						1.270	16.16	6.55	86.8	2.9	33.92	8.35				
2011/1/20 17:04:58						5.928	15.84	6.72	88.3	3.7	34.03	8.37	3.6	0.033	0.17	6
2011/1/20 17:05:11						5.818	15.83	6.75	88.7	3.5	34.04	8.37				
2011/1/20 17:05:30						11.574	15.71	6.80	89.1	4.5	34.05	8.38	2.2	0.033	0.17	9
2011/1/20 17:05:33						11.609	15.69	6.82	89.2	4.6	34.06	8.38				
2011/1/20 17:48:37	C1	MF	832724	808170	18.6	1.086	15.96	7.01	92.1	3.9	33.91	8.44	4.1	0.024	0.16	8
2011/1/20 17:48:45						1.073	15.97	7.00	91.9	3.8	33.91	8.44				
2011/1/20 17:50:04						9.231	15.91	6.91	90.8	4.3	33.99	8.44	4.7	0.023	0.15	28
2011/1/20 17:50:08						9.271	15.91	6.92	90.9	4.1	33.99	8.44				
2011/1/20 17:50:50						17.657	15.81	6.88	90.3	9.6	34.01	8.44	5.2	0.020	0.15	22
2011/1/20 17:50:53						17.648	15.81	6.88	90.2	9.6	34.02	8.44				
2011/1/20 16:45:17	C2	MF	831471	807731	9.4	1.040	16.17	7.46	98.3	5.5	33.99	8.33	1.8	0.014	0.14	8
2011/1/20 16:45:21						0.958	16.20	7.45	98.2	4.7	33.96	8.33				
2011/1/20 16:45:44						5.807	16.12	7.43	97.8	2.9	34.03	8.32	2.2	0.020	0.15	9
2011/1/20 16:45:46						5.899	16.11	7.38	97.2	2.8	34.03	8.32				
2011/1/20 16:46:08						8.330	15.83	7.36	96.3	3.0	34.09	8.33	2.7	0.035	0.16	3
2011/1/20 16:46:17						8.468	15.83	7.34	96.0	3.0	34.09	8.32				
2011/1/20 17:39:43	C3	MF	832201	808884	15.6	1.062	15.97	7.23	94.8	3.6	33.92	8.43	2.6	0.022	0.15	4
2011/1/20 17:39:50						1.062	15.98	7.21	94.6	3.6	33.92	8.43				
2011/1/20 17:40:14						7.754	15.91	7.18	94.1	3.7	33.98	8.43	3.6	0.021	0.15	8
2011/1/20 17:40:23						7.815	15.90	7.16	93.9	3.6	34.00	8.43				
2011/1/20 17:40:49						14.536	15.78	7.16	93.6	4.1	34.02	8.43	3.5	0.023	0.15	5
2011/1/20 17:40:53						14.614	15.78	7.16	93.6	4.2	34.03	8.43				

Remarks: MF - Middle Flood tida
ME - Middle Ebb tida

Contract No. DC/2009/13

Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwn Wan

AUES

Sok Kwu Wan

Baseline Data 25-Jan-11

Date / Time	Location	Tide*	Co-ordinates		Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pH	SS	Ammonia N	TIN	E.coli
			East	North	m	m	℃	mg/L	%	NTU	ppt	unit	mg/l	mg/l	mg/l	1CFU/100ml
01/25/11 16:21:49	W1	ME	832947	807733	2.1	1.008	15.73	5.51	77.7	3.6	33.82	8.56	1.7	<0.005	0.14	<1
01/25/11 16:21:53						1.006	15.73	5.50	77.6	3.6	33.81	8.55				
01/25/11 16:09:53	W2	ME	832606	807967	12.1	1.022	15.52	4.35	62.9	3.7	33.77	8.56	2.4	<0.005	0.15	<1
01/25/11 16:09:56						1.003	15.52	4.62	64.8	3.7	31.65	8.55				
01/25/11 16:10:28						6.000	15.50	4.79	68.3	3.8	33.82	8.53	1.6	<0.005	0.16	2
01/25/11 16:10:34						6.081	15.50	4.75	67.8	3.9	33.82	8.53				
01/25/11 16:11:06						11.189	15.52	4.83	68.9	3.7	33.90	8.52	2	<0.005	0.15	1
01/25/11 16:11:12						11.172	15.52	4.81	68.7	3.6	33.89	8.52				
01/25/11 16:00:38	W3	ME	832052	807916	11.9	1.066	15.62	4.35	63.2	3.5	33.82	8.58	8.7	<0.005	0.15	1
01/25/11 16:00:41						1.119	15.62	4.43	64.2	3.5	33.82	8.58				
01/25/11 16:01:12						6.097	15.60	4.58	66.0	3.6	33.89	8.56	2.5	<0.005	0.15	<1
01/25/11 16:01:19						5.992	15.60	4.61	66.4	3.5	33.90	8.56				
01/25/11 16:01:50						10.962	15.59	4.54	65.6	3.3	34.00	8.55	2.5	<0.005	0.15	1
01/25/11 16:02:00						10.916	15.60	4.55	65.7	3.5	33.99	8.54				
01/25/11 16:29:11	C1	ME	833694	808199	17.8	1.086	15.49	5.15	72.7	3.9	33.76	8.56	2.8	<0.005	0.16	<1
01/25/11 16:29:15						1.113	15.50	5.15	72.7	3.8	33.79	8.56				
01/25/11 16:30:42						8.984	15.49	5.16	72.9	3.9	33.82	8.54	2.2	<0.005	0.16	1
01/25/11 16:31:11						8.951	15.47	5.17	72.9	3.9	33.79	8.53				
01/25/11 16:31:39						16.760	15.50	5.10	72.1	4.1	33.86	8.53	2.2	<0.005	0.16	<1
01/25/11 16:32:02						16.902	15.48	5.13	72.5	4.2	33.85	8.53				
01/25/11 15:51:00	C2	ME	831484	807735	8.9	1.010	15.66	4.22	60.4	3.3	31.75	8.59	2.3	<0.005	0.16	<1
01/25/11 15:51:03						1.052	15.66	4.15	60.8	3.3	33.89	8.59				
01/25/11 15:51:24						4.592	15.61	4.42	62.8	3.4	31.90	8.59	0.7	<0.005	0.15	<1
01/25/11 15:51:34						4.529	15.61	4.28	62.3	3.4	33.95	8.59				
01/25/11 15:52:09						7.850	15.56	4.43	64.1	3.3	33.97	8.58	2.8	<0.005	0.15	<1
01/25/11 15:52:24						7.930	15.56	4.36	63.2	3.5	33.95	8.58				
01/25/11 16:45:50	C3	ME	832191	808849	14.3	1.116	15.34	5.82	80.5	3.4	33.62	8.56	2.4	<0.005	0.17	<1
01/25/11 16:45:53						1.117	15.34	5.80	80.2	3.5	33.62	8.56				
01/25/11 16:46:30						7.193	15.42	5.68	79.0	3.6	33.74	8.54	1.9	<0.005	0.16	<1
01/25/11 16:46:33						7.103	15.42	5.69	79.2	3.6	33.74	8.54				
01/25/11 16:51:57						13.656	15.45	5.38	75.4	6.1	33.71	8.52	1.9	<0.005	0.16	<1
01/25/11 16:52:10						13.348	15.50	5.37	75.4	6.7	33.72	8.52				
01/25/11 10:05:51	W1	MF	832963	807730	2	1.036	15.42	6.38	87.7	4.3	33.83	8.54	1.4	<0.005	0.16	<1
01/25/11 10:05:54						1.088	15.42	6.38	87.7	4.5	33.83	8.53				
01/25/11 10:14:02	W2	MF	832600	807979	12.1	1.042	15.40	6.14	84.7	4.4	33.86	8.46	2.6	<0.005	0.16	7
01/25/11 10:14:08						1.025	15.42	6.01	83.1	4.4	33.84	8.45				
01/25/11 10:14:26						6.142	15.41	5.96	82.6	4.4	33.84	8.45	2.1	<0.005	0.16	4
01/25/11 10:14:49						6.083	15.41	5.92	82.1	4.6	33.83	8.45				
01/25/11 10:15:14						11.149	15.42	5.86	81.3	4.2	33.84	8.45	2.9	<0.005	0.16	1
01/25/11 10:15:19						11.153	15.43	5.86	81.3	4.1	33.84	8.45				
01/25/11 10:49:17	W3	MF	832042	807890	12.2	1.017	15.43	6.07	84.0	3.2	33.91	8.52	3.9	<0.005	0.15	<1
01/25/11 10:49:32						1.073	15.44	5.91	82.1	3.3	33.91	8.48				
01/25/11 10:49:59						6.016	15.34	5.67	78.9	3.7	33.92	8.46	2.2	<0.005	0.15	<1
01/25/11 10:50:11						6.109	15.34	5.60	78.0	3.6	33.92	8.46				
01/25/11 10:50:40						11.265	15.43	5.50	77.0	3.2	34.01	8.43	3.6	<0.005	0.15	<1
01/25/11 10:50:47						11.220	15.45	5.42	76.1	3.2	34.01	8.42				
01/25/11 09:57:44	C1	MF	833698	808166	18.1	1.079	15.31	6.01	82.7	3.8	33.58	8.41	2.3	<0.005	0.16	3
01/25/11 09:57:50						1.061	15.33	5.99	82.5	4.0	33.56	8.41				
01/25/11 09:58:25						9.057	15.39	5.86	81.1	4.7	33.65	8.40	2.7	<0.005	0.16	2
01/25/11 09:58:32						8.976	15.39	5.83	80.8	4.6	33.66	8.41				
01/25/11 09:59:32						17.071	15.43	5.67	78.9	4.6	33.73	8.41	2	<0.005	0.16	4
01/25/11 09:59:35						17.040	15.44	5.66	78.8	4.7	33.73	8.40				
01/25/11 10:56:52	C2	MF	831460	807742	9.3	1.038	15.50	6.14	85.0	3.1	33.93	8.51	2.7	<0.005	0.16	1
01/25/11 10:57:04						0.995	15.52	5.89	82.0	3.1	33.94	8.48				
01/25/11 10:57:27						4.723	15.51	5.71	79.8	3.0	33.99	8.45	1.7	<0.005	0.15	<1
01/25/11 10:57:30						4.738	15.51	5.70	79.6	3.0	33.98	8.45				
01/25/11 10:57:44						8.306	15.52	5.54	77.7	2.9	34.02	8.44	1.2	<0.005	0.15	1
01/25/11 10:57:48						8.351	15.52	5.54	77.7	2.9	34.03	8.44				
01/25/11 10:29:33	C3	MF	832211	808860	14.8	1.037	15.42	5.76	80.1	4.1	33.83	8.45	2.6	<0.005	0.16	1
01/25/11 10:29:36						1.102	15.42	5.73	79.7	4.1	33.83	8.44				
01/25/11 10:30:11						7.440	15.42	5.69	79.3	4.1	33.84	8.44	2.3	<0.005	0.16	2
01/25/11 10:30:18						7.352	15.42	5.66	78.9	4.1	33.84	8.44				
01/25/11 10:31:00						13.822	15.42	5.60	78.1	4.4	33.84	8.44	2	<0.005	0.16	2
01/25/11 10:31:08						13.771	15.42	5.64	78.6	4.3	33.84	8.44				

Remarks: MF - Middle Flood tida
ME - Middle Ebb tida

Appendix H

Laboratory Results Report

CERTIFICATE OF ANALYSIS

Client	:	**ACTION UNITED ENVIRO SERVICES**	*Laboratory*	:	**ALS Technichem HK Pty Ltd**	*Page*	: **1 of 5**
Contact	:	**MR T W TAM**	*Contact*	:	**Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1018972**
Address	:	**RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T., HONG KONG**	*Address*	:	**11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**		
E-mail	:	**Twtam@fordbusiness.com**	*E-mail*	:	**Godfrey.Chan@alsenviro.com**		
Telephone	:	**+852 2959 6059**	*Telephone*	:	**+852 2610 1044**		
Facsimile	:	**+852 2959 6079**	*Facsimile*	:	**+852 2610 2021**		
Project	:	**CONSTRUCTION OF SEWAGE TREATMENT WORKS AT YUNG SHUE WAN AND SOK KWU WAN**	*Quote number*	:	**HK/632b/2010****	*Date received*	: **20-AUG-2010**
Order number	:	**DC/2009/13**				*Date of issue*	: **02-SEP-2010**
C-O-C number	:	**----**				*No. of samples*	- *Received* : **32**
Site	:	**----**					- *Analysed* : **32**

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the 'Electronic Transactions Ordinance' of Hong Kong, Chapter 553, Section 6.

Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**
Leung Sai Ho, Ivan	**Supervisor**	**Microbiology**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1018972 supersedes any previous reports with this reference. The completion date of analysis is 31-AUG-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1018972 :

Contract No. DC/2009/13 - Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan, proposed EM&A Programme for Baseline and Impact Monitoring - Sok Kwu Wan .
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.
Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.
Sample(s) were arrived in the laboratory at 17:30. Microbiological sample(s), in 250mL plastic bottle labelled sterile, with addition of sodium thiosulfate solution. Testing period : 20/08/2010 (19:20) - 22/08/2010.
The accredited LOR for Total Suspended Solids is 2mg/L and Ammoniacal Nitrogen (NH3-N) is 0.01mg/L. The results reported below the accredited LOR and the decimal value of the results were for reference only.

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	Client sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)	EK055A: Ammonia as N	EK059A: Nitrite + Nitrate as N	EK063A: Inorganic Nitrogen as N	EM002: E. coli
			LOR Unit	0.5 mg/L	0.005 mg/L	0.01 mg/L	0.01 mg/L	1 CFU/100mL
				EA/ED: Physical and Aggregate Properties	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	EM: Microbiological Testing
W1/M/EBB	[19-AUG-2010]	HK1018972-002		**3.1**	**0.021**	**0.21**	**0.23**	<1
W2/S /EBB	[19-AUG-2010]	HK1018972-004		**8.4**	**0.018**	**0.21**	**0.23**	**3**
W2/M/EBB	[19-AUG-2010]	HK1018972-005		**7.4**	**0.015**	**0.20**	**0.22**	**3**
W2/B/EBB	[19-AUG-2010]	HK1018972-006		**6.7**	**0.020**	**0.20**	**0.22**	**3**
W3/S /EBB	[19-AUG-2010]	HK1018972-007		**6.1**	**0.051**	**0.18**	**0.23**	**23**
W3/M/EBB	[19-AUG-2010]	HK1018972-008		**11.3**	**0.038**	**0.20**	**0.24**	**12**
W3/B/EBB	[19-AUG-2010]	HK1018972-009		**6.3**	**0.042**	**0.19**	**0.23**	**4**
C1/S /EBB	[19-AUG-2010]	HK1018972-010		**8.7**	**0.020**	**0.21**	**0.23**	<1
C1/M/EBB	[19-AUG-2010]	HK1018972-011		**6.0**	**0.028**	**0.28**	**0.31**	**1**
C1/B/EBB	[19-AUG-2010]	HK1018972-012		**8.1**	**0.036**	**0.30**	**0.34**	<1
C2/S /EBB	[19-AUG-2010]	HK1018972-013		**6.0**	**0.027**	**0.30**	**0.33**	**13**
C2/M/EBB	[19-AUG-2010]	HK1018972-014		**6.7**	**0.049**	**0.36**	**0.41**	**5**
C2/B/EBB	[19-AUG-2010]	HK1018972-015		**6.8**	**0.027**	**0.24**	**0.27**	**1**
C3/S /EBB	[19-AUG-2010]	HK1018972-016		**7.4**	**0.052**	**0.26**	**0.31**	<1
C3/M/EBB	[19-AUG-2010]	HK1018972-017		**5.6**	**0.049**	**0.24**	**0.29**	<1
C3/B/EBB	[19-AUG-2010]	HK1018972-018		**5.7**	**0.037**	**0.23**	**0.27**	**19**
W1/M/FLOOD	[19-AUG-2010]	HK1018972-020		**9.1**	**0.028**	**0.32**	**0.35**	**1**
W2/S /FLOOD	[19-AUG-2010]	HK1018972-022		**3.8**	**0.038**	**0.21**	**0.25**	**11**
W2/M/FLOOD	[19-AUG-2010]	HK1018972-023		**8.5**	**0.040**	**0.21**	**0.25**	**1**
W2/B/FLOOD	[19-AUG-2010]	HK1018972-024		**9.3**	**0.051**	**0.23**	**0.28**	**1**
W3/S /FLOOD	[19-AUG-2010]	HK1018972-025		**6.4**	**0.014**	**0.22**	**0.23**	<1
W3/M/FLOOD	[19-AUG-2010]	HK1018972-026		**9.6**	**0.020**	**0.21**	**0.23**	**2**
W3/B/FLOOD	[19-AUG-2010]	HK1018972-027		**13.6**	**0.024**	**0.22**	**0.24**	<1
C1/S /FLOOD	[19-AUG-2010]	HK1018972-028		**6.1**	**0.030**	**0.23**	**0.26**	**14**
C1/M/FLOOD	[19-AUG-2010]	HK1018972-029		**6.8**	**0.034**	**0.24**	**0.27**	**3**
C1/B/FLOOD	[19-AUG-2010]	HK1018972-030		**11.8**	**0.039**	**0.24**	**0.28**	**13**
C2/S /FLOOD	[19-AUG-2010]	HK1018972-031		**6.1**	**0.022**	**0.26**	**0.28**	**>1**
C2/M/FLOOD	[19-AUG-2010]	HK1018972-032		**16.3**	**0.019**	**0.24**	**0.26**	<1
C2/B/FLOOD	[19-AUG-2010]	HK1018972-033		**5.3**	**0.022**	**0.23**	**0.25**	**1**
C3/S /FLOOD	[19-AUG-2010]	HK1018972-034		**10.0**	**0.017**	**0.26**	**0.28**	<1
C3/M/FLOOD	[19-AUG-2010]	HK1018972-035		**5.3**	**0.028**	**0.26**	**0.29**	**60**
C3/B/FLOOD	[19-AUG-2010]	HK1018972-036		**5.4**	**0.024**	**0.25**	**0.27**	**26**

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1466081)								
HK1018972-004	W2/S /EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.4	9.4	11.3
HK1018972-013	C2/S /EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.0	6.8	12.4
EA/ED: Physical and Aggregate Properties (QC Lot: 1466085)								
HK1018972-025	W3/S /FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.4	5.5	14.6
HK1018972-035	C3/M/FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.3	5.3	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1465035)								
HK1018972-004	W2/S /EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	0.018	0.018	0.0
HK1018972-014	C2/M/EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	0.049	0.050	2.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1465036)								
HK1018972-022	W2/S /FLOOD	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	0.038	0.037	2.7
HK1018972-024	W2/B/FLOOD	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	0.051	0.049	4.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1466179)								
HK1018972-022	W2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.21	0.24	13.3
HK1018972-011	C1/M/EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.28	0.29	3.5
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1466180)								
HK1018972-004	W2/S /EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.21	0.20	4.9
HK1019632-002	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	11.7	11.5	1.7

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1466081)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	114	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1466085)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1465035)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.0	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1465036)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.8	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1466179)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	104	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1466180)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	108	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*MSD*	*Low*	*High*	*Value*	*Control Limit*
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1465035)										
HK1018972-011	C1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	96.8	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1465036)										
HK1018972-022	W2/S /FLOOD	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	100	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1466179)										
HK1019645-001	Anonymous	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	102	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1466180)										
HK1019549-001	Anonymous	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	103	----	75	125	----	----

CERTIFICATE OF ANALYSIS

Client	:	**ACTION UNITED ENVIRO SERVICES**	*Laboratory*	:	**ALS Technichem HK Pty Ltd**	*Page*	: **1 of 5**
Contact	:	**MR T W TAM**	*Contact*	:	**Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1018973**
Address	:	**RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T., HONG KONG**	*Address*	:	**11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**		
E-mail	:	**Twtam@fordbusiness.com**	*E-mail*	:	**Godfrey.Chan@alsenviro.com**		
Telephone	:	**+852 2959 6059**	*Telephone*	:	**+852 2610 1044**		
Facsimile	:	**+852 2959 6079**	*Facsimile*	:	**+852 2610 2021**		
Project	:	**CONSTRUCTION OF SEWAGE TREATMENT WORKS AT YUNG SHUE WAN AND SOK KWU WAN**	*Quote number*	:	**HK/632b/2010****	*Date received*	: **26-AUG-2010**
Order number	:	**DC/2009/13**				*Date of issue*	: **06-SEP-2010**
C-O-C number	:	**----**				*No. of samples*	- *Received* : **32**
Site	:	**----**					- *Analysed* : **32**

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Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**
Leung Sai Ho, Ivan	**Supervisor**	**Microbiology**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1018973 supersedes any previous reports with this reference. The completion date of analysis is 01-SEP-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1018973 :

Contract No. DC/2009/13 - Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan, proposed EM&A Programme for Baseline and Impact Monitoring - Sok Kwu Wan .
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.
Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.
Sample(s) were arrived in the laboratory at 17:30. Microbiological sample(s), in 250mL plastic bottle labelled sterile, with addition of sodium thiosulfate solution. Testing period : 26/08/2010 (18:00) - 28/08/2010.
The accredited LOR for Total Suspended Solids is 2mg/L and Ammoniacal Nitrogen (NH3-N) is 0.01mg/L. The results reported below the accredited LOR and the decimal value of the results were for reference only.

Analytical Results

Sub-Matrix: **MARINE WATER**

Compound			EA025: Suspended Solids (SS)	EK055A: Ammonia as N	EK059A: Nitrite + Nitrate as N	EK063A: Inorganic Nitrogen as N	EM002: E. coli
LOR Unit			0.5 mg/L	0.005 mg/L	0.01 mg/L	0.01 mg/L	1 CFU/100mL
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	EM: Microbiological Testing
W1/M/EBB	[25-AUG-2010]	HK1018973-002	**5.3**	**0.015**	**0.14**	**0.16**	**2**
W2/S /EBB	[25-AUG-2010]	HK1018973-004	**2.7**	**0.022**	**0.17**	**0.19**	<1
W2/M/EBB	[25-AUG-2010]	HK1018973-005	**2.2**	**0.017**	**0.15**	**0.17**	<1
W2/B/EBB	[25-AUG-2010]	HK1018973-006	**4.4**	**0.026**	**0.14**	**0.17**	**2**
W3/S /EBB	[25-AUG-2010]	HK1018973-007	**1.2**	**0.029**	**0.17**	**0.20**	**4**
W3/M/EBB	[25-AUG-2010]	HK1018973-008	**2.5**	**0.031**	**0.16**	**0.19**	**10**
W3/B/EBB	[25-AUG-2010]	HK1018973-009	**9.3**	**0.044**	**0.12**	**0.16**	**6**
C1/S /EBB	[25-AUG-2010]	HK1018973-010	**3.4**	**0.008**	**0.16**	**0.17**	**2**
C1/M/EBB	[25-AUG-2010]	HK1018973-011	**3.5**	**0.013**	**0.16**	**0.17**	**3**
C1/B/EBB	[25-AUG-2010]	HK1018973-012	**3.4**	**0.010**	**0.16**	**0.17**	**6**
C2/S /EBB	[25-AUG-2010]	HK1018973-013	**5.0**	**0.035**	**0.14**	**0.18**	<1
C2/M/EBB	[25-AUG-2010]	HK1018973-014	**3.4**	**0.040**	**0.17**	**0.21**	**4**
C2/B/EBB	[25-AUG-2010]	HK1018973-015	**1.2**	**0.056**	**0.18**	**0.24**	<1
C3/S /EBB	[25-AUG-2010]	HK1018973-016	**2.7**	**0.023**	**0.17**	**0.19**	<1
C3/M/EBB	[25-AUG-2010]	HK1018973-017	**2.4**	**0.024**	**0.16**	**0.18**	**2**
C3/B/EBB	[25-AUG-2010]	HK1018973-018	**3.2**	**0.024**	**0.16**	**0.18**	**1**
W1/M/FLOOD	[25-AUG-2010]	HK1018973-020	**3.6**	**0.023**	**0.22**	**0.24**	**24**
W2/S /FLOOD	[25-AUG-2010]	HK1018973-022	**3.2**	**0.016**	**0.15**	**0.17**	**3**
W2/M/FLOOD	[25-AUG-2010]	HK1018973-023	**6.0**	**0.027**	**0.14**	**0.17**	**3**
W2/B/FLOOD	[25-AUG-2010]	HK1018973-024	**2.5**	**0.019**	**0.16**	**0.18**	**2**
W3/S /FLOOD	[25-AUG-2010]	HK1018973-025	**2.0**	**0.031**	**0.16**	**0.19**	<1
W3/M/FLOOD	[25-AUG-2010]	HK1018973-026	**2.2**	**0.041**	**0.16**	**0.20**	<1
W3/B/FLOOD	[25-AUG-2010]	HK1018973-027	**2.7**	**0.032**	**0.16**	**0.19**	<1
C1/S /FLOOD	[25-AUG-2010]	HK1018973-028	**3.3**	**0.056**	**0.26**	**0.32**	**58**
C1/M/FLOOD	[25-AUG-2010]	HK1018973-029	**3.1**	**0.053**	**0.26**	**0.31**	**53**
C1/B/FLOOD	[25-AUG-2010]	HK1018973-030	**3.5**	**0.054**	**0.26**	**0.31**	**48**
C2/S /FLOOD	[25-AUG-2010]	HK1018973-031	**2.7**	**0.023**	**0.25**	**0.27**	<1
C2/M/FLOOD	[25-AUG-2010]	HK1018973-032	**1.6**	**0.051**	**0.26**	**0.31**	<1
C2/B/FLOOD	[25-AUG-2010]	HK1018973-033	**2.2**	**0.016**	**0.25**	**0.27**	**2**
C3/S /FLOOD	[25-AUG-2010]	HK1018973-034	**3.8**	**0.039**	**0.14**	**0.18**	**46**
C3/M/FLOOD	[25-AUG-2010]	HK1018973-035	**2.6**	**0.050**	**0.14**	**0.19**	**44**
C3/B/FLOOD	[25-AUG-2010]	HK1018973-036	**3.4**	**0.053**	**0.14**	**0.19**	**49**

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1469650)								
HK1018973-002	W1/M/EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.3	6.3	17.2
HK1018973-013	C2/S /EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.0	4.1	20.8
EA/ED: Physical and Aggregate Properties (QC Lot: 1469651)								
HK1018973-025	W3/S /FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.0	3.0	37.6
HK1018973-035	C3/M/FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.6	3.0	14.3
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1469844)								
HK1018973-002	W1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	0.015	0.015	0.0
HK1019657-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.01	mg/L	90.9	90.9	0.07
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1469845)								
HK1018973-011	C1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	0.013	0.013	0.0
HK1019765-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1469867)								
HK1018973-022	W2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.15	0.16	6.4
HK1018973-010	C1/S /EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.16	0.15	6.4
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1469868)								
HK1018971-001	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.33	0.33	0.0
HK1018971-011	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.26	0.25	3.9

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1469650)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	109	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1469651)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1469844)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	109	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1469845)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	107	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1469867)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	106	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1469868)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	98.6	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*MSD*	*Low*	*High*	*Value*	*Control Limit*
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1469844)										
HK1018973-002	W1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	93.0	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1469845)										
HK1018973-011	C1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	103	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1469867)										
HK1018973-010	C1/S /EBB	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	103	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1469868)										
HK1018973-011	C1/M/EBB	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	109	----	75	125	----	----

CERTIFICATE OF ANALYSIS

Client	:	**ACTION UNITED ENVIRO SERVICES**	*Laboratory*	:	**ALS Technichem HK Pty Ltd**	*Page*	: **1 of 5**
Contact	:	**MR T W TAM**	*Contact*	:	**Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1020638**
Address	:	**RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T., HONG KONG**	*Address*	:	**11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**		
E-mail	:	**Twtam@fordbusiness.com**	*E-mail*	:	**Godfrey.Chan@alsenviro.com**		
Telephone	:	**+852 2959 6059**	*Telephone*	:	**+852 2610 1044**		
Facsimile	:	**+852 2959 6079**	*Facsimile*	:	**+852 2610 2021**		
Project	:	**CONSTRUCTION OF SEWAGE TREATMENT WORKS AT YUNG SHUE WAN AND SOK KWU WAN**	*Quote number*	:	**HK/632b/2010****	*Date received*	: **10-SEP-2010**
Order number	:	**DC/2009/13**				*Date of issue*	: **21-SEP-2010**
C-O-C number	:	**----**				*No. of samples*	- *Received* : **32**
Site	:	**----**					- *Analysed* : **32**

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the 'Electronic Transactions Ordinance' of Hong Kong, Chapter 553, Section 6.

Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**
Leung Sai Ho, Ivan	**Supervisor**	**Microbiology**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1020638 supersedes any previous reports with this reference. The completion date of analysis is 20-SEP-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1020638 :

Contract No. DC/2009/13 - Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan, proposed EM&A Programme for Baseline and Impact Monitoring - Sok Kwu Wan.
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.
Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.
Sample(s) were arrived in the laboratory at 17:30. Microbiological sample(s), in 125mL plastic bottle labelled sterile, with addition of sodium thiosulfate solution. Testing period : 10/09/2010 (18:45) - 12/09/2010.
The accredited LOR for Total Suspended Solids is 2mg/L and Ammoniacal Nitrogen (NH3-N) is 0.01mg/L. The results reported below the accredited LOR and the decimal value of the results were for reference only.

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	Client sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)	EK055A: Ammonia as N	EK059A: Nitrite + Nitrate as N	EK063A: Inorganic Nitrogen as N	EM002: E. coli
			LOR Unit	0.5 mg/L	0.005 mg/L	0.01 mg/L	0.01 mg/L	1 CFU/100mL
				EA/ED: Physical and Aggregate Properties	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	EM: Microbiological Testing
W1/M/EBB	[10-SEP-2010]	HK1020638-002		**5.3**	<0.005	**0.25**	**0.25**	**16**
W2/S /EBB	[10-SEP-2010]	HK1020638-004		**4.2**	<0.005	**0.30**	**0.30**	**3**
W2/M/EBB	[10-SEP-2010]	HK1020638-005		**2.6**	**0.014**	**0.29**	**0.30**	**21**
W2/B/EBB	[10-SEP-2010]	HK1020638-006		**3.6**	<0.005	**0.27**	**0.27**	**26**
W3/S /EBB	[10-SEP-2010]	HK1020638-007		**2.3**	**0.007**	**0.31**	**0.32**	**4**
W3/M/EBB	[10-SEP-2010]	HK1020638-008		**3.5**	**0.008**	**0.29**	**0.30**	**27**
W3/B/EBB	[10-SEP-2010]	HK1020638-009		**4.3**	**0.008**	**0.29**	**0.30**	**29**
C1/S /EBB	[10-SEP-2010]	HK1020638-010		**3.5**	<0.005	**0.28**	**0.28**	**17**
C1/M/EBB	[10-SEP-2010]	HK1020638-011		**1.9**	**0.005**	**0.28**	**0.28**	**16**
C1/B/EBB	[10-SEP-2010]	HK1020638-012		**2.2**	<0.005	**0.29**	**0.29**	**13**
C2/S /EBB	[10-SEP-2010]	HK1020638-013		**1.8**	**0.026**	**0.33**	**0.36**	**6**
C2/M/EBB	[10-SEP-2010]	HK1020638-014		**2.1**	**0.030**	**0.33**	**0.36**	**16**
C2/B/EBB	[10-SEP-2010]	HK1020638-015		**2.5**	**0.023**	**0.33**	**0.35**	**13**
C3/S /EBB	[10-SEP-2010]	HK1020638-016		**2.2**	<0.005	**0.28**	**0.28**	**13**
C3/M/EBB	[10-SEP-2010]	HK1020638-017		**1.9**	**0.007**	**0.28**	**0.29**	**11**
C3/B/EBB	[10-SEP-2010]	HK1020638-018		**4.2**	<0.005	**0.26**	**0.26**	**6**
W1/M/FLOOD	[10-SEP-2010]	HK1020638-020		**3.4**	**0.040**	**0.37**	**0.41**	**100**
W2/S /FLOOD	[10-SEP-2010]	HK1020638-022		**1.3**	**0.011**	**0.41**	**0.42**	**36**
W2/M/FLOOD	[10-SEP-2010]	HK1020638-023		**2.2**	**0.010**	**0.39**	**0.40**	**80**
W2/B/FLOOD	[10-SEP-2010]	HK1020638-024		**3.6**	**0.006**	**0.33**	**0.34**	**56**
W3/S /FLOOD	[10-SEP-2010]	HK1020638-025		**1.0**	**0.029**	**0.34**	**0.37**	**16**
W3/M/FLOOD	[10-SEP-2010]	HK1020638-026		**1.4**	**0.023**	**0.32**	**0.34**	**17**
W3/B/FLOOD	[10-SEP-2010]	HK1020638-027		**1.9**	**0.021**	**0.33**	**0.35**	**92**
C1/S /FLOOD	[10-SEP-2010]	HK1020638-028		**3.7**	**0.013**	**0.28**	**0.29**	**86**
C1/M/FLOOD	[10-SEP-2010]	HK1020638-029		**3.8**	**0.010**	**0.27**	**0.28**	**76**
C1/B/FLOOD	[10-SEP-2010]	HK1020638-030		**5.1**	**0.010**	**0.28**	**0.29**	**68**
C2/S /FLOOD	[10-SEP-2010]	HK1020638-031		**1.8**	**0.019**	**0.33**	**0.35**	**20**
C2/M/FLOOD	[10-SEP-2010]	HK1020638-032		**2.1**	**0.024**	**0.33**	**0.35**	**12**
C2/B/FLOOD	[10-SEP-2010]	HK1020638-033		**2.2**	**0.025**	**0.34**	**0.36**	**34**
C3/S /FLOOD	[10-SEP-2010]	HK1020638-034		**2.2**	**0.020**	**0.38**	**0.40**	**85**
C3/M/FLOOD	[10-SEP-2010]	HK1020638-035		**1.8**	**0.017**	**0.37**	**0.39**	**79**
C3/B/FLOOD	[10-SEP-2010]	HK1020638-036		**1.8**	**0.019**	**0.34**	**0.36**	**82**

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1487779)								
HK1020635-025	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.7	2.8	50.7
HK1020638-007	W3/S /EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.3	4.3	58.6
EA/ED: Physical and Aggregate Properties (QC Lot: 1487780)								
HK1020638-017	C3/M/EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.9	1.2	43.5
HK1020638-029	C1/M/FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.8	4.3	11.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1488179)								
HK1020635-011	Anonymous	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0
HK1021479-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.01	mg/L	0.52	0.52	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1488180)								
HK1020635-021	Anonymous	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0
HK1021394-008	Anonymous	EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1488519)								
HK1020638-031	C2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.33	0.34	3.0
HK1020638-022	W2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.41	0.41	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1488520)								
HK1020638-023	W2/M/FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.39	0.40	2.5
HK1021322-001	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.26	0.26	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1487779)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1487780)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	91.0	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1488179)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	109	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1488180)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	112	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1488519)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	89.4	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1488520)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	91.6	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1488179)										
HK1020635-011	Anonymous	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	100	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1488180)										
HK1020635-021	Anonymous	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	100	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1488519)										
HK1020638-031	C2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	85.3	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1488520)										
HK1020638-022	W2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	79.0	----	75	125	----	----

CERTIFICATE OF ANALYSIS

Client	:	**ACTION UNITED ENVIRO SERVICES**	*Laboratory*	:	**ALS Technichem HK Pty Ltd**	*Page*	: **1 of 5**
Contact	:	**MR T W TAM**	*Contact*	:	**Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1020639**
Address	:	**RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T., HONG KONG**	*Address*	:	**11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**		
E-mail	:	**Twtam@fordbusiness.com**	*E-mail*	:	**Godfrey.Chan@alsenviro.com**		
Telephone	:	**+852 2959 6059**	*Telephone*	:	**+852 2610 1044**		
Facsimile	:	**+852 2959 6079**	*Facsimile*	:	**+852 2610 2021**		
Project	:	**CONSTRUCTION OF SEWAGE TREATMENT WORKS AT YUNG SHUE WAN AND SOK KWU WAN**	*Quote number*	:	**HK/632b/2010****	*Date received*	: **29-SEP-2010**
Order number	:	**DC/2009/13**				*Date of issue*	: **11-OCT-2010**
C-O-C number	:	**----**				*No. of samples*	- *Received* : **32**
Site	:	**----**					- *Analysed* : **32**

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the 'Electronic Transactions Ordinance' of Hong Kong, Chapter 553, Section 6.

Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**
Leung Sai Ho, Ivan	**Supervisor**	**Microbiology**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1020639 supersedes any previous reports with this reference. The completion date of analysis is 04-OCT-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1020639 :

Contract No. DC/2009/13 - Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan, proposed EM&A Programme for Baseline and Impact Monitoring - Sok Kwu Wan.
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.
Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.
Sample(s) were arrived in the laboratory at 17:30. Microbiological sample(s), in 125mL plastic bottle labelled sterile, with addition of sodium thiosulfate solution. Testing period : 30/09/2010 (09:40) - 02/10/2010.
The accredited LOR for Total Suspended Solids is 2mg/L and Ammoniacal Nitrogen (NH3-N) is 0.01mg/L. The results reported below the accredited LOR and the decimal value of the results were for reference only.

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	Client sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)	EK055A: Ammonia as N	EK059A: Nitrite + Nitrate as N	EK063A: Inorganic Nitrogen as N	EM002: E. coli
			LOR Unit	0.5 mg/L	0.005 mg/L	0.01 mg/L	0.01 mg/L	1 CFU/100mL
				EA/ED: Physical and Aggregate Properties	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	EM: Microbiological Testing
W1/M/EBB	[29-SEP-2010]	HK1020639-002		**7.7**	<0.005	**0.34**	**0.34**	**2**
W2/S /EBB	[29-SEP-2010]	HK1020639-004		**15.5**	<0.005	**0.40**	**0.40**	**1**
W2/M/EBB	[29-SEP-2010]	HK1020639-005		**6.5**	**0.006**	**0.40**	**0.41**	<1
W2/B/EBB	[29-SEP-2010]	HK1020639-006		**13.6**	**0.022**	**0.30**	**0.32**	**17**
W3/S /EBB	[29-SEP-2010]	HK1020639-007		**9.7**	<0.005	**0.40**	**0.40**	<1
W3/M/EBB	[29-SEP-2010]	HK1020639-008		**12.1**	**0.005**	**0.40**	**0.40**	<1
W3/B/EBB	[29-SEP-2010]	HK1020639-009		**10.8**	**0.006**	**0.40**	**0.41**	<1
C1/S /EBB	[29-SEP-2010]	HK1020639-010		**10.3**	**0.009**	**0.41**	**0.42**	**1**
C1/M/EBB	[29-SEP-2010]	HK1020639-011		**7.1**	**0.008**	**0.38**	**0.39**	**2**
C1/B/EBB	[29-SEP-2010]	HK1020639-012		**5.9**	**0.026**	**0.35**	**0.38**	**15**
C2/S /EBB	[29-SEP-2010]	HK1020639-013		**8.9**	**0.006**	**0.38**	**0.39**	<1
C2/M/EBB	[29-SEP-2010]	HK1020639-014		**12.6**	**0.008**	**0.38**	**0.39**	**4**
C2/B/EBB	[29-SEP-2010]	HK1020639-015		**8.4**	**0.006**	**0.38**	**0.39**	<1
C3/S /EBB	[29-SEP-2010]	HK1020639-016		**13.6**	<0.005	**0.35**	**0.35**	**3**
C3/M/EBB	[29-SEP-2010]	HK1020639-017		**8.6**	**0.007**	**0.34**	**0.35**	<1
C3/B/EBB	[29-SEP-2010]	HK1020639-018		**4.9**	**0.008**	**0.32**	**0.33**	<1
W1/M/FLOOD	[29-SEP-2010]	HK1020639-020		**6.0**	**0.019**	**0.46**	**0.48**	<1
W2/S /FLOOD	[29-SEP-2010]	HK1020639-022		**11.7**	**0.020**	**0.45**	**0.47**	<1
W2/M/FLOOD	[29-SEP-2010]	HK1020639-023		**5.5**	**0.023**	**0.46**	**0.48**	<1
W2/B/FLOOD	[29-SEP-2010]	HK1020639-024		**10.8**	**0.021**	**0.45**	**0.47**	<1
W3/S /FLOOD	[29-SEP-2010]	HK1020639-025		**4.4**	**0.011**	**0.44**	**0.45**	<1
W3/M/FLOOD	[29-SEP-2010]	HK1020639-026		**6.6**	**0.015**	**0.44**	**0.45**	<1
W3/B/FLOOD	[29-SEP-2010]	HK1020639-027		**7.9**	**0.019**	**0.44**	**0.46**	<1
C1/S /FLOOD	[29-SEP-2010]	HK1020639-028		**4.5**	**0.051**	**0.39**	**0.44**	**4**
C1/M/FLOOD	[29-SEP-2010]	HK1020639-029		**6.4**	**0.038**	**0.38**	**0.42**	**4**
C1/B/FLOOD	[29-SEP-2010]	HK1020639-030		**5.8**	**0.024**	**0.38**	**0.40**	<1
C2/S /FLOOD	[29-SEP-2010]	HK1020639-031		**11.7**	**0.099**	**0.44**	**0.54**	<1
C2/M/FLOOD	[29-SEP-2010]	HK1020639-032		**15.7**	**0.013**	**0.44**	**0.45**	<1
C2/B/FLOOD	[29-SEP-2010]	HK1020639-033		**10.8**	**0.020**	**0.42**	**0.44**	<1
C3/S /FLOOD	[29-SEP-2010]	HK1020639-034		**9.6**	<0.005	**0.42**	**0.42**	<1
C3/M/FLOOD	[29-SEP-2010]	HK1020639-035		**6.4**	**0.015**	**0.38**	**0.39**	**5**
C3/B/FLOOD	[29-SEP-2010]	HK1020639-036		**5.9**	<0.005	**0.41**	**0.41**	<1

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1508226)								
HK1020639-002	W1/M/EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.7	6.7	13.9
HK1020639-013	C2/S /EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.9	9.9	10.6
EA/ED: Physical and Aggregate Properties (QC Lot: 1508227)								
HK1020639-025	W3/S /FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.4	5.1	15.2
HK1020639-035	C3/M/FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.4	5.5	14.9
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1506141)								
HK1020639-011	C1/M/EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.38	0.37	2.7
HK1020639-004	W2/S /EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.40	0.40	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1506142)								
HK1020639-028	C1/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.39	0.39	0.0
HK1020639-031	C2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.44	0.44	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1507194)								
HK1020639-004	W2/S /EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	0.006	0.0
HK1020639-028	C1/S /FLOOD	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	0.051	0.052	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1507195)								
HK1020639-011	C1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	0.008	0.008	0.0
HK1020639-006	W2/B/EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	0.022	0.022	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1508226)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	114	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1508227)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	110	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1506141)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	106	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1506142)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	105	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1507194)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.5	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1507195)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	102	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*MSD*	*Low*	*High*	*Value*	*Control Limit*
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1506141)										
HK1020639-011	C1/M/EBB	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	105	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1506142)										
HK1020639-028	C1/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	91.0	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1507194)										
HK1020639-004	W2/S /EBB	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	100	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1507195)										
HK1020639-011	C1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	102	----	75	125	----	----

CERTIFICATE OF ANALYSIS

Client	:	**ACTION UNITED ENVIRO SERVICES**	*Laboratory*	:	**ALS Technichem HK Pty Ltd**	*Page*	: **1 of 5**
Contact	:	**MR T W TAM**	*Contact*	:	**Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1023077**
Address	:	**RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T., HONG KONG**	*Address*	:	**11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**		
E-mail	:	**Twtam@fordbusiness.com**	*E-mail*	:	**Godfrey.Chan@alsenviro.com**		
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Facsimile	:	**+852 2959 6079**	*Facsimile*	:	**+852 2610 2021**		
Project	:	**CONSTRUCTION OF SEWAGE TREATMENT WORKS AT YUNG SHUE WAN AND SOK KWU WAN**	*Quote number*	:	**HK/632b/2010****	*Date received*	: **12-OCT-2010**
Order number	:	**DC/2009/13**				*Date of issue*	: **22-OCT-2010**
C-O-C number	:	**----**				*No. of samples*	- *Received* : **32**
Site	:	**----**					- *Analysed* : **32**

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Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**
Leung Sai Ho, Ivan	**Supervisor**	**Microbiology**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1023077 supersedes any previous reports with this reference. The completion date of analysis is 20-OCT-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1023077 :

Contract No. DC/2009/13 - Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan, proposed EM&A Programme for Baseline and Impact Monitoring - Sok Kwu Wan.
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.
Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.
Sample(s) were arrived in the laboratory at 17:30. Microbiological sample(s), in 125mL plastic bottle labelled sterile, with addition of sodium thiosulfate solution. Testing period : 13/10/2010 (11:50) - 15/10/2010.
The accredited LOR for Total Suspended Solids is 2mg/L and Ammoniacal Nitrogen (NH3-N) is 0.01mg/L. The results reported below the accredited LOR and the decimal value of the results were for reference only.

Analytical Results

Sub-Matrix: **MARINE WATER**

Compound			EA025: Suspended Solids (SS)	EK055A: Ammonia as N	EK059A: Nitrite + Nitrate as N	EK063A: Inorganic Nitrogen as N	EM002: E. coli
LOR Unit			0.5 mg/L	0.005 mg/L	0.01 mg/L	0.01 mg/L	1 CFU/100mL
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	EM: Microbiological Testing
W1/M/EBB	[12-OCT-2010]	HK1023077-002	**5.3**	<0.005	**0.16**	**0.16**	**4**
W2/S /EBB	[12-OCT-2010]	HK1023077-004	**2.7**	<0.005	**0.16**	**0.16**	**6**
W2/M/EBB	[12-OCT-2010]	HK1023077-005	**3.0**	<0.005	**0.16**	**0.16**	<1
W2/B/EBB	[12-OCT-2010]	HK1023077-006	**3.5**	<0.005	**0.16**	**0.16**	<1
W3/S /EBB	[12-OCT-2010]	HK1023077-007	**3.4**	<0.005	**0.16**	**0.16**	**8**
W3/M/EBB	[12-OCT-2010]	HK1023077-008	**3.2**	<0.005	**0.16**	**0.16**	**3**
W3/B/EBB	[12-OCT-2010]	HK1023077-009	**3.2**	<0.005	**0.16**	**0.16**	**4**
C1/S /EBB	[12-OCT-2010]	HK1023077-010	**3.1**	<0.005	**0.16**	**0.16**	**55**
C1/M/EBB	[12-OCT-2010]	HK1023077-011	**3.9**	<0.005	**0.16**	**0.16**	**85**
C1/B/EBB	[12-OCT-2010]	HK1023077-012	**3.4**	<0.005	**0.16**	**0.16**	**53**
C2/S /EBB	[12-OCT-2010]	HK1023077-013	**3.7**	<0.005	**0.16**	**0.16**	**11**
C2/M/EBB	[12-OCT-2010]	HK1023077-014	**3.3**	<0.005	**0.16**	**0.16**	**11**
C2/B/EBB	[12-OCT-2010]	HK1023077-015	**2.9**	<0.005	**0.16**	**0.16**	**10**
C3/S /EBB	[12-OCT-2010]	HK1023077-016	**2.8**	<0.005	**0.16**	**0.16**	**47**
C3/M/EBB	[12-OCT-2010]	HK1023077-017	**3.9**	<0.005	**0.16**	**0.16**	**74**
C3/B/EBB	[12-OCT-2010]	HK1023077-018	**3.3**	<0.005	**0.16**	**0.16**	**68**
W1/M/FLOOD	[12-OCT-2010]	HK1023077-020	**4.2**	<0.005	**0.17**	**0.17**	**13**
W2/S /FLOOD	[12-OCT-2010]	HK1023077-022	**2.7**	<0.005	**0.16**	**0.16**	**5**
W2/M/FLOOD	[12-OCT-2010]	HK1023077-023	**3.2**	<0.005	**0.16**	**0.16**	**27**
W2/B/FLOOD	[12-OCT-2010]	HK1023077-024	**3.4**	<0.005	**0.16**	**0.16**	**24**
W3/S /FLOOD	[12-OCT-2010]	HK1023077-025	**2.6**	<0.005	**0.15**	**0.15**	**4**
W3/M/FLOOD	[12-OCT-2010]	HK1023077-026	**2.6**	<0.005	**0.16**	**0.16**	**4**
W3/B/FLOOD	[12-OCT-2010]	HK1023077-027	**2.4**	<0.005	**0.16**	**0.16**	**13**
C1/S /FLOOD	[12-OCT-2010]	HK1023077-028	**3.2**	<0.005	**0.15**	**0.15**	**87**
C1/M/FLOOD	[12-OCT-2010]	HK1023077-029	**2.1**	<0.005	**0.15**	**0.15**	**74**
C1/B/FLOOD	[12-OCT-2010]	HK1023077-030	**3.6**	<0.005	**0.15**	**0.15**	**86**
C2/S /FLOOD	[12-OCT-2010]	HK1023077-031	**2.6**	<0.005	**0.15**	**0.15**	**5**
C2/M/FLOOD	[12-OCT-2010]	HK1023077-032	**1.5**	<0.005	**0.15**	**0.15**	**7**
C2/B/FLOOD	[12-OCT-2010]	HK1023077-033	**1.6**	<0.005	**0.15**	**0.15**	**8**
C3/S /FLOOD	[12-OCT-2010]	HK1023077-034	**3.3**	<0.005	**0.15**	**0.15**	**100**
C3/M/FLOOD	[12-OCT-2010]	HK1023077-035	**2.1**	<0.005	**0.14**	**0.14**	**89**
C3/B/FLOOD	[12-OCT-2010]	HK1023077-036	**3.1**	<0.005	**0.15**	**0.15**	**110**

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1528988)								
HK1023077-002	W1/M/EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.3	5.3	0.0
HK1023077-013	C2/S /EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.7	4.1	10.2
EA/ED: Physical and Aggregate Properties (QC Lot: 1528989)								
HK1023077-025	W3/S /FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.6	1.9	32.8
HK1023077-035	C3/M/FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.1	2.3	12.1
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1523942)								
HK1024227-011	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.32	0.33	3.1
HK1023625-004	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.16	0.16	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1523943)								
HK1023888-001	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.02	0.02	0.0
HK1023283-007	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.40	0.40	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1525244)								
HK1023077-002	W1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0
HK1023887-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.010	mg/L	0.11	0.100	9.5
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1525245)								
HK1023077-011	C1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0
HK1023964-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.010	mg/L	0.58	0.570	1.7

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1528988)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1528989)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	103	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1523942)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	104	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1523943)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	106	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1525244)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.9	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1525245)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.6	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*MSD*	*Low*	*High*	*Value*	*Control Limit*
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1523942)										
HK1023923-001	Anonymous	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	101	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1523943)										
HK1023923-005	Anonymous	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	100	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1525244)										
HK1023077-002	W1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	88.0	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1525245)										
HK1023077-011	C1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	112	----	75	125	----	----

CERTIFICATE OF ANALYSIS

Client	:	**ACTION UNITED ENVIRO SERVICES**	*Laboratory*	:	**ALS Technichem HK Pty Ltd**	*Page*	: **1 of 5**
Contact	:	**MR T W TAM**	*Contact*	:	**Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1023078**
Address	:	**RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T., HONG KONG**	*Address*	:	**11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**		
E-mail	:	**Twtam@fordbusiness.com**	*E-mail*	:	**Godfrey.Chan@alsenviro.com**		
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Facsimile	:	**+852 2959 6079**	*Facsimile*	:	**+852 2610 2021**		
Project	:	**CONSTRUCTION OF SEWAGE TREATMENT WORKS AT YUNG SHUE WAN AND SOK KWU WAN**	*Quote number*	:	**HK/632b/2010****	*Date received*	: **19-OCT-2010**
Order number	:	**DC/2009/13**				*Date of issue*	: **28-OCT-2010**
C-O-C number	:	**----**				*No. of samples*	- *Received* : **32**
Site	:	**----**					- *Analysed* : **32**

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Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**
Leung Sai Ho, Ivan	**Supervisor**	**Microbiology**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1023078 supersedes any previous reports with this reference. The completion date of analysis is 25-OCT-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1023078 :

Contract No. DC/2009/13 - Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan, proposed EM&A Programme for Baseline and Impact Monitoring - Sok Kwu Wan.
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.
Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.
Sample(s) were arrived in the laboratory at 17:30. Microbiological sample(s), in 125mL plastic bottle labelled sterile, with addition of sodium thiosulfate solution. Testing period : 20/10/2010 (09:45) - 22/10/2010.
The accredited LOR for Total Suspended Solids is 2mg/L and Ammoniacal Nitrogen (NH3-N) is 0.01mg/L. The results reported below the accredited LOR and the decimal value of the results were for reference only.

Analytical Results

Sub-Matrix: **MARINE WATER**

Compound			EA025: Suspended Solids (SS)	EK055A: Ammonia as N	EK059A: Nitrite + Nitrate as N	EK063A: Inorganic Nitrogen as N	EM002: E. coli
LOR Unit			0.5 mg/L	0.005 mg/L	0.01 mg/L	0.01 mg/L	1 CFU/100mL
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	EM: Microbiological Testing
W1/M/EBB	[19-OCT-2010]	HK1023078-002	<0.5	**0.024**	**0.04**	**0.06**	**1**
W2/S /EBB	[19-OCT-2010]	HK1023078-004	**1.4**	**0.020**	**0.05**	**0.07**	**1**
W2/M/EBB	[19-OCT-2010]	HK1023078-005	**1.0**	**0.018**	**0.04**	**0.06**	**2**
W2/B/EBB	[19-OCT-2010]	HK1023078-006	**2.0**	**0.018**	**0.04**	**0.06**	**2**
W3/S /EBB	[19-OCT-2010]	HK1023078-007	**4.5**	**0.027**	**0.10**	**0.13**	<1
W3/M/EBB	[19-OCT-2010]	HK1023078-008	**2.4**	<0.005	**0.05**	**0.05**	**8**
W3/B/EBB	[19-OCT-2010]	HK1023078-009	**3.6**	**0.005**	**0.02**	**0.02**	**12**
C1/S /EBB	[19-OCT-2010]	HK1023078-010	**3.4**	**0.020**	**0.05**	**0.07**	<1
C1/M/EBB	[19-OCT-2010]	HK1023078-011	**3.1**	**0.022**	**0.04**	**0.06**	**3**
C1/B/EBB	[19-OCT-2010]	HK1023078-012	**2.7**	**0.021**	**0.04**	**0.06**	**1**
C2/S /EBB	[19-OCT-2010]	HK1023078-013	**3.5**	**0.023**	**0.02**	**0.04**	**9**
C2/M/EBB	[19-OCT-2010]	HK1023078-014	**2.3**	**0.020**	**0.02**	**0.04**	**7**
C2/B/EBB	[19-OCT-2010]	HK1023078-015	**2.6**	**0.020**	**0.02**	**0.04**	**9**
C3/S /EBB	[19-OCT-2010]	HK1023078-016	**3.6**	<0.005	**0.06**	**0.06**	<1
C3/M/EBB	[19-OCT-2010]	HK1023078-017	**3.0**	**0.005**	**0.07**	**0.08**	**2**
C3/B/EBB	[19-OCT-2010]	HK1023078-018	**2.6**	<0.005	**0.06**	**0.06**	<1
W1/M/FLOOD	[19-OCT-2010]	HK1023078-020	**4.1**	**0.024**	**0.02**	**0.04**	**20**
W2/S /FLOOD	[19-OCT-2010]	HK1023078-022	**4.6**	<0.005	**0.07**	**0.07**	**1**
W2/M/FLOOD	[19-OCT-2010]	HK1023078-023	**3.4**	<0.005	**0.07**	**0.07**	**2**
W2/B/FLOOD	[19-OCT-2010]	HK1023078-024	**4.0**	<0.005	**0.08**	**0.08**	**2**
W3/S /FLOOD	[19-OCT-2010]	HK1023078-025	**3.8**	<0.005	**0.06**	**0.06**	**1**
W3/M/FLOOD	[19-OCT-2010]	HK1023078-026	**5.0**	<0.005	**0.07**	**0.07**	**8**
W3/B/FLOOD	[19-OCT-2010]	HK1023078-027	**3.4**	<0.005	**0.07**	**0.07**	**4**
C1/S /FLOOD	[19-OCT-2010]	HK1023078-028	**4.1**	**0.016**	**0.07**	**0.09**	**1**
C1/M/FLOOD	[19-OCT-2010]	HK1023078-029	**3.6**	**0.014**	**0.08**	**0.09**	**2**
C1/B/FLOOD	[19-OCT-2010]	HK1023078-030	**3.3**	**0.016**	**0.07**	**0.09**	**1**
C2/S /FLOOD	[19-OCT-2010]	HK1023078-031	**2.9**	**0.012**	**0.01**	**0.02**	**2**
C2/M/FLOOD	[19-OCT-2010]	HK1023078-032	**3.8**	**0.013**	**0.02**	**0.03**	**4**
C2/B/FLOOD	[19-OCT-2010]	HK1023078-033	**3.2**	**0.014**	**0.02**	**0.03**	**2**
C3/S /FLOOD	[19-OCT-2010]	HK1023078-034	**8.2**	**0.008**	**0.05**	**0.06**	**3**
C3/M/FLOOD	[19-OCT-2010]	HK1023078-035	**5.9**	**0.005**	**0.06**	**0.06**	**7**
C3/B/FLOOD	[19-OCT-2010]	HK1023078-036	**7.4**	**0.007**	**0.05**	**0.06**	**2**

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1534610)								
HK1023078-002	W1/M/EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	<0.5	0.0
HK1023078-013	C2/S /EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.5	2.6	29.5
EA/ED: Physical and Aggregate Properties (QC Lot: 1534611)								
HK1023078-025	W3/S /FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.8	3.8	0.0
HK1023078-035	C3/M/FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.9	6.9	15.6
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1530643)								
HK1024547-023	Anonymous	EK055A: Ammonia as N	7664-41-7	0.010	mg/L	<0.01	<0.010	0.0
HK1023078-022	W2/S /FLOOD	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1530644)								
HK1023078-011	C1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	0.022	0.023	4.4
HK1024547-003	Anonymous	EK055A: Ammonia as N	7664-41-7	0.010	mg/L	<0.01	<0.010	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1531019)								
HK1024669-011	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.12	0.12	0.0
HK1024669-001	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.17	0.16	6.1
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1531020)								
HK1024793-002	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.1	mg/L	4.9	4.5	8.3
HK1023078-002	W1/M/EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.04	0.04	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1534610)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1534611)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	88.5	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1530643)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	93.4	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1530644)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	88.6	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1531019)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	108	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1531020)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	106	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*MSD*	*Low*	*High*	*Value*	*Control Limit*
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1530643)										
HK1023078-002	W1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	107	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1530644)										
HK1023078-011	C1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	110	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1531019)										
HK1024669-001	Anonymous	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	113	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1531020)										
HK1024669-011	Anonymous	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	114	----	75	125	----	----

CERTIFICATE OF ANALYSIS

Client	:	**ACTION UNITED ENVIRO SERVICES**	*Laboratory*	:	**ALS Technichem HK Pty Ltd**	*Page*	: **1 of 5**
Contact	:	**MR T W TAM**	*Contact*	:	**Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1026850**
Address	:	**RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG**	*Address*	:	**11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**		
E-mail	:	**Twtam@fordbusiness.com**	*E-mail*	:	**Godfrey.Chan@alsenviro.com**		
Telephone	:	**+852 2959 6059**	*Telephone*	:	**+852 2610 1044**		
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Project	:	**CONSTRUCTION OF SEWAGE TREATMENT WORKS AT YUNG SHUE WAN AND SOK KWU WAN**	*Quote number*	:	**HK/632b/2010****	*Date received*	: **17-NOV-2010**
Order number	:	**DC/2009/13**				*Date of issue*	: **26-NOV-2010**
C-O-C number	:	**----**				*No. of samples*	- *Received* : **32**
Site	:	**----**					- *Analysed* : **32**

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Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**
Leung Sai Ho, Ivan	**Supervisor**	**Microbiology**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1026850 supersedes any previous reports with this reference. The completion date of analysis is 22-NOV-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1026850 :

Contract No. DC/2009/13 - Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan, proposed EM&A Programme for Baseline and Impact Monitoring - Sok Kwu Wan.
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.
Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.
Sample(s) were arrived in the laboratory at 17:30. Microbiological sample(s), in 125mL plastic bottle labelled sterile , with addition of sodium thiosulfate solution. Testing period : 17/11/2010 (18:30) - 19/11/2010.
The accredited LOR for Total Suspended Solids is 2mg/L and Ammoniacal Nitrogen (NH3-N) is 0.01mg/L. The results reported below the accredited LOR and the decimal value of the results were for reference only.

Analytical Results

Sub-Matrix: **MARINE WATER**

Compound			EA025: Suspended Solids (SS)	EK055A: Ammonia as N	EK059A: Nitrite + Nitrate as N	EK063A: Inorganic Nitrogen as N	EM002: E. coli
LOR Unit			0.5 mg/L	0.005 mg/L	0.01 mg/L	0.01 mg/L	1 CFU/100mL
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	EM: Microbiological Testing
W1/M/EBB	[16-NOV-2010]	HK1026850-002	**5.5**	<0.005	**0.15**	**0.15**	**4**
W2/S /EBB	[16-NOV-2010]	HK1026850-004	**3.8**	**0.020**	**0.16**	**0.18**	**1**
W2/M/EBB	[16-NOV-2010]	HK1026850-005	**5.3**	<0.005	**0.16**	**0.16**	**2**
W2/B/EBB	[16-NOV-2010]	HK1026850-006	**15.3**	<0.005	**0.15**	**0.15**	**3**
W3/S /EBB	[16-NOV-2010]	HK1026850-007	**1.6**	<0.005	**0.14**	**0.14**	**2**
W3/M/EBB	[16-NOV-2010]	HK1026850-008	**3.9**	**0.030**	**0.16**	**0.19**	**1**
W3/B/EBB	[16-NOV-2010]	HK1026850-009	**2.4**	**0.010**	**0.15**	**0.16**	**2**
C1/S /EBB	[16-NOV-2010]	HK1026850-010	**8.0**	<0.005	**0.14**	**0.14**	**1**
C1/M/EBB	[16-NOV-2010]	HK1026850-011	**7.1**	<0.005	**0.14**	**0.14**	**4**
C1/B/EBB	[16-NOV-2010]	HK1026850-012	**9.4**	<0.005	**0.14**	**0.14**	**2**
C2/S /EBB	[16-NOV-2010]	HK1026850-013	**4.0**	**0.040**	**0.17**	**0.21**	**6**
C2/M/EBB	[16-NOV-2010]	HK1026850-014	**2.8**	**0.050**	**0.17**	**0.22**	**3**
C2/B/EBB	[16-NOV-2010]	HK1026850-015	**3.4**	**0.040**	**0.17**	**0.21**	**6**
C3/S /EBB	[16-NOV-2010]	HK1026850-016	**5.1**	<0.005	**0.14**	**0.14**	<1
C3/M/EBB	[16-NOV-2010]	HK1026850-017	**7.3**	<0.005	**0.14**	**0.14**	<1
C3/B/EBB	[16-NOV-2010]	HK1026850-018	**10.0**	<0.005	**0.14**	**0.14**	**1**
W1/M/FLOOD	[16-NOV-2010]	HK1026850-020	**12.7**	<0.005	**0.14**	**0.14**	<1
W2/S /FLOOD	[16-NOV-2010]	HK1026850-022	**6.3**	<0.005	**0.14**	**0.14**	<1
W2/M/FLOOD	[16-NOV-2010]	HK1026850-023	**11.9**	<0.005	**0.14**	**0.14**	<1
W2/B/FLOOD	[16-NOV-2010]	HK1026850-024	**2.5**	<0.005	**0.14**	**0.14**	**2**
W3/S /FLOOD	[16-NOV-2010]	HK1026850-025	**9.0**	<0.005	**0.16**	**0.16**	**1**
W3/M/FLOOD	[16-NOV-2010]	HK1026850-026	**8.0**	<0.005	**0.15**	**0.15**	**1**
W3/B/FLOOD	[16-NOV-2010]	HK1026850-027	**13.4**	<0.005	**0.14**	**0.14**	**1**
C1/S /FLOOD	[16-NOV-2010]	HK1026850-028	**7.1**	<0.005	**0.15**	**0.15**	<1
C1/M/FLOOD	[16-NOV-2010]	HK1026850-029	**10.3**	<0.005	**0.15**	**0.15**	<1
C1/B/FLOOD	[16-NOV-2010]	HK1026850-030	**4.1**	<0.005	**0.15**	**0.15**	**1**
C2/S /FLOOD	[16-NOV-2010]	HK1026850-031	**6.4**	**0.030**	**0.17**	**0.20**	<1
C2/M/FLOOD	[16-NOV-2010]	HK1026850-032	**2.4**	**0.020**	**0.16**	**0.18**	**1**
C2/B/FLOOD	[16-NOV-2010]	HK1026850-033	**10.0**	<0.005	**0.14**	**0.14**	**1**
C3/S /FLOOD	[16-NOV-2010]	HK1026850-034	**5.5**	<0.005	**0.14**	**0.14**	<1
C3/M/FLOOD	[16-NOV-2010]	HK1026850-035	**7.4**	<0.005	**0.14**	**0.14**	<1
C3/B/FLOOD	[16-NOV-2010]	HK1026850-036	**7.6**	<0.005	**0.14**	**0.14**	<1

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1569622)								
HK1026850-002	W1/M/EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.5	6.3	13.6
HK1026850-013	C2/S /EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.0	4.1	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 1569626)								
HK1026850-025	W3/S /FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.0	10.2	12.1
HK1026850-035	C3/M/FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.4	8.4	12.6
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1567627)								
HK1026850-002	W1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0
HK1026850-011	C1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1567628)								
HK1026850-022	W2/S /FLOOD	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0
HK1026850-031	C2/S /FLOOD	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	0.030	0.030	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1567662)								
HK1026850-002	W1/M/EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.15	0.15	0.0
HK1026850-011	C1/M/EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.14	0.14	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1567663)								
HK1026850-022	W2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.14	0.14	0.0
HK1026850-031	C2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.17	0.17	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1569622)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	91.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1569626)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1567627)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.5	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1567628)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.8	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1567662)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	92.8	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1567663)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	92.0	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1567627)										
HK1026850-002	W1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	120	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1567628)										
HK1027263-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	108	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1567662)										
HK1026850-002	W1/M/EBB	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	87.0	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1567663)										
HK1026850-022	W2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	92.0	----	75	125	----	----

CERTIFICATE OF ANALYSIS

Client	:	**ACTION UNITED ENVIRO SERVICES**	*Laboratory*	:	**ALS Technichem HK Pty Ltd**	*Page*	: **1 of 5**
Contact	:	**MR T W TAM**	*Contact*	:	**Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1026853**
Address	:	**RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG**	*Address*	:	**11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**		
E-mail	:	**Twtam@fordbusiness.com**	*E-mail*	:	**Godfrey.Chan@alsenviro.com**		
Telephone	:	**+852 2959 6059**	*Telephone*	:	**+852 2610 1044**		
Facsimile	:	**+852 2959 6079**	*Facsimile*	:	**+852 2610 2021**		
Project	:	**CONSTRUCTION OF SEWAGE TREATMENT WORKS AT YUNG SHUE WAN AND SOK KWU WAN**	*Quote number*	:	**HK/632b/2010****	*Date received*	: **25-NOV-2010**
Order number	:	**DC/2009/13**				*Date of issue*	: **06-DEC-2010**
C-O-C number	:	**----**				*No. of samples*	- *Received* : **32**
Site	:	**----**					- *Analysed* : **32**

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Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**
Leung Sai Ho, Ivan	**Supervisor**	**Microbiology**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1026853 supersedes any previous reports with this reference. The completion date of analysis is 30-NOV-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1026853 :

Contract No. DC/2009/13 - Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan, proposed EM&A Programme for Baseline and Impact Monitoring - Sok Kwu Wan.
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.
Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.
Sample(s) were arrived in the laboratory at 17:30. Microbiological sample(s), in 125mL plastic bottle labelled sterile , with addition of sodium thiosulfate solution. Testing period : 26/11/2010 (11:45) - 28/11/2010.
The accredited LOR for Total Suspended Solids is 2mg/L and Ammoniacal Nitrogen (NH3-N) is 0.01mg/L. The results reported below the accredited LOR and the decimal value of the results were for reference only.

Analytical Results

Sub-Matrix: **MARINE WATER**

Compound			EA025: Suspended Solids (SS)	EK055A: Ammonia as N	EK059A: Nitrite + Nitrate as N	EK063A: Inorganic Nitrogen as N	EM002: E. coli
LOR Unit			0.5 mg/L	0.005 mg/L	0.01 mg/L	0.01 mg/L	1 CFU/100mL
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	EM: Microbiological Testing
W1/M/EBB	[25-NOV-2010]	HK1026853-002	**11.3**	<0.005	**0.14**	**0.14**	**36**
W2/S /EBB	[25-NOV-2010]	HK1026853-004	**5.6**	**0.028**	**0.14**	**0.17**	**280**
W2/M/EBB	[25-NOV-2010]	HK1026853-005	**10.3**	**0.044**	**0.14**	**0.18**	**350**
W2/B/EBB	[25-NOV-2010]	HK1026853-006	**5.8**	<0.005	**0.13**	**0.13**	**160**
W3/S /EBB	[25-NOV-2010]	HK1026853-007	**15.3**	**0.011**	**0.14**	**0.15**	**40**
W3/M/EBB	[25-NOV-2010]	HK1026853-008	**14.3**	**0.034**	**0.13**	**0.16**	**120**
W3/B/EBB	[25-NOV-2010]	HK1026853-009	**8.4**	**0.010**	**0.13**	**0.14**	**62**
C1/S /EBB	[25-NOV-2010]	HK1026853-010	**7.2**	**0.027**	**0.13**	**0.16**	**240**
C1/M/EBB	[25-NOV-2010]	HK1026853-011	**11.3**	**0.027**	**0.12**	**0.15**	**110**
C1/B/EBB	[25-NOV-2010]	HK1026853-012	**5.6**	**0.026**	**0.12**	**0.14**	**100**
C2/S /EBB	[25-NOV-2010]	HK1026853-013	**7.2**	<0.005	**0.11**	**0.11**	**59**
C2/M/EBB	[25-NOV-2010]	HK1026853-014	**5.0**	<0.005	**0.08**	**0.08**	**52**
C2/B/EBB	[25-NOV-2010]	HK1026853-015	**4.1**	**0.009**	**0.10**	**0.11**	**46**
C3/S /EBB	[25-NOV-2010]	HK1026853-016	**9.8**	**0.018**	**0.11**	**0.13**	**71**
C3/M/EBB	[25-NOV-2010]	HK1026853-017	**19.9**	**0.021**	**0.11**	**0.13**	**55**
C3/B/EBB	[25-NOV-2010]	HK1026853-018	**3.8**	<0.005	**0.10**	**0.10**	**43**
W1/M/FLOOD	[25-NOV-2010]	HK1026853-020	**12.6**	**0.006**	**0.14**	**0.15**	**32**
W2/S /FLOOD	[25-NOV-2010]	HK1026853-022	**7.4**	<0.005	**0.14**	**0.14**	**290**
W2/M/FLOOD	[25-NOV-2010]	HK1026853-023	**11.9**	**0.026**	**0.13**	**0.16**	**310**
W2/B/FLOOD	[25-NOV-2010]	HK1026853-024	**6.9**	**0.020**	**0.13**	**0.15**	**430**
W3/S /FLOOD	[25-NOV-2010]	HK1026853-025	**7.9**	<0.005	**0.12**	**0.12**	**100**
W3/M/FLOOD	[25-NOV-2010]	HK1026853-026	**10.8**	**0.063**	**0.12**	**0.18**	**67**
W3/B/FLOOD	[25-NOV-2010]	HK1026853-027	**12.4**	<0.005	**0.09**	**0.09**	**290**
C1/S /FLOOD	[25-NOV-2010]	HK1026853-028	**8.4**	**0.030**	**0.14**	**0.17**	**210**
C1/M/FLOOD	[25-NOV-2010]	HK1026853-029	**10.3**	**0.040**	**0.13**	**0.17**	**96**
C1/B/FLOOD	[25-NOV-2010]	HK1026853-030	**14.6**	**0.020**	**0.11**	**0.13**	**96**
C2/S /FLOOD	[25-NOV-2010]	HK1026853-031	**4.5**	<0.005	**0.03**	**0.03**	**2**
C2/M/FLOOD	[25-NOV-2010]	HK1026853-032	**10.3**	<0.005	**0.03**	**0.03**	**4**
C2/B/FLOOD	[25-NOV-2010]	HK1026853-033	**6.7**	**0.021**	**0.02**	**0.04**	**6**
C3/S /FLOOD	[25-NOV-2010]	HK1026853-034	**5.9**	**0.022**	**0.14**	**0.16**	**640**
C3/M/FLOOD	[25-NOV-2010]	HK1026853-035	**12.8**	**0.040**	**0.13**	**0.17**	**850**
C3/B/FLOOD	[25-NOV-2010]	HK1026853-036	**8.2**	**0.030**	**0.13**	**0.16**	**590**

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1581007)								
HK1026853-002	W1/M/EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	11.3	12.1	6.8
HK1026853-013	C2/S /EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.2	6.2	14.9
EA/ED: Physical and Aggregate Properties (QC Lot: 1581008)								
HK1026853-025	W3/S /FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.9	8.9	12.4
HK1026853-035	C3/M/FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	12.8	11.3	12.6
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1578593)								
HK1026853-002	W1/M/EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.14	0.14	0.0
HK1026853-011	C1/M/EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.12	0.11	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1578594)								
HK1026853-022	W2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.14	0.13	0.0
HK1026853-031	C2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.03	0.03	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1579298)								
HK1026853-022	W2/S /FLOOD	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0
HK1026853-011	C1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	0.027	0.028	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1579299)								
HK1027505-001	Anonymous	EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
HK1026853-002	W1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1581007)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	111	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1581008)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	114	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1578593)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	110	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1578594)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	107	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1579298)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	106	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1579299)											
EK055A: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	106	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1578593)										
HK1026853-002	W1/M/EBB	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	120	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1578594)										
HK1026853-011	C1/M/EBB	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	112	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1579298)										
HK1026853-022	W2/S /FLOOD	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	114	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1579299)										
HK1026853-011	C1/M/EBB	EK055A: Ammonia as N	7664-41-7	0.5 mg/L	83.6	----	75	125	----	----

CERTIFICATE OF ANALYSIS

Client	:	**ACTION UNITED ENVIRO SERVICES**	*Laboratory*	:	**ALS Technichem HK Pty Ltd**	*Page*	: **1 of 5**
Contact	:	**MR T W TAM**	*Contact*	:	**Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1029535**
Address	:	**RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG**	*Address*	:	**11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**		
E-mail	:	**Twtam@fordbusiness.com**	*E-mail*	:	**Godfrey.Chan@alsenviro.com**		
Telephone	:	**+852 2959 6059**	*Telephone*	:	**+852 2610 1044**		
Facsimile	:	**+852 2959 6079**	*Facsimile*	:	**+852 2610 2021**		
Project	:	**CONSTRUCTION OF SEWAGE TREATMENT WORKS AT YUNG SHUE WAN AND SOK KWU WAN**	*Quote number*	:	**HK/632b/2010****	*Date received*	: **16-DEC-2010**
Order number	:	**----**				*Date of issue*	: **28-DEC-2010**
C-O-C number	:	**----**				*No. of samples*	- *Received* : **32**
Site	:	**----**					- *Analysed* : **32**

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Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**
Leung Sai Ho, Ivan	**Supervisor**	**Microbiology**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1029535 supersedes any previous reports with this reference. The completion date of analysis is 24-DEC-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1029535 :

Contract No. DC/2009/13 - Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan, proposed EM&A Programme for Baseline and Impact Monitoring - Sok Kwu Wan.
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.
Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.
Sample(s) were arrived in the laboratory at 17:30. Microbiological sample(s), in 125mL plastic bottle labelled sterile, with addition of sodium thiosulfate solution. Testing period : 17/12/2010 (11:30) - 19/12/2010.
The accredited LOR for Total Suspended Solids is 2mg/L and Ammoniacal Nitrogen (NH3-N) is 0.01mg/L. The results reported below the accredited LOR and the decimal value of the results were for reference only.

Analytical Results

Sub-Matrix: **MARINE WATER**

Compound			EA025: Suspended Solids (SS)	EK055K: Ammonia as N	EK059A: Nitrite + Nitrate as N	EK063A: Inorganic Nitrogen as N	EM002: E. coli
LOR Unit			0.5 mg/L	0.005 mg/L	0.01 mg/L	0.01 mg/L	1 CFU/100mL
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	EM: Microbiological Testing
W1/M/EBB	[16-DEC-2010]	HK1029535-002	**4.7**	**0.055**	**0.08**	**0.14**	**5**
W2/S /EBB	[16-DEC-2010]	HK1029535-004	**4.2**	**0.037**	**0.05**	**0.09**	**14**
W2/M/EBB	[16-DEC-2010]	HK1029535-005	**5.8**	**0.048**	**0.07**	**0.12**	**9**
W2/B/EBB	[16-DEC-2010]	HK1029535-006	**4.3**	**0.053**	**0.08**	**0.13**	**8**
W3/S /EBB	[16-DEC-2010]	HK1029535-007	**2.4**	**0.055**	**0.07**	**0.12**	**3**
W3/M/EBB	[16-DEC-2010]	HK1029535-008	**3.1**	**0.047**	**0.06**	**0.11**	**7**
W3/B/EBB	[16-DEC-2010]	HK1029535-009	**5.4**	**0.042**	**0.06**	**0.10**	**9**
C1/S /EBB	[16-DEC-2010]	HK1029535-010	**7.3**	**0.033**	**0.05**	**0.08**	**15**
C1/M/EBB	[16-DEC-2010]	HK1029535-011	**6.6**	**0.037**	**0.05**	**0.09**	**14**
C1/B/EBB	[16-DEC-2010]	HK1029535-012	**7.0**	**0.032**	**0.05**	**0.08**	**11**
C2/S /EBB	[16-DEC-2010]	HK1029535-013	**4.1**	**0.103**	**0.12**	**0.22**	**18**
C2/M/EBB	[16-DEC-2010]	HK1029535-014	**1.3**	**0.107**	**0.12**	**0.23**	**22**
C2/B/EBB	[16-DEC-2010]	HK1029535-015	**2.5**	**0.104**	**0.12**	**0.22**	**20**
C3/S /EBB	[16-DEC-2010]	HK1029535-016	**5.5**	**0.033**	**0.05**	**0.08**	**16**
C3/M/EBB	[16-DEC-2010]	HK1029535-017	**5.1**	**0.034**	**0.05**	**0.08**	**10**
C3/B/EBB	[16-DEC-2010]	HK1029535-018	**5.2**	**0.035**	**0.05**	**0.08**	**8**
W1/M/FLOOD	[16-DEC-2010]	HK1029535-020	**3.5**	**0.051**	**0.07**	**0.12**	**3**
W2/S /FLOOD	[16-DEC-2010]	HK1029535-022	**5.2**	**0.040**	**0.05**	**0.09**	**11**
W2/M/FLOOD	[16-DEC-2010]	HK1029535-023	**2.9**	**0.034**	**0.05**	**0.08**	**7**
W2/B/FLOOD	[16-DEC-2010]	HK1029535-024	**5.6**	**0.038**	**0.05**	**0.09**	**10**
W3/S /FLOOD	[16-DEC-2010]	HK1029535-025	**6.9**	**0.052**	**0.07**	**0.12**	**5**
W3/M/FLOOD	[16-DEC-2010]	HK1029535-026	**7.2**	**0.054**	**0.07**	**0.12**	**2**
W3/B/FLOOD	[16-DEC-2010]	HK1029535-027	**2.7**	**0.056**	**0.07**	**0.13**	**6**
C1/S /FLOOD	[16-DEC-2010]	HK1029535-028	**4.5**	**0.049**	**0.05**	**0.10**	**9**
C1/M/FLOOD	[16-DEC-2010]	HK1029535-029	**5.5**	**0.034**	**0.05**	**0.08**	**7**
C1/B/FLOOD	[16-DEC-2010]	HK1029535-030	**5.8**	**0.038**	**0.04**	**0.08**	**9**
C2/S /FLOOD	[16-DEC-2010]	HK1029535-031	**10.7**	**0.075**	**0.09**	**0.16**	**8**
C2/M/FLOOD	[16-DEC-2010]	HK1029535-032	**6.2**	**0.094**	**0.11**	**0.20**	**6**
C2/B/FLOOD	[16-DEC-2010]	HK1029535-033	**5.2**	**0.074**	**0.09**	**0.16**	**5**
C3/S /FLOOD	[16-DEC-2010]	HK1029535-034	**11.4**	**0.048**	**0.06**	**0.11**	**5**
C3/M/FLOOD	[16-DEC-2010]	HK1029535-035	**7.9**	**0.044**	**0.06**	**0.10**	**7**
C3/B/FLOOD	[16-DEC-2010]	HK1029535-036	**6.7**	**0.045**	**0.07**	**0.12**	**8**

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1609897)								
HK1029535-002	W1/M/EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.7	4.0	16.8
HK1029535-013	C2/S /EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.1	3.3	19.8
EA/ED: Physical and Aggregate Properties (QC Lot: 1609898)								
HK1029535-025	W3/S /FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.9	6.2	10.2
HK1029535-035	C3/M/FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.9	6.9	13.4
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1606995)								
HK1029535-002	W1/M/EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.08	0.07	0.0
HK1029535-011	C1/M/EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.05	0.05	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1606996)								
HK1029535-022	W2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.05	0.05	0.0
HK1029617-001	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1615291)								
HK1029535-002	W1/M/EBB	EK055K: Ammonia as N	7664-41-7	0.005	mg/L	0.055	0.050	9.5
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1615292)								
HK1029535-011	C1/M/EBB	EK055K: Ammonia as N	7664-41-7	0.005	mg/L	0.037	0.040	7.8

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1609897)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1609898)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1606995)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	104	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1606996)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	104	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1615291)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.1	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1615292)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.4	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
				Concentration	MS	MSD	Low	High	Value	Control Limit

Matrix: **WATER**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*MSD*	*Low*	*High*	*Value*	*Control Limit*
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1606995)										
HK1029617-001	Anonymous	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	114	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1606996)										
HK1029617-002	Anonymous	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	108	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1615291)										
HK1029535-002	W1/M/EBB	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	106	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1615292)										
HK1029535-011	C1/M/EBB	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	113	----	75	125	----	----

CERTIFICATE OF ANALYSIS

Client	:	**ACTION UNITED ENVIRO SERVICES**	*Laboratory*	:	**ALS Technichem HK Pty Ltd**	*Page*	: **1 of 5**
Contact	:	**MR T W TAM**	*Contact*	:	**Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1029537**
Address	:	**RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG**	*Address*	:	**11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**		
E-mail	:	**Twtam@fordbusiness.com**	*E-mail*	:	**Godfrey.Chan@alsenviro.com**		
Telephone	:	**+852 2959 6059**	*Telephone*	:	**+852 2610 1044**		
Facsimile	:	**+852 2959 6079**	*Facsimile*	:	**+852 2610 2021**		
Project	:	**CONSTRUCTION OF SEWAGE TREATMENT WORKS AT YUNG SHUE WAN AND SOK KWU WAN**	*Quote number*	:	**HK/632b/2010****	*Date received*	: **31-DEC-2010**
Order number	:	**----**				*Date of issue*	: **11-JAN-2011**
C-O-C number	:	**----**				*No. of samples*	- *Received* : **32**
Site	:	**----**					- *Analysed* : **32**

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the 'Electronic Transactions Ordinance' of Hong Kong, Chapter 553, Section 6.

Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**
Leung Sai Ho, Ivan	**Supervisor**	**Microbiology**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1029537 supersedes any previous reports with this reference. The completion date of analysis is 04-JAN-2011. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1029537 :

Contract No. DC/2009/13 - Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan, proposed EM&A Programme for Baseline and Impact Monitoring - Sok Kwu Wan.
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.
Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.
Sample(s) were arrived in the laboratory at 17:30. Microbiological sample(s), in 125mL plastic bottle labelled sterile, with addition of sodium thiosulfate solution. Testing period : 31/12/2010 (14:30) - 02/01/2011.
The accredited LOR for Total Suspended Solids is 2mg/L and Ammoniacal Nitrogen (NH3-N) is 0.01mg/L. The results reported below the accredited LOR and the decimal value of the results were for reference only.

Analytical Results

Sub-Matrix: **MARINE WATER**

Compound			EA025: Suspended Solids (SS)	EK055K: Ammonia as N	EK059A: Nitrite + Nitrate as N	EK063A: Inorganic Nitrogen as N	EM002: E. coli
LOR Unit			0.5 mg/L	0.005 mg/L	0.01 mg/L	0.01 mg/L	1 CFU/100mL
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	EM: Microbiological Testing
W1/M/EBB	[30-DEC-2010]	HK1029537-002	<0.5	<0.005	**0.12**	**0.12**	<1
W2/S /EBB	[30-DEC-2010]	HK1029537-004	**0.6**	<0.005	**0.13**	**0.13**	<1
W2/M/EBB	[30-DEC-2010]	HK1029537-005	**2.2**	<0.005	**0.13**	**0.13**	**1**
W2/B/EBB	[30-DEC-2010]	HK1029537-006	<0.5	<0.005	**0.13**	**0.13**	**1**
W3/S /EBB	[30-DEC-2010]	HK1029537-007	<0.5	<0.005	**0.13**	**0.13**	**1**
W3/M/EBB	[30-DEC-2010]	HK1029537-008	<0.5	**0.020**	**0.13**	**0.15**	**4**
W3/B/EBB	[30-DEC-2010]	HK1029537-009	<0.5	**0.010**	**0.13**	**0.14**	**3**
C1/S /EBB	[30-DEC-2010]	HK1029537-010	**1.7**	<0.005	**0.12**	**0.12**	<1
C1/M/EBB	[30-DEC-2010]	HK1029537-011	<0.5	<0.005	**0.12**	**0.12**	**1**
C1/B/EBB	[30-DEC-2010]	HK1029537-012	**0.5**	<0.005	**0.12**	**0.12**	**2**
C2/S /EBB	[30-DEC-2010]	HK1029537-013	**0.5**	<0.005	**0.12**	**0.12**	<1
C2/M/EBB	[30-DEC-2010]	HK1029537-014	<0.5	<0.005	**0.12**	**0.12**	<1
C2/B/EBB	[30-DEC-2010]	HK1029537-015	**1.1**	<0.005	**0.12**	**0.12**	<1
C3/S /EBB	[30-DEC-2010]	HK1029537-016	**1.5**	<0.005	**0.12**	**0.12**	**4**
C3/M/EBB	[30-DEC-2010]	HK1029537-017	**1.9**	<0.005	**0.12**	**0.12**	**2**
C3/B/EBB	[30-DEC-2010]	HK1029537-018	<0.5	<0.005	**0.13**	**0.13**	**4**
W1/M/FLOOD	[30-DEC-2010]	HK1029537-020	**1.6**	<0.005	**0.12**	**0.12**	<1
W2/S /FLOOD	[30-DEC-2010]	HK1029537-022	<0.5	<0.005	**0.12**	**0.12**	<1
W2/M/FLOOD	[30-DEC-2010]	HK1029537-023	**4.5**	<0.005	**0.12**	**0.12**	<1
W2/B/FLOOD	[30-DEC-2010]	HK1029537-024	<0.5	<0.005	**0.12**	**0.12**	**1**
W3/S /FLOOD	[30-DEC-2010]	HK1029537-025	<0.5	<0.005	**0.13**	**0.13**	<1
W3/M/FLOOD	[30-DEC-2010]	HK1029537-026	<0.5	<0.005	**0.12**	**0.12**	<1
W3/B/FLOOD	[30-DEC-2010]	HK1029537-027	<0.5	<0.005	**0.13**	**0.13**	<1
C1/S /FLOOD	[30-DEC-2010]	HK1029537-028	**1.2**	<0.005	**0.12**	**0.12**	<1
C1/M/FLOOD	[30-DEC-2010]	HK1029537-029	**1.2**	<0.005	**0.13**	**0.13**	<1
C1/B/FLOOD	[30-DEC-2010]	HK1029537-030	**7.7**	<0.005	**0.13**	**0.13**	<1
C2/S /FLOOD	[30-DEC-2010]	HK1029537-031	**4.2**	<0.005	**0.13**	**0.13**	**2**
C2/M/FLOOD	[30-DEC-2010]	HK1029537-032	**2.4**	<0.005	**0.13**	**0.13**	**1**
C2/B/FLOOD	[30-DEC-2010]	HK1029537-033	**1.0**	<0.005	**0.13**	**0.13**	<1
C3/S /FLOOD	[30-DEC-2010]	HK1029537-034	**2.4**	<0.005	**0.13**	**0.13**	<1
C3/M/FLOOD	[30-DEC-2010]	HK1029537-035	**0.9**	<0.005	**0.13**	**0.13**	<1
C3/B/FLOOD	[30-DEC-2010]	HK1029537-036	<0.5	**0.050**	**0.13**	**0.18**	<1

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1619786)								
HK1029537-002	W1/M/EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	<0.5	0.0
HK1029537-013	C2/S /EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	0.5	0.6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 1619787)								
HK1029537-025	W3/S /FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	<0.5	0.0
HK1029537-035	C3/M/FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	0.9	1.3	30.3
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1619814)								
HK1029537-022	W2/S /FLOOD	EK055K: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1619815)								
HK1029537-011	C1/M/EBB	EK055K: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1619901)								
HK1030933-002	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.1	mg/L	4.1	4.2	0.0
HK1030922-002	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	10.0	9.84	1.6
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1619902)								
HK1030938-002	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.1	mg/L	3.5	3.5	0.0
HK1029537-002	W1/M/EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.12	0.12	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1619786)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	91.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1619787)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.0	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1619814)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	95.1	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1619815)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	96.9	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1619901)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	103	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1619902)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	105	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
				Concentration	MS	MSD	Low	High	Value	Control Limit

Matrix: **WATER**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*MSD*	*Low*	*High*	*Value*	*Control Limit*
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1619814)										
HK1031108-002	Anonymous	EK055K: Ammonia as N	7664-41-7	5 mg/L	89.0	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1619815)										
HK1030485-002	Anonymous	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	106	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1619901)										
HK1030933-002	Anonymous	EK059A: Nitrite + Nitrate as N	----	10 mg/L	114	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1619902)										
HK1030938-002	Anonymous	EK059A: Nitrite + Nitrate as N	----	10 mg/L	113	----	75	125	----	----

CERTIFICATE OF ANALYSIS

Client	:	**ACTION UNITED ENVIRO SERVICES**	*Laboratory*	:	**ALS Technichem HK Pty Ltd**	*Page*	: **1 of 5**
Contact	:	**MR T W TAM**	*Contact*	:	**Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1100389**
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Project	:	**CONSTRUCTION OF SEWAGE TREATMENT WORKS AT YUNG SHUE WAN AND SOK KWU WAN**	*Quote number*	:	**HK/632b/2010****	*Date received*	: **20-JAN-2011**
Order number	:	**DC/2009/13**				*Date of issue*	: **31-JAN-2011**
C-O-C number	:	**----**				*No. of samples*	- *Received* : **32**
Site	:	**----**					- *Analysed* : **32**

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the 'Electronic Transactions Ordinance' of Hong Kong, Chapter 553, Section 6.

Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**
Leung Sai Ho, Ivan	**Supervisor**	**Microbiology**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1100389 supersedes any previous reports with this reference. The completion date of analysis is 24-JAN-2011. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1100389 :

Contract No. DC/2009/13 - Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan, proposed EM&A Programme for Baseline and Impact Monitoring - Sok Kwu Wan.
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.
Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.
Sample(s) were arrived in the laboratory at 17:30. Microbiological sample(s), in 125mL plastic bottle labelled sterile, with addition of sodium thiosulfate solution. Testing period : Sample(s) were arrived in the laboratory at 10:15. Microbiological sample(s), in plastic bags, were received in an ambient condition. Testing period : 21/01/2011 (11:30) - 23/01/2011.
The accredited LOR for Total Suspended Solids is 2mg/L and Ammoniacal Nitrogen (NH3-N) is 0.01mg/L. The results reported below the accredited LOR and the decimal value of the results were for reference only.

Analytical Results

Sub-Matrix: **MARINE WATER**

Compound			EA025: Suspended Solids (SS)	EK055K: Ammonia as N	EK059A: Nitrite + Nitrate as N	EK063A: Inorganic Nitrogen as N	EM002: E. coli
LOR Unit			0.5 mg/L	0.005 mg/L	0.01 mg/L	0.01 mg/L	1 CFU/100mL
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	EM: Microbiological Testing
W1/M/EBB	[20-JAN-2011]	HK1100389-002	**1.8**	**0.032**	**0.13**	**0.16**	<1
W2/S /EBB	[20-JAN-2011]	HK1100389-004	**2.8**	**0.021**	**0.13**	**0.15**	**23**
W2/M/EBB	[20-JAN-2011]	HK1100389-005	**1.4**	**0.032**	**0.13**	**0.16**	**21**
W2/B/EBB	[20-JAN-2011]	HK1100389-006	**4.5**	**0.029**	**0.13**	**0.16**	**34**
W3/S /EBB	[20-JAN-2011]	HK1100389-007	**3.8**	**0.038**	**0.14**	**0.18**	**8**
W3/M/EBB	[20-JAN-2011]	HK1100389-008	**3.2**	**0.041**	**0.14**	**0.18**	**11**
W3/B/EBB	[20-JAN-2011]	HK1100389-009	**2.2**	**0.041**	**0.14**	**0.18**	<1
C1/S /EBB	[20-JAN-2011]	HK1100389-010	**4.1**	**0.032**	**0.14**	**0.17**	**17**
C1/M/EBB	[20-JAN-2011]	HK1100389-011	**5.3**	**0.031**	**0.14**	**0.17**	**13**
C1/B/EBB	[20-JAN-2011]	HK1100389-012	**3.9**	**0.030**	**0.13**	**0.16**	**22**
C2/S /EBB	[20-JAN-2011]	HK1100389-013	**4.1**	**0.012**	**0.11**	**0.12**	**3**
C2/M/EBB	[20-JAN-2011]	HK1100389-014	**1.8**	**0.009**	**0.12**	**0.13**	**6**
C2/B/EBB	[20-JAN-2011]	HK1100389-015	**5.5**	**0.013**	**0.12**	**0.13**	**1**
C3/S /EBB	[20-JAN-2011]	HK1100389-016	**3.3**	**0.011**	**0.13**	**0.14**	**11**
C3/M/EBB	[20-JAN-2011]	HK1100389-017	**5.8**	**0.015**	**0.13**	**0.14**	**20**
C3/B/EBB	[20-JAN-2011]	HK1100389-018	**6.6**	<0.005	**0.13**	**0.13**	**27**
W1/M/FLOOD	[20-JAN-2011]	HK1100389-020	**3.6**	**0.048**	**0.14**	**0.19**	**2**
W2/S /FLOOD	[20-JAN-2011]	HK1100389-022	**3.0**	**0.020**	**0.13**	**0.15**	**12**
W2/M/FLOOD	[20-JAN-2011]	HK1100389-023	**4.2**	**0.030**	**0.14**	**0.17**	**10**
W2/B/FLOOD	[20-JAN-2011]	HK1100389-024	**2.2**	**0.039**	**0.14**	**0.18**	**2**
W3/S /FLOOD	[20-JAN-2011]	HK1100389-025	**2.5**	**0.036**	**0.14**	**0.18**	**1**
W3/M/FLOOD	[20-JAN-2011]	HK1100389-026	**3.6**	**0.033**	**0.14**	**0.17**	**6**
W3/B/FLOOD	[20-JAN-2011]	HK1100389-027	**2.2**	**0.033**	**0.14**	**0.17**	**9**
C1/S /FLOOD	[20-JAN-2011]	HK1100389-028	**4.1**	**0.024**	**0.14**	**0.16**	**8**
C1/M/FLOOD	[20-JAN-2011]	HK1100389-029	**4.7**	**0.023**	**0.13**	**0.15**	**28**
C1/B/FLOOD	[20-JAN-2011]	HK1100389-030	**5.2**	**0.020**	**0.13**	**0.15**	**22**
C2/S /FLOOD	[20-JAN-2011]	HK1100389-031	**1.8**	**0.014**	**0.13**	**0.14**	**8**
C2/M/FLOOD	[20-JAN-2011]	HK1100389-032	**2.2**	**0.020**	**0.13**	**0.15**	**9**
C2/B/FLOOD	[20-JAN-2011]	HK1100389-033	**2.7**	**0.035**	**0.13**	**0.16**	**3**
C3/S /FLOOD	[20-JAN-2011]	HK1100389-034	**2.6**	**0.022**	**0.13**	**0.15**	**4**
C3/M/FLOOD	[20-JAN-2011]	HK1100389-035	**3.6**	**0.021**	**0.13**	**0.15**	**8**
C3/B/FLOOD	[20-JAN-2011]	HK1100389-036	**3.5**	**0.023**	**0.13**	**0.15**	**5**

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1642958)								
HK1100389-002	W1/M/EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.8	1.9	7.1
HK1100389-013	C2/S /EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.1	2.9	34.0
EA/ED: Physical and Aggregate Properties (QC Lot: 1642959)								
HK1100389-025	W3/S /FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.5	1.9	24.2
HK1100389-035	C3/M/FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.6	5.1	33.8
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1642332)								
HK1100389-002	W1/M/EBB	EK055K: Ammonia as N	7664-41-7	0.005	mg/L	0.032	0.030	6.4
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1642333)								
HK1100389-011	C1/M/EBB	EK055K: Ammonia as N	7664-41-7	0.005	mg/L	0.031	0.030	3.3
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1642338)								
HK1100389-031	C2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.13	0.13	0.0
HK1101572-007	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	1.36	1.29	5.3
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1642339)								
HK1101640-001	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	1.55	1.50	3.3
HK1101633-002	Anonymous	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	12.1	12.1	0.2

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1642958)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1642959)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1642332)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.9	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1642333)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	97.8	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1642338)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	112	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1642339)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	103	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
				Concentration	MS	MSD	Low	High	Value	Control Limit

Matrix: **WATER**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*MSD*	*Low*	*High*	*Value*	*Control Limit*
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1642332)										
HK1100389-002	W1/M/EBB	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	110	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1642333)										
HK1100389-011	C1/M/EBB	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	116	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1642338)										
HK1101637-002	Anonymous	EK059A: Nitrite + Nitrate as N	----	10 mg/L	113	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1642339)										
HK1101670-001	Anonymous	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	113	----	75	125	----	----

CERTIFICATE OF ANALYSIS

Client	:	**ACTION UNITED ENVIRO SERVICES**	*Laboratory*	:	**ALS Technichem HK Pty Ltd**	*Page*	: **1 of 5**
Contact	:	**MS JAN KWOK**	*Contact*	:	**Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1100390**
Address	:	**RM A 20/F., GOLDEN KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG**	*Address*	:	**11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**		
E-mail	:	**Jankwok@fordbusiness.com**	*E-mail*	:	**Godfrey.Chan@alsenviro.com**		
Telephone	:	**+852 2959 6059**	*Telephone*	:	**+852 2610 1044**		
Facsimile	:	**+852 2959 6079**	*Facsimile*	:	**+852 2610 2021**		
Project	:	**CONSTRUCTION OF SEWAGE TREATMENT WORKS AT YUNG SHUE WAN AND SOK KWU WAN**	*Quote number*	:	**HK/632b/2010****	*Date received*	: **26-JAN-2011**
Order number	:	**----**				*Date of issue*	: **08-FEB-2011**
C-O-C number	:	**----**				*No. of samples*	- *Received* : **32**
Site	:	**----**					- *Analysed* : **32**

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Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**
Leung Sai Ho, Ivan	**Supervisor**	**Microbiology**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1100390 supersedes any previous reports with this reference. The completion date of analysis is 31-JAN-2011. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1100390 :

Contract No. DC/2009/13 - Construction of Sewage Treatment Works at Yung Shue Wan and Sok Kwu Wan, proposed EM&A Programme for Baseline and Impact Monitoring - Sok Kwu Wan.
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.
Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.
Sample(s) were arrived in the laboratory at 13:00. Microbiological sample(s), in 125mL plastic bottle labelled sterile, with addition of sodium thiosulfate solution. Testing period : 27/01/2011 (09:30) - 29/01/2011.
The accredited LOR for Total Suspended Solids is 2mg/L and Ammoniacal Nitrogen (NH3-N) is 0.01mg/L. The results reported below the accredited LOR and the decimal value of the results were for reference only.

Analytical Results

Sub-Matrix: **MARINE WATER**

Compound			EA025: Suspended Solids (SS)	EK055K: Ammonia as N	EK059A: Nitrite + Nitrate as N	EK063A: Inorganic Nitrogen as N	EM002: E. coli
LOR Unit			0.5 mg/L	0.005 mg/L	0.01 mg/L	0.01 mg/L	1 CFU/100mL
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	ED/EK: Inorganic Nonmetallic Parameters	EM: Microbiological Testing
W1/M/EBB	[25-JAN-2011]	HK1100390-002	**1.7**	<0.005	**0.14**	**0.14**	<1
W2/S /EBB	[25-JAN-2011]	HK1100390-004	**2.4**	<0.005	**0.15**	**0.15**	<1
W2/M/EBB	[25-JAN-2011]	HK1100390-005	**1.6**	<0.005	**0.16**	**0.16**	**2**
W2/B/EBB	[25-JAN-2011]	HK1100390-006	**2.0**	<0.005	**0.15**	**0.15**	**1**
W3/S /EBB	[25-JAN-2011]	HK1100390-007	**8.7**	<0.005	**0.15**	**0.15**	**1**
W3/M/EBB	[25-JAN-2011]	HK1100390-008	**2.5**	<0.005	**0.15**	**0.15**	<1
W3/B/EBB	[25-JAN-2011]	HK1100390-009	**2.5**	<0.005	**0.15**	**0.15**	**1**
C1/S /EBB	[25-JAN-2011]	HK1100390-010	**2.8**	<0.005	**0.16**	**0.16**	<1
C1/M/EBB	[25-JAN-2011]	HK1100390-011	**2.2**	<0.005	**0.16**	**0.16**	**1**
C1/B/EBB	[25-JAN-2011]	HK1100390-012	**2.2**	<0.005	**0.16**	**0.16**	<1
C2/S /EBB	[25-JAN-2011]	HK1100390-013	**2.3**	<0.005	**0.16**	**0.16**	<1
C2/M/EBB	[25-JAN-2011]	HK1100390-014	**0.7**	<0.005	**0.15**	**0.15**	<1
C2/B/EBB	[25-JAN-2011]	HK1100390-015	**2.8**	<0.005	**0.15**	**0.15**	<1
C3/S /EBB	[25-JAN-2011]	HK1100390-016	**2.4**	<0.005	**0.17**	**0.17**	<1
C3/M/EBB	[25-JAN-2011]	HK1100390-017	**1.9**	<0.005	**0.16**	**0.16**	<1
C3/B/EBB	[25-JAN-2011]	HK1100390-018	**1.9**	<0.005	**0.16**	**0.16**	<1
W1/M/FLOOD	[25-JAN-2011]	HK1100390-020	**1.4**	<0.005	**0.16**	**0.16**	<1
W2/S /FLOOD	[25-JAN-2011]	HK1100390-022	**2.6**	<0.005	**0.16**	**0.16**	**7**
W2/M/FLOOD	[25-JAN-2011]	HK1100390-023	**2.1**	<0.005	**0.16**	**0.16**	**4**
W2/B/FLOOD	[25-JAN-2011]	HK1100390-024	**2.9**	<0.005	**0.16**	**0.16**	**1**
W3/S /FLOOD	[25-JAN-2011]	HK1100390-025	**3.9**	<0.005	**0.15**	**0.15**	<1
W3/M/FLOOD	[25-JAN-2011]	HK1100390-026	**2.2**	<0.005	**0.15**	**0.15**	<1
W3/B/FLOOD	[25-JAN-2011]	HK1100390-027	**3.6**	<0.005	**0.15**	**0.15**	<1
C1/S /FLOOD	[25-JAN-2011]	HK1100390-028	**2.3**	<0.005	**0.16**	**0.16**	**3**
C1/M/FLOOD	[25-JAN-2011]	HK1100390-029	**2.7**	<0.005	**0.16**	**0.16**	**2**
C1/B/FLOOD	[25-JAN-2011]	HK1100390-030	**2.0**	<0.005	**0.16**	**0.16**	**4**
C2/S /FLOOD	[25-JAN-2011]	HK1100390-031	**2.7**	<0.005	**0.16**	**0.16**	**1**
C2/M/FLOOD	[25-JAN-2011]	HK1100390-032	**1.7**	<0.005	**0.15**	**0.15**	<1
C2/B/FLOOD	[25-JAN-2011]	HK1100390-033	**1.2**	<0.005	**0.15**	**0.15**	**1**
C3/S /FLOOD	[25-JAN-2011]	HK1100390-034	**2.6**	<0.005	**0.16**	**0.16**	**1**
C3/M/FLOOD	[25-JAN-2011]	HK1100390-035	**2.3**	<0.005	**0.16**	**0.16**	**2**
C3/B/FLOOD	[25-JAN-2011]	HK1100390-036	**2.0**	<0.005	**0.16**	**0.16**	**2**

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1647005)								
HK1100390-002	W1/M/EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.7	1.1	41.9
HK1100390-014	C2/M/EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	0.7	0.9	16.7
EA/ED: Physical and Aggregate Properties (QC Lot: 1647006)								
HK1100390-025	W3/S /FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.9	4.8	19.8
HK1100390-035	C3/M/FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.3	2.3	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1647194)								
HK1100390-011	C1/M/EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.16	0.16	0.0
HK1100390-022	W2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.16	0.16	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1647195)								
HK1100390-031	C2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.16	0.16	0.0
HK1100390-002	W1/M/EBB	EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	0.14	0.14	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1650253)								
HK1101886-009	Anonymous	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.06	0.06	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 1650254)								
HK1101886-011	Anonymous	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.04	0.04	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1647005)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	90.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1647006)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1647194)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	96.2	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1647195)											
EK059A: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.4 mg/L	94.8	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1650253)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	91.0	----	85	115	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1650254)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	90.6	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
				Concentration	MS	MSD	Low	High	Value	Control Limit

Matrix: **WATER**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*MSD*	*Low*	*High*	*Value*	*Control Limit*
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1647194)										
HK1100390-011	C1/M/EBB	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	120	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1647195)										
HK1100390-022	W2/S /FLOOD	EK059A: Nitrite + Nitrate as N	----	1.0 mg/L	117	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1650253)										
HK1101886-009	Anonymous	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	84.0	----	75	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QCLot: 1650254)										
HK1101886-011	Anonymous	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	116	----	75	125	----	----

Appendix I

Meteorological of Baseline Water Quality Monitoring Days

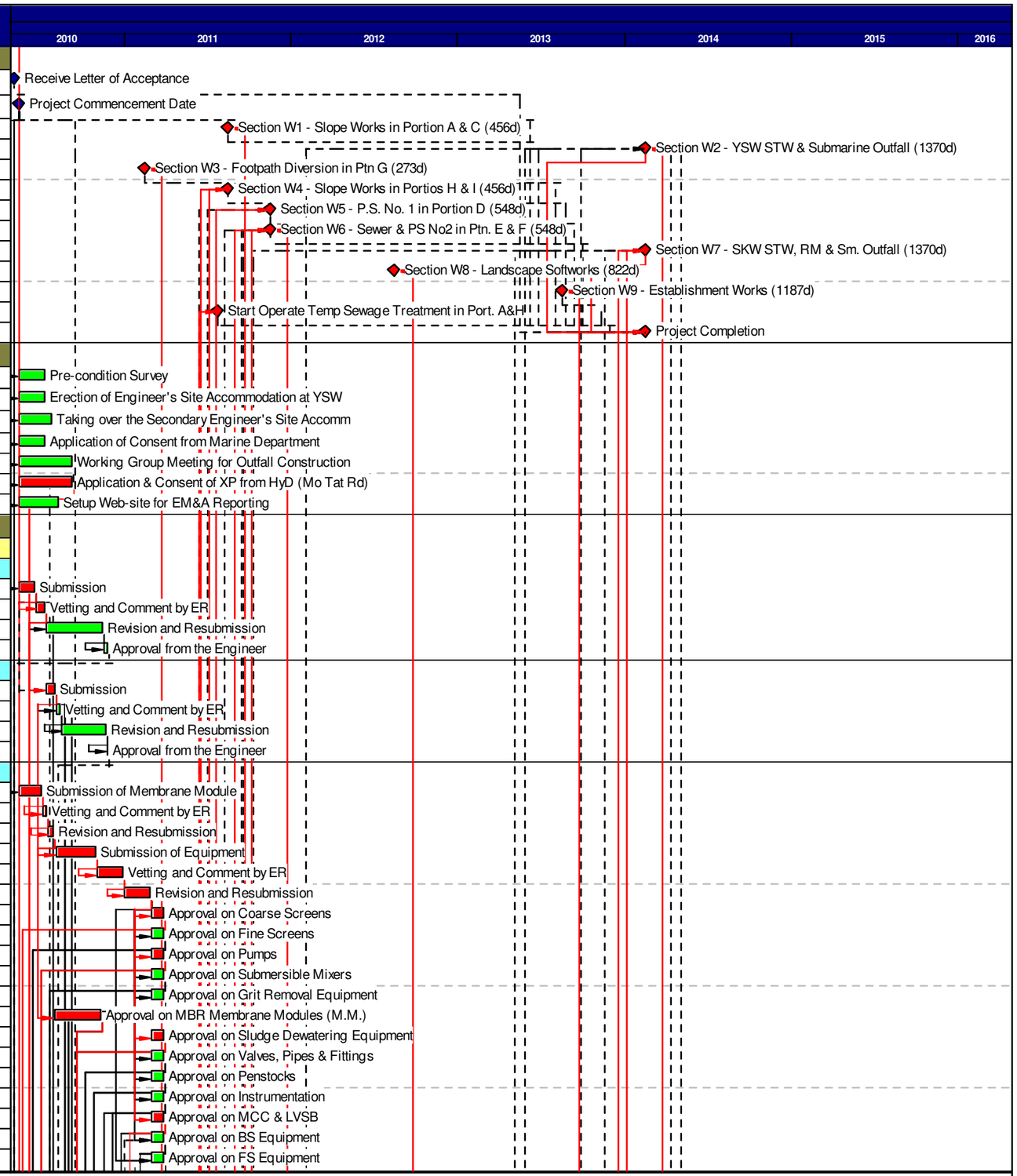
Meteorological Data Extracted from HKO during the Baseline Monitoring Period

Date		Weather
19 August 10	Thursday	A few squally thunderstorms at first.
25 August 10	Wednesday	A few squally showers later.
10 September 10	Friday	Mainly cloudy with a few showers and squally thunderstorms.
29 September 10	Wednesday	Moderate to fresh east to northeasterly winds.
12 October 10	Tuesday	Mainly fine. Moderate east to northeasterly winds.
19 October 10	Tuesday	Fresh north to northeasterly winds
16 November 10	Tuesday	Mainly fine.
25 November 10	Thursday	Fine and dry apart from some haze.
16 December 10	Thursday	Moderate to fresh northerly winds.
30 December 10	Thursday	Moderate to fresh northerly winds
20 January 11	Thursday	Fine and dry apart from some haze.
25 January 11	Tuesday	Sunny periods

Appendix J

Master Construction Program

Activity ID	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
Project Key Date								
KD0010	0		05/05/10 A		05/05/10 A			KD0125
KD0020	0		17/05/10 A		17/05/10 A			E&M0010, E&M0070, E&M1001,
KD0030	0		15/08/11 *		15/08/11	0 *	YSW0150	KD0125
KD0040	0		14/02/14 *		14/02/14	0 *	E&M0720, YSW0400, YSW0930,	KD0125
KD0050	0		13/02/11 *		13/02/11	0 *	SKW0551	KD0125
KD0060	0		15/08/11 *		15/08/11	0 *	SKW0594, SKW0595	KD0125
KD0070	0		15/11/11 *		15/11/11	0 *	E&M1130, E&M11800, SKW0861	KD0125
KD0080	0		15/11/11 *		15/11/11	0 *	E&M2120, E&M2130, E&M2180,	KD0125
KD0090	0		14/02/14 *		14/02/14	0 *	E&M3370, SKW1221, SKW1291,	KD0125
KD0100	0		15/08/12 *		15/08/12	0 *	SKW1611	
KD0110	0		15/08/13 *		15/08/13	0 *	SKW1631	KD0125
KD0115	0		23/07/11 *		23/07/11	0 *	E&M0510	KD0125
KD0125	0		14/02/14 *		14/02/14	0 *	KD0010, KD0020, KD0030,	
Preliminary (Civil)								
PRE0020	60	17/05/10	15/07/10	19/05/10	17/07/10 *	2d	KD0020	
PRE0040	60	17/05/10 *	15/07/10	19/05/10	17/07/10 *	2d	KD0020	
PRE0050	75	17/05/10	30/07/10	18/05/10	31/07/10 *	1d	KD0020	
PRE0060	60	17/05/10	15/07/10	18/05/10	16/07/10 *	1d	KD0020	
PRE0090	120	17/05/10	13/09/10	01/11/10	28/02/11	168d	KD0020	SKW1151
PRE0100	120	17/05/10	13/09/10	17/05/10	13/09/10	0	KD0020	SKW1491, SKW1501
PRE0130	90	17/05/10	14/08/10	18/05/10	15/08/10 *	1d	KD0020	
Preliminary (E&M)								
Technical Submission								
Process Design of SKWSTW & YSWSTW								
E&M0010	38	17/05/10	23/06/10	17/05/10	23/06/10	0	KD0020	E&M0020, E&M0040, E&M0235
E&M0020	21	24/06/10	14/07/10	24/06/10	14/07/10	0	E&M0010	E&M0030, E&M0040
E&M0030	125	15/07/10	16/11/10	12/02/11	16/06/11	212d	E&M0020	E&M0080
E&M0080	14	17/11/10	30/11/10	17/06/11	30/06/11	212d	E&M0030	E&M0295
Hydraulic Design								
E&M0040	21	15/07/10	04/08/10	15/07/10	04/08/10	0	E&M0010, E&M0020	E&M0050, E&M0101, E&M0240,
E&M0050	14	05/08/10	18/08/10	05/03/11	18/03/11	212d	E&M0040	E&M0060
E&M0060	97	19/08/10	23/11/10	19/03/11	23/06/11	212d	E&M0050	E&M0430
E&M0430	7	24/11/10	30/11/10	24/06/11	30/06/11	212d	E&M0060	E&M0295
Equipment Submission & Approval								
E&M0070	50	17/05/10	05/07/10	17/05/10	05/07/10	0	KD0020	E&M0090
E&M0090	14	06/07/10	19/07/10	06/07/10	19/07/10	0	E&M0070	E&M0100
E&M0100	14	20/07/10	02/08/10	20/07/10	02/08/10	0	E&M0090	E&M0160
E&M0101	90	05/08/10	02/11/10	05/08/10	02/11/10	0	E&M0040	E&M0102
E&M0102	60	03/11/10	01/01/11	03/11/10	01/01/11	0	E&M0101	E&M0103
E&M0103	60	02/01/11	02/03/11	02/01/11	02/03/11	0	E&M0102	E&M0110, E&M0120, E&M0130,
E&M0110	30	03/03/11	01/04/11	03/03/11	01/04/11	0	E&M0103	E&M0390
E&M0120	30	03/03/11	01/04/11	29/04/11	28/05/11	57d	E&M0103	E&M0400, E&M3060
E&M0130	30	03/03/11	01/04/11	03/03/11	01/04/11	0	E&M0103	E&M0410, E&M3070
E&M0140	30	03/03/11	01/04/11	01/06/11	30/06/11	90d	E&M0103	E&M0420, E&M3080
E&M0150	30	03/03/11	01/04/11	29/04/11	28/05/11	57d	E&M0103	E&M0380, E&M3030
E&M0160	105	03/08/10	15/11/10	03/08/10	15/11/10	0	E&M0100	E&M0360, E&M0370, E&M3010
E&M0170	30	03/03/11	01/04/11	03/03/11	01/04/11	0	E&M0103	E&M0440, E&M3090
E&M0180	30	03/03/11	01/04/11	28/06/11	27/07/11	117d	E&M0103	E&M0450, E&M3100
E&M0190	30	03/03/11	01/04/11	11/06/11	10/07/11	100d	E&M0103	E&M0460, E&M3110
E&M0200	30	03/03/11	01/04/11	09/10/11	07/11/11	220d	E&M0103	E&M0470, E&M3130
E&M0210	30	03/03/11	01/04/11	03/03/11	01/04/11	0	E&M0103	E&M0480, E&M3140
E&M0220	30	03/03/11	01/04/11	31/07/11	29/08/11	150d	E&M0103, E&M0280	E&M0490, E&M3150
E&M0230	30	03/03/11	01/04/11	01/06/11	30/06/11	90d	E&M0103, E&M0290	E&M0295, E&M0320, E&M0500,



Start date	05/05/10
Finish date	14/02/14
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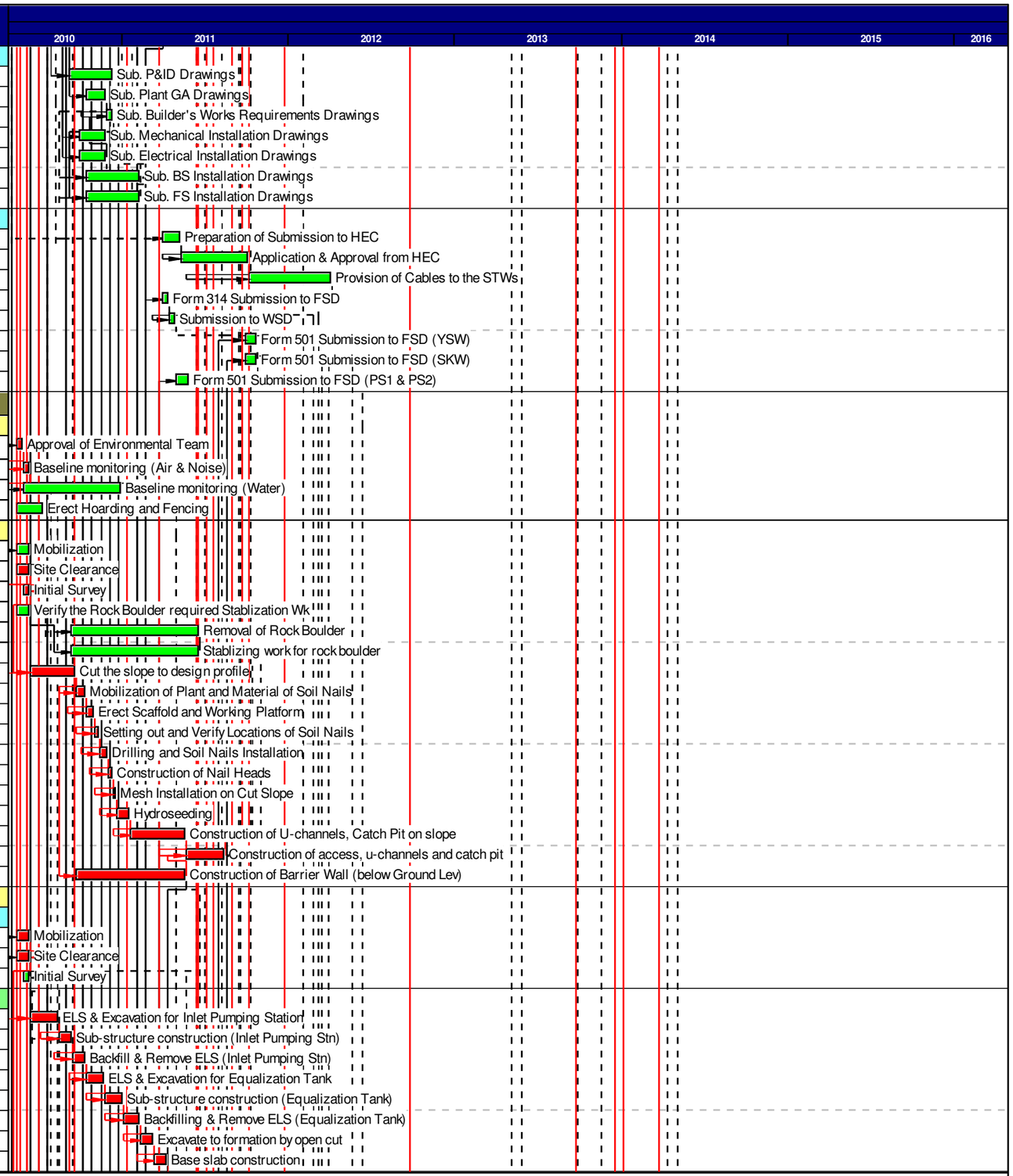
Early bar
Progress bar
Critical bar
Summary bar
Progress point
Critical point
Summary point
Start milestone point
Finish milestone point

Leader Civil Engineering Corp. Ltd.
Contract No. DC/2009/13
Construction of Sewage Treatment Works at YSW & SKW
Works Programme (Rev. 2)

Date	Revision	Checked	Approved
17/05/10	Revision 0	StL	VC
31/07/10	Revision 1	StL	VC
30/12/10	Revision 2	StL	VC

Activity ID	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
Drawings Submission & Approval								
E&M0235	100	07/09/10	15/12/10	07/11/13	14/02/14	1157d	E&M0010	
E&M0240	45	17/10/10	30/11/10	02/02/11	18/03/11	108d	E&M0040	E&M0250, E&M0280, E&M0290
E&M0250	15	01/12/10	15/12/10	19/03/11	02/04/11	108d	E&M0240, E&M0270	E&M0280, E&M0290
E&M0260	60	02/10/10	30/11/10	17/12/13	14/02/14	1172d	E&M0040	
E&M0270	60	02/10/10	30/11/10	18/01/11	18/03/11	108d	E&M0040	E&M0250, E&M0280
E&M0280	120	16/10/10	12/02/11	02/04/11	30/07/11	168d	E&M0240, E&M0250, E&M0270	E&M0220
E&M0290	120	16/10/10	12/02/11	01/02/11	31/05/11	108d	E&M0240, E&M0250	E&M0230
Statutory Submission								
E&M0295	39	02/04/11	10/05/11	01/07/11	08/08/11	90d	E&M0080, E&M0230, E&M0430	E&M0300
E&M0300	150	11/05/11	07/10/11	09/08/11	05/01/12	90d	E&M0295	E&M0305
E&M0305	180	08/10/11	04/04/12	06/01/12	03/07/12	90d	E&M0300	E&M0680
E&M0320	14	02/04/11	15/04/11	15/04/12	28/04/12	379d	E&M0230	E&M0325, E&M0670
E&M0325	14	16/04/11	29/04/11	29/04/12	12/05/12	379d	E&M0320	E&M0670, E&M0680
E&M0330	28	29/09/11	26/10/11	12/07/12	08/08/12	287d	E&M0500	E&M0700
E&M0340	28	29/09/11	26/10/11	12/07/12	08/08/12	287d	E&M3160	E&M3360
E&M0350	28	02/05/11	29/05/11	18/01/14	14/02/14	992d	E&M2016	
Yung Shue Wan								
Preliminary								
YSW0020	16	17/05/10	01/06/10	17/05/10	01/06/10	0	KD0020	YSW0030, YSW0040
YSW0030	14	02/06/10	15/06/10	02/06/10	15/06/10	0	YSW0020	YSW0120, YSW0152, YSW0500,
YSW0040	213	02/06/10	31/12/10	16/07/10	13/02/11	44d	YSW0020	YSW0350
YSW0050	60	17/05/10	15/07/10	19/05/10	17/07/10 *	2d		
Section W 1 - Slope W orks in Portion A & C								
YSW0075	30	17/05/10	15/06/10	10/10/10	08/11/10	146d	KD0020	YSW0100
YSW0080	30	17/05/10	15/06/10	17/05/10	15/06/10	0		YSW0085, YSW0120
YSW0085	14	02/06/10	15/06/10	02/06/10	15/06/10	0	YSW0080	YSW0120
YSW0090	30	17/05/10	15/06/10	12/07/10	10/08/10	56d		YSW0100, YSW0110
YSW0100	280	14/09/10	20/06/11	09/11/10	15/08/11	56d	YSW0075, YSW0090	YSW0150
YSW0110	280	14/09/10	20/06/11	09/11/10	15/08/11	56d	YSW0090	YSW0150
YSW0120	100	16/06/10	23/09/10	16/06/10	23/09/10	0	YSW0030, YSW0080, YSW0085	YSW0131, YSW0165
YSW0131	20	24/09/10	13/10/10	24/09/10	13/10/10	0	YSW0120	YSW0132
YSW0132	20	14/10/10	02/11/10	14/10/10	02/11/10	0	YSW0131	YSW0133
YSW0133	10	03/11/10	12/11/10	03/11/10	12/11/10	0	YSW0132	YSW0134
YSW0134	20	13/11/10	02/12/10	13/11/10	02/12/10	0	YSW0133	YSW0135
YSW0135	10	03/12/10	12/12/10	03/12/10	12/12/10	0	YSW0134	YSW0136
YSW0136	10	13/12/10	22/12/10	13/12/10	22/12/10	0	YSW0135	YSW0137
YSW0137	30	23/12/10	21/01/11	23/12/10	21/01/11	0	YSW0136	YSW0140
YSW0140	120	22/01/11	21/05/11	22/01/11	21/05/11	0	YSW0137	YSW0150
YSW0150	86	22/05/11	15/08/11	22/05/11	15/08/11	0	YSW0100, YSW0110, YSW0140,	KD0030
YSW0165	240	24/09/10	21/05/11	24/09/10	21/05/11	0	YSW0120	YSW0150, YSW0154, YSW0155
Section W 2 - YSW STW & Submarine Outfall								
Civil & Structural Work								
YSW0412	30	17/05/10	15/06/10	17/05/10	15/06/10	0	KD0020	YSW0422
YSW0422	30	17/05/10	15/06/10	17/05/10	15/06/10	0	KD0020, YSW0412	YSW0432, YSW0500, YSW0610,
YSW0432	14	02/06/10	15/06/10	03/08/10	16/08/10	62d	YSW0422	YSW0510
YSW STP - GL H - T								
YSW0500	62	16/06/10	16/08/10	16/06/10	16/08/10	0	YSW0030, YSW0422	YSW0510
YSW0510	30	17/08/10	15/09/10	17/08/10	15/09/10	0	YSW0432, YSW0500	YSW0520
YSW0520	30	16/09/10	15/10/10	16/09/10	15/10/10	0	YSW0510	YSW0530, YSW0610
YSW0530	40	16/10/10	24/11/10	16/10/10	24/11/10	0	YSW0520	YSW0540
YSW0540	40	25/11/10	03/01/11	25/11/10	03/01/11	0	YSW0530	YSW0550
YSW0550	40	04/01/11	12/02/11	04/01/11	12/02/11	0	YSW0540	YSW0570
YSW0570	30	13/02/11	14/03/11	13/02/11	14/03/11	0	YSW0550	YSW0580
YSW0580	30	15/03/11	13/04/11	15/03/11	13/04/11	0	YSW0570	YSW0590



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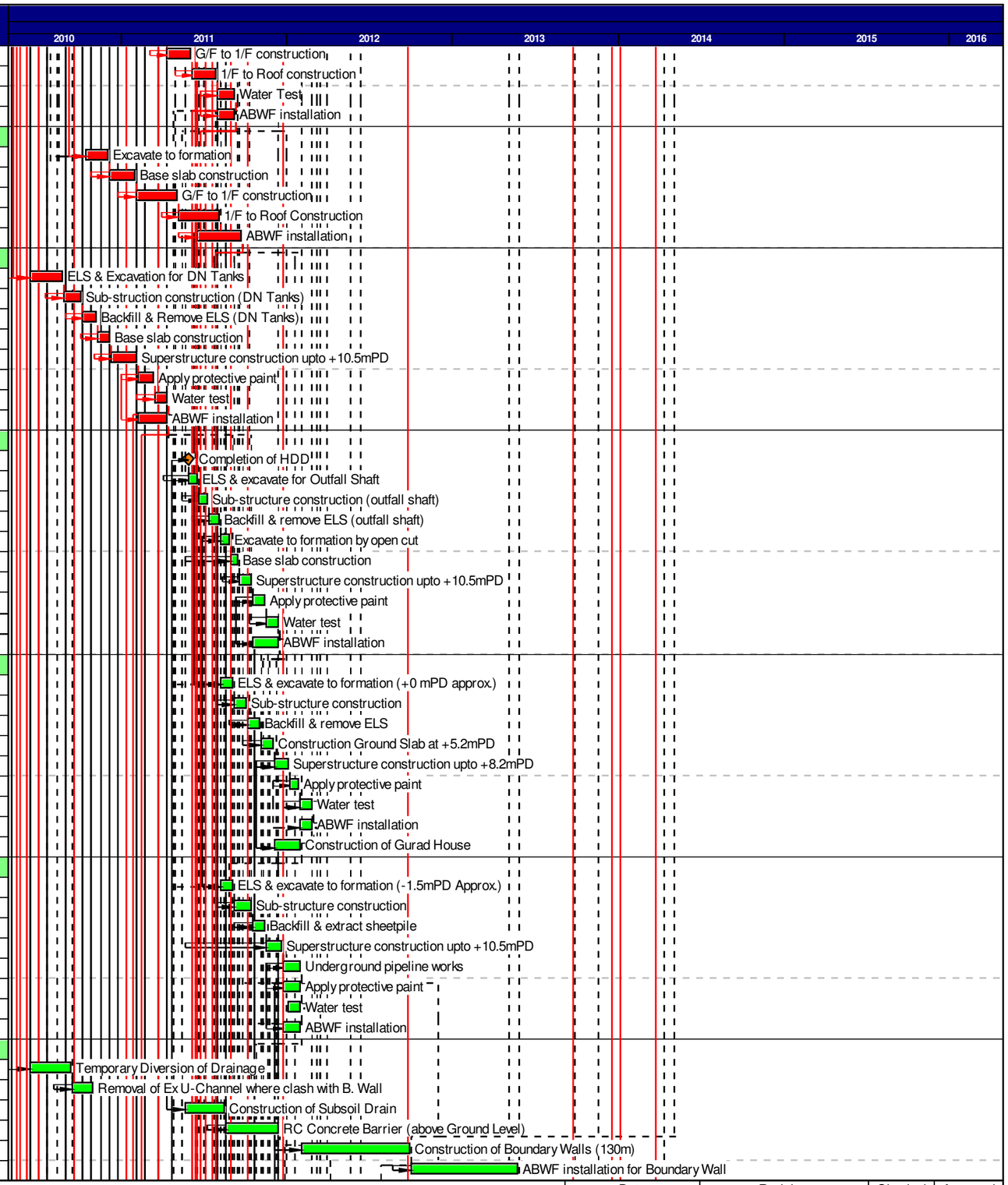
30/12/10	Revision 2	StL	VC

Activity ID	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
YSW0590	55	14/04/11	07/06/11	14/04/11	07/06/11	0	YSW0580	YSW0600
YSW0600	55	08/06/11	01/08/11	08/06/11	01/08/11	0	YSW0590	YSW0720, YSW0800
YSW0720	40	02/08/11	10/09/11	02/08/11	10/09/11	0	YSW0600	E&M0530, E&M0540, E&M0550,
YSW0800	40	02/08/11	10/09/11	02/08/11	10/09/11	0	YSW0600	E&M0530, E&M0540, E&M0550,
YSW STP - GL T - X								
YSW0610	50	16/10/10	04/12/10	16/10/10	04/12/10	0	YSW0030, YSW0422, YSW0520	YSW0620
YSW0620	60	05/12/10	02/02/11	05/12/10	02/02/11	0	YSW0610	YSW0630
YSW0630	95	03/02/11	08/05/11	03/02/11	08/05/11	0	YSW0620	YSW0640
YSW0640	91	09/05/11	07/08/11	09/05/11	07/08/11	0	YSW0630	YSW0810, YSW0840
YSW0810	100	18/06/11	25/09/11	18/06/11	25/09/11	0	YSW0640	E&M0610, E&M0620, E&M0630,
YSW STP - GL F - H & DN Tanks								
YSW0650	72	16/06/10	26/08/10	16/06/10	26/08/10	0	YSW0030, YSW0422	YSW0660
YSW0660	44	27/08/10	09/10/10	27/08/10	09/10/10	0	YSW0650	YSW0670
YSW0670	32	10/10/10	10/11/10	10/10/10	10/11/10	0	YSW0660	YSW0680
YSW0680	30	11/11/10	10/12/10	11/11/10	10/12/10	0	YSW0670	YSW0690
YSW0690	60	11/12/10	08/02/11	11/12/10	08/02/11	0	YSW0680	YSW0700, YSW0820
YSW0700	35	09/02/11	15/03/11	09/02/11	15/03/11	0	YSW0690	YSW0710
YSW0710	30	16/03/11	14/04/11	16/03/11	14/04/11	0	YSW0700	E&M0510, E&M0630, E&M0640
YSW0820	65	09/02/11	14/04/11	09/02/11	14/04/11	0	YSW0690	E&M0510, E&M0630, E&M0640
YSW STP - GL A - F								
YSW0730	0	01/06/11		01/07/11		30d	YSW0360	YSW0740
YSW0740	22	01/06/11	22/06/11	01/07/11	22/07/11	30d	YSW0730	YSW0750
YSW0750	22	23/06/11	14/07/11	23/07/11	13/08/11	30d	YSW0740	YSW0760
YSW0760	24	15/07/11	07/08/11	14/08/11	06/09/11	30d	YSW0750	YSW0770, YSW1470
YSW0770	22	08/08/11	29/08/11	07/09/11	28/09/11	30d	YSW0760	YSW0780
YSW0780	21	30/08/11	19/09/11	29/09/11	19/10/11	30d	YSW0770	YSW0790
YSW0790	30	20/09/11	19/10/11	20/10/11	18/11/11	30d	YSW0780	YSW0795, YSW0870
YSW0795	30	20/10/11	18/11/11	19/11/11	18/12/11	30d	YSW0790	YSW0830
YSW0830	30	19/11/11	18/12/11	19/12/11	17/01/12	30d	YSW0795	E&M0520, E&M0605, E&M0630,
YSW0870	60	20/10/11	18/12/11	28/12/11	25/02/12	69d	YSW0790	E&M0520, E&M0605, E&M0630,
Fire Hose Reel / Sprinkler Pump Rm								
YSW0840	30	08/08/11	06/09/11	01/09/11	30/09/11	24d	YSW0030, YSW0422, YSW0640	YSW0860
YSW0860	30	07/09/11	06/10/11	01/10/11	30/10/11	24d	YSW0840	YSW0880
YSW0880	30	07/10/11	05/11/11	31/10/11	29/11/11	24d	YSW0860	YSW0890
YSW0890	30	06/11/11	05/12/11	30/11/11	29/12/11	24d	YSW0880	YSW0900, YSW0930
YSW0900	35	06/12/11	09/01/12	30/12/11	02/02/12	24d	YSW0890	YSW0910, YSW0925
YSW0910	21	10/01/12	30/01/12	03/02/12	23/02/12	24d	YSW0900	YSW0915, YSW0925
YSW0915	30	31/01/12	29/02/12	24/02/12	24/03/12	24d	YSW0910	YSW0925
YSW0925	30	31/01/12	29/02/12	24/02/12	24/03/12	24d	YSW0900, YSW0910, YSW0915	E&M0640
YSW0930	60	06/12/11	03/02/12	06/05/12	04/07/12	152d	YSW0890	E&M0690, KD0040
Emergency Storage Tank								
YSW1470	30	08/08/11	06/09/11	07/11/11	06/12/11	91d	YSW0030, YSW0760	YSW1480
YSW1480	40	07/09/11	16/10/11	07/12/11	15/01/12	91d	YSW1470	YSW1490
YSW1490	30	17/10/11	15/11/11	16/01/12	14/02/12	91d	YSW1480	YSW1500
YSW1500	40	16/11/11	25/12/11	15/02/12	25/03/12	91d	YSW1490	YSW1530, YSW1536, YSW1540
YSW1530	40	26/12/11	03/02/12	26/03/12	04/05/12	91d	YSW1500	E&M0690, YSW1620, YSW1640,
YSW1536	40	26/12/11	03/02/12	26/05/12	04/07/12	152d	YSW1500	YSW1538
YSW1538	30	05/01/12	03/02/12	05/06/12	04/07/12	152d	YSW1536	E&M0690
YSW1540	40	26/12/11	03/02/12	26/05/12	04/07/12	152d	YSW1500	E&M0690
Road, Drain, Cable Draw Pits & Ducting								
YSW0152	92	16/06/10	15/09/10	26/09/13	26/12/13	1198d	YSW0030	YSW0153
YSW0153	50	16/09/10	04/11/10	27/12/13	14/02/14	1198d	YSW0152	
YSW0154	90	22/05/11	19/08/11	08/10/11	05/01/12	139d	YSW0165	YSW0155
YSW0155	120	20/08/11	17/12/11	06/01/12	04/05/12	139d	YSW0154, YSW0165	YSW1640, YSW1660
YSW1620	240	04/02/12	30/09/12	24/08/12	20/04/13	202d	YSW1530	KD0040, YSW1625, YSW1690
YSW1625	240	01/10/12	28/05/13	20/06/13	14/02/14	262d	YSW1620	KD0040



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Early bar
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Critical bar
Summary bar
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Leader Civil Engineering Corp. Ltd.
Contract No. DC/2009/13
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31/07/10	Revision 1	StL	VC
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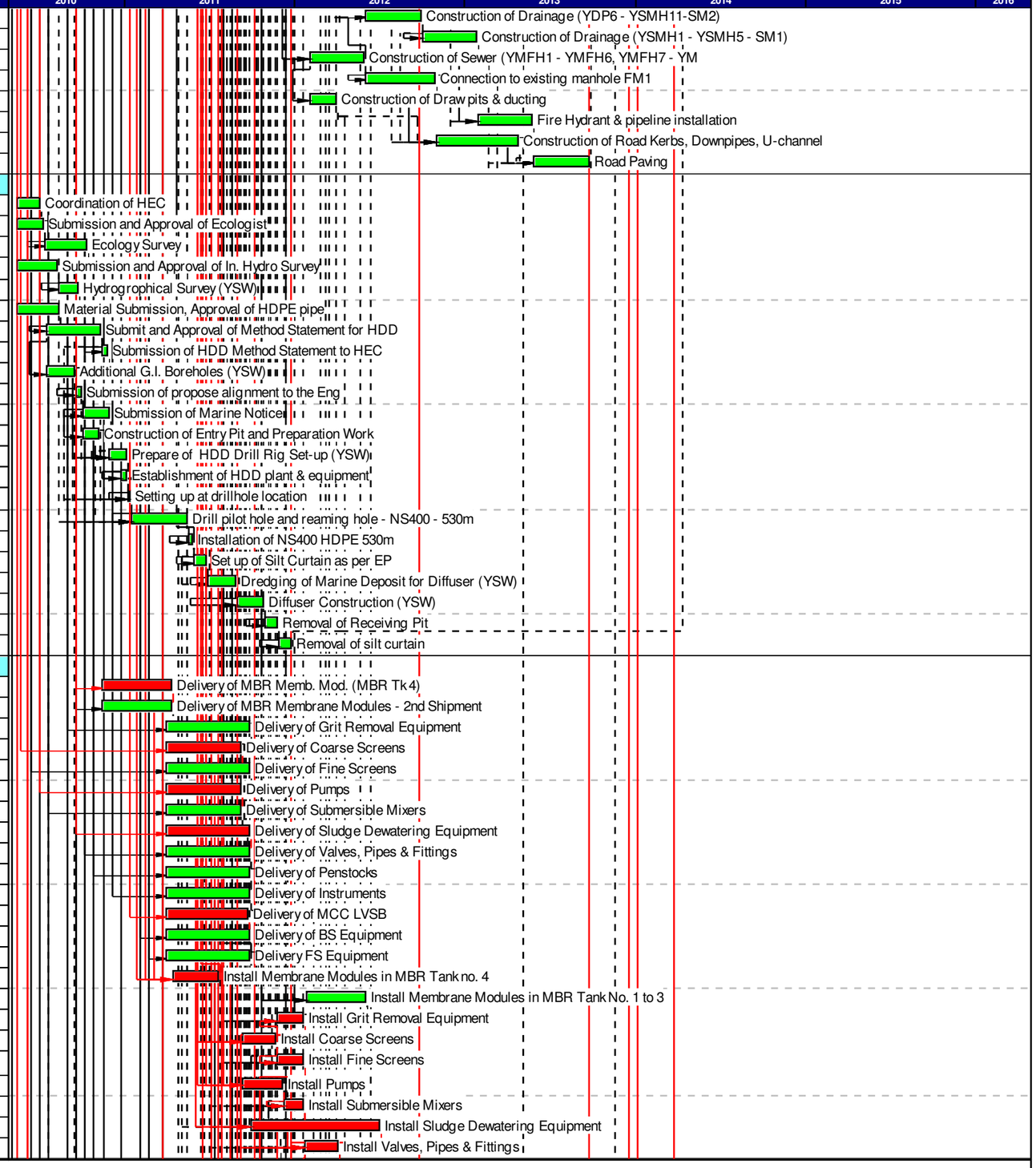
Activity ID	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
YSW1640	120	03/06/12	30/09/12	23/10/12	19/02/13	142d	YSW0155, YSW1530, YSW1660	YSW1650, YSW1690
YSW1650	120	01/10/12	28/01/13	20/02/13	19/06/13	142d	YSW1640	YSW1680, YSW1700
YSW1660	120	04/02/12	02/06/12	05/05/12	01/09/12	91d	YSW0155, YSW1530	YSW1640, YSW1670, YSW1675,
YSW1670	150	03/06/12	30/10/12	22/11/12	20/04/13	172d	YSW1660	YSW1690
YSW1675	60	04/02/12	03/04/12	05/05/12	03/07/12	91d	YSW1660	E&M0680, YSW1690
YSW1680	120	29/01/13	28/05/13	20/06/13	17/10/13	142d	YSW1530, YSW1650	YSW1700
YSW1690	180	31/10/12	28/04/13	21/04/13	17/10/13	172d	YSW1620, YSW1640, YSW1670,	YSW1700
YSW1700	120	29/05/13	25/09/13	18/10/13	14/02/14	142d	YSW1650, YSW1660, YSW1680,	KD0040
Submarine Outfall								
YSW0180	53	17/05/10	08/07/10	23/12/10	13/02/11	220d		YSW0350
YSW0200	60	17/05/10	15/07/10	17/09/10	15/11/10	123d		YSW0210
YSW0210	90	16/07/10	13/10/10	16/11/10	13/02/11	123d	YSW0200	YSW0350
YSW0220	90	17/05/10	14/08/10	02/10/10	30/12/10	138d		YSW0230
YSW0230	45	15/08/10	28/09/10	31/12/10	13/02/11	138d	YSW0220	YSW0350
YSW0240	93	17/05/10	17/08/10	16/06/10	16/09/10	30d		YSW0250
YSW0250	120	19/07/10	15/11/10	18/08/10	15/12/10	30d	YSW0240	YSW0260, YSW0270, YSW0340
YSW0260	14	16/11/10	29/11/10	16/12/10	29/12/10	30d	YSW0250	YSW0320, YSW0340
YSW0270	62	19/07/10	18/09/10	06/09/10	06/11/10	49d	YSW0250	YSW0280, YSW0320
YSW0280	14	19/09/10	02/10/10	07/11/10	20/11/10	49d	YSW0270	YSW0290, YSW0310, YSW0340
YSW0290	60	03/10/10	01/12/10	16/12/10	13/02/11	74d	YSW0280	YSW0350
YSW0310	39	03/10/10	10/11/10	21/11/10	29/12/10	49d	YSW0280	YSW0320, YSW0330
YSW0320	39	30/11/10	07/01/11	30/12/10	06/02/11	30d	YSW0260, YSW0270, YSW0310	YSW0330, YSW0350
YSW0330	14	25/12/10	07/01/11	24/01/11	06/02/11	30d	YSW0310, YSW0320	YSW0340
YSW0340	7	08/01/11	14/01/11	07/02/11	13/02/11	30d	YSW0250, YSW0260, YSW0280,	YSW0350
YSW0350	123	15/01/11	17/05/11	14/02/11	16/06/11	30d	YSW0040, YSW0180, YSW0210,	YSW0360
YSW0360	14	18/05/11	31/05/11	17/06/11	30/06/11	30d	YSW0350	SKW1181, YSW0365, YSW0370,
YSW0365	30	01/06/11	30/06/11	20/07/13	18/08/13	780d	YSW0360	YSW0370
YSW0370	60	01/07/11	29/08/11	19/08/13	17/10/13	780d	YSW0360, YSW0365	YSW0380
YSW0380	60	30/08/11	28/10/11	18/10/13	16/12/13	780d	YSW0370	YSW0390
YSW0390	30	29/10/11	27/11/11	17/12/13	15/01/14	780d	YSW0380	YSW0400
YSW0400	30	28/11/11	27/12/11	16/01/14	14/02/14	780d	YSW0390	KD0040
E&M Works - YSW STP								
E&M0360	150	16/11/10	14/04/11	16/11/10	14/04/11	0	E&M0160	E&M0510
E&M0370	150	16/11/10	14/04/11	29/09/11	25/02/12	317d	E&M0160	E&M0520
E&M0380	180	02/04/11	28/09/11	29/05/11	24/11/11	57d	E&M0150	E&M0530
E&M0390	162	02/04/11	10/09/11	02/04/11	10/09/11	0	E&M0110	E&M0540
E&M0400	180	02/04/11	28/09/11	29/05/11	24/11/11	57d	E&M0120	E&M0550
E&M0410	162	02/04/11	10/09/11	02/04/11	10/09/11	0	E&M0130	E&M0560
E&M0420	162	02/04/11	10/09/11	01/07/11	09/12/11	90d	E&M0140	E&M0570
E&M0440	180	02/04/11	28/09/11	02/04/11	28/09/11	0	E&M0170	E&M0580
E&M0450	180	02/04/11	28/09/11	28/07/11	23/01/12	117d	E&M0180	E&M0590, E&M0605
E&M0460	180	02/04/11	28/09/11	11/07/11	06/01/12	100d	E&M0190	E&M0600
E&M0470	180	02/04/11	28/09/11	08/11/11	05/05/12	220d	E&M0200	E&M0610
E&M0480	177	02/04/11	25/09/11	02/04/11	25/09/11	0	E&M0210	E&M0620
E&M0490	180	02/04/11	28/09/11	30/08/11	25/02/12	150d	E&M0220	E&M0630
E&M0500	180	02/04/11	28/09/11	27/09/11	24/03/12	178d	E&M0230	E&M0330, E&M0640
E&M0510	100	15/04/11	23/07/11	15/04/11	23/07/11	0	E&M0360, YSW0710, YSW0820	KD0115
E&M0520	130	27/01/12	04/06/12	26/02/12	04/07/12	30d	E&M0370, YSW0830, YSW0870	E&M0690
E&M0530	60	25/11/11	23/01/12	25/11/11	23/01/12	0	E&M0380, E&M0540, YSW0720,	E&M0590, E&M0660
E&M0540	75	11/09/11	24/11/11	11/09/11	24/11/11	0	E&M0390, YSW0720, YSW0800	E&M0530, E&M0550, E&M0570,
E&M0550	60	25/11/11	23/01/12	25/11/11	23/01/12	0	E&M0400, E&M0540, YSW0720,	E&M0590, E&M0660
E&M0560	90	11/09/11	09/12/11	11/09/11	09/12/11	0	E&M0410, YSW0720, YSW0800	E&M0570, E&M0590, E&M0660
E&M0570	45	10/12/11	23/01/12	10/12/11	23/01/12	0	E&M0420, E&M0540, E&M0560,	E&M0590, E&M0660, E&M0690
E&M0580	280	29/09/11	04/07/12	29/09/11	04/07/12	0	E&M0440, YSW0720, YSW0800	E&M0690
E&M0590	75	24/01/12	07/04/12	24/01/12	07/04/12	0	E&M0450, E&M0530, E&M0540,	E&M0610, E&M0630, E&M0640,



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Contract No. DC/2009/13
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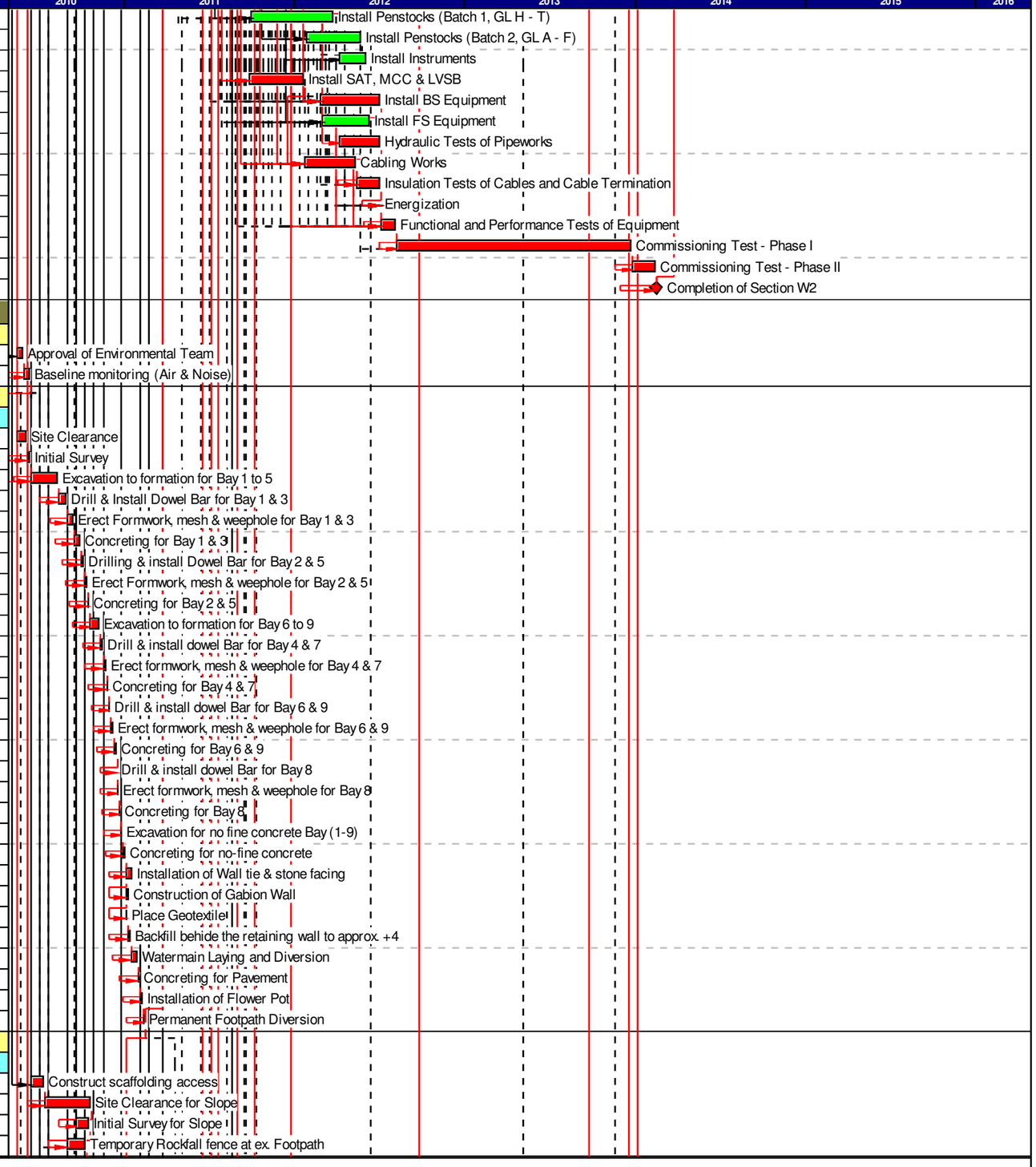
Activity ID	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
E&M0600	180	29/09/11	26/03/12	07/01/12	04/07/12	100d	E&M0460, YSW0720, YSW0800	E&M0690
E&M0605	120	27/01/12	25/05/12	07/03/12	04/07/12	40d	E&M0450, YSW0830, YSW0870	E&M0690
E&M0610	60	08/04/12	06/06/12	06/05/12	04/07/12	28d	E&M0470, E&M0590, YSW0720,	E&M0690
E&M0620	120	26/09/11	23/01/12	26/09/11	23/01/12	0	E&M0480, YSW0810	E&M0660, E&M0680
E&M0630	130	26/02/12	04/07/12	26/02/12	04/07/12	0	E&M0490, E&M0590, YSW0710,	E&M0690
E&M0640	102	01/03/12	10/06/12	25/03/12	04/07/12	24d	E&M0500, E&M0590, YSW0710,	E&M0690
E&M0650	88	08/04/12	04/07/12	08/04/12	04/07/12	0	E&M0590	E&M0690
E&M0660	110	24/01/12	12/05/12	24/01/12	12/05/12	0	E&M0530, E&M0540, E&M0550,	E&M0670
E&M0670	52	13/05/12	03/07/12	13/05/12	03/07/12	0	E&M0320, E&M0325, E&M0660	E&M0680
E&M0680	1	04/07/12	04/07/12	04/07/12	04/07/12	0	E&M0305, E&M0325, E&M0620,	E&M0690
E&M0690	35	05/07/12	08/08/12	05/07/12	08/08/12	0	E&M0520, E&M0570, E&M0580,	E&M0700
E&M0700	505	09/08/12	26/12/13	09/08/12	26/12/13	0	E&M0330, E&M0690	E&M0710
E&M0710	50	27/12/13	14/02/14	27/12/13	14/02/14	0	E&M0700	E&M0720
E&M0720	0		14/02/14 *		14/02/14	0 *	E&M0710	KD0040
Sok Kwu Wan								
Preliminary								
SKW0250	16	17/05/10	01/06/10	17/05/10	01/06/10	0	KD0020	SKW0260
SKW0260	14	02/06/10	15/06/10	02/06/10	15/06/10	0	SKW0250	SKW0242, SKW0592, SKW0681,
Section W3 - Footpath Diversion in Portion G								
Civil & Geotechnical Works								
SKW0240	21	17/05/10	06/06/10	17/05/10	06/06/10	0		SKW0241
SKW0241	9	07/06/10	15/06/10	07/06/10	15/06/10	0	SKW0240	SKW0242
SKW0242	57	16/06/10	11/08/10	16/06/10	11/08/10	0	SKW0241, SKW0260	SKW0251
SKW0251	21	12/08/10	01/09/10	12/08/10	01/09/10	0	SKW0242	SKW0301
SKW0301	14	02/09/10	15/09/10	02/09/10	15/09/10	0	SKW0251	SKW0311
SKW0311	14	16/09/10	29/09/10	16/09/10	29/09/10	0	SKW0301	SKW0321
SKW0321	7	30/09/10	06/10/10	30/09/10	06/10/10	0	SKW0311	SKW0331
SKW0331	7	07/10/10	13/10/10	07/10/10	13/10/10	0	SKW0321	SKW0341
SKW0341	7	14/10/10	20/10/10	14/10/10	20/10/10	0	SKW0331	SKW0351
SKW0351	21	21/10/10	10/11/10	21/10/10	10/11/10	0	SKW0341	SKW0361
SKW0361	6	11/11/10	16/11/10	11/11/10	16/11/10	0	SKW0351	SKW0371
SKW0371	7	17/11/10	23/11/10	17/11/10	23/11/10	0	SKW0361	SKW0381
SKW0381	7	24/11/10	30/11/10	24/11/10	30/11/10	0	SKW0371	SKW0391
SKW0391	3	01/12/10	03/12/10	01/12/10	03/12/10	0	SKW0381	SKW0401
SKW0401	7	04/12/10	10/12/10	04/12/10	10/12/10	0	SKW0391	SKW0411
SKW0411	7	11/12/10	17/12/10	11/12/10	17/12/10	0	SKW0401	SKW0421
SKW0421	1	18/12/10	18/12/10	18/12/10	18/12/10	0	SKW0411	SKW0431
SKW0431	4	19/12/10	22/12/10	19/12/10	22/12/10	0	SKW0421	SKW0441
SKW0441	4	23/12/10	26/12/10	23/12/10	26/12/10	0	SKW0431	SKW0461
SKW0461	3	27/12/10	29/12/10	27/12/10	29/12/10	0	SKW0441	SKW0471
SKW0471	7	30/12/10	05/01/11	30/12/10	05/01/11	0	SKW0461	SKW0481
SKW0481	14	06/01/11	19/01/11	06/01/11	19/01/11	0	SKW0471	SKW0491
SKW0491	7	06/01/11	12/01/11	06/01/11	12/01/11	0	SKW0481	SKW0501
SKW0501	3	06/01/11	08/01/11	06/01/11	08/01/11	0	SKW0491	SKW0511
SKW0511	7	09/01/11	15/01/11	09/01/11	15/01/11	0	SKW0501	SKW0521
SKW0521	14	16/01/11	29/01/11	16/01/11	29/01/11	0	SKW0511	SKW0531
SKW0531	7	30/01/11	05/02/11	30/01/11	05/02/11	0	SKW0521	SKW0541
SKW0541	7	06/02/11	12/02/11	06/02/11	12/02/11	0	SKW0531	SKW0551
SKW0551	1	13/02/11	13/02/11	13/02/11	13/02/11	0	SKW0541	KD0050, SKW1261, SKW1311
Section W4 - Slope Works in Portions H & I								
Geotechnical Works								
SKW0588	30	15/06/10	14/07/10	15/06/10	14/07/10	0	KD0020	SKW0590
SKW0590	100	15/07/10	22/10/10	15/07/10	22/10/10	0	SKW0588	SKW0591
SKW0591	28	21/09/10	18/10/10	21/09/10	18/10/10	0	SKW0590	SKW0592
SKW0592	43	31/08/10	12/10/10	31/08/10	12/10/10	0	SKW0260, SKW0591	SKW0593I



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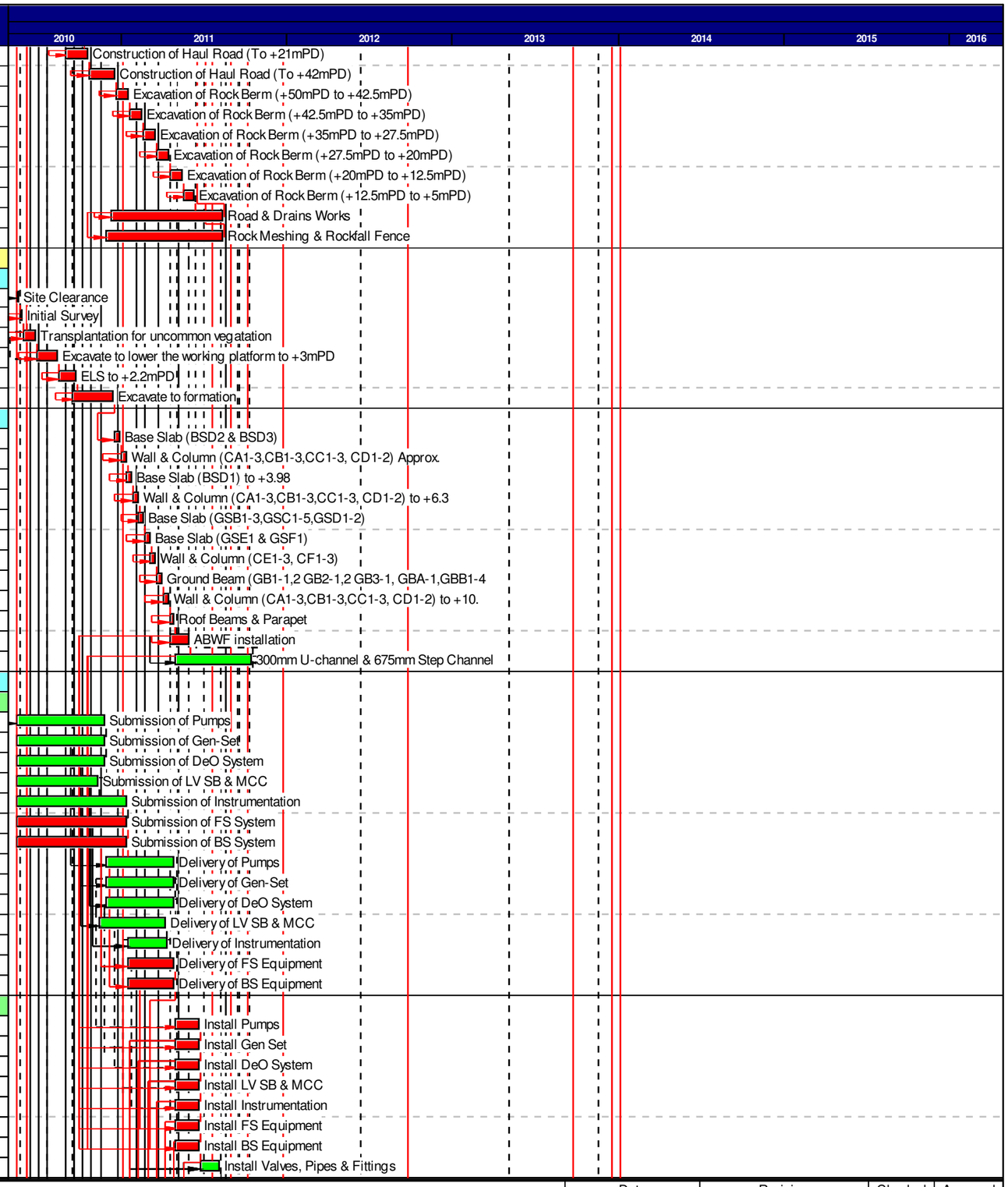
SKW05931	50	03/09/10	22/10/10	03/09/10	22/10/10	0	SKW0592	SKW05932
SKW05932	60	23/10/10	21/12/10	23/10/10	21/12/10	0	SKW05931	SKW05933
SKW05933	30	22/12/10	20/01/11	22/12/10	20/01/11	0	SKW05932	SKW05934
SKW05934	30	21/01/11	19/02/11	21/01/11	19/02/11	0	SKW05933	SKW05935
SKW05935	30	20/02/11	21/03/11	20/02/11	21/03/11	0	SKW05934	SKW05936
SKW05936	30	22/03/11	20/04/11	22/03/11	20/04/11	0	SKW05935	SKW05937
SKW05937	30	21/04/11	20/05/11	21/04/11	20/05/11	0	SKW05936	SKW05938
SKW05938	26	21/05/11	15/06/11	21/05/11	15/06/11	0	SKW05937	SKW0594, SKW0595, SKW1311,
SKW0594	248	11/12/10	15/08/11	11/12/10	15/08/11	0	SKW05938	KD0060
SKW0595	260	29/11/10	15/08/11	29/11/10	15/08/11	0	SKW05938	KD0060
Section W 5 - P.S. No. 1 in Portion D								
Civil & Geotechnical Works								
SKW0651	7	17/05/10	23/05/10	17/05/10	23/05/10	0	KD0020	SKW0652
SKW0652	7	24/05/10	30/05/10	24/05/10	30/05/10	0	SKW0651	SKW0661, SKW0681
SKW0661	30	31/05/10	29/06/10	31/05/10	29/06/10	0	SKW0652	SKW0681
SKW0681	49	30/06/10	17/08/10	30/06/10	17/08/10	0	SKW0260, SKW0652, SKW0661	SKW0691
SKW0691	40	18/08/10	26/09/10	18/08/10	26/09/10	0	SKW0681	SKW0721
SKW0721	92	17/09/10	17/12/10	17/09/10	17/12/10	0	SKW0691	SKW0741
Structural Works								
SKW0741	15	18/12/10	01/01/11	18/12/10	01/01/11	0	SKW0721	SKW0751
SKW0751	14	01/01/11	14/01/11	01/01/11	14/01/11	0	SKW0741	SKW0761
SKW0761	14	14/01/11	27/01/11	14/01/11	27/01/11	0	SKW0751	SKW0771
SKW0771	14	27/01/11	09/02/11	27/01/11	09/02/11	0	SKW0761	SKW0781
SKW0781	14	09/02/11	22/02/11	09/02/11	22/02/11	0	SKW0771	SKW0791
SKW0791	14	22/02/11	07/03/11	22/02/11	07/03/11	0	SKW0781	SKW0801
SKW0801	14	07/03/11	20/03/11	07/03/11	20/03/11	0	SKW0791	SKW0811
SKW0811	14	21/03/11	03/04/11	21/03/11	03/04/11	0	SKW0801	SKW0821
SKW0821	14	04/04/11	17/04/11	04/04/11	17/04/11	0	SKW0811	SKW0831
SKW0831	14	18/04/11	01/05/11	18/04/11	01/05/11	0	SKW0821	E&M1101, E&M1102, E&M1103,
SKW0841	45	18/04/11	01/06/11	18/04/11	01/06/11	0	SKW0831	E&M1101, E&M1102, E&M1103,
SKW0861	168	02/05/11	16/10/11	01/06/11	15/11/11	30d	SKW0831, SKW0841	KD0070
E&M Works (PS1)								
Submission & Delivery								
E&M1001	198	17/05/10	30/11/10	19/05/10	02/12/10	2d	KD0020	E&M1011
E&M1002	198	17/05/10	30/11/10	19/05/10	02/12/10	2d		E&M1012
E&M1003	198	17/05/10	30/11/10	19/05/10	02/12/10	2d		E&M1013
E&M1004	180	17/05/10	12/11/10	06/06/10	02/12/10	20d		E&M1014
E&M1005	243	17/05/10	14/01/11	03/06/10	31/01/11	17d		E&M1015
E&M1006	243	17/05/10	14/01/11	17/05/10	14/01/11	0		E&M1016
E&M1007	243	17/05/10	14/01/11	17/05/10	14/01/11	0		E&M1017
E&M1011	150	01/12/10	29/04/11	03/12/10	01/05/11	2d	E&M1001	E&M1101
E&M1012	150	01/12/10	29/04/11	03/12/10	01/05/11	2d	E&M1002	E&M1102
E&M1013	150	01/12/10	29/04/11	03/12/10	01/05/11	2d	E&M1003	E&M1103
E&M1014	150	13/11/10	11/04/11	03/12/10	01/05/11	20d	E&M1004	E&M1104
E&M1015	90	15/01/11	14/04/11	01/02/11	01/05/11	17d	E&M1005	E&M1105
E&M1016	107	15/01/11	01/05/11	15/01/11	01/05/11	0	E&M1006	E&M1106
E&M1017	107	15/01/11	01/05/11	15/01/11	01/05/11	0	E&M1007	E&M1107
Installation, T&C								
E&M1101	55	02/05/11	25/06/11	02/05/11	25/06/11	0	E&M1011, SKW0831, SKW0841	E&M1110, E&M1140
E&M1102	55	02/05/11	25/06/11	02/05/11	25/06/11	0	E&M1012, SKW0831, SKW0841	E&M1110, E&M1140
E&M1103	55	02/05/11	25/06/11	02/05/11	25/06/11	0	E&M1013, SKW0831, SKW0841	E&M1110, E&M1140
E&M1104	55	02/05/11	25/06/11	02/05/11	25/06/11	0	E&M1014, SKW0831, SKW0841	E&M1140
E&M1105	55	02/05/11	25/06/11	02/05/11	25/06/11	0	E&M1015, SKW0831, SKW0841	E&M1140
E&M1106	55	02/05/11	25/06/11	02/05/11	25/06/11	0	E&M1016, SKW0831, SKW0841	E&M1130, E&M1140
E&M1107	55	02/05/11	25/06/11	02/05/11	25/06/11	0	E&M1017, SKW0831, SKW0841	E&M1110, E&M1140
E&M1110	46	26/06/11	10/08/11	24/12/13	07/02/14	912d	E&M1101, E&M1102, E&M1103,	E&M1120



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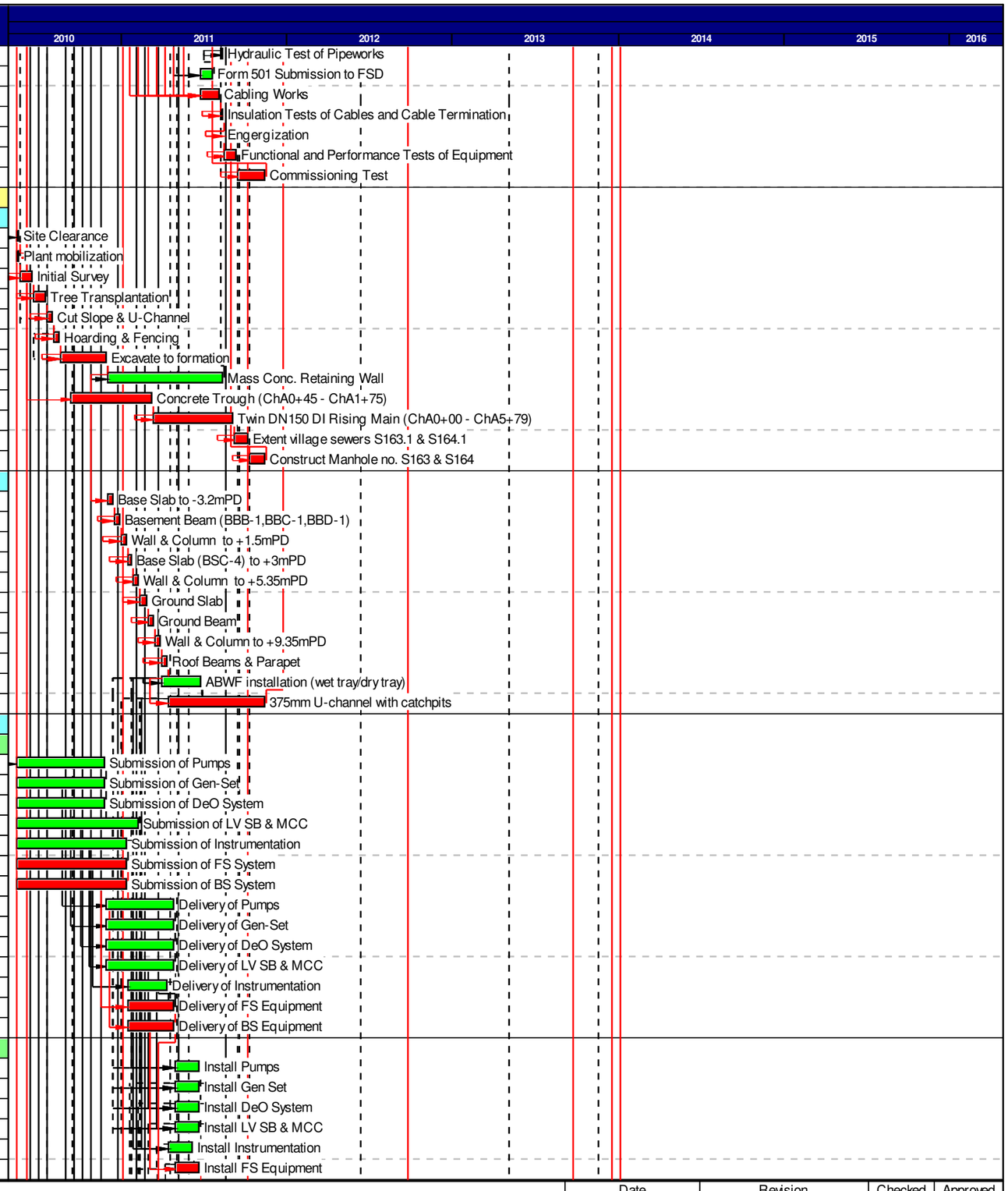
30/12/10	Revision 2	StL	VC

Activity ID	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
E&M1120	7	11/08/11	17/08/11	08/02/14	14/02/14	912d	E&M1110	
E&M1130	28	26/06/11	23/07/11	19/10/11	15/11/11	115d	E&M1106	KD0070
E&M1140	43	26/06/11	07/08/11	26/06/11	07/08/11	0	E&M1101, E&M1102, E&M1103,	E&M1150
E&M1150	7	08/08/11	14/08/11	08/08/11	14/08/11	0	E&M1140	E&M1160
E&M1160	3	15/08/11	17/08/11	15/08/11	17/08/11	0	E&M1150	E&M1170
E&M1170	30	18/08/11	16/09/11	18/08/11	16/09/11	0	E&M1160	E&M11800
E&M11800	60	17/09/11	15/11/11	17/09/11	15/11/11	0	E&M1170	KD0070
Section W 6 - Sewer and PS No.2 in Portions E&H								
Civil & Geotechnical Works								
SKW0881	7	17/05/10	23/05/10	17/05/10	23/05/10	0	KD0020	SKW0891
SKW0891	7	17/05/10	23/05/10	17/05/10	23/05/10	0	SKW0881	SKW0892
SKW0892	30	24/05/10	22/06/10	24/05/10	22/06/10	0	SKW0891	SKW0901
SKW0901	30	23/06/10	22/07/10	23/06/10	22/07/10	0	SKW0892	SKW0921
SKW0921	14	23/07/10	05/08/10	23/07/10	05/08/10	0	SKW0260, SKW0901	SKW0931, SKW0951
SKW0931	14	06/08/10	19/08/10	06/08/10	19/08/10	0	SKW0921	SKW0951
SKW0951	106	20/08/10	03/12/10	20/08/10	03/12/10	0	SKW0921, SKW0931	SKW0961, SKW0971
SKW0961	257	04/12/10	17/08/11	04/03/11	15/11/11	90d	SKW0951	KD0080
SKW1491	180	14/09/10	12/03/11	14/09/10	12/03/11	0	PRE0100	SKW1511
SKW1511	180	13/03/11	08/09/11	13/03/11	08/09/11	0	SKW1491	SKW1531
SKW1531	34	09/09/11	12/10/11	09/09/11	12/10/11	0	SKW1511	SKW1581
SKW1581	34	13/10/11	15/11/11	13/10/11	15/11/11	0	SKW1531	KD0080
Structural Works								
SKW0971	14	04/12/10	17/12/10	04/12/10	17/12/10	0	SKW0951	SKW0981
SKW0981	14	18/12/10	31/12/10	18/12/10	31/12/10	0	SKW0971	SKW0991
SKW0991	14	01/01/11	14/01/11	01/01/11	14/01/11	0	SKW0981	SKW1001
SKW1001	14	15/01/11	28/01/11	15/01/11	28/01/11	0	SKW0991	SKW1011
SKW1011	14	29/01/11	11/02/11	29/01/11	11/02/11	0	SKW1001	SKW1021
SKW1021	20	12/02/11	03/03/11	12/02/11	03/03/11	0	SKW1011	SKW1031
SKW1031	14	04/03/11	17/03/11	04/03/11	17/03/11	0	SKW1021	SKW1041
SKW1041	14	18/03/11	31/03/11	18/03/11	31/03/11	0	SKW1031	SKW1051
SKW1051	14	01/04/11	14/04/11	01/04/11	14/04/11	0	SKW1041	E&M2101, E&M2102, E&M2103,
SKW1061	90	01/04/11	29/06/11	18/04/11	16/07/11	17d	SKW1051	E&M2101, E&M2102, E&M2103,
SKW1081	215	15/04/11	15/11/11	15/04/11	15/11/11	0	SKW1051	KD0080
E&M Works (PS2)								
Submission & Delivery								
E&M2001	198	17/05/10	30/11/10	20/07/10	02/02/11	64d	KD0020	E&M2011
E&M2002	198	17/05/10	30/11/10	20/07/10	02/02/11	64d		E&M2012
E&M2003	198	17/05/10	30/11/10	20/07/10	02/02/11	64d		E&M2013
E&M2004	271	17/05/10	11/02/11	19/05/10	13/02/11	2d		E&M2014
E&M2005	243	17/05/10	14/01/11	03/06/10	31/01/11	17d		E&M2015
E&M2006	243	17/05/10	14/01/11	17/05/10	14/01/11	0		E&M2016
E&M2007	243	17/05/10	14/01/11	17/05/10	14/01/11	0		E&M2017
E&M2011	150	01/12/10	29/04/11	03/02/11	02/07/11	64d	E&M2001	E&M2101
E&M2012	150	01/12/10	29/04/11	03/02/11	02/07/11	64d	E&M2002	E&M2102
E&M2013	150	01/12/10	29/04/11	03/02/11	02/07/11	64d	E&M2003	E&M2103
E&M2014	150	01/12/10	29/04/11	03/12/10	01/05/11	2d	E&M2004	E&M2104
E&M2015	90	15/01/11	14/04/11	01/02/11	01/05/11	17d	E&M2005	E&M2105
E&M2016	107	15/01/11	01/05/11	15/01/11	01/05/11	0	E&M2006	E&M0350, E&M2106
E&M2017	107	15/01/11	01/05/11	15/01/11	01/05/11	0	E&M2007	E&M2107
Installation, T&C								
E&M2101	55	30/04/11	23/06/11	03/07/11	26/08/11	64d	E&M2011, SKW1051, SKW1061	E&M2110
E&M2102	55	30/04/11	23/06/11	03/07/11	26/08/11	64d	E&M2012, SKW1051, SKW1061	E&M2110
E&M2103	55	30/04/11	23/06/11	03/07/11	26/08/11	64d	E&M2013, SKW1051, SKW1061	E&M2110
E&M2104	55	30/04/11	23/06/11	02/05/11	25/06/11	2d	E&M2014, SKW1051, SKW1061	E&M2140
E&M2105	55	15/04/11	08/06/11	02/05/11	25/06/11	17d	E&M2015, SKW1051, SKW1061	E&M2140
E&M2106	55	02/05/11	25/06/11	02/05/11	25/06/11	0	E&M2016, SKW1051, SKW1061	E&M2140



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Activity ID	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
E&M2107	55	02/05/11	25/06/11	02/05/11	25/06/11	0	E&M2017, SKW1051, SKW1061	E&M2110, E&M2140
E&M2110	46	26/06/11	10/08/11	27/08/11	11/10/11	62d	E&M2101, E&M2102, E&M2103,	E&M2120
E&M2120	7	11/08/11	17/08/11	12/10/11	18/10/11	62d	E&M2110	E&M2130, KD0080
E&M2130	28	18/08/11	14/09/11	19/10/11	15/11/11	62d	E&M2120	KD0080
E&M2140	43	26/06/11	07/08/11	26/06/11	07/08/11	0	E&M2104, E&M2105, E&M2106,	E&M2150
E&M2150	7	08/08/11	14/08/11	08/08/11	14/08/11	0	E&M2140	E&M2160
E&M2160	3	15/08/11	17/08/11	15/08/11	17/08/11	0	E&M2150	E&M2170
E&M2170	30	18/08/11	16/09/11	18/08/11	16/09/11	0	E&M2160	E&M2180
E&M2180	60	17/09/11	15/11/11	17/09/11	15/11/11	0	E&M2170	KD0080
Section W 7 - SKW STW ,Sewer and Submarine Outfall								
Submarine Outfall								
SKW1130	180	17/05/10	12/11/10	11/04/12	07/10/12	695d		SKW1131
SKW1131	300	13/11/10	08/09/11	08/10/12	03/08/13	695d	KD0020, SKW1130	SKW1231
SKW1141	213	16/06/10	14/01/11	31/07/10	28/02/11	45d	SKW0260	SKW1151
SKW1151	185	15/01/11	18/07/11	01/03/11	01/09/11	45d	PRE0090, SKW1141	SKW1171
SKW1171	120	19/07/11	15/11/11	02/09/11	30/12/11	45d	SKW1151	SKW1181
SKW1181	60	16/11/11	14/01/12	31/12/11	28/02/12	45d	SKW1171, YSW0360	SKW1191
SKW1191	30	15/01/12	13/02/12	29/02/12	29/03/12	45d	SKW1181	SKW1201
SKW1201	210	14/02/12	10/09/12	30/03/12	25/10/12	45d	SKW1191	SKW1211
SKW1211	180	11/09/12	09/03/13	26/10/12	23/04/13	45d	SKW1201	SKW1221
SKW1221	57	10/03/13	05/05/13	24/04/13	19/06/13	45d	SKW1211	KD0090, SKW1231, SKW1441
SKW1231	60	06/05/13	04/07/13	04/08/13	02/10/13	90d	SKW1131, SKW1221	SKW1241
SKW1241	60	05/07/13	02/09/13	03/10/13	01/12/13	90d	SKW1231	SKW1251
SKW1251	45	03/09/13	17/10/13	02/12/13	15/01/14	90d	SKW1241	SKW1431
SKW1431	30	18/10/13	16/11/13	16/01/14	14/02/14	90d	SKW1251	KD0090
SKW1441	240	06/05/13	31/12/13	20/06/13	14/02/14	45d	SKW1221	
SKW STW								
Submission & Delivery (E&M)								
E&M3010	150	16/11/10	14/04/11	24/04/13	20/09/13	890d	E&M0160	E&M3170
E&M3030	180	02/04/11	28/09/11	31/08/11	26/02/12	151d	E&M0150	E&M3190
E&M3060	136	02/04/11	15/08/11	15/08/11	28/12/11	135d	E&M0120	E&M3210
E&M3070	136	02/04/11	15/08/11	15/08/11	28/12/11	135d	E&M0130	E&M3220
E&M3080	180	02/04/11	28/09/11	15/09/11	12/03/12	166d	E&M0140	E&M3230
E&M3090	210	02/04/11	28/10/11	18/07/11	12/02/12	107d	E&M0170	E&M3240
E&M3100	180	02/04/11	28/09/11	05/02/13	03/08/13	675d	E&M0180	E&M3250
E&M3110	180	02/04/11	28/09/11	18/02/13	16/08/13	688d	E&M0190	E&M3260
E&M3130	180	02/04/11	28/09/11	04/05/13	30/10/13	763d	E&M0200	E&M3270
E&M3140	180	02/04/11	28/09/11	09/05/11	04/11/11	37d	E&M0210	E&M3261
E&M3150	180	02/04/11	28/09/11	20/02/13	18/08/13	690d	E&M0220	E&M3291
E&M3160	180	02/04/11	28/09/11	14/01/12	11/07/12	287d	E&M0230	E&M0340, E&M3300
Construction of Grid A-G								
SKW1261	164	14/02/11	27/07/11	14/02/11	27/07/11	0	SKW0551	SKW1271, SKW1371
SKW1271	25	28/07/11	21/08/11	28/07/11	21/08/11	0	SKW1261	SKW1281
SKW1281	25	22/08/11	15/09/11	22/08/11	15/09/11	0	SKW1271	SKW1291
SKW1291	25	16/09/11	10/10/11	16/09/11	10/10/11	0	SKW1281	KD0090, SKW1301
SKW1301	25	11/10/11	04/11/11	11/10/11	04/11/11	0	SKW1291	E&M3261, E&M3291, E&M3311,
SKW1411	85	11/10/11	03/01/12	11/10/11	03/01/12	0	SKW1301	E&M3261, E&M3291, E&M3311
Construction of Grid G-N								
SKW1311	36	16/06/11	21/07/11	29/06/11	03/08/11	13d	SKW0551, SKW05938	SKW1321
SKW1321	35	22/07/11	25/08/11	04/08/11	07/09/11	13d	SKW1311	SKW1331
SKW1331	35	26/08/11	29/09/11	08/09/11	12/10/11	13d	SKW1321	SKW1341
SKW1341	35	30/09/11	03/11/11	13/10/11	16/11/11	13d	SKW1331	SKW1351
SKW1351	18	04/11/11	21/11/11	17/11/11	04/12/11	13d	SKW1341	SKW1361
SKW1361	24	22/11/11	15/12/11	05/12/11	28/12/11	13d	SKW1351	E&M3170, E&M3190, E&M3210,
Construction of Grid N-T								

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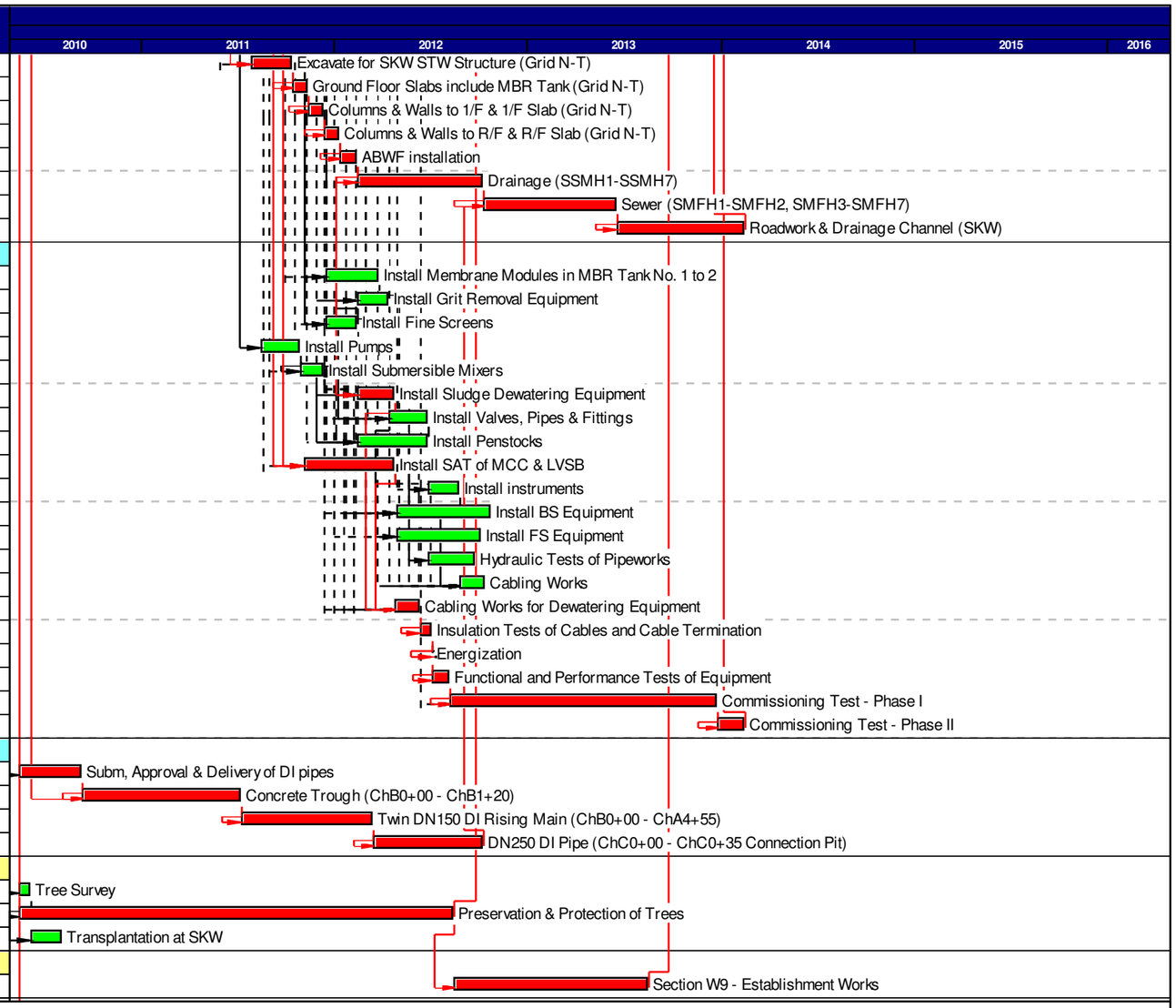
SKW1371	80	28/07/11	15/10/11	28/07/11	15/10/11	0	SKW05938, SKW1261	SKW1381
SKW1381	30	16/10/11	14/11/11	16/10/11	14/11/11	0	SKW1371	SKW1391
SKW1391	30	15/11/11	14/12/11	15/11/11	14/12/11	0	SKW1381	SKW1401
SKW1401	30	15/12/11	13/01/12	15/12/11	13/01/12	0	SKW1391	E&M3240, SKW1421
SKW1421	30	14/01/12	12/02/12	14/01/12	12/02/12	0	SKW1401	E&M3240, SKW1551
SKW1551	241	13/02/12	10/10/12	13/02/12	10/10/12	0	SKW1421	SKW1561
SKW1561	251	11/10/12	18/06/13	11/10/12	18/06/13	0	SKW1541, SKW1551	SKW1571
SKW1571	241	19/06/13	14/02/14	19/06/13	14/02/14	0	SKW1561	KD0090
SKW STP - E&M Works								
E&M3170	100	16/12/11	24/03/12	21/09/13	29/12/13	645d	E&M3010, SKW1361	E&M3311
E&M3190	60	14/02/12	13/04/12	27/02/12	26/04/12	13d	E&M3030, E&M3210, SKW1361	E&M3250, E&M3320
E&M3210	60	16/12/11	13/02/12	29/12/11	26/02/12	13d	E&M3060, SKW1361	E&M3190, E&M3250, E&M3260,
E&M3220	75	16/08/11	29/10/11	29/12/11	12/03/12	135d	E&M3070	E&M3230, E&M3250, E&M3260,
E&M3230	45	30/10/11	13/12/11	13/03/12	26/04/12	135d	E&M3080, E&M3220	E&M3250, E&M3260, E&M3311,
E&M3240	74	13/02/12	26/04/12	13/02/12	26/04/12	0	E&M3090, SKW1401, SKW1421	E&M3320
E&M3250	75	14/04/12	27/06/12	04/08/13	17/10/13	477d	E&M3100, E&M3190, E&M3210,	E&M3270, E&M3291, E&M3300,
E&M3260	135	14/02/12	27/06/12	17/08/13	29/12/13	550d	E&M3110, E&M3210, E&M3220,	E&M3311
E&M3261	174	05/11/11	26/04/12	05/11/11	26/04/12	0	E&M3140, SKW1301, SKW1411	E&M3311, E&M3320
E&M3270	60	28/06/12	26/08/12	31/10/13	29/12/13	490d	E&M3130, E&M3250	E&M3311
E&M3291	180	29/04/12	25/10/12	19/08/13	14/02/14	477d	E&M3150, E&M3250, SKW1301,	
E&M3300	161	29/04/12	06/10/12	07/09/13	14/02/14	496d	E&M3160, E&M3250, SKW1361	
E&M3310	90	28/06/12	25/09/12	17/11/13	14/02/14	507d	E&M3250	
E&M3311	47	27/08/12	12/10/12	30/12/13	14/02/14	490d	E&M3170, E&M3230, E&M3260,	
E&M3320	47	27/04/12	12/06/12	27/04/12	12/06/12	0	E&M3190, E&M3210, E&M3220,	E&M3321
E&M3321	21	13/06/12	03/07/12	13/06/12	03/07/12	0	E&M3320	E&M3331
E&M3331	1	04/07/12	04/07/12	04/07/12	04/07/12	0	E&M3321	E&M3359
E&M3359	35	05/07/12	08/08/12	05/07/12	08/08/12	0	E&M3331	E&M3360
E&M3360	505	09/08/12	26/12/13	09/08/12	26/12/13	0	E&M0340, E&M3359	E&M3370
E&M3370	50	27/12/13	14/02/14	27/12/13	14/02/14	0	E&M3360	KD0090
Rising Main								
SKW1481	120	17/05/10	13/09/10	17/05/10	13/09/10	0	KD0020	SKW1501
SKW1501	300	14/09/10	10/07/11	14/09/10	10/07/11	0	PRE0100, SKW1481	SKW1521
SKW1521	250	11/07/11	16/03/12	11/07/11	16/03/12	0	SKW1501	SKW1541
SKW1541	208	17/03/12	10/10/12	17/03/12	10/10/12	0	SKW1521	SKW1561
Section W 8 - Landscape Softworks in All Portions								
SKW1591	21	17/05/10	06/06/10	26/11/13	16/12/13	1289d	KD0020	SKW1621
SKW1611	822	17/05/10	15/08/12	17/05/10	15/08/12	0	KD0020	KD0100, SKW1631
SKW1621	60	07/06/10	05/08/10	17/12/13	14/02/14	1289d	SKW1591	
Section W 9 - Establishment W orks in All Portions								
SKW1631	365	16/08/12	15/08/13	16/08/12	15/08/13	0	SKW1611	KD0110



Start date	05/05/10
Finish date	14/02/14
Data date	17/05/10
Run date	06/01/11
Page number	9A
c Primavera Systems, Inc.	

Early bar
Progress bar
Critical bar
Summary bar
Progress point
Critical point
Summary point
Start milestone point
Finish milestone point

Leader Civil Engineering Corp. Ltd.
Contract No. DC/2009/13
Construction of Sewage Treatment Works at YSW & SKW
Works Programme (Rev. 2)

Date	Revision	Checked	Approved
17/05/10	Revision 0	StL	VC
31/07/10	Revision 1	StL	VC
30/12/10	Revision 2	StL	VC