



Maeda - CREC - SELI Joint Venture

Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel

Monthly EM&A Report (February 2010)



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EXECUTIVE SUMMARY

- 1. Drainage Services Department (DSD) has awarded the contract for the Design and Construction of Tsuen Wan Drainage Tunnel (hereafter referred to as the "Project") to Maeda-CREC-SELI Joint Venture (MCSJV). MCSJV has appointed Hyder Consulting Limited (HCL) as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) works in accordance with the Environmental Monitoring and Audit Manual (EM&A Manual) and Environmental Permit (EP). Commencement of the construction work had been notified to the Environmental Protection Department (EPD) in January 2008. This Monthly EM&A Report summarises the EM&A works undertaken in February 2010.
- According to the EM&A Manual, there are four designated air quality monitoring locations, five designated noise monitoring locations and four water quality monitoring locations during the construction phase: (i) Sik Sik Yuen Ho Fung College (ASR 1, NSR 1 and Intake I-1); (ii) Hong Hoi Chee Hong Temple (ASR 3, NSR 3 and Intake I-2); (iii) Squatters (NSR 6 and Intake I-3); (iv) Beach Tower (Long Beach Gardens) (ASR 8, NSR 8 and Outfall O-1); and (v) Greenview Terrace (Block 1) (ASR 9, NSR 9 and Outfall O-1).
- 3. During the non restricted hours, major construction activities undertaken by the Contractor at TWDT included site cleaning and tidying at I-1, I-2, I-3 and Outfall; drilling rig at I-2 and I-3; soil nailing at Outfall; breaking up of existing boulder at I-3 and Outfall; excavation of man access shaft at I-2, formation of access road at I-3 and Outfall; erosion control mat and green wire mesh at Outfall; cascade and continue channel modification works at I-1; construction of skin wall at I-3; formation of steel platform at I-2, and pre-assembly of tunnel boring machine (TBM) at outfall. Construction activities carried out during restricted hours included delivery TBM bearing and cutter head.
- 4. No exceedances have been recorded for air quality and noise monitoring during the reporting month.
- 5. No water quality monitoring was carried out on 15 February 2010. Exceedances for water quality monitoring are summarized in the following table:

Parameter	Action Level Exceedance	Limit Level Exceedance
DO	Nil	Nil
Turbidity	Nil	Nil
SS	Nil	Three recorded at I-1 and I-3 on 5, 8 and 19 February 2010.

6. The exceedances were considered not to be project-related as no direct disturbance was observed contributed by the project construction activities. Detail interpretation could be referred to Section 4.3 of this report.

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- 7. The status of waste generation in the reporting month are:
 - A total of 790.0 m³ C&D material was disposed of to public fill at Tuen Mun and 2,950.0 m³ inert C&D materials were reused in other Contracts. Detail information could be referred to Section 5.1.1 of this report.
 - About 3.2 m³ general waste was disposed of to NENT Landfill;
 - 550 kg paper/cardboard packaging was recycled;
 - No metals was generated in the reporting month;
 - No plastic waste was disposed of in the reporting month; and
 - No chemical waste was disposed of in the reporting month.
- 8. In this reporting month, two site inspections and one monthly site audit were carried out by ET and Independent Environmental Checker (IEC) respectively, to ensure proper implementation of environmental mitigation measures specified in the EM&A Manual and compliance with environmental legislation. All observations, which were recorded on the inspection checklists, were passed to the Contractor together with the ET's recommendations.
- 9. As advised by the Contractor and verified by ET:
 - No non-compliance regarding the site inspection was received in the reporting month;
 - No environmental complaint was received during the reporting month; and
 - No summons and prosecution was received in this reporting month.
- 10. The major construction works for the upcoming three months will be:
 - Site cleaning and tidying at I-1, I-2, I-3 and Outfall;
 - Drilling rig at I-2 and I-3;
 - Soil nailing at Outfall;
 - Breaking up exiting boulder at I-3 and Outfall;
 - Excavation of man access shaft at I-2;
 - Formation of access road at I-3 and Outfall;
 - Erosion control mat and green wire mesh at Outfall;
 - Cascade and continue channel modification works at I-1;
 - Erection of steel platform at I-2;
 - Pre-assembly of TBM at Outfall;
 - Construction of shafts at I-2 and I-3; and
 - Construction of launching chamber at Outfall.



1 INTRODUCTION

- 1.1.1 The Drainage Services Department (DSD) proposed to construct a tunnel with an internal diameter of 6.5m and a length of 5.13km, with the purpose to alleviate the flooding risk in Tsuen Wan and Kwai Chung.
- 1.1.2 This project is a Designated Project under Schedule 2 Part I Category Q, of the Environmental Impact Assessment Ordinance (EIAO) as part of the proposed Tsuen Wan Drainage Tunnel (TWDT) passes underneath the existing Tai Mo Shan Country Park. An Environmental Impact Assessment (EIA) Study has therefore been undertaken to provide information on the nature and extent of environmental impacts arising from the construction and operation of the proposed designed project and related activities taking place concurrently. From the EIA the recommendations for monitoring contained herein, are made.
- 1.1.3 The Maeda-CREC-SELI Joint Venture (MCSJV) was awarded by DSD with the Contract Design and Construction of Tsuen Wan Drainage Tunnel.
- 1.1.4 Hyder was commissioned by the MCSJV as the Environmental Team (ET) to implement an EM&A program in accordance with the EM&A Manual. The proposed tunnel section flows from the junction of Shing Mun Road and Wo Yi Hop Road and discharges to south of Yau Kom Tau underneath Castle Peak Road as shown in Appendix A.
- 1.1.5 The construction works of the Project was commenced in January 2008. This is the twenty-third monthly EM&A report summarising the impact monitoring results and audit findings of the EM&A program in February 2010.



2 PROJECT INFORMATION

2.1 Project Organization and Management Structure

2.1.1 The organization chart and lines of communication with respect to the on-site environmental management are shown in Appendix B.

2.2 Construction Progress

- 2.2.1 The overall project programme from the detail design to completion of all civil works shall take approximately 54 months. The construction programme is presented in Appendix C.
- 2.2.2 The major construction activities undertaken in the reporting month were:
 - Site cleaning and tidying at I-1, I-2, I-3 and Outfall;
 - Drilling rig at I-2 and I-3;
 - Soil nailing at Outfall;
 - Breaking up of existing boulder at I-3 and Outfall;
 - Excavation of man access shaft at I-2,
 - Formation of access road at I-3 and Outfall;
 - Erosion control mat and green wire mesh at Outfall;
 - Cascade and continue channel modification works at I-1;
 - Construction of skin wall at I-3;
 - Formation of steel platform at I-2, and
 - Pre-assembly of tunnel boring machine (TBM) at outfall.
- 2.2.3 Construction activities carried out for TWDT during restricted hours included delivery TBM bearing and cutter head at Outfall.

2.3 Mitigation Measures

2.3.1 The implemented environmental mitigation measures and their statuses are given in Appendix D.

2.4 Status of License and Permit

2.4.1 A summary of relevant permits and licences for the Project is given in Appendix E.



3 SUMMARY OF EM&A REQUIREMENT

3.1 Air Quality

Air Quality Parameters

3.1.1 1-hour Total Suspended Particulates (TSP) levels are measured at the designated air monitoring locations in accordance with the EM&A Manual. Information such as date of monitoring, duration, weather condition, equipment used and monitoring results were recorded on the field data sheet developed for the Project. The monitoring results are presented in Section 4.

Monitoring Methodology

- 3.1.2 1-hour TSP monitoring is carried out under typical weather conditions (with no adverse weather such as typhoon signal or rain storm warning) three times every six days using High Volume Air Samplers (HVASs). Monitoring should be conducted in accordance with the standard sampling method as set out in High Volume Method for Total Suspended Particulates, Part 50 Chapter 1 Appendix B, Title 40 of the Code of Federal Regulations of the USEPA.
- 3.1.3 After each sampling, the filter paper loaded with dust is kept in a clean and tightly sealed plastic bag. The filter paper is then re-conditioned in desiccators for 24 hours before obtaining the weight under laboratory conditions.
- 3.1.4 The average concentrations of the TSP are calculated based on the following information obtained from monitoring:
 - Flow rate;
 - Weight of the filter paper before and after sampling; and
 - Sampling period indicated by the elapsed-time meter.
- 3.1.5 All samples should be kept in good condition (i.e. stored in sealed plastic bags, with brief description of the monitoring dates and locations) for a period of 6 months before disposal. Sample analysis is carried out by ALS Technichem (HK) Pty Limited (HOKLAS Registration Number 066).

Monitoring Equipment and Calibration

- 3.1.6 High Volume Air Samplers (HVASs) are used for 1-hour TSP monitoring to comply with the USEPA specifications in Appendix B Part 5 - Reference Method for the Determination of Suspended Particulate matter in the Atmosphere (High-Volume Method) of the Code of Federal Regulation dated June 1, 1991.
- 3.1.7 All HVASs are calibrated before commencement of monitoring using standard orifice 5points calibration method with orifice calibrator to determine the actual flow rate of each HVAS. This shall be used for the calculation of the TSP level. Calibration Kit Model -TE5025A is used for calibration of the HVAS. Recalibration of the HVAS shall be carried

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out after motor maintenance, at least once every six months, which is about the expected life of carbon brush. The air quality monitoring equipment used during the reporting month is shown in Table 3-1 below. The calibration certificates are included in Appendix F.

Equipment Type	Model	Serial Number	Calibration Orifice Number	Location
HVAS	BM2000HX	4994	1559	ASR 1
HVAS	BM2000HX	5875	1559	ASR 3
HVAS	TE5005X	0390	1559	ASR 8
HVAS	TE5005X	0646	1559	ASR 9

 Table 3-1
 Air Quality Monitoring Equipment

Monitoring Location

3.1.8 Four designated air quality-monitoring locations were identified in the contract specific EM&A manual. They are listed in Table 3-2 below and shown in Appendix G.

Monitoring Station ID	Name of Premises	Floor Level
ASR1	Sik Sik Yuen Ho Fung College	G/F
ASR3	Hong Hoi Chee Hong Temple	Podium
ASR8	Beach Tower (Long Beach Gardens)	G/F
ASR9	Greenview Terrace (Block 1)	G/F

Table 3-2 Air Quality Monitoring Locations

Action and Limit Levels

3.1.9 The Action and Limit Levels for the 1-hour TSP monitoring is shown in Table 3-3. In case exceedances of Action and/or Limit levels for air quality occur, Event Contingency Plans (ECPs) would be implemented. The ECPs for Action and Limit levels exceedances are shown in Table 3-4.

Station	1-hr TSP Level in µg/m ³	1-hr TSP Level in μg/m ³			
	Action Level	Limit Level			
ASR 1	307	500			
ASR 3	327	500			
ASR 8	337	500			
ASR 9	329	500			

Table 3-3 Action & Limit Levels for Air Quality

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	ACTION					
EVENT	ET	IEC	SOR	CONTRACTOR		
ACTION LEVEL						
Exceedance for one sample	investigate the causes of	 Check monitoring data submitted by ET; Check Contractor's working method. 	Notify Contractor.	 Rectify any unacceptable practice; Amend working methods if appropriate. 		
Exceedance for two or more consecutive samples	 Inform IEC and SOR; Advise SOR on the effectiveness of the proposed remedial measures; Repeat measurements to confirm findings; 	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ET on the effectiveness of the proposed remedial measures; Supervise Implementation of remedial measures. 	 Confirm receipt of notification of exceedance in writing; Notify Contractor; Ensure remedial measures properly implemented. 	 Submit proposals for remedial to SOR within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate. 		
LIMIT LEVEL						
Exceedance for or sample	ne • Identify source, investigate the causes of exceedance and propose remedial measures;	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and 	 Confirm receipt of notification of exceedance in writing; Notify Contractor; Ensure remedial 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working 		

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	ACTION				
EVENT	ET	IEC	SOR	CONTRACTOR	
	 Inform IEC, SOR, Contractor and EPD; Repeat measurement to confirm finding; Increase monitoring frequency to daily; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and SOR informed of the results. 	 measures; Advise SOR on the effectiveness of the proposed remedial measures; 	measures properly implemented.	 days of notification; Implement the agreed proposals; Amend proposal if appropriate. 	
	 Notify IEC, SOR, Contractor and EPD; Identify source; Repeat measurement to confirm findings; Increase monitoring frequency to daily; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Arrange meeting with IEC and SOR to discuss the remedial actions to be taken; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and SOR informed of the results; If exceedance stops, cease additional 	Contractor on the potential remedial actions; • Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise SOR accordingly; • Supervise the implementation of remedial measures.	 Confirm receipt of notification of exceedance in writing; Notify Contractor; In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; Ensure remedial measures properly implemented; If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	 agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by SOR until the exceedance is abated. 	

Table 3-4 Event/Action Plan for Air Quality

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3.2 Noise

Noise Parameters

- 3.2.1 The construction noise level is measured in terms of equivalent A-weighted sound pressure level (L_{eq}) measured in decibels (dB(A)). Monitoring of $L_{eq(30 \text{ min})}$ is carried out at the noise monitoring locations on a weekly basis during normal construction working hours (0700-1900 hours from Monday to Saturday except public holidays). For all other time periods (i.e. restricted hours), $L_{eq(5 \text{ min})}$ would be employed for comparison with the Noise Control Ordinance (NCO) criteria if necessary.
- 3.2.2 The two statistical sound levels L₁₀ and L₉₀: the level exceeded for 10 and 90 percent of the time respectively, are also recorded during monitoring. Major noise sources observed, both on-site and off-site, are recorded on the field data sheet. All measurements are recorded to the nearest 0.1 dB(A) and presented in round numbers in this report. Results are presented in Section 4.

Monitoring Methodology

- 3.2.3 Sound level meters, which comply with the International Electrotechnical Commission Publication 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications as referred to the Technical Memorandum (TM) issued under the Noise Control Ordinance, are used. Noise levels for the A-weighted levels $L_{eq(30min)}$, L_{10} and L_{90} are measured throughout the impact monitoring. Average, by sound power, of six consecutive 5 minutes readings is used to provide $L_{eq(30 min)}$ for non-restricted hours (07:00-19:00 hours from Monday to Saturday except public holidays). A facade correction of 3dB(A) is applied to the measurements that are carried out under free field conditions.
- 3.2.4 During the impact monitoring, parameters such as dates, weather condition, equipment used, measurement results and major noise sources are recorded on the field data record sheet. Monitoring would not be carried out in the presence of fog, rain or strong wind with a steady speed exceeding 5 m/s. In relation to the monitored noise levels, other noise sources such as road traffic might make a significant contribution to the overall noise environment. Therefore, noise monitoring activities would take into account such influencing factors, which were not present during the baseline monitoring period.

Monitoring Equipment and Calibration

- Rion Precision Sound Level Meters of Type NA-27 and Type NL-18 in compliance with the International Electrotechnical Commission Publication 651: 1979 (Type 1) and 804: 1985 (Type 1) Specifications, stated in the Technical Memorandum (TM) issued under the NCO, are used for noise monitoring in this reporting month.
- 3.2.6 Prior to and following each noise measurement, the accuracy of the sound level meters is checked using an acoustic calibrators (Rion Type NC-73) generating a known sound pressure level at a known frequency. Measurements are considered as valid only if the calibration levels from before and after the noise measurement agrees to within 1.0 dB(A). The sound level meters and the calibrator are calibrated annually to ensure they perform to the same level of accuracy as stated in the manufacturer's specifications.



The noise monitoring equipment used during the reporting month is shown in Table 3-5 below. The calibration certificates are included in Appendix F.

Equipment Type	Manufacturer	Type Number	Serial Number	Location
Sound Level Meter	Rion	NA-27	00201194	NSR1, NSR3, _NSR6, NSR8 and
Sound Level Meter	Rion	NL-18	00360030	NSR9
Sound Level Calibrator	Rion	NC-73	10786708	_
Sound Level Calibrator	Rion	NC-73	10997142	_

Table 3-5 Noise Monitoring Equipment

Monitoring Location

3.2.7 Five designated noise monitoring locations were identified in the contract specific EM&A manual. They are listed in Table 3-6 below and shown in Appendix G. All the locations below are in façade measurement.

Monitoring Station ID	Name of Premises	Floor Level	
NSR1	Sik Sik Yuen Ho Fung College	G/F	
NSR3	Hong Hoi Chee Hong Temple	Podium	
NSR6	Squatters	G/F	
NSR8	Beach Tower (Long Beach Gardens)	G/F	
NSR9		Podium (up to 6 July2009)	
	Greenview Terrace (Block 1)	Roof* (from 16 July 2009)	

* The noise monitoring location of NSR9 had been adjusted at rooftop from 16 July 2009.

Table 3-6 Noise Monitoring Locations

Construction Groundborne Noise

3.2.8 Prediction of construction groundborne noise indicates the criteria will be achieved at most NSRs except exceedances are predicted at Hong Hoi Chee Hong Temple (NSR3) and Squatters (NSR6). It is recommended to restrict the TBM operation in non-restricted period (i.e. 0700 - 1900) at these NSRs. In order to ensure proper control of groundborne noise is executed by the contractor, a monitoring requirement is recommended at the Hong Hoi Chee Hong Temple at Intake 2 and Squatters at Intake 3 for compliance checking. According to the monitoring schedule, TBM operation will be carried out for about 3 months in the vicinity of Hong Hoi Chee Hong Temple at Intake 2 and Squatters at Intake 3. If groundborne noise criterion is exceeded, the monitoring shall continue daily until acceptance has been restored against the criterion. Otherwise the monitoring can be discontinued.



3.2.9 The criteria including Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites (TM-Places) under the NCO stipulates that noise transmitted primarily through the structural elements of building, or buildings, shall be 10 dB(A) less than the relevant ANLs. Daytime groundborne construction noise criterion of 60 dB(A) therefore applies with reference to TM-EIAO 70 dB(A) criterion for schools and taking account of the minus 10 dB(A) requirement under the NCO TM-Places. Following the same principle for groundborne noise criteria, groundborne construction noise levels inside domestic premises relying on opened window for ventilation will be limited to 65 dB(A), with reference to the daytime airborne noise criterion of 75 dB(A) in accordance with TM-EIAO.

Action and Limit Levels

3.2.10 The Action and Limit levels for construction noise are defined in Table 3-7. If noncompliance of the criteria occurs, actions in accordance with the Action Plan in Table 3-8 would be carried out.

Time Period	Action	Limit
0700 – 1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A)*

For educational establishments the limit level shall be 70dB(A) and reduced to 65dB(A) during examination periods between 0700-1900 hrs on normal weekdays.

Table 3-7	Action a	& Limit L	_evels	for Noise

Encod	Action				
Event	ET Leader	IEC	SOR	Contractor	
Action Level	 Notify IEC and the Contractor. Carry out investigation. Report the results of investigation to IEC and the Contractor. Discuss with the Contractor and formulate remedial measures. Increase monitoring frequency to check mitigation measures. 	 Review with analysed results submitted by ET. Review the proposed remedial measures by the Contractor and advise SOR accordingly. Supervise the implement of remedial measures. 	 notification of exceedance in writing. Notify the Contractor. Require the Contractor to propose remedial measures for the analysed noise problem. 	• Implement noise r mitigation proposals.	
Limit Level	 Identify the source. Notify IEC, SOR, EPD and the Contractor. Repeat measurement 	• Discuss amongst SOR, ET Leader and the Contractor on the potential remedial	 Confirm receipt of notification of exceedance in writing. Notify the Contractor. 		

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Action

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Enert	Action				
Event	ET Leader	IEC	SOR	Contractor	
	 to confirm findings. Increase monitoring frequency. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented. Inform IEC, SOR, and EPD the causes & actions taken for the exceedances. Assess effectiveness of the Contractor's remedial actions and keep IEC, EPD and SOR informed of the results. If exceedance stops, cease additional monitoring. 	 actions. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise SOR accordingly. Supervise the implementation of remedial measures. 	 Require the Contractor to propose remedial measures for the analysed noise problem. Ensure remedial measures are properly implemented. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated. 	 IEC within 3 working days of notification. Implement the agreed proposals. Resubmit proposals if problem still not under control. Stop the relevant activity of works as determined by the SOR until the exceedance is abated. 	

Table 3-8 Event/Action Plan for Noise

3.3 Water Quality

3.3.1 The water quality impact would be insignificant with the protection measures recommended in Section 5.6 of the EIA report. However in view of the sensitive nature of the rivers/streams and bathing beaches in the Study Area, it is suggested that a programme of monitoring should be established to confirm the mitigation measures are protecting these water bodies.

Water Quality Parameters

- 3.3.2 Monitoring for Dissolved Oxygen (DO), temperature, turbidity, pH and suspended solids (SS) should be undertaken at designated monitoring locations. It should be noted that DO, temperature, turbidity and pH should be measured in-situ whereas SS is assayed in a laboratory.
- 3.3.3 In association with the water quality parameters, other relevant data should also be measured, such as monitoring location/position, time, weather conditions, and any special phenomena and description of work underway at the construction site etc.

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Monitoring Methodology

- 3.3.4 In accordance with the EM&A Manual, the water quality monitoring for all specified parameters shall be measured at all designated monitoring locations including control points at an interval of 3 days per week. DO, temperature, turbidity, pH and SS shall be undertaken at designated monitoring locations.
- 3.3.5 It should be noted that water samples for all monitoring parameters should be collected, stored, preserved and analysis according to Standard Methods, APHA 17 ed. and/or methods agreed by the Director of Environmental Protection.
- 3.3.6 Each sample shall be analysed in accordance with the APHA Standard Methods for the Examination of Water and Wastewater, 18th edition, or an equivalent method approved by the EPD. If an in-house or non-standard method is proposed, details of the method verification may require to be submitted to the EPD. In any circumstance, the sample testing should comply with a comprehensive quality assurance and quality control programme. The laboratory should be prepared to demonstrate the quality programmes to the EPD when requested.

Monitoring Equipment and Calibration

3.3.7 All the water samples collected should be transferred to clearly labelled and pre-cleaned sample containers with necessary preservatives immediately after collection. The sample containers should be provided by a HOKLAS accredited laboratory. Sufficient quantity of samples should be collected for all laboratory analyses. Following sampling, samples should be stored in a cool box at temperature of between 0 and 4°C, and transported to the laboratory within the sample retention time as advised by the laboratory under proper chain-of-custody system. The water quality monitoring equipment used during the reporting month is shown in Table 3-9 below.

Equipment Type	Manufacturer	Model	Quantity
pH Meter / DO / Temperature Meter	WTW	PH/Oxi 340i	1
Tuibidimeter	EUTECH	TN-100	1

Table 3-9 Water Quality Monitoring Equipment

3.3.8 All pH meters, DO meters and turbidimeters shall be checked and calibrated prior to use. DO meters and turbidimeters shall be calibrated by a laboratory accredited under HOKLAS or any other international accreditation scheme, and subsequently recalibrated at 3 monthly intervals throughout all stages of the water quality monitoring. Responses of sensors and electrodes shall be checked with certified standard solutions before each use. Wet bulb calibrations for all DO meters shall be carried out before measurement at each monitoring location. For the on site calibration of field equipment, BS 127:1993, "Guide to field and on-site test methods for the analysis of waters" should be observed. The calibration certificates are included in Appendix F.



Monitoring Location

3.3.9 Four designated monitoring locations were identified in the contract specific EM&A Manual for water quality monitoring. While the construction of the outfall basin at the seashore has not been started, monitoring of marine water quality is only required during which the stilling basin is placed at the seashore area. These four monitoring stations are listed in Table 3-10 below and shown in Appendix G.

Monitoring Station ID	Name of Premises
I-1	Intake I-1
I-1-C	Control of Intake I-1
I-2	Intake I-2
I-2-C	Control of Intake I-2
I-3	Intake I-3
I-3-C*	Control of Intake I-3
O-1 (FT) & (ET)	Outfall 1During Flood Tide and Ebb Tide
O-1-C (FT)	Control of Outfall O-1 During Flood Tide
O-1-C (ET)	Control of Outfall O-1 During Ebb Tide

Monitoring Station ID Name of Premise

The upper stream location (I-3-C) had been relocated from end of February 2009 due to coarse stone blockage.

Table 3-10 Water Quality Monitoring Locations

3.3.10 Note that there are two control stations for Outfall O-1, one for sampling during flood tide and one for sampling during ebb tide. Only one of those control stations for Outfall O-1 shall be sampled during each sampling. Control station to be sampled will be determined based on the tidal information provided by the Hong Kong Observatory.

Action and Limit Levels

3.3.11 The Action and Limit levels for water quality monitoring parameters are defined in Table 3-11. In case of any exceedance, appropriate actions will be undertaken in accordance with the Event and Action Plan as described in Table 3-12.



Parameters	Action	Limit
DO in mg/l	Surface & Middle	Surface & Middle
(Surface, Middle &	5%-ile of baseline data for surface	4mg/l except 5mg/l for FCZ or
Bottom)	and middle layer.	1%-ile of baseline data for surface and middle layer
	Bottom	Bottom
	5%-ile of baseline data for bottom layer.	2mg/l or 1%-ile of baseline data for bottom layer
SS in mg/l	95%-ile of baseline data or 120% of	99%-ile of baseline or 130% of
(depth-averaged)	upstream control station's SS at the same tide of the same day	upstream control station's SS at the same tide of the same day and specific sensitive receiver water quality requirements (e.g. required suspended solids levels for concerned sea water intakes)
Turbidity (Tby) in NTU (depth-averaged)	95%-ile of baseline data or 120% of upstream control station's Tby at the same tide of the same day	99%-ile of baseline or 130% of upstream control station's Tby at the same tide of the same day
Notes:		

- For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
- For SS and Tby, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary.

Table 3-11 Action/Limit Levels for Water Quality



Event	ET Leader	IEC	SOR	Contractor
Action Level being exceeded by one sampling day	 Repeat in-situ measurement to confirm finding; Identify source(s) of impact; Inform IEC and Contractor; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC and Contractor; and Repeat measurement on next day of exceedance. 	Contractor on the mitigation measures • Review proposals on mitigation measures submitted by Contractor and advise the SOR accordingly; and • Assess the effectiveness of the implemented mitigation measures	 the proposed mitigation measures and Make agreement on the mitigation measures to be implemented. 	compliance in
Action Level being exceeded by more than one consecutive sampling day	 Repeat in-situ measurement to confirm finding; Identify source(s) of impact; Inform IEC and Contractor; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC and Contractor; Ensure mitigation measures are implemented; Prepare to increase the monitoring frequency to daily; and 	 Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the SOR accordingly; and Assess the effectiveness of the implemented mitigation measures. 	 Discuss with IEC on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented; and Assess the effectiveness of the implemented mitigation measures. 	 Inform the Engineer and confirm notification of the non- compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET and IEC and propose mitigation measures to IEC and SOR within 3 working days; and Implement the agreed mitigation measures.

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Event	ET Leader	IEC	SOR	Contractor
	 Repeat measurement on next day of exceedance. 			
Limit Level being exceeded by one sampling day	 Repeat in-situ measurement to confirm finding; Identify source(s) of impact; Inform IEC, Contractor and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, SOR and Contractor; Ensure mitigation measures are implemented; and Increase the monitoring frequency to daily until no exceedance of Limit level. 	 Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the SOR accordingly; and Assess the effectiveness of the implemented mitigation measures. 	 Discuss with IEC, ET and Contractor on the proposed mitigation measures; and Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; and Assess the effectiveness of the implemented mitigation measures. 	 Inform the Engineer and confirm notification of the non- compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET and IEC and SOR and propose mitigation measures to IEC and SOR within 3 working days; and Implement the agreed mitigation measures.
Limit Level being exceeded by more than one consecutive sampling day	 Repeat in-situ measurement to confirm finding; Identify source(s) of impact; Inform IEC, Contractor and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; 	 Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the SOR accordingly; and Assess the effectiveness of the implemented 	 Discuss with IEC, ET and Contractor on the proposed mitigation measures; and Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Assess the 	 Inform the SOR and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods;

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Event	ET Leader	IEC	SOR	Contractor
	 Discuss mitigation measures with IEC, SOR and Contractor; Ensure mitigation measures are implemented; and 7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. 	mitigation measures.	effectiveness of the implemented mitigation measures; and • Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit Level.	 Discuss with ET and IEC and SOR and propose mitigation measures to IEC and SOR within 3 working days; Implement the agreed mitigation measures; and As directed by the Engineer, to slow down or to stop all or part of the marine work or construction activities.

Table 3-12 Event/Action Plan for Water Quality



4 MONITORING RESULT

4.1 Air Quality

4.1.1 The air quality monitoring schedule of the reporting period is given in Appendix H.

1-hr TSP Monitoring

4.1.2 Results of 1-hours TSP level are shown in Table 4-1. All measurements were recorded to the nearest 0.1μg/m³ and presented in round numbers in this report. Detail results including weather conditions, and graphical presentations are presented in Appendix I.

Station	Monitoring Date	Monitoring Result (μg/m3)	Action/Limit Levels (μg/m3)
		91.1	
	02-Feb-10	77.8	
		75.3	
		123.9	
	08-Feb-10	36.4	
		25.5	
		29.2	
ASR 1	12-Feb-10	63.2	307/500
		42.5	
		75.3	
	18-Feb-10	93.6	
		54.7	
		88.7	
	24-Feb-10	94.8	
		83.8	
		87.0	
	02-Feb-10	118.6	
		88.3	
ASR 3		146.3	327/500
	08-Feb-10	45.4	
		41.6	
	12-Feb-10	31.5	

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Station	Monitoring Date	Monitoring Result (μg/m3)	Action/Limit Level (μg/m3)
		65.6	
		36.6	
		104.7	
	18-Feb-10	56.8	
		75.7	
		99.6	
	24-Feb-10	78.2	
		105.9	
		139.3	
	02-Feb-10	82.2	
		115.6	
		110.1	
	08-Feb-10	51.6	
		48.8	
		22.3	
ASR 8	12-Feb-10	59.9	337/500
		29.3	
		79.4	
	18-Feb-10	58.5	
		97.5	
		135.1	
	24-Feb-10	104.5	
		135.1	
		129.4	
	02-Feb-10	68.1	
		104.1	
ASR 9		185.5	329/500
	08-Feb-10	70.7	
		74.7	
	12-Feb-10	48.0	

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Station	Monitoring Date	Monitoring Result (μg/m3)	Action/Limit Levels (μg/m3)
		65.4	
		46.7	
		100.1	
	18-Feb-10	89.4	
		78.7	
		93.4	
	24-Feb-10	89.4	_
		106.7	

Note: *Italic* indicates the occurrence of exceedance of *Action level* **Bold** indicates the occurrence of exceedance of **Limit Level**

Table 4-1 Air Quality Monitoring Results

4.1.3 No project related exceedance was recorded in the reporting month.

4.2 Noise

4.2.1 The noise monitoring schedule of the reporting period is given in Appendix H. Results of measured noise level, in terms of Leq (30min), during the construction are shown in Table 4-2. All measurements including L10 and L90 are recorded to the nearest 0.1 dB(A) and presented in round numbers in this report. Detail results including weather conditions and graphical presentation are presented in Appendix I.

Station	Monitoring Date	L _{eq (30 min)} dB(A)	Limit Levels dB(A)
	02-Feb-10	63.2	
	08-Feb-10	64.7	
NSR 1	18-Feb-10	61.7	70/65**
	24-Feb-10	63.7	
	02-Feb-10	70.7	
	08-Feb-10	67.0	
NSR 3	18-Feb-10	58.3	
	24-Feb-10	71.9	76
	02-Feb-10	65.7	75
NSR 6	05-Feb-10*	70.1	
	08-Feb-10	69.7	
	12-Feb-10*	48.5	

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Station	Monitoring Date	L _{eq (30 min)} dB(A)	Limit Levels dB(A)
	17-Feb-10	44.2	
	19-Feb-10*	68.4	
	24-Feb-10	68.2	
	26-Feb-10*	68.3	
	02-Feb-10	65.0	
	08-Feb-10	63.3	
NSR 8	18-Feb-10	59.0	
	24-Feb-10	66.3	
	02-Feb-10	72.8	
	05-Feb-10*	67.4	
	08-Feb-10	68.3	
	12-Feb-10*	60.6	
NSR 9	17-Feb-10	62.3	
	19-Feb-10*	59.5	
	24-Feb-10	62.9	
	26-Feb-10*	59.7	

* Additional noise monitoring due to the documented complaints.

** Noise Limit level at NSR1 was reduced from 70 dB(A) to 65 dB(A) during examination periods between 1 and 9 as well as 24 and 26 February 2010.

Table 4-2 Noise Monitoring Results

- 4.2.2 No exceedances of Action and Limit Levels were recorded in our regular noise monitoring during the reporting month.
- 4.2.3 As no new complaint was received at NSR6 and NSR9 during the reporting period, the additional noise monitoring would be ceased and the noise monitoring frequency would maintain once a week as described in the EM&A Manual.

4.3 Water Quality Monitoring

4.3.1 The water quality monitoring schedule of the reporting period is given in Appendix H. Summaries of exceedances for water quality monitoring are provided in Table 4-3 to Table 4-5.

Parameter	Action Level Exceedance	Limit Level Exceedance
DO	Nil	Nil
Turbidity	Nil	Nil

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SS	Nil	Two recorded on 5 and 8 February 2010.
Total	Nil	Тwo
Table 4-3	Summary of Exceedances for I-1	
Parameter	Action Level Exceedance	Limit Level Exceedance
DO	Nil	Nil
Turbidity	Nil	Nil
SS	Nil	Nil
Total	Nil	Nil

ParameterAction Level ExceedanceLimit Level ExceedanceDONilNilTurbidityNilNilSSNilOne recorded on 19 February 2010TotalNilOne

Table 4-5Summary of Exceedances for I-3

- 4.3.2 Results of measured water quality parameters during the reporting month are shown in Table 4-6 and detailed results including weather conditions and graphical presentations are enclosed in Appendix I.
- 4.3.3 No water quality monitoring was carried out on 15 February 2010 because no construction works are carried out during the Chinese New Year. Three non-project related exceedances were recorded for the water quality monitoring within the reporting month.
- 4.3.4 The exceedances of Control Limit Levels of SS (130% higher than I-1-C) recorded at I-1 on 5 and 8 February 2010 were below baseline Action/Limit Levels and were within the range of baseline SS concentration. Construction activities, such as disposal of C&D materials, and site cleaning and tidying, were undertaken during the measurement. No direct disturbance was observed from the site. Thus, the exceedances of SS levels recorded on 5 and 8 February 2010 at I-1 were considered to be contributed by natural variation and no action was therefore required.
- 4.3.5 Exceedance of Control Limit Level of SS (130% higher than I-3-C) was recorded at I-3 on 19 February 2010. The measured SS level was below baseline Action/Limit Level and was within the range of baseline SS concentration. Only site cleaning and tidying was undertaken during the measurement. No direct disturbance was observed from the site. Thus, the exceedance of SS level recorded on 19 February 2010 at I-3 was considered to be contributed by natural variation and no action was therefore required.



4.3.6 The above mentioned exceedances were considered as non project related, however, proper mitigation measures had been implemented during measurements. Details of the above mentioned investigations could be referred to the notifications of exceedances as enclosed in Appendix J, which have been provided to the IEC for review.

Station	Date	Temperature	DO (mg/L)	Action/Limit Level for DO (mg/L)	рН	Turbidity (NTU)	Action/Limit Level for Turbidity (NTU		Action/Limit Level for SS (mg/L)
I-1	01-Feb-10	23.00	6.74	3.42 / 3.34	7.44	7.06	9.75 / 12.47	8.80	8.85 / 10.17
	03-Feb-10	22.75	6.12		7.60	4.03	_	5.10	
	05-Feb-10	19.50	6.65		7.48	3.83	_	6.40	
	08-Feb-10	20.00	5.59		7.64	6.52	_	3.80	
	10-Feb-10	23.00	5.92		7.64	8.70	_	6.05	
	12-Feb-10	18.60	5.75		7.82	2.72	_	2.00	
	17-Feb-10	12.50	6.48		7.33	5.68	_	3.70	
	19-Feb-10	11.50	7.27		7.60	8.86	_	5.85	
	22-Feb-10	20.60	5.66		7.51	7.18	_	5.55	
	24-Feb-10	22.70	6.23		7.55	5.59	_	7.45	
	26-Feb-10	22.40	5.24		7.45	6.14		7.05	

Station	Date	Temperature	DO (mg/L)	Action/Limit Level for DO (mg/L)	рН	Turbidity (NTU	J)Action/Limit Level for Turbidity (NT		Action/Limit Level for SS (mg/L)
I-1-C	01-Feb-10	23.05	6.84	- / -	7.40	7.19	- / -	9.05	- / -
	03-Feb-10	22.80	6.22		7.68	4.48	_	5.45	
	05-Feb-10	19.40	6.72		7.50	3.91	_	4.80	
	08-Feb-10	20.10	5.86		7.63	7.01		2.40	
	10-Feb-10	22.80	5.84		7.72	8.92		5.45	
	12-Feb-10	18.50	6.14		7.89	2.84		2.00	
	17-Feb-10	12.60	6.79		7.35	5.82		3.95	
	19-Feb-10	11.60	7.77		7.60	9.02		6.45	
	22-Feb-10	20.50	5.76		7.50	7.32		5.50	
	24-Feb-10	22.90	6.10		7.50	5.85		7.20	
	26-Feb-10	22.30	5.20		7.45	6.20		7.20	

Station	Date	Temperature	DO (mg/L)	Action/Limit Level for DO (mg/L)	рН	Turbidity (NT	U)Action/Limit Level for Turbidity (NT		Action/Limit Level for SS (mg/L)
I-2	01-Feb-10	23.40	6.59	3.66 / 3.63	7.52	2.05	6.63 / 6.99	2.00	7.68 / 8.34
	03-Feb-10	22.30	5.59		7.26	1.62		2.00	
	05-Feb-10	19.25	7.31		7.26	1.82		2.00	
	08-Feb-10	20.25	5.52		7.62	4.72		2.00	
	10-Feb-10	23.20	6.14		7.56	2.34		2.50	
	12-Feb-10	18.10	5.57		7.61	2.74		2.00	
	17-Feb-10	12.00	6.28		7.30	1.56		2.00	
	19-Feb-10	11.10	6.53		7.38	3.13		2.60	
	22-Feb-10	20.10	5.85		7.43	1.81		2.00	
	24-Feb-10	23.10	5.55		7.40	1.97		2.00	
	26-Feb-10	23.00	5.14		7.61	2.12		2.00	

Station	Date	Temperature	DO (mg/L)	Action/Limit Level for DO (mg/L)	рН	Turbidity (NT	U)Action/Limit Level for Turbidity (NTI		Action/Limit Level for SS (mg/L)
I-2-C	01-Feb-10	23.50	6.66	- / -	7.50	2.10	- / -	2.00	- / -
	03-Feb-10	22.20	5.77		7.27	1.63		2.00	
	05-Feb-10	19.20	6.90		7.22	1.92		2.00	
	08-Feb-10	20.30	5.56		7.60	4.95		2.20	
	10-Feb-10	23.15	6.09		7.60	2.75		2.25	
	12-Feb-10	18.20	5.48		7.61	3.14		2.20	
	17-Feb-10	11.80	6.38		7.30	1.61		2.00	
	19-Feb-10	11.00	6.82		7.50	3.17		2.65	
	22-Feb-10	20.00	5.88		7.40	1.87		2.00	
	24-Feb-10	23.00	5.62		7.41	2.21		2.00	
	26-Feb-10	23.00	5.34		7.50	2.21		2.00	

Station	Date	Temperature	DO (mg/L)	Action/Limit Level for DO (mg/L)	рН	Turbidity (NT	U)Action/Limit Level for Turbidity (NT		Action/Limit Level for SS (mg/L)
I-3	01-Feb-10	23.30	7.03	3.65 / 3.51	7.61	2.28	3.99 / 4.18	2.00	6.13 / 7.23
	03-Feb-10	22.60	5.88		7.28	1.12		2.00	
	05-Feb-10	19.20	6.89		7.40	1.12		2.00	
	08-Feb-10	20.30	5.47		7.40	3.65		2.95	
	10-Feb-10	24.00	5.96		7.46	3.26		2.85	
	12-Feb-10	18.25	5.44		7.50	1.76		2.00	
	17-Feb-10	12.10	6.38		7.27	1.86		2.00	
	19-Feb-10	11.20	6.50		7.55	3.77		3.80	
	22-Feb-10	20.20	6.11		7.27	2.06		2.00	
	24-Feb-10	23.50	5.49		7.30	3.33		2.45	
	26-Feb-10	23.20	5.28		7.63	1.82		2.00	

Station	Date	Temperature	DO (mg/L)	Action/Limit Level for DO (mg/L)	рН	Turbidity (NT	U)Action/Limit Level for Turbidity (NTU)	SS (mg/L)	Action/Limit Level for SS (mg/L)
I-3-C	01-Feb-10	23.35	7.10	- / -	7.60	2.33	- / -	2.00	- / -
	03-Feb-10	22.65	5.98		7.29	1.19		2.00	
	05-Feb-10	19.00	6.77		7.38	1.19		2.00	
	08-Feb-10	20.40	5.58		7.48	3.80		3.30	
	10-Feb-10	23.80	6.10		7.40	3.44		3.15	
	12-Feb-10	18.00	5.45		7.51	1.84		2.00	
	17-Feb-10	11.95	6.31		7.26	2.10		2.00	
	19-Feb-10	11.20	6.52		7.52	3.77		2.55	
	22-Feb-10	20.05	6.20		7.25	2.15		2.00	
	24-Feb-10	23.30	5.44		7.28	3.37		2.35	
	26-Feb-10	23.10	5.31		7.62	1.87		2.00	

Note: *Italic* indicates the occurrence of exceedance of *Action level*. Bold indicates the occurrence of exceedance of Limit level.

 Table 4-6
 Water Quality Monitoring Results

4.4 Summary of Project-Related Exceedances

4.4.1 Table 4-7 summarises the project-related exceedance results recorded in February 2010. Note that exceedances that are considered not related to the construction activities are not included in this table.

Environmental Monitoring	Total No. of Measurement	Action Level Exceedance	% of Action Level Exceedance	Limit Level Exceedance	% of Limit Level Exceedance
Air Quality	60	0	0	0	0
Noise	28	0	0	0	0
Water	66	0	0	0	0

Note: Exceedances that are considered not related to the construction activities are not included in this table.

Table 4-7 Summary of Project-Related Exceedances

5 WASTE MANAGEMENT

5.1.1 The status of waste management is summarized in Table 5-1 below.

Quantity
790.0
2,950.0
Nil
550.0
Nil
Nil
3.2

* Other Contracts include DC/2007/08 and DC/2006/04.

Table 5-1 Waste Generated in February 2010

NON-COMPLIANCE AND DEFICIENCY 6

Site Audit by ET 6.1

6.1.1 ET has carried out two site inspections in the reporting month. All observations together with the appropriate recommended mitigation measures where necessary were recorded in the audit checklists that were passed to the Contractor. Major environmental deficiencies observed during site inspection/audits and recommendation, which were made by the ET, are summarised in Table 6-1 below. No non-compliance was observed.

Inspection Date	Observation	Recommendation	Status				
29 January 2010	1. Chemical containers without drip trays were observed at I-3.	1. The Contractor was reminded to provide chemical containers with drip trays.	1. During the site inspection on 4 February 2010, the Contractor was reminded to provide chemical containers with drip trays. (Outstanding).				
4 February 2010	 Chemical containers without drip trays were observed at I-3. Some oil stains was observed on soil surface underneath an air compressor at Outfall. The small breaker at Outfall was observed not properly wrapped with acoustic sheets. Site runoff was observed entering the channel at I-2. 	 The Contractor was reminded to provide chemical containers with drip trays. The Contractor was reminded to clear the contaminated soil and treat them as chemical waste. The Contractor was reminded to provide proper acoustic sheets to the breaker used onsite. The Contractor was reminded to provide sandbag bunging to intercept site runoff from entering the channel. 	 provided with drip trays (Closed). 2. During the site inspection or 26 February 2010, the contaminated soil was cleared and treated as chemical waste. (Closed) 3. During the site inspection or 26 February 2010, the breaker used onsite was provided with proper acoustic sheets. (Closed) 4. During the site inspection or 26 February 2010, 				
26 February 2010	1 Site runoff was observed crossing the works areas and running into the channel at I-1.	1. The Contractor was reminded to enhance wastewater mitigation measures on site.	1. During the site inspection on 4 March 2010, wastewater mitigation measures were enhanced on site (Closed).				

7 COMPLAINT

- 7.1.1 A complaint hotline at <u>9850 3241</u> of the Contractor has been established for the Project.
- 7.1.2 No environmental complaint was received during the reporting month.
- 7.1.3 The environmental complaints received in January 2010 regarding daytime construction noise and effluent discharge at I-3 were closed as all identified mitigation measures were implemented and no new complaints were received during the reporting month. Details of the complaint investigation can be referred to Appendix K.
- 7.1.4 Cumulative statistics of environmental complaints are shown in Table 7-1.

Complaints Received in the Reporting Month Cumulative Number of Complaints

0 17

Table 7-1 Cumulative Statistic of Environmental Complaint

8 SUMMARY OF NOTIFICATION OF SUMMONS, SUCCESSFUL PROSECUTIONS AND CORRECTIVE ACTIONS

- 8.1.1 No summons and successful prosecution was received during the reporting month.
- 8.1.2 Cumulative statistics of Notification of Summons, Successful Prosecutions and Convictions are shown in Table 8-1.

Notification of Su	mmons	Successful Prosec	cution	
February 2010	Cumulative	February 2010	Cumulative	
0	0	0	0	

 Table 8-1
 Cumulative Statistics of Notification of Summons and Successful Prosecutions

9 FUTURE KEY ISSUE

9.1.1

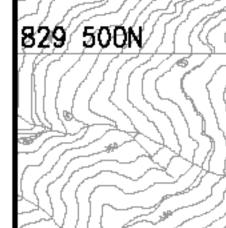
The forecast of construction works for the upcoming three months are:

- Site cleaning and tidying at I-1, I-2, I-3 and Outfall;
- Drilling rig at I-2 and I-3;
- Soil nailing at Outfall;
- Breaking up exiting boulder at I-3 and Outfall;
- Excavation of man access shaft at I-2;
- Formation of access road at I-3 and Outfall;

- Erosion control mat and green wire mesh at Outfall;
- Cascade and continue channel modification works at I-1;
- Erection of steel platform at I-2;
- Pre-assembly of TBM at Outfall;
- Construction of shafts at I-2 and I-3; and
- Construction of launching chamber at Outfall.

Appendix A

Site Map and Works Area



829 000N

828 500N

828 000N

827 500N

827 000N

826 500N

826 000N

825 500N

APPROACH BEATH

825 000N

824 500N

SHEK LUNG KUNG

YAU KOM TAU

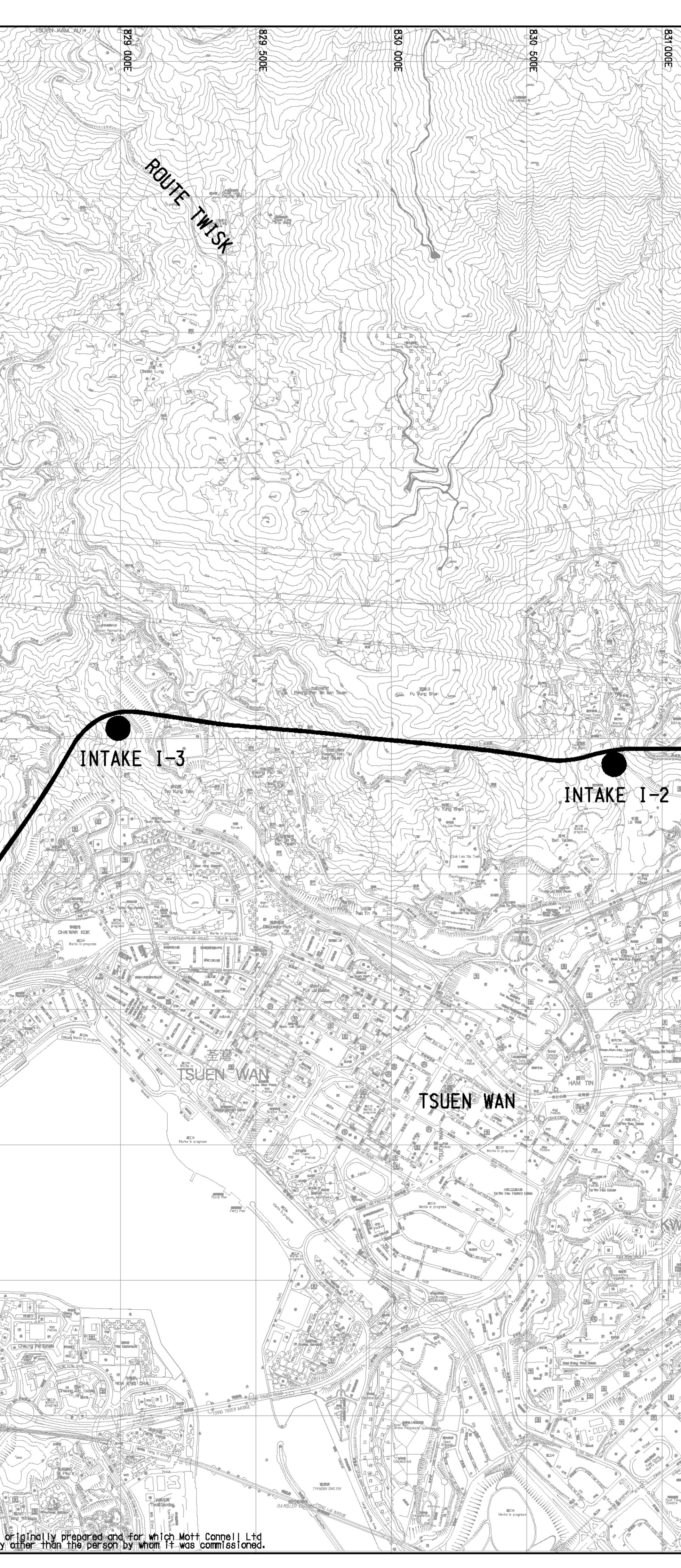
Pak Shek 194

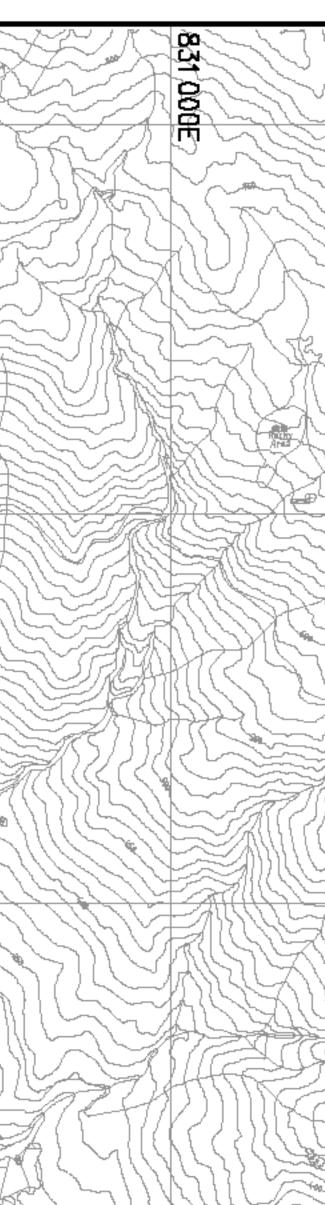
IS Y NORTH COAS Choung Shus Tap

JSING YE

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OUTFALL 0-1





ing Kwei Chung Teus

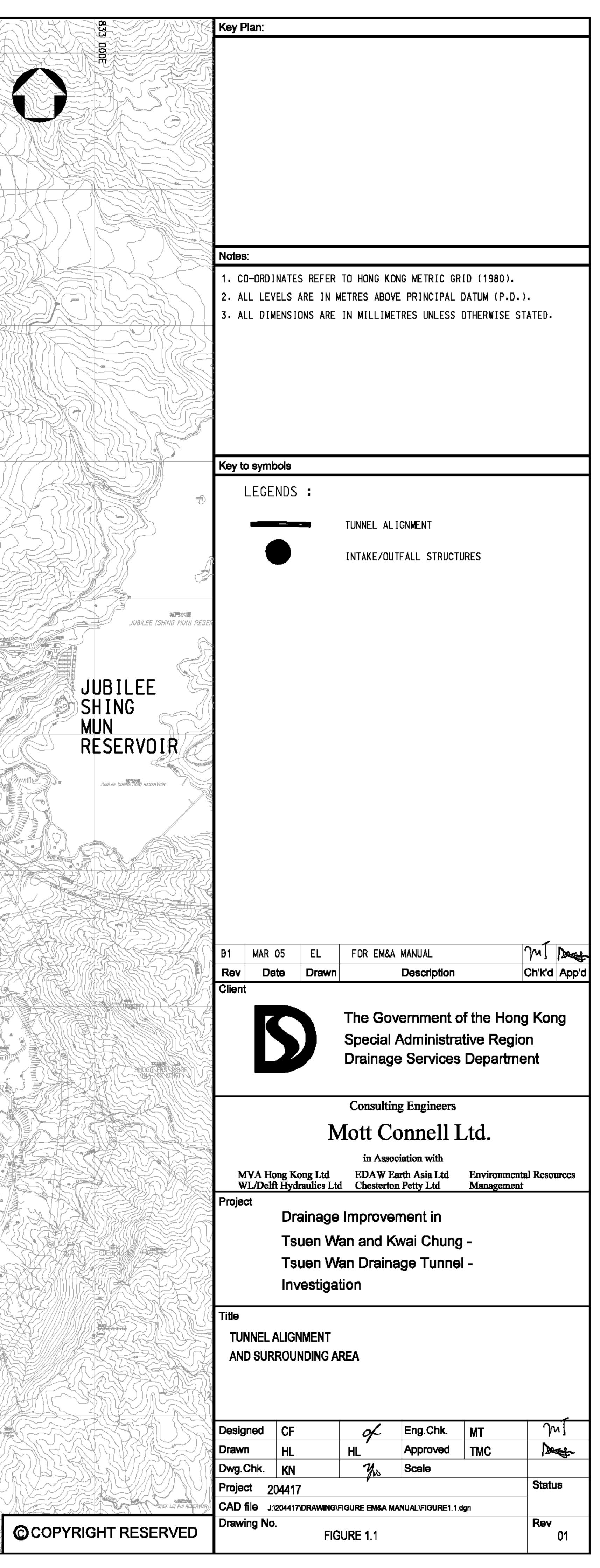
SHEUNG KIWA CHUNG





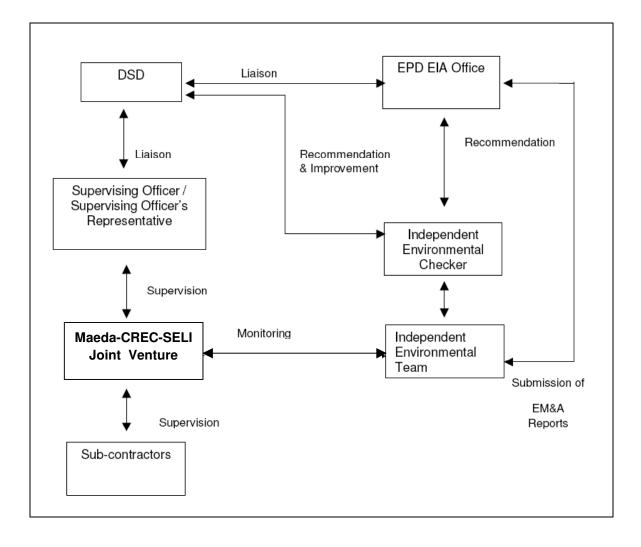
Stille witchung Elsan

KWAI CHUNG



Appendix B

Organization Chart



Appendix C

Construction Programme

ID	Activity Description	Dur D	P3D AD04 Dur Start	AD04 Finish	WP3D Start	WP3D Finish		Total Float	2006 2009 2010 2011 2012 2013
Preliminaries		Dur L	All Start	Timen	Gtart	Thiral	I CE	Pitoat	
Project Dates			State of the Owner, where					_	
01000000		0	0 00 11 10 7 4		00 11 11 10 7 4	1		(
01R0000002	Tender Issue Date		0 26JUN07A		26JUN07A		2	-	
01R0000004	Tender Closing Date	0	0 05OCT07A		050CT07A	<u></u>	2		
01R0000006	Letter of Acceptance Issued Date	0	0 14DEC07A		14DEC07A		2	-	
01R000008	Contract Commencement Date	0	0 28DEC07A		28DEC07A	2.5.5.1.5.2.5.5.1.5.1.1.5.	2		♦14 days after L@A
01R0000010	Completion of Section 1 of the Works	0	0	07DEC12		18JAN13	2	-462	Contract completion date on 02/09/11
01R0000012	Completion of Section 2 of the Works	0	0	22MAR12		22MAR12	2	-239	Contract completion date on 27/07/11
01R0000014	Completion of Section 3 of the Works	0	0	23MAR12		23MAR12	2	-240	Conciract completion date on 27/07/11
01R0000016	Completion of Section 4 of the Works	0	0	04FEB12		04FEB12	2	-192	Contract completion date on 27/07/11
01R0000018	Completion of Section 5 of the Works	0	0	07DEC12		18JAN13	2	-485	Contract completion date on 10/08/11
01R0000020	Completion of Section 6 of the Works	0	0	27JUL11		27JUL11	2	0	Contract completion date on 27/07/11
01R0000022	Completion of Section 7 of the Works	0	0	07DEC13		18JAN14	2	-462	Contract completion date on 01/09/12
Possession o	f Area								
01R00A0102	Possession Portion A - 90d of DOC	0	0 27FEB08A		27FEB08A		2		Permanent land allocation area was possessed on 19/03/08
01R00A0104	Handover of Section 1 of Works at Portion A	0	0	22MAR12	1251/1. 2010/0016 C	22MAR12	2	-239	
01R00B0102	Possession of Portion B - 90d of DOC	0	0 07MAR08A	LLINGUIL	07MAR08A	LLIVINGULL	2	200	월달 - ㅋㅋ # - ㅋㅋ
01R00B0102	Handover of Portion B	0	0	23MAR12	10.0000000000000	23MAR12	2	-240	
01R00C0102	Possession of Portion C - 90d of DOC	0	0 26MAR08A	25101/4112	26MAR08A	2510/4112	2	-240	
01R00C0102	Handover of Portion C	0	0	04FEB12	ZOWAROOA	04FEB12	2	-192	
01R00D0102		0	0 28DEC07A	U4FED 12	28DEC07A	04FED12		-192	
	Possession of Portion D on DOC	0	0 200EC07A	07DEC12		18JAN13	2	405	
01R00D0104	Handover of Portion D			UTDEC12	AND THE OWNER OF THE OWNER	16JAN13	2	-485	
01R00E0102	Possession of Portion E - 650d of DOC	0	0 07OCT09		07OCT09		2	0	
01R00E0104	Handover of Portion E	0	0	07DEC12		18JAN13	2	-462	
01R00F0102	Possession of Portion F on DOC	0	0 28DEC07A	78 2412 24 24 19 19	28DEC07A		2		
01R00F0104	Handover of Portion F	0	0	07DEC12		18JAN13	2	-462	
01R00G0102	Possession of Portion G - 700d of DOC	0	0 26NOV09		26NOV09		2	0	
01R00G0104	Handover of Portion G	0	0	11MAR11	}	11MAR11	2	175	
01R00I0102	Possession of Portion I on DOC	0	0 28DEC07A		28DEC07A		2		
01R00l0104	Handover of Portion I	0	0	07DEC12		18JAN13	2	-462	
01R00J0102	Possession of Portion J	0	0: 15MAR10		15MAR10		2	-268	
01R00J0104	Handover of Portion J	0	0	03SEP10		03SEP10	2	0	
01R0H10102	Possession of Portion H1 on DOC	0	0 28DEC07A		28DEC07A		2		
01R0H10104	Handover of Portion H1	0	0	30DEC13		10FEB14	2	0	
01R0H20102	Possession of Portion H2 - 300d of DOC	0	0 04NOV08A		04NOV08A		2		
art Date	29JUN07	AD04	Mae	eda-CREC-	SELI JV	Sheet 1 of	58		Addendum to Works Programme "WP04"
nish Date	30DEC13				DC/2007/12			Date	Revision Checked Approved
ata Date	28MAY09		•		truction of			UN09 UG09	Works Program Revision "WP02" Works Program Revision "WP3D"
un Date	22OCT09 10:37	r			age Tunnel			EP09	WP3D-TBM Halft Speed at WSD Tunnel#3
	Critical Activ	ity	Addendum to	works Pr	ogramme "V	VP04"		0CT09	WP3E WP04

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ID	Activity	AD04		AD04	AD04	WP3D	WP3D		Total	2006 2009 2010 2011 2012 2013
State States	Description	Dur	Dur	Start	Finish	Start	Finish	ID	Float	
01R0H20104	Handover of Portion H2	0	0		30DEC13		10FEB14	2	0	
Section of W	/orks - DOP to Completion					والمتحدث والم				
01R1000202	S1-Works in Portions A to F except works in S2-7	1,308	1,308	28DEC07A	07DEC12	28DEC07A	18JAN13	2	-462	
01R1000204	S1-Maintenance Period (365 days)	365	365	08DEC12	07DEC13	19JAN13	18JAN14	2	-462	
1R20A0206	S2-Slope Stabilization works within Portion A	1,247	1,247	27FEB08A	22MAR12	27FEB08A	22MAR12	2	-239	
1R20A0208	S2-Maintenance Period (365 days)	365	365	23MAR12	22MAR13	23MAR12	22MAR13	2	-202	
1R30B0210	S3-Slope Stabilization works within Portion B	1,238	1,238	07MAR08A	23MAR12	07MAR08A	23MAR12	2	-240	
1R30B0212	S3-Maintenance Period (365 days)	365	365	24MAR12	23MAR13	24MAR12	23MAR13	2	-203	
1R40C0214	S4-Slope Stabilization works within Portion C	1,219	1,219	26MAR08A	04FEB12	26MAR08A	04FEB12	2	-192	
1R40C0216	S4-Maintenance Period (365 days)	365	365	05FEB12	03FEB13	05FEB12	03FEB13	2	-155	
01R50D0218	S5-Slope Stabilization works within Portion D	1,308	1,308	28DEC07A	07DEC12	28DEC07A	18JAN13	2	-485	
1R50D0220	S5-Maintenance Period (365 days)	365	365	08DEC12	07DEC13	19JAN13	18JAN14	2	-462	
1R60G0222	S6-Works within Portion G	609	609	26NOV09	27JUL11	26NOV09	27JUL11	2	0	
1R60G0224	S6-Maintenance Period (365 days)	365	365	28JUL11	26JUL12	28JUL11	26JUL12	2	37	
01R7000226	S7-Ladscape softworks & establishment works	1,673	1,673	28DEC07A	30NOV13	28DEC07A	11JAN14	2	-455	
01R7000228	S7-Maintenance Period (30 days)	30	30	01DEC13	30DEC13	12JAN14	10FEB14	2	-455	
acilition for	the SO as per ER 12									
delinies foi	The oo as per mit in				_					
10000000	Provide temporary accommodation	7	7	28DEC07A	15 JAN08A	28DEC07A	15JAN08A	2		to the satisfaction of the SO ER 12.3.1 refers
1R0000302		95	95				28AUG08A	2		
01R0000304	Design the SO's principle office		35	An other and the second second		28MAR08A		1		at Potions H & I
1R0000305	Erect Hoarding/Signboard/Gate/Fencing	35	0.000		a series and a series of	19MAY08A		1		to the satisfaction of the SO
1R0000306	Erect SO's principle office in Portion H1/H2	100	100	14SEP08A		14SEP08A	13JUN09	2	276	not more than 2 months after the instruction
1R0000308	Provide secondary offices, directed by SO	64	64 90	28DEC07A	where the second of the second	28DEC07A		2		CER 12.4; 3 nps. vehicles within 14 days of DOC
1R0000310	Provide transport for the SO as per App. ER,M	90				28DEC07A	The second s	2		within 1 month of DOCtemporary equipment provied on 18/02/
1R0000311	Provide survey equipments as per App. ER,M	30	30			14SEP08A	Contraction of the local	2	0	
1R0000314	Maintain & Service the Principle Office	1,539	1,539		and a strength of the	280CT08A	a later of the second second	2	0	
1R0000316	Maintain & Service the Secondary Office	1,495	-	280CT08A		12JAN08A	11JAN14	2	0	
01R0000318	Maintain & Service the transportation	Contraction of the	1,785	The second s	Contract of the second second	18FEB08A	11JAN14	2	0	
01R0000319	Maintain & Service the survey equipments	2000	1,748	1.	The Property of the Property o	Concernent and Automation	10FEB14	2	0	
01R0000372	Demolish & removal of Principle Office	30	30	01DEC13	SUDECTS	12JAN14	IUFED 14	4		
Contractor's	s Accommodation as per ER.B					1000	and the second second			
										the state of the second s
01R0001402	Design Contractor's main office	30	30	01FEB08A	19MAY08A	01FEB08A	19MAY08A	2	4	to the satisfaction of SO
1R0001406	Maintain & service Contractor's office	1,597	1,597	18JUL08A	30NOV13	18JUL08A	11JAN14	2	0	
01R0001408	Demolish & removal of Contractor's main office	30	30	01DEC13	30DEC13	12JAN14	10FEB14	2	0	
01R000141	Erect Contractor's main office in Portion H1	50*	50*	19MAY08A	17JUL08A	19MAY08A	17JUL08A	1		to the satisfaction of the SO
01R0001412	Construct base slab	10	10	19MAY08A	30MAY08A	19MAY08A	30MAY08A	1		
01R0001413	Install steel frames	12	12	31MAY08A	21JUN08A	31MAY08A	21JUN08A	1		
01R0001414	Install wall/roof panels, windows etc	6	6	23JUN08A	30JUN08A	23JUN08A	30JUN08A	1		
01R0001415	Install & E& M/ceiling/floor panels	8	8	02JUL08A	12JUL08A	02JUL08A	12JUL08A	1		
01R0001416	Site clearance	1	1	14JUL08A	17JUL08A	14JUL08A	17JUL08A	1		

Sheet 2 of 58

ID	Activity	And the second se	WP3D	AD04	AD04	WP3D	WPSD		Total	2008 2009 2010 2011 2012 2013
01R0001417	Description Install furnitures/internet & move in	Dur 2	Dur 2	Start 14JUL08A	Finish 17JUL08A	Start 14JUL08A	Finish 17JUL08A	1	Float	
	amme & Monthly Report as per SCC 27			-			-		-	
MORKS Flog	annine & Montiny Report as per 500 21								_	
01R0000502	Prepare/Submit draft Works Programme	7	7		21050074	14DEC07A	21DEC07A	2	1	
01R0000502	SO's review/comment on draft Works Programme	14				22DEC07A		2		
01R0000505	Prepare/Submit draft Works Programme Rev, 1	28	1.000				15FEB08A	2		
01R0000506	Prepare/Submit 1st 3-Month Rolling Programme	14				14DEC07A		2		
01R0000507	SO's approval on draft Works Programme	14		16FEB08A			28MAR08A	2	-	경찰 이 집에 다 집에 지 않았는 것이 없었다.
		14				28AUG08A		2		
01R0000508	Submit Revised Works Programme					020CT08A		2		장신 그는 것이 같은 것은 물건을 받았는데?
01R0000510	SO's Approval of Revised Works Programme	14						-	204	Correction to be includ
01R0000512	Monthly Update for all Programme	1,779		18JAN08A		18JAN08A	18JAN13	2	364	
01R0000514	Contractor's Monthly Progress Report	1,775	1,775	22JAN08A	31DEC12	22JAN08A	18JAN13	2	364	
Safety Plan a	is per SCC 35						فيصاعدهم			
-										
01R0000602	Submit draft Safety Plan	14	14	14DEC07A	29DEC07A	14DEC07A	29DEC07A	2		within 14 days of LOA
01R0000604	Hold an ad hoc meeting with RE on Safety Plan	7	7	31DEC07A	09JAN08A	31DEC07A	A80/AL60	2		within 7 days from the submission of DSP
01R0000606	Submit 6 copies of the Safety Plan	35	35	14DEC07A	26FEB08A	14DEC07A	26FEB08A	2		within 35 days of LOA
01R0000608	Submit updated safety orgainiza. chart monthly	1,747	1,747	20MAR08A	31DEC12	20MAR08A	18JAN13	2	364	
17R0000602	Fulfill all relevant safety obligation	1,830	1,830	28DEC07A	31DEC12	28DEC07A	18JAN13	2	364	
	All Insurances				1					
Contractor S	All Insurances		_		-				-	
01R0000704	Submit documents for all insurances are effected	21	21		02SEP08A	14DEC07A	02SEP08A	2	1	as per SCC9, SCC10 & SCC45
		21	21	HECONA	OZOEI OOI	TIDEOUT	OLDEI GON			
Quality Syste	em as per ER 9.3						-	47.8		
		_								
01R0000802	Appoint a Quality Manager	14				28DEC07A		2		as per SCC 74 within 14 days of DOC
01R0000804	Submit proposed Quality System for SO's consent	28					22JAN08A	2		within 28 days of LOA
01R0000806	Submit QSSP for approval of the SO	28					14MAR08A	2		Swithin 28 days of DOC
01R0000808	Maintain & update Quality System	1,802	1,802	25JAN08A	31DEC12	25JAN08A	18JAN13	2	364	
Environment										
01R0000902	Nominate Environmental Officer	14	14	14DEC07A	21DEC07A	14DEC07A	21DEC07A	2		as per ER B.1 Clause 1.74A1(2)
01R0000903	Establish a billing account for disposal	21	21	14DEC07A	02JAN08A	14DEC07A	02JAN08A	2		per Notes to Tenderer (AA)
01R0000904	Submit draft EMP	21	21	14DEC07A	02JAN08A	14DEC07A	02JAN08A	2		SCC69, within 21 days of LOA
01R0000906	Revise draft EMP within 7 days of SO's notice	14				04JAN08A		2		■as per SCC69
01R0000908	Submit final version of EMP	45					21FEB08A	2		as per SCC69, within 45 days of LOA
01R0000910	Review/update/submit EMP monthly					28JAN08A		2	364	
01R0000912	Employ IET	21					02JAN08A	2		to the approval of the SO
01R0000914	Submit Baseline Monitoring Plan	21				28DEC07A		2	1	For approval of the SO & EPD
01R0000915	Seek for EPD's Agreement on WQML & schedule	21					31JAN08A	2		
01R0000916	Carry out baseline monitoring	37					20MAR08A	2		
01R0000918	Prepare/submit reports for baseline monitoring	20					28MAR08A	2		for approval of the SO
						01APR08A		2	364	
01R0000920	Impact monitoring & reporting	1,703	1,100	UTAL NUCA	SIDLOIZ	IN TAL NOOA	100/1410	4	1 004	

Sheet 3 of 58

ID	Activity Description	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish		Total 2008 2009 2010 2011 2012 2013 Float
17R0000902	Fulfill all relevant environmental obligation	section.	and the second second	28DEC07A	a second second	28DEC07A	and the second second	2	364
	Permit/Utilities per SCC 54 & SCC 83		1. mar						
-Activitient 1	on a contract por cost of cost								
01R0001002	Nominate IIUMS co-ordinator	7	7	14DEC07A	15JAN08A	14DEC07A	15JAN08A	2	n≣as per SCC83; within 7 days of LOA
01R0001004	SO approve IIUMS co-ordinator	14	14	16JAN08A	29FEB08A	16JAN08A	29FEB08A	2	
01R0001006	Submit brand name of UGS detection equipment	7	7	28DEC07A	18FEB08A	28DEC07A	18FEB08A	2	as per ER B1 1 59; within 7 days of DOC
1R0001008	Utilities detection & report to the SO	21	21	29FEB08A	05APR08A	29FEB08A	05APR08A	2	
1R0001010	Liaison with UUs	21	21	04JAN08A	29FEB08A	04JAN08A	29FEB08A	2	
1R0001012	Apply XP for site entrance construction	7	7	21JAN08A	08MAR08A	21JAN08A	08MAR08A	2	
01R0001014	HyD process XP for site entrance construction	20	20	10MAR08A	28MAY08A	10MAR08A	28MAY08A	2	hces=ER.B1 1.18A3(1), not less than 17 working days
01R0001016	HyD issue XP for site entrance construction	0	0		28MAY08A		28MAY08A	2	
01R0001018	Apply XP for GI works at I-1 & I-2	1	1	22APR08A	20MAY08A	22APR08A	20MAY08A	2	
01R0001020	HyD process XP for GI works at I-1 & I-2	30	2.222	23APR08A	Contraction in the second second	23APR08A	Concerns of the owner.	2	
1R0001022	HyD issue XP for GI works at I-1 & I-2	0	0		26SEP08A		26SEP08A	1	
1R0001024	Apply XP for trial grout at Fault F1	1	1	22APR08A	20MAY08A	22APR08A	20MAY08A	2	
1R0001026	HyD process XP for trial grout at Fault F1	30	301	23APR08A	22JUL08A	23APR08A	22JUL08A	2	
1R0001028	HyD issue XP for trial grout at Fault F1	0	0		22JUL08A		22JUL08A	1	
re-construe	ction Condition Survey			1.00					
	Chon Contraction Survey								
Preliminaries	Appoint a Qualified Structural Engineer	30	30	28050074	19140084	28DEC07A	19MAR08A	2	as per ER. B1 1.61;
	Submit nos. & extent of the affected EBS	30				28DEC07A			as per ER. B1 1.61; within 30 days of DOC
01R0001104	A REAL PROPERTY OF THE PARTY OF		30	ZODEGUTA	ISWARUOA	ZODECOTA	ISIVIAICOA	2	
station of the station of the state of the s	etween I-1 & I-2			22APR08A		22APR08A	23APR08A	2	
1R0001118	Carry out stg 1 PCS between I-1 & I-2	6						2	
01R0001120	Prepare/submit reports for stg 1 PCS bet I-1&I-2	60				24APR08A		2	
01R0001122	Review/accept reports for stg 1 PCS bet I-1&I-2	60	60	31MAY08A	20JAN09A	31MAY08A	20JAN09A	2	
The second se	etween H2 & H3	1 2			1			1 0	
01R0001130	Carry out stg 1 PCS between I-2 & I-3	5				25MAR08A		2	
01R0001132	Prepare/submit reports for stg 1 PCS bet I-2&I-3	60			and the second second second	24APR08A	C. LEWIS CO. C. LEWIS C. LEWIS C.	2	
01R0001134	Review/accept reports for stg 1 PCS bet I-2&I-3	60	60	24MAY08A	04FEB09A	24MAY08A	04FEB09A	2	
PCS Stage 1 b	etween I-3 & O-1								
01R0001142	Carry out stg 1 PCS between I-3 & O-1	5		THE REPORT OF THE PARTY OF	The second second second second second		26MAR08A	2	
01R0001144	Prepare/submit reports for stg 1 PCS bet I-3&O-1	60			-	26MAR08A		2	
01R0001146	Review/accept reports for stg 1 PCS bet I-3&O-1	60	60	31MAY08A	04FEB09A	31MAY08A	04FEB09A	2	
PCS Stage 1 a	t vicinity of 0-1						_		
01R0001106	Carry out stg 1 PCS at vicinity of O-1	5				25MAR08A		2	
01R0001108	Prepare/submit reports for stg 1 PCS at 0-1	60				31MAR08A		2	
1R0001110	Review/accept reports for stg 1 PCS at O-1	60	60	27MAY08A	09FEB09A	27MAY08A	09FEB09A	2	
PCS Stage 2 b	etween I-1 & I-2								
01R0001124	Carry out stg 2 PCS between I-1 & I-2	5	5	22APR08A	02JUN08A	22APR08A	02JUN08A	2	
01R0001126	Prepare/submit reports for stg 2 PCS bet I-1&I-2	60	60	24APR08A	10JUN08A	24APR08A	10JUN08A	2	
01R0001128	Review/accept reports for stg 2 PCS bet I-1&I-2	60	60	11JUN08A	09FEB09A	11JUN08A	09FEB09A	2	

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ID	Activity Description	D04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	Q	Total Float	2008 2009 2010 2011 2012 2013
PCS Stage 2 b	etween I-2 & I-3									
01R0001136	Carry out stg 2 PCS between I-2 & I-3	5	5	30APR08A	07JUN08A	30APR08A	07JUN08A	2		
01R0001138	Prepare/submit reports for stg 2 PCS bet I-2&I-3	60	60	02MAY08A	12JUN08A	02MAY08A	12JUN08A	2		2월 🛎 - 다음 - 다음 - 다음 - 다음 - 영상
01R0001140	Review/accept reports for stg 2 PCS bet I-2&I-3	60	60	13JUN08A	09FEB09A	13JUN08A	09FEB09A	2		
PCS Stage 2 b	etween I-3 & O-1									
01R0001148	Carry out stg 2 PCS between I-3 & O-1	5	5	09MAY08A	13JUN08A	09MAY08A	13JUN08A	2		
01R0001150	Prepare/submit reports for stg 2 PCS bet I-3&O-1	60	60	04JUN08A	18JUN08A	04JUN08A	18JUN08A	2		
01R0001152	Review/accept reports for stg 2 PCS bet I-3&O-1	60	60	19JUN08A	09FEB09A	19JUN08A	09FEB09A	2		
PCS Stage 2 at	t Vicinity of O-1									
01R0001112	Carry out stg 2 PCS at vicinity of O-1	12	12	01APR08A	06JUN08A	01APR08A	06JUN08A	2		
01R0001114	Prepare/submit reports for stg 2 PCS at 0-1	60	60	02JUN08A	16JUN08A	02JUN08A	16JUN08A	2		
01R0001116	Review/accept reports for stg 2 PCS at O-1	60	60	17JUN08A	09FEB09A	17JUN08A	09FEB09A	2		
Pre-const. con	ndition structural survey; I-1									
01R0001154	Prepare/submit reports for EBS at I-1	28	28	28AUG08A	10JAN09A	28AUG08A	10JAN09A	2		
01R0001156	Review/accept reports for EBS at I-1	28	28	12JAN09A	24MAR09A	12JAN09A	24MAR09A	2		
	adition structural survey; I-2		-		-					
01R0001158	Prepare/submit reports for EBS at I-2	28	28	28AUG08A	10JAN09A	28AUG08A	10JAN09A	2		
01R0001160	Review/accept reports for EBS at I-2	28	10.1221	and the line of the second second	24MAR09A	12JAN09A	24MAR09A	2		
	ndition structural survey; I-3	-					4	1 546		
01R0001162	Prepare/submit reports for EBS at I-3	28	28	28AUG08A	10.JAN09A	28AUG08A	10JAN09A	2	1	
01R0001164	Review/accept reports for EBS at I-3	28	10.000	Station of the second second second	24MAR09A	and the second second second	24MAR09A	2		
	ndition structural survey; O-1	-			1	1	1	1.077	-	
01R0001166	Prepare/submit reports for EBS at O-1	28	28	28AUG08A	10JAN09A	28AUG08A	10JAN09A	2		
01R0001168	Review/accept reports for EBS at 0-1	28			1.0.2020/2020/2020/20	100000000000000000000000000000000000000	24MAR09A	2		엄마 🚔 이 집 것 이 집 이 집 이 하였는데.
and the second se	ndition structural survey; Tunnel	1	-					-	-	
01R0001170	Prepare/submit reports for EBS along Tunnel alig	28	28	28AUG08A	15JAN09A	28AUG08A	15JAN09A	2	-	
01R0001172	Review/accept reports for EBS along Tunnel align	28	C. 10.	16JAN09A	 (c)=(cc.th)(cc.tob) h 	16JAN09A	10JUN09	2	-16	
Contraction of the local division of the loc							1 Constraints		1 10.00	
Traffic			_						-	
				14DEC07A	02 14 1084	14DEC07A	03JAN08A	2		
01R0001202	Appoint Traffic Consultant/Traffic Engineer	14	14	a statement of the	28FEB08A	1		2		
01R0001204	Eng's Approval of Traffic Consultant	7			31JAN08A		31JAN08A	2	-	
01R0001206	Prepare/submit TTA Schemes (ingress & egress)	14	14	Salver, Erstendig	01APR08A		01APR08A	2		TIND TMLG scheduled on 11/03/081st TMLG was held on 12/02/08
01R0001216	Obtain endorsement of TTA schemes from TMLG	21	21	02APR08A	19APR08A	a construction of the second se	19APR08A	2		HyD & Police ER.B1 1.15 (9) refers
01R0001234	Approval of TTA schemes by the Authorities	14			19APR08A			2	-	HyD & Police ER.B1 1.15 (9) refers
01R0001236	Approval of TTA schemes by the Authorities	14	144	UZAPROBA	TSAFROOA	02APR06A	13AF KUOA	2		
Managemen	t of Sub-contractors as per SCC 44									
01R0001302	Submit a Sub-contractor Management Plan	30	30	14DEC07A	12JAN08A	14DEC07A	12JAN08A	2		Swithin 30 days of LOA
01R0001304	Submit Quarterly the Updated SMP	1,642	1,642	03JUL08A	31DEC12	03JUL08A	18JAN13	2	364	Per SCC 44
Trees										
Siu Ho Wan as	a New Tree Transplanting Area									
V0028-02	Receive VO28 for new tree transplanting area	0	0		16AUG08A		16AUG08A	1		Area Within Sul Ho Wan Sewage Treatment Works

D	Activity		WP3D	AD04	AD04	WP3D	WP3D Finish		Total Float	2008 2009 2010 2011 2012	2013
100000.01	Description	Dur	Dur	Start	Finish	Start	A CONTRACTOR OF A CONTRACTOR OFTA CONTRACTOR O	125	1,1080		
VO028-04	Preparation works for new T.T. area	20	20	18AUG08A	U/SEPU8A	TRAUGURA	07SEP08A	2			8
01R0001502	Appoint Landscape Specialist Contractor	14	14	14DEC07A	14JAN08A	14DEC07A	14JAN08A	2			8
01R0001504	SO's Approval of Landscape Contractor	7	7	15JAN08A	28FEB08A	15JAN08A	28FEB08A	2			5
01R0001506	Nominate competent person to oversee tree works	45	45	14DEC07A	29JAN08A	14DEC07A	29JAN08A	2		ERB 26.02A; within 45 dyas of LOA	
01R0001510	Obtain Tree Removal Permit by Others	90	90	28DEC07A	06MAR08A	28DEC07A	06MAR08A	2	1	ER 1.5.3 (2); within 3 mths from DOC	ŝ
01R0001512	Remove / Transplant Trees start	0	0	08SEP08A		08SEP08A		2		ER 1.53(2) within 3 months from DOC	
Survey			a li n								ŝ.
01R0001602	Appoint Surveyors	14	14	28DEC07A	10JAN08A	28DEC07A	10JAN08A	2			2
01R0001604	SO's Approval of Surveyor	7	7	11JAN08A	16APR08A	11JAN08A	16APR08A	2			8
01R0001608	Initial Survey	28	28	18JAN08A	10MAR08A	18JAN08A	10MAR08A	1			8
01R0001610	Maintain & carry out survey works	1,378	1,378	23FEB08A	07DEC12	23FEB08A	18JAN13	2	0		
Smart Card	System as per ER B.30							6			1 1
01R0001802	Submit Smart Card Sys for SO's Approval	7	7	28DEC07A	15 141084		15 IAN08A	2	1	As per ER.B30 30.06(2)SOR.s approval obtained on 13/02/08	de la compañía de la comp
01R0001802	Install & start Operating Smart-Card System	60		28DEC07A				2			2È
01R0001804	Operate & Maintain Smart-Card System	1.47.47.1	0.00000	25FEB08A	The state of the second second	PRE- PRI	New York Contract of the Press	2	0		4
		1,111	heet	ZJI LOUDA	30140 4 13	201 20004	110/1114	2			-
Procuremen	nt of Sub-contractor								_		
01R0001904	Spoil Disposal	60	60	28AUG08A	27MAR09A	28AUG08A	27MAR09A	2			
01R0001906	Earthwork for Outfall O-1	60	60	14DEC07A	05JUN08A	14DEC07A	05JUN08A	2		awarded to Kin Lee	8 1
01R0001910	Re-bar Supply	90	90	14DEC07A	30MAY08A	14DEC07A	30MAY08A	2		awarded to VSC Steel Co. Ltd by PR	8
01R0001912	Soil Nailing	60	60	28DEC07A	02APR08A	28DEC07A	02APR08A	2		Geotech Eng td	3
01R0001914	H-piling Works	90	90	14DEC07A	09MAY08A	14DEC07A	09MAY08A	2		awarded to Hin Wing	1
01R0001916	Fabrication of Pre-cast Lining	80	80	02JUN08A	05JAN09A	02JUN08A	05JAN09A	2			2
01R0001920	Drainage/Road Works for Access Road at I-3	60	60	08AUG08A	03NOV08A	08AUG08A	03NOV08A	2		King Shing	8
01R0001922	Temp. steel decking over Shing Mun Nullah at I-1	90	90	14DEC07A	25APR08A	14DEC07A	25APR08A	2		awarded to Long Faith	
01R0001924	Design/Install Communication System	344	344	28JUN08A	26JUN09	28JUN08A	26JUN09	2	356		d
01R0001925	Design/install Flow Monitoring Devices	78	78	14JUL08A	01AUG08A	14JUL08A	01AUG08A	2		awarded to Soldata	
01R0001936	Procurement & delivery of Communication System	180	180	06DEC09	03JUN10	06DEC09	03JUN10	2	356		
01R0001938	Procurement/delivery of Flow Measurement Devices	120	120	110CT09	07FEB10	110CT09	07FEB10	2	501		
01R0018A02	Supply TBM/Main Tunnel Construction	7	7	14DEC07A	21DEC07A	14DEC07A	21DEC07A	2		fawaded to Seli	0
01R0018A04	Security	17	17	17DEC07A	02JAN08A	17DEC07A	02JAN08A	2			1
01R0018A06	Progress Photo/Vedio	25	25	29DEC07A	22JAN08A	29DEC07A	22JAN08A	2			2
01R0018A08	Webpage/Physical Model/3D Animation	48	48	14DEC07A	14FEB08A	14DEC07A	14FEB08A	2		awarded to Intelibuild	
01R0018A10	Hoarding/Fencing Erection	60	60	04JAN08A	03MAR08A	04JAN08A	03MAR08A	2		awarded to Ch Yau	
01R0018A12	Erection of Contractor's Office	67	67	28DEC07A	03MAR08A	28DEC07A	03MAR08A	2	1	awarded to Ming Kee	24
01R0018A14	Remote Control CCTV	60	60	04JAN08A	03MAR08A	04JAN08A	03MAR08A	2		awarded to Pilet Electronic	
01R0018A16	Concrete Supply	45	45	14DEC07A	11MAR08A	14DEC07A	11MAR08A	2		Anderson	2
01R0018A18	Geotechnical Instrumentation	60	60	15JAN08A	14MAR08A	15JAN08A	14MAR08A	2		awarded to So data	53
01R0018A20	Drilling/Grouting for Geotchnical Instrumentat.	60	60	16JAN08A	15MAR08A	16 JAN08A	15MAR08A	2		awarded to Lam	1

Sheet 6 of 58

D	Activity Description	D04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	0	Total Float	2006 2009 2010 2011 2012 2013
01R0018A22	Site Clearance	60	60	26JAN08A	25MAR08A	26JAN08A	25MAR08A	2		awarded to King Shing
01R0018A24	Erection of SOR's Office	95	95	02JAN08A	05APR08A	02JAN08A	05APR08A	2		awarded to Long Faith
01R0018A26	Carry out Grout Trial at Fault F1	90	90	02APR08A	30JUN08A	02APR08A	30JUN08A	2		awarded to Dril Tech
01R0018A28	Design/Fabricate Segmental Lining Mould	90	90	23APR08A	21JUL08A	23APR08A	21JUL08A	2		awarded to Korea Mould
01R0018A30	Construction of Skin Walls	90	90	21JUL08A	03JAN09A	21JUL08A	03JAN09A	2		Wilson Construction
01R0018A32	Design/Fabricate/Supply/Install Conveyor Belt	90	90	14JUL08A	05JAN09A	14JUL08A	05JAN09A	2		
01R0018A34	Supply of Locomotive	90	90	14JUL08A	100CT08A	14JUL08A	100CT08A	2		Schoma
01R0018A36	Excavation Works at I-1	60	60	28AUG08A	21JAN09A	28AUG08A	21JAN09A	2		awarded to C & H Eng. Co.
01R0018A38	Construction of Steel Platform at O-1	50	50	28AUG08A	14MAR09A	28AUG08A	14MAR09A	2		
01R0018A40	Construction of Steel Platform at I-2	50	50	28AUG08A	27DEC08A	28AUG08A	27DEC08A	2		Chi Yau
01R0018A42	Pre-excavation Grouting for Shaft Excavation	60	60	28AUG08A	11MAR09A	28AUG08A	11MAR09A	2		
01R0018A46	Excavation/Construction of TBM Launching Chamber	70	70	28AUG08A	18DEC08A	28AUG08A	18DEC08A	2		Super Rich
01R0018A48	Construction of Subgrade Structure at I-1	333	333	28AUG08A	26JUL09	28AUG08A	26JUL09	2	186	
01R0018A50	Shaft Excavation by RCD at I-2	90	90	28AUG08A	26NOV08A	28AUG08A	26NOV08A	2		Longo Piling
01R0018A52	Excavation/Construction of Shafts/Adits/Chambers	90	90	28AUG08A	26MAR09A	28AUG08A	26MAR09A	2		
01R0018A54	Construction of Hopper at O-1	90	90	28AUG08A	31JAN09A	28AUG08A	31JAN09A	2	1	awarded to Multitech
01R0018A56	Suttering of Spiral Ramp	233	233	28AUG08A	26JUL09	28AUG08A	26JUL09	2	200	
01R0018A58	Open Cut Excavation & Construction at I-3	90	90	28AUG08A	02MAY09A	28AUG08A	02MAY09A	2		
01R0018A60	Lining Formworks for Underground Structures	233	233	28AUG08A	05AUG09	28AUG08A	05AUG09	2	137	
01R0018A61	Tunnel Data Management System (TDMS)	90	90	28AUG08A	03APR09A	28AUG08A	03APR09A	2		
01R0018A62	Supply of Rail Track	90	90	28AUG08A	26MAR09A	28AUG08A	26MAR09A	2		
01R0018A64	Supply of Aggregate	120	120	28FEB09A	28JUL09	28FEB09A	28JUL09	2	-64	
01R0018A68	Construct Box Culvert/Cascade/Spiral Ramp at O-1	200	200	28FEB09A	16SEP09	28FEB09A	16SEP09	2	1,566	
01R0018A70	Metal Works	200	200	28FEB09A	16OCT09	28FEB09A	16OCT09	2	593	
01R0018A72	Pipe Jacking Works at Lo Wai	250	250	28FEB09A	16OCT09	28FEB09A	16OCT09	2	301	
01R0018A74	Finishing Works	250	250	28FEB09A	05DEC09	28FEB09A	05DEC09	2	549	
Others 01R0001928	Submit Contractor's Management Team	0	0		10JAN08A		10JAN08A	2		Per SCC 74
01R0001930	Submit Photographer for Monthly Progress Photo	0	0			28JAN08A		2		♦Per ER10!7
01R0001932	Install Project Signboards at Potions A,B,C & D	30	30		29MAY09	28FEB09A	29MAY09	2	0	
01R0001934	Presentation of TDMS to SOR/ Employer; ER 4.4.6	6						2		unnel excavation=presentation of the TDMS to the SO & DSD before
01R0001940	Prepare/submit Operation & Maintenance Manual	90	90	11NOV11	08FEB12		21MAR12	2	691	E s per ER4.4.11
01R0001942	Prepare/submit As-built Drawings	90	90	08DEC12	07MAR13		18APR13	2	298	as per ER4.4.12
01R0001944	Produce 2 documentary video for tunnel	30	30		06JAN13		17FEB13	2	358	
Construction	Risk Assessment (CRA) as per ER 7									
								-	-	
01R00PCRA2	s at Portion A (I-1) Prepare/submit PCRA for works at I-1	21	21	07APP08A	20AUG08A	07APP08A	20AUG08A	2	1	AIP submission
01R00PCRA2	DC review & certify PCRA for works at I-1	60			130CT08A			2	+	
01R00PCRA4	SOR review & accept PCRA to works at I-1	60			25SEP08A			2	-	
01R00PCRA8	GEO review/agree PCRA	28					09DEC08A	2		=ER C. 7.6.4
		20	20	STOOTOGA	USDECUGA	STOOTOOA	USDECOOA	2		
F	s at Portion B (I-2)	04	04	1440000	2041/2024	440D000	204110084	0		
01R00PCRB2	Prepare/submit PCRA for works at I-2	21	21	14APR08A	ZUAUGU8A	14APR08A	20AUG08A	2		AIP submission

01R00PCRB4	Description	Dur	Dur	Start	Finish	Start	Finish	D	Float			
REPORT OF A CONTRACTOR	DC review & certify PCRA for works at I-2	60	60	22MAY08A	130CT08A	22MAY08A	130CT08A	2				
1R00PCRB6	SOR review & accept PCRA at works at I-2	60	1 221	and the second		22MAY08A	the transmission of the second	2				
1R00PCRB8	GEO review/agree PCRA	28	28	310CT08A	09DEC08A	310CT08A	09DEC08A	2		ER C. 7.6.4		131
	at Portion C (I-3)	1	1					1				1
1R00PCRC2	Prepare/submit PCRA for works at 1-3	21	21	01APR08A	20AUG08A	01APR08A	20AUG08A	2	F 3	AIP submission		31
1R00PCRC4	DC review & certify PCRA for works at I-3	60		CONTRACTOR OF CALL	100000000000000000000000000000000000000	21MAY08A	1	2				12
1R00PCRC6	SOR review & accept PCRA at works at I-3	60				21MAY08A		2				181 - T
1R00PCRC8	GEO review/agree PCRA	28	28	310CT08A	09DEC08A	310CT08A	09DEC08A	2	8	ER Q. 7.6.4		
CRA for Works	at Portion D/E (O-1)											12
1R00PCRD2	Prepare/submit PCRA for works at O-1	21	21	01APR08A	20AUG08A	01APR08A	20AUG08A	2		AIP submission		34
1R00PCRD4	DC review & certify PCRA for works at O-1	60	<u> </u>			21MAY08A		2			1	37 11
1R00PCRD6	SOR review & accept PCRA at works at 0-1	60	60			12MAY08A	Contract & Annual State State	2				
1R00PCRD8	GEO review/agree PCRA	28				310CT08A		2		ER C. 7.6.4		王 (4) —
	at Portion F/J (Main Tunnel)											
1R00PCRF2	Prepare/submit PCRA for main tunnel works	21	21	09JUN08A	23APR09A	09JUN08A	23APR09A	2		AIP submission		24
1R00PCRF4	DC review & certify PCRA for main tunnel works	60	60		· · · · · · · · · · · · · · · · · · ·	14JUL08A	08JUN09	2	-77			
1R00PCRF6	SOR review & accept PCRA for main tunnel works	60	60			16JUL08A	16JUN09	2	-78			12
1R00PCRF8	GEO review/agree PCRA	28		28FEB09A		28FEB09A	09JUN09	2		ER CI. 7.6.4		100
	at Portion A (I-1)	20	2.5	201 2000/1	00001100	201 2000/1	50001100	-				1
1R00DCRA2	Prepare/submit DCRA for works at I-1	14	14	020CT08A	27007084	020CT08A	270CT08A	2		DDA submission		2
1R00DCRA4	DC review & certify DCRA for works at I-1	21	21			280CT08A		2			1 18 - 1	al n
1R00DCRA6	SOR review & accept DCRA at works at I-1	49	49			05NOV08A		2				
1R00DCRA8	GEO review/agree DCRA	28	28			Concernant and presidents	27MAR09A	2		ER CI. 7.6.4		
	s at Portion B (I-2)	20	20	201 200011	21111 01001	201 200011	2110 alcost					
1R00DCRB2	Prepare/submit DCRA for works at I-2	14	14	140CT08A	02 11 1009	140CT08A	02JUN09	2	0	DDA submission	1 1 2	£2.
1R00DCRB4	DC review & certify DCRA for works at I-2	21	21	05DEC08A	09JUN09	+	1	2	0			82 -
1R00DCRB6	SOR review & accept DCRA at works at I-2	49	49			10DEC08A		2	7		이 방법이 가장	32
1R00DCRB8	GEO review/agree DCRA	28	28			10JUN09	07JUL09	2		ER CI. 7.6.4		個一
		20	20	10001100	0730203	10301405	0100203	- 4				
1R00DCRC2	at Portion C (I-3) Prepare/submit DCRA for works at I-3	14	14	140CT08A	03.000	140CT08A	03JUN09	2	-59	DDA submission		12
1R00DCRC2	DC review & certify DCRA for works at I-3	21		310CT08A		310CT08A		2	-59	DDA Submission		121
1R00DCRC4	SOR review & accept DCRA to works at I-3	49	25.5.17	07NOV08A		07NOV08A		2	-59		1 184 - 2	33
1R00DCRC8	GEO review/agree DCRA	28	28	committee of the particular section		11JUN09	08JUL09	2	-39	ER CI. 7.6.4		12
		20	20	11001003	0000109	11001009	0000203	2	0			
1R00DCRD2	at Portion D/E (0-1) Prepare/submit DCRA for works at 0-1	14	14	03NOV08A	03.000	03NOV08A	03JUN09	2	-157	DDA submission	1. 1. 1.	10
	DC review & certify DCRA for works at 0-1	21				15NOV08A		2	-157	Subh Subhission		- 18
1R00DCRD4 1R00DCRD6	SOR review & accept DCRA for works at 0-1	49	10000			15NOV08A		2	-157			
1R00DCRD8	GEO review/agree DCRA	28	28	and the print of the second		11JUN09	08JUL09	2	-157	ER CI. 7.6.4		24
	NEW CONTRACTOR OF A CONTRACT CONT	20	20	FIGUNUS	0000209	11001409	0000108	4				39
	s at Portion F/J (Main Tunnel)	- 24	24	14140000	22 IL INO2	14140004	23JUN09	1 0	70			
1R00DCRF2	Prepare/submit DCRA for main tunnel works	21		14MAR09A	1	14MAR09A		2	-78	DDA submission		21-
1R00DCRF4	DC review & certify DCRA for main tunnel works	21	21	24JUN09	14JUL09	and the second sec	14JUL09	2	-78			100
1R00DCRF6 1R00DCRF8	SOR review & accept DCRA for main tunnel works GEO review/agree DCRA	49	49 28	24JUN09 15JUL09	11AUG09 11AUG09		11AUG09 11AUG09	2	-78	ER CI. 7.6.4		

ID	Activity Description	D04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	C	Total Float	2008 2009 2010 2011 2012 2013
Physical Mo	dels & Other Material Display	Contraction of the second s	and the second s			Se				
Trysical wo	uels a other material orspity									
01R0002302	Prepare/submit a physical models	255	255	15FEB08A	27NOV08A	15FEB08A	27NOV08A	2		to the acceptance of the SO
01R0002304	Prepare/submit a 3-D animation model	308	308	15FEB08A	27FEB09A	15FEB08A	27FEB09A	2		to the acceptance of the SOas per ER's Note 4.4.9
Internet Web	osite as per ER 4.4.7									
01R0002402	Propose the design of web page	30	30	28DEC07A	09FEB08A	28DEC07A	09FEB08A	2		Swithin 1 month from DOC
01R0002404	Produce the web page for approval of SO	211	211	10MAR08A	19FEB09A	10MAR08A	19FEB09A	2		within 2 months from DOC
01R0002406	SO's approval of web page	30	30	02JUN08A	24FEB09A	02JUN08A	24FEB09A	2		
01R0002408	Submit updated web pages monthly	1,433	1,433	25FEB09A	30NOV13	25FEB09A	11JAN14	2	30	
Schedule of	Milestones for Cost Centre No. 1R									
01 R0002501	1R 1; On provision of SO's Accommodation	0	0		13SEP08A		13SEP08A	2		Accommodation for accupation as per App. ER.M
01 R0002502	1R 2; On providing documents of effected CWI	0	0		03JAN08A		03JAN08A	2		Care of the works insurance has been effected
01 R0002503	1R 3; On providing documents of effected TPI	0	0		03JAN08A		03JAN08A	2		◆3rd party insurance has been effected
01R0002504	1R 4; On Pproviding documents of effected PII	0	0		03JAN08A		03JAN08A	2		P. I. Insurance has been effected.
01R0002505	1R 5; On delivery of all Land Transport for SO	0	0		02MAY08A		02MAY08A	2		In transport delivered for use of the SO
01R0002506	1R 6; On install. of computer facilities for SO	0	0		13SEP08A		13SEP08A	2		computer facilities for use of the SO
01R0002507	1R 7; On accept. of detailed CRA incl. PCS	0	0		11AUG09		11AUG09	2	1,602	
01R0002508	1R 8; On acceptance of Physical Model by the SO	0	0		27NOV08A		27NOV08A	2		physical model completed as per ER 4.4.8
01R0002509	1R 9; On acceptance of 3-D Animation Model	0	0		27FEB09A		27FEB09A	2		3 D animation model completed as per ER 4.4.9
01R0002510	1R 10; On satisf. operation of CCTV for 3 mth	0	0		17JUN09		17JUN09	2		D as per ER 4.4.10 for 3 mths of the remote CCTV intalled in
01R0002511	1R 11; On acceptance of O&MM	0	0		08FEB12		21MAR12	2	691	O&IMM completed as per ER 4.4.11
01R0002512	1R 12; On acceptance of as-built drwgs.	0	0		07MAR13		18APR13	2	298	
01R0002513	1R 13; On acceptance of T.R/Video/Brouchure	0	0		06JAN13		17FEB13	2	358	
01R0002514	1R 14; On complete all wks for 3 mth frm DOC	0	0		27MAR08A		27MAR08A	2		of all obligations by this C.S. 3-mths from DOC
01R0002515	1R 15; On complete all wks for 6 mth frm DOC	0	0		27JUN08A	_	27JUN08A	2	-	of all obligations by this CS 6 mths from DOC
01R0002516	1R 16; On complete all wks for 9 mth frm DOC	0	0		25SEP08A		25SEP08A	2	-	♦of all obligations by this CS 9 mths from DOC
01R0002517	1R 17; On complete all wks for 12 mth frm DOC	0	0		27DEC08A		27DEC08A	2		of all obligation by this CS 12 mths frm DOC
01R0002518	1R 18; On complete all wks for 15 mth frm DOC	0	0		27MAR09A		27MAR09A	2	1.100	of all obligations by this CS 15 mths frm DOC
01R0002519	1R 19; On complete all wks for 18 mth frm DOC	0	0		26JUN09		26JUN09	2	1,163	♦ of all obligations by this CS 18 mths frm DOC ♦ of all obligations by this CS 21 mths frm DOC
01R0002520	1R 20; On complete all wks for 21 mth frm DOC	0	0		25SEP09		25SEP09	2	1,072	◆of all obligations by this CS 21 mins frm DOC ◆of all obligations by this CS 24 mins frm DOC
01R0002521	1R 21; On complete all wks for 24 mth frm DOC	0	0		26DEC09		26DEC09	2	980 889	 Of all obligations by this CS 24 mins frm DOC Of all obligations by this CS 27 mins frm DOC
01R0002522	1R 22; On complete all wks for 27 mth frm DOC	0	0		27MAR10		27MAR10	2	798	 In obligations by this CS 27 must find be of all obligations by this CS 30 mths fm
01R0002523	1R 23; On complete all wks for 30 mth frm DOC	0	0		26JUN10		26JUN10 25SEP10	2	798	♦ of all obligations by this CS 30 mins inn
01R0002524	1R 24; On complete all wks for 33 mth frm DOC	0	0		25SEP10		25SEP10 26DEC10	2	615	◆of all obligations by this CS 35 mins i
01R0002525	1R 25; On complete all wks for 36 mth frm DOC		0		26DEC10 27MAR11		26DEC10 27MAR11	2	524	
01R0002526	1R 26; On complete all wks for 39 mth frm DOC	0	0		2/MAR11 26JUN11		2/MAR11 26JUN11	2	433	♦ of all obligations by this CS is
01R0002527	1R 27; On complete all wks for 42 mth frm DOC	0	0		255EP11		255EP11	2	342	
01R0002528	1R 28; On complete all wks for 45 mth frm DOC	0	0		255EP11 04JAN13		15FEB13	2	342	of completion except Section 7
01R0002529	1R 29; On issuance of completion certificates	0	0		04JAN13 08MAR13		19APR13	2	297	
01R0002530	1R 30; On complete all wks for 3 mth frm CMP	U	U		UDIVIAR 13		ISAPR13	2	297	

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UD.	Activity Description	AD04 Dur	WP3D Dur	AD04 Start					Total Float	2008 2009 2010 2011 2012 2013
01R0002531	1R 31; On complete all wks for 6 mth frm CMP	0	0	ones.	07JUN13	19JU	102M2	2	206	of all obligations 6 mths frm DOM excl. Sec. 7
01R0002532	1R 32; On complete all wks for 9 mth frm CMP	0	0		06SEP13	1800		2	115	of all obligations 9 mths frm DOM excl. Sec. 7
01R0002533	1R 33: On issuance of maintenance certificate	0	0		30DEC13	10FE		2	0	certificate 🔶
The second se	stand to be a second			P COMP		-				
Schedule of	Milestones for Cost Centre No. 16R								-	
16R7003001	16R 1: On completion of landscape wks; Portion A	0	0		01MAR12	01MA	R12	2	669	
16R7003002	16R 2: On completion of landscape wks; Portion B	0	0		16MAR12	16MA	R12	2	654	
16R7003003	16R 3; On completion of landscape wks; Portion C	0	0		28JAN12	28JA	V12	2	702	
16R7003004	16R 4: On completion of landscape wks; Portion D	0	0		30NOV12	11JA	113	2	395	
16R7003005	16R 5; On completion of establish wks; Portion A	0	0		01MAR13	01MA	R13	2	304	
16R7003006	16R 6; On completion of establish wks; Portion B	0	0		16MAR13	16MA	R13	2	289	
16R7003007	16R 7; On completion of establish wks; Portion C	0	0		27JAN13	27JA	N13	2	337	
16R7003008	16R 8; On completion of establish wks; Portion D	0	0		30NOV13	11JA	N14	2	30	
-	Milestones for Cost Centre No. 17R						100			
17R0003101	17R 1; On complet of all wks for 3 mth frm DOC	0	0		27MAR08A	27MA	R08A	2		of all safety & env. obligations 3 mths frm DOC
17R0003102	17R 2; On complet of all wks for 6 mth frm DOC	0	0		27JUN08A	27JU	N08A	2		of all safely & env. obligations 6 mths frm DOC
17R0003103	17R 3; On complet of all wks for 9 mth frm DOC	0	0		26SEP08A	26SE	P08A	2		of all safey & env. obligations 9 mths frm DOC
17R0003104	17R 4; On complet of all wks for 12 mth frm DOC	0	0		27DEC08A	27DE	C08A	2		of all safety & env. obligations 12 mths frm DOC
17R0003105	17R 5; On complet of all wks for 15 mth frm DOC	0	0		27MAR09A	27M/	R09A	2		of all safety & env. obligations 15 mths frm DOC
17R0003106	17R 6; On complet of all wks for 18 mth frm DOC	0	0		27JUN09	15JU	L09	2	1,647	of all safety & env. obligations 18 mths frm DOC
17R0003107	17R 7; On complet of all wks for 21 mth frm DOC	0	0		26SEP09	1400	:T09	2	1,556	of all safety & env. obligations 21 mths frm DOC
17R0003108	17R 8; On complet of all wks for 24 mth frm DOC	0	0		26DEC09	13JA	N10	2	1,465	of all safety & env. obligations 24 mths frm DOC
17R0003109	17R 9; On complet of all wks for 27 mth fm DOC	0	0		28MAR10	15AF	R10	2	1,373	of all safety & env. obligations 27 mths frm D
17R0003110	17R 10; On complet all wks for 30 mth frm DOC	0	0		27JUN10	15JU	L10	2	1,282	of all satety & env. obligations 30 mths fm
17R0003111	17R 11; On complet all wks for 33 mth frm DOC	0	0		26SEP10	1400	T10	2	1,191	of all safety & env. obligations 33 mths
17R0003112	17R 12; On complet all wks for 36 mth frm DOC	0	0		26DEC10	13JA	N11	2	1,100	of all safety & env. obligations 36 m
17R0003113	17R 13; On complet all wks for 39 mth frm DOC	0	0		28MAR11	15AF	R11	2	1,008	of all safety & env. obligations 38
17R0003114	17R 14; On complet all wks for 42 mth frm DOC	0	0		27JUN11	15JU	L11	2	917	of all safety & env. obligations
17R0003115	17R 15; On complet all wks for 45 mth frm DOC	0	D		26SEP11	1400	T11	2	826	of all safety & env. obligati
17R0003116	17R 16; On complet all wks for 48 mth frm DOC	0	0		26DEC11	13JA	N12	2	735	of all safety & env. obligations 48 mths frm DOC
17R0003117	17R 17; On complet of all wks for 3 mth frm CMP	0	0		08MAR13	19AF	R13	2	297	of all safety & env. obligations 3 mths frm DOMexcl. Section 7
17R0003118	17R 18; On complet of all wks for 6 mth frm CMP	0	0		07JUN13	19JU	L13	2	206	of all safety & env. obligations 6 mths frm DOMexcluding Section 7
17R0003119	17R 19; On complet of all wks for 9 mth frm CMP	0	0		07SEP13	1900	T13	2	114	of all safety & env. obligations 9 mths frm DOMexcluding Section 7+
17R0003120	17R 20; On issuance of maintenance certificate	0	0		30DEC13	10FE	B14	2	0	certificate
Design/Des	ign Check for Permanent Works	فلتعود		-						
Project -wid	e Packages				and the second second	1715	and the second			
Project Design	n Plan (PDP)									
02L10D0102	Employ Independent Designer	7			20DEC07A 14D			2	1	
02L10D0104	Prepare & submit Project Design Plan (PDP)	28			26FEB08A 14D			2		ER 5.4.1, within 28 days of LOA
02L10D0106	SO's review & comment on PDP	28			18MAR08A 27F			2		
02L10D0108	Provide further information of (PDP)	28	28	19MAR08A	21AUG08A 19M	AR08A 21AL	IG08A	2		

ID	Activity Description	D84 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	0	Total Float	2038	2009					T
02L10D0110	SO approves PDP	14	14	14MAY08A	04SEP08A	14MAY08A	04SEP08A	2							1.2	
02L10D0112	Employ Independent Design Checker	14	14	28DEC07A	01FEB08A	28DEC07A	01FEB08A	2				1			inter .	
02L10D0114	Approval of Design Checker by the SO	28	28	02FEB08A	28FEB08A	2FEB08A	28FEB08A	2	1							
	mmunication System											-		111	1181	
02L1FE0102	Design preparation for the AIP submission	15	15	27JUN09	11JUL09	27JUN09	11JUL09	2	356		0	1		12		
02L1FE0103	Design (AIP) submission for the DC's approval	1	1	13JUL09	13JUL09	13JUL09	13JUL09	1	288		1 1	2.1		1.1		
02L1FE0104	Design (AIP) certification by the Design Checker	28	28	14JUL09	10AUG09	14JUL09	10AUG09	2	356	10		11		43	1421	
2L1FE0106	Design (AIP) submission for the SO's approval	1	1	13JUL09	13JUL09		13JUL09	1	294	1 and	1	-			1943	
2L1FE0108	Design (AIP) review by the SO	60	60	21JUL09	18SEP09	21JUL09	18SEP09	2	356	15					2123	
2L1FE0110	AIP submission for rel. authorities' approval	1	1	13JUL09		13JUL09	13JUL09	1	321	-He	4			37		
2L1FE0112	Design (AIP) review by the rel. authorities	28	28	21JUL09	17AUG09		17AUG09	2	387	1.1		-		190	148	
2L1FE0114	Obtain rel. authorities's approval for AIP	1	1	18AUG09	18AUG09		18AUG09	1	315	1.01	1			122	1123	
02L1FE0116	Obtain SO's consent for design (AIP)	0	0		19SEP09		19SEP09	2	356		•					
2L1FE0118	Design preparation for the DDA submission	30	30	28AUG09	26SEP09	28AUG09	26SEP09	2	356	1.5		**: *		370 =	1481	
02L1FE0119	Design (DDA) submission for the DC's approval	1	1	28SEP09	28SEP09	inges sure marea	28SEP09	1	288		1	1		1.12.12	- 181	
02L1FE0120	Design (DDA) certification by the Design Checker	28	28		260CT09	Mar Source Pressed	260CT09	2	356			100		1	1	
2L1FE0120	Design (DDA) certification by the Design Checker Design (DDA) submission for the SO's approval	1	20	28SEP09	28SEP09	Contraction of Contraction	285EP09	1	293	121			1	1204	- 1324	
		60	60	060CT09	097530422110113404.1	060CT09	04DEC09	2	356	結				1201	一花海	
2L1FE0124	Design (DDA) review by the SO	1	1	28SEP09	28SEP09	CIRCLE CONSTRUCTION	28SEP09	1	319	(Ex)		8				
2L1FE0126	DDA submission for rel. authorities' approval		28	265EF09	02NOV09	Server and the Server	02NOV09	2	388	121		1		120-		
2L1FE0128	Design (DDA) review by the rel. authorities	28			100000000000000000000000000000000000000	New York (Chies	02NOV09	1	316					1	- 484	
02L1FE0130	Obtain rel. authorities's approval for DDA	1	1	03NOV09	03NOV09	13100009	1.1111111111111111111111111111111111111	14	201222	191			1.000	500	- 383	
02L1FE0132	Obtain SO's consent for design (DDA)	0	0		05DEC09		05DEC09	2	356	-		×		-	- 18	
	w Measurement System	ी समेत	1 4		[12				12		
2L1FE0202	Design preparation for the AIP submission	0	0		11MAY09A		11MAY09A	2		18				· · · · ·	- 14	
2L1FE0203	Design (AIP) submission for the DC's approval	1	1	29MAY09	29MAY09	2220202000000	29MAY09	1	410				- 1	2×10^{-1}		
2L1FE0204	Design (AIP) certification by the Design Checker	28	28	2.9903.0004.0 (Mccc.	26JUN09		26JUN09	2	502	1.		1		30		
2L1FE0206	Design (AIP) submission for the SO's approval	1	1	12MAY09A	12MAY09A		12MAY09A	1	-					i kay		
2L1FE0208	Design (AIP) review by the SO	60	225265	13MAY09A	24JUL09			2	502	120	F	_	-11 -		1.24	
2L1FE0210	AIP submission for rel. authorities' approval	1	1		29MAY09		29MAY09	1	432	100				18-1	- 434	
2L1FE0212	Design (AIP) review by the rel. authorities	28	28	06JUN09		D6JUN09	03JUL09	2	522					1.64	1.44	
02L1FE0214	Obtain rel. authorities's approval for AIP	্ৰ	1	04JUL09	04JUL09	04JUL09	04JUL09	1	427) <u>.</u>				12.0	1431	
2L1FE0216	Obtain SO's consent for design (AIP)	0	0		25JUL09		25JUL09	2	502	1.0	•				22	
02L1FE0218	Design preparation for the DDA submission	30	30	03JUL09	01AUG09	03JUL09	01AUG09	2	502	1						
02L1FE0219	Design (DDA) submission for the DC's approval	া	1	03AUG09	03AUG09	03AUG09	03AUG09	1	410	18			9		12.24	
2L1FE0220	Design (DDA) certification by the Design Checker	28	28	04AUG09	31AUG09	04AUG09	31AUG09	2	501	- 13		÷1			133	
2L1FE0222	Design (DDA) submission for the SO's approval	1	1	03AUG09	03AUG09	03AUG09	03AUG09	1	416					i Bost	12	
02L1FE0224	Design (DDA) review by the SO	60	60	11AUG09	09OCT09	11AUG09	09OCT09	2	501				100			
02L1FE0226	DDA submission for rel. authorities' approval	1	1	03AUG09	03AUG09	03AUG09	03AUG09	1	440	30	1				124	
02L1FE0228	Design (DDA) review by the rel. authorities	28	28	11AUG09	07SEP09	11AUG09	07SEP09	2	533		=					
02L1FE0230	Obtain rel. authorities's approval for DDA	1	1	08SEP09	08SEP09	08SEP09	08SEP09	1	431		1			18		
02L1FE0232	Obtain design (DDA) approval from the SO	0	0		10OCT09		10OCT09	2	501	1		N		10	161	

ID.	Activity Description	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish		Total Float								T
Devilen Devil		and a	Cour	otart	- mien	Start										198	
	ages for Works in Portion A							-	-			- 3			15	112	
	ecking Design Over Shing Mun Nullah			00550004	15MAY08A	DOFEDORA	15MAY08A	2		1					and the	18	
02L1AA0102	Design preparation by the Designer	14	14	22FEB08A				2							1001	1.23	í
02L1AA0104	Design certification by the Design Checker	14	14		1998, 1997, 1992, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 19	16MAY08A				-	1	- 1	-		- 10 F-	-16	
02L1AA0106	Design submission for the SO's approval	1	1	26MAY08A		26MAY08A	and the second s	1									
02L1AA0108	Design review by the SO	21		27MAY08A				2						a []	çên ni mir		1.56mm
02L1AA0110	Obtain design approval from the SO	0	0		30JUN08A		30JUN08A	2	-	×		-					
-	or Spiral Ramp/Cascade/Box Culvert		,		1	La constantina de la			_							ij. zag	
02L1AA0202	Design preparation for the DDA submission	158		02MAY08A		02MAY08A		2				-1					-
02L1AA0203	Design submission for the DC's approval	2	2		17FEB09A		17FEB09A	1		1 Constant						1.5	-
02L1AA0204	Design (DDA) certification by the Design Checker	30	30	super- blacking independent	17FEB09A		17FEB09A	2				- 1	-				
02L1AA0206	Design (DDA) submission for the SO's approval	2	2			12AUG08A		1		-1					1.92	122	
02L1AA0208	Design (DDA) review by the SO	68	68	and the second sec		13AUG08A		2		말할 때 🖛						1440	
02L1AA0216	SO submit design (DDA) for approval of GEO	1	1	03FEB09A	03MAR09A		03MAR09A	1	72	1	=7 d	ays aft	er ICE certific	cation	44		
02L1AA0218	Design (DDA) review/approval by the GEO	28		04MAR09A		04MAR09A		2	0	0.50					124	- week	
02L1AA0238	Obtain SO's consent for design (DDA)	0	0		24MAR09A		24MAR09A	2		2011	9				š	1 23	
Temp. Platform	m Design for H-Piling								_						1381	199	[] · · · ·
02L1AA0302	Design preparation by the Designer	15	15	04JAN10*	18JAN10	04JAN10*	18JAN10	2	330	18							
02L1AA0303	Design submission for the DC's approval	1	1	19JAN10	19JAN10	19JAN10	19JAN10	1	269	-					5 July 1		
02L1AA0304	Design certification by the Design Checker	28	28	20JAN10	16FEB10	20JAN10	16FEB10	2	330				•			122	
02L1AA0306	Design submission for the SO's approval	1	1	19JAN10	19JAN10	19JAN10	19JAN10	1	269	1				19	1.	12	
02L1AA0308	Design review by the SO	42	42	20JAN10	02MAR10	20JAN10	02MAR10	2	330						al di	12.23	
02L1AA0310	Obtain design approval from the SO	0	0		02MAR10	1	02MAR10	2	330	10		_	•			135	
Cascade & Bo	ox Culver Design for Portion A									11				- 1		133	
02L1AA0402	Design preparation for the AIP submission	30	30	02JUN08A	28FEB09A	02JUN08A	28FEB09A	2									1
02L1AA0403	Design (AIP) submission for the DC's approval	3	3	12JUL08A	02MAR09A	12JUL08A	02MAR09A	1	1			4		_0		112	
02L1AA0404	Design (AIP) certification by the Design Checker	243	243	14JUL08A	18MAR09A	14JUL08A	18MAR09A	2			15	ICE	n 17/09/092i	nd ICE ce	rt on 02/12/	08	
02L1AA0406	Design (AIP) submission for the SO's approval	2	2	15JUL08A	19MAR09A	15JUL08A	19MAR09A	1								112	ţ.
02L1AA0408	Design (AIP) review by the SO	66	66	16JUL08A	20MAR09A	16JUL08A	20MAR09A	2		bel 💳			1			12	
02L1AA0410	AIP submission for rel. authorities' approval	1	1	14JUL08A	19AUG08A	14JUL08A	19AUG08A	1			13					1972	
02L1AA0412	Design (AIP) review by the rel. authorities	28	28	15JUL08A	12NOV08A	15JUL08A	12NOV08A	2			4	1	(1) A		(p.d.	1418	
02L1AA0414	Obtain rel. authorities's approval for AIP	1	1	03NOV08A	12NOV08A	03NOV08A	12NOV08A	1						1		1.10	
02L1AA0420	Obtain SO's consent for design (AIP)	0	0		20MAR09A	N	20MAR09A	2			•						
02L1AA0422	Design preparation for the DDA submission	30	30	21MAR09A	12JUN09	21MAR09A	12JUN09	2	124								
02L1AA0423	Design (DDA) submission for the DC's approval	1	1	13JUN09	13JUN09	13JUN09	13JUN09	1	105								
02L1AA0424	Design (DDA) certification by the Design Checker	28	28	14JUN09	11JUL09	14JUN09	11JUL09	2	126		1	•					1
02L1AA0426	Design (DDA) submission for the SO's approval	1	1	13JUN09	13JUN09	13JUN09	13JUN09	1	103				1 13		130	188	
02L1AA0428	Design (DDA) review by the SO	66	66	14JUN09	18AUG09	14JUN09	18AUG09	2	124							20	
02L1AA0430	DDA submission for rel. authorities' approval	1	1	20JUN09	20JUN09	20JUN09	20JUN09	1	128			1		8			
02L1AA0432	Design (DDA) review by the rel, authorities	28	28	21JUN09	18JUL09	21JUN09	18JUL09	2	155							142	
02L1AA0434	Obtain rel. authorities's approval for DDA	1	1	20JUL09	20JUL09	20JUL09	20JUL09	1	129			1				1	
02L1AA0440	Obtain SO's consent for design (DDA)	0	0		19AUG09		19AUG09	! 2	124		1345	•	1 6		10.5		

ID	Activity		WP3D	AD04	AD04	WP3D	WP3D Finish		Total Float				010	2011 2	2012 2013
	Description	Our	Dur	Start	Finish	Start	Pinish	-	Figat				The second second		
Impact Assess	ment on WSD Wo Ylp Hop V. S. P. H.	-					Interesting and the		- 8	-					1225
02L1AA0502	Design preparation for the DDA submission	30		02MAY08A		02MAY08A	26FEB09A	2							1983
02L1AA0503	Design (DDA) submission for the DC's approval	1		26JUN08A	Contractory and a second	26JUN08A	27FEB09A	1	-	Contraction of the local division of the loc			00/10/00	1.84	
02L1AA0504	Design (DDA) certification by the Design Checker	60		27JUN08A	11MAR09A		11MAR09A	2			1911	JE cert or	02/12/08		1.1.2
02L1AA0506	Design (DDA) submission for the SO's approval	2		14JUL08A	24MAR09A		24MAR09A	1					- e -		1.1.4
02L1AA0508	Design (DDA) review by the SO	66	66	15JUL08A	31MAR09A	15JUL08A	31MAR09A	2				1.4		i and	- 1384
02L1AA0510	DDA submission for rel, authorities' approval	2	2	10JUL08A	14MAR09A	10JUL08A	14MAR09A	1			-				
02L1AA0512	Design (DDA) review by the rel. authorities	28	28	14JUL08A	31MAY09	14JUL08A	31MAY09	2	0	_			2	1.0	- 1444
02L1AA0514	Obtain rel. authorities's approval for DDA	1	1	01JUN09	01JUN09	01JUN09	01JUN09	1	0	1	ing i	1.12			
02L1AA0520	Obtain SO's consent for design (DDA)	0	0		31MAR09A		31MAR09A	2			•			12	
Temporary Pla	tform for Pipe Piling									84			1.1		
02L1AA0602	Design preparation by the Designer	11	11	21JUL08A	23AUG08A	21JUL08A	23AUG08A	2		8 .				1.00	13.2
02L1AA0603	Design submission for the DC's approval	1	1	01AUG08A	25AUG08A	01AUG08A	25AUG08A	1	2	1. E					
02L1AA0604	Design certification by the Design Checker	21	21	02AUG08A	26SEP08A	02AUG08A	26SEP08A	2	8	=					146
02L1AA0606	Design submission for the SO's approval	1	1	08AUG08A	27SEP08A	08AUG08A	27SEP08A	1	1				- 28	1.1	2
02L1AA0608	Design review by the SO	28	28	09AUG08A	170CT08A	09AUG08A	170CT08A	2	8						100
02L1AA0610	Obtain design approval from the SO	0	0		170CT08A		170CT08A	2		•					232
Temporary Wo	rks Design for Retrieval of TBM									1				32.1	1923
02L1AA0702	Design preparation by the Designer	30	30	28FEB09A	22JUN09	28FEB09A	22JUN09	2	139	ġ	-	1			334
02L1AA0703	Design submission for the DC's approval	1	1	23JUN09	23JUN09	23JUN09	23JUN09	1	115		1			010	1983
02L1AA0704	Design certification by the Design Checker	28	28	24JUN09	21JUL09	24JUN09	21JUL09	2	139						
02L1AA0706	Design submission for the SO's approval	1	1	23JUN09	23JUN09	23JUN09	23JUN09	1	115	191	1				13.2
02L1AA0708	Design review by the SO	42	42	24JUN09	04AUG09	24JUN09	04AUG09	2	139				11		
02L1AA0710	Obtain design approval from the SO	0	0		04AUG09		04AUG09	2	139	2					22
	ainage Management Plan for Portion A		-												
02L1AA0802	TDMP preparation by the Designer	208	208	18AUG08A	23MAY09A	18AUG08A	23MAY09A	2						1.1	12.3
02L1AA0804	TDMP submission for the DC's approval	2	2	24SEP08A	25MAY09A	24SEP08A	25MAY09A	1	3	-					
02L1AA0806	TDMP certification by the Design Checker	28	28	240CT08A	03JUN09	240CT08A	03JUN09	2	142				12		P.G.
02L1AA0808	TDMP submission for the SO's approval	2	2	05NOV08A	04JUN09	05NOV08A	04JUN09	1	165	-	-	0.0	11		
02L1AA0810	TDMP review by the SO	90	90	05NOV08A	16JUL09	05NOV08A	16JUL09	2	192	-	1			-	1428
02L1AA0812	TDMP submission for DSD's approval	1	1	04JUN09	04JUN09	04JUN09	04JUN09	1	119				1.8		
02L1AA0814	TDMP review by the DSD	90	90	05JUN09	02SEP09	05JUN09	02SEP09	2	144	1.2				and a large	
02L1AA0816	Obtain DSD's approval for DDA	1	1	03SEP09	03SEP09	03SEP09	03SEP09	1	117			1			
02L1AA0818	Obtain SO's consent for TDMP	0	0		03SEP09		03SEP09	2	144	-		•			
	Instrumentation Stg 1 for GL Works		1											136	
3DL1AAG102	Design preparation by the Designer	14	14	22FEB08A	28APR08A	22FEB08A	28APR08A	2		-			R-		
3DL1AAG104	Design certification by the Design Checker	7	7	29APR08A	16JUN08A	29APR08A	16JUN08A	2							
3DL1AAG106	Design submission for the SO's approval	1	1	10MAY08A	10MAY08A			1	1					33	12.00
3DL1AAG108	Design review by the SO	14	14	12MAY08A	28AUG08A	12MAY08A	28AUG08A	2							
3DL1AAG110	Obtain design approval from the SO	0	0		28AUG08A	and the second second second	28AUG08A	2		•					1.00
3DL1AAG112	Install Geotechnical Instruments	6	6	26MAY08A	26MAY08A	26MAY08A	26MAY08A	1							
3DL1AAG112	Baseline Monitoring	14	+				31MAY08A	2	1	1				, e.	
JUL IANGI 14	adoutte montoring	1.002						1.1							

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ID	Activity		WP3D	AD04	AD84	WP3D	WP3D	Cal	Total	2008 2009 2010 2011 2012	2015
and the second second	Description	Dur	Dur	Start	Finish	Start	Finish	ID	Float		
	nstrumentation Stg 2 for Deep Exc.						a company				6
3DL1AAG202	Design preparation by the Designer	14	14		-	01DEC08A	24FEB09A	2			
3DL1AAG204	Design certification by the Design Checker	7		15DEC08A		15DEC08A		2			
3DL1AAG206	Design submission for the SO's approval	1	1		25FEB09A		25FEB09A	1			
3DL1AAG208	Design review by the SO	28		08JAN09A			24MAR09A	2			
3DL1AAG210	Obtain design approval from the SO	0	0		24MAR09A		24MAR09A	2			H
3DL1AAG212	Install Geotechnical Instruments	28	28	09FEB09A		09FEB09A	04JUN09	1	0		1
3DL1AAG214	Baseline Monitoring	6	6		225000000000000000000000000000000000000	18FEB09A	25MAR09A	2			
3DL1AAG216	Monitor/report Geotechnical Instrumentation	1,643	1,643	02JUN08A	04FEB13	02JUN08A	04FEB13	2	0		
Design Packa	ages for Works in Portion B										1
Piling Platform	to Construct H-pile Wall										
02L1BB0202	Design preparation by the Designer	15	15	24MAR08A	09MAY08A	24MAR08A	09MAY08A	2			
02L1BB0204	Design certification by the Design Checker	14	14	10MAY08A	08AUG08A	10MAY08A	08AUG08A	2			
02L1BB0206	Design submission for the SO's approval	1	1	21MAY08A	08AUG08A	21MAY08A	08AUG08A	1			
02L1BB0208	Design review by the SO	21	21	22MAY08A	25SEP08A	22MAY08A	25SEP08A	2			
02L1BB0210	Obtain design approval from the SO	0	0		25SEP08A		25SEP08A	2			
Temp. Platform	to Construct Drop Shafts										
02L1BB0302	Design preparation by the Designer	22	22	04AUG08A	11DEC08A	04AUG08A	11DEC08A	2			
02L1BB0303	Design submission for the DC's approval	2	2	11DEC08A	12FEB09A	11DEC08A	12FEB09A	1			
02L1BB0304	Design certification by the Design Checker	14	14	12DEC08A	25FEB09A	12DEC08A	25FEB09A	2			
02L1BB0306	Design submission for the SO's approval	2	2	12DEC08A	25FEB09A	12DEC08A	25FEB09A	1			
02L1BB0308	Design review by the SO	21	21	13DEC08A	11MAR09A	13DEC08A	11MAR09A	2			
02L1BB0310	Obtain design approval from the SO	Ö	0		11MAR09A		11MAR09A	2			
Temporary Dra	inage Management Plan										
02L1BB0402	TDMP preparation by the Designer	313	313	05MAY08A	21MAR09A	05MAY08A	21MAR09A	2			
02L1BB0403	TDMP submission for the DC's approval	2	2	05AUG08A	23MAR09A	05AUG08A	23MAR09A	1			
02L1BB0404	TDMP certification by the Design Checker	213	213	06AUG08A	13APR09A	06AUG08A	13APR09A	2			
02L1BB0406	TDMP submission for the SO's approval	2	2	24SEP08A	14APR09A	24SEP08A	14APR09A	1			
02L1BB0408	TDMP review by the SO	90	90	25SEP08A	03JUN09	25SEP08A	03JUN09	2	-210		
02L1BB0410	TDMP submission for DSD's approval	1	1	23SEP08A	23SEP08A	23SEP08A	23SEP08A	1			
02L1BB0412	TDMP review by the DSD	90	90	24SEP08A	04JUN09	24SEP08A	04JUN09	2	-211		
02L1BB0414	Obtain DSD's approval for DDA	1	1	05JUN09	05JUN09	05JUN09	05JUN09	1	-168		
02L1BB0416	Obtain SO's consent for TDMP	0	0		05JUN09		05JUN09	2	-211		
Temp. Support	Design for MAA/MAS/VDS/DC										
02L1BB0502	Design preparation for the AIP submission	272	272	02JUN08A	19MAR09A	02JUN08A	19MAR09A	2			
02L1BB0503	Design (AIP) submission for the DC's approval	2	2	11JUL08A	20MAR09A	11JUL08A	20MAR09A	1			
02L1BB0504	Design (AIP) certification by the Design Checker	60	60	12JUL08A	04APR09A	12JUL08A	04APR09A	2	_		
02L1BB0506	Design (AIP) submission for the SO's approval	2	2	24JUL08A		24JUL08A	06APR09A	1			
02L1BB0508	Design (AIP) review by the SO	66	66	25JUL08A	11MAY09A	25JUL08A	11MAY09A	2			
02L1BB0510	AIP submission for rel. authorities' approval	1	1	12JUL08A	12JUL08A	12JUL08A	12JUL08A	1			
02L1BB0512	Design (AIP) review by the rel. authorities	28	28	14JUL08A	The address of the state	14JUL08A	10NOV08A	2	1		
02L1BB0514	Obtain rel. authorities's approval for AIP	1		11NOV08A		11NOV08A	Contraction of the second second	1			
Averation and a second		1	1	29MAY09		29MAY09	29MAY09	1	0		
02L1BB0516	SO submit design (AIP) for approval of GEO	1	1	29MAY09	29MAY09	29MAY09	29MAY09	1	0		

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ID	Activity Description	D84	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	0	Total Float	2908	2009	2010	20	13 20	12 2013	3
02L1BB0518	Design (AIP) review/approval by the GEO	28	28	30MAY09	Laborates.	30MAY09	26JUN09	2	0		1			1421	-1-1-2	
02L1BB0518	Obtain SO's consent for design (AIP)	0	0	oon in theo	11MAY09A	Consideration in Consider	11MAY09A	2			4					
02L1BB0522	Design preparation for the DDA submission	30	30	28MAY09		28MAY09	26JUN09	2	0		1 🖌	1.0				
02L1BB0523	Design (DDA) submission for the DC's approval	1	1	27JUN09		27JUN09	27JUN09	1	0		1			1.	12/1	
02L1BB0524	Design (DDA) certification by the Design Checker	28	28	28JUN09		28JUN09	25JUL09	2	1			1.1			14/2	
02L1BB0526	Design (DDA) submission for the SO's approval	1	1	27JUN09	Contraction Contraction	27JUN09	27JUN09	1	0		T.		111		素質	
02L1BB0528	Design (DDA) review by the SO	66	66	28JUN09	117/14/02/4-0000	28JUN09	01SEP09	2	0	2		100		100	- 新知 -	
02L1BB0530	DDA submission for rel. authorities' approval	1	1	04JUL09	04JUL09	internet	04JUL09	1	26	1	1. 1	19				
02L1BB0532	Design (DDA) review by the rel. authorities	28	28	05JUL09	01AUG09	the second second	01AUG09	2	31					1. (1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	123	
02L1BB0532	Obtain rel. authorities's approval for DDA	1	1	03AUG09	The second states of	03AUG09	03AUG09	1	26		1. 16.1	1.1		32	181	
02L1BB0536	SO submit design (DDA) for approval of GEO	1	1	03AUG09		03AUG09	03AUG09	1	0	8	a r	1.5			12/2	
02L1BB0538	Design (DDA) review/approval by the GEO	28	28	04AUG09	The second second second	04AUG09	31AUG09	2	0			111			100	-
02L1BB0540	Obtain SO's consent for design (DDA)	0	0	04/10000	02SEP09	0110000	02SEP09	2	0	3		1.1		914	1965	
Constant and the second		0	-	_	02011 00	1	OZOLI OO	~	-			-		10	- 18	
	Design for MA and MA/MT Connection	110	110	09JUN08A	02 11 1000	09JUN08A	02JUN09	2	0					i go i		
02L1BB0602	Design preparation for the AIP submission		100	18MAY09A	1010000 - adi 000000	18MAY09A	The second statements	1	3			1.4		05.00	1163	- 11
02L1BB0603	Design (AIP) submission for the DC's approval	1	0.0	19MAY09A		19MAY09A	14JUN09	2	0			11	- 11		·	
02L1BB0604	Design (AIP) certification by the Design Checker	28	20	03JUN09		03JUN09	03JUN09	1	0	-	1			- 82 -		
02L1BB0606	Design (AIP) submission for the SO's approval		66	04JUN09		04JUN09	03301403	2	0					7		
02L1BB0608	Design (AIP) review by the SO	66	00	03JUN09		03JUN09	03JUN09	1	30	18 ×				128		
02L1BB0610	AIP submission for rel. authorities' approval	1		Construction of the second second				2	36	3e e -	-			12	- 484 -	
02L1BB0612	Design (AIP) review by the rel, authorities	28	28	04JUN09		04JUN09	01JUL09	1	31		I R			1	1000	
02L1BB0614	Obtain rel. authorities's approval for AIP	1	1	02JUL09	All Contraction and a second second	02JUL09	02JUL09		0	8	1 2 -			10.0	- 334	
02L1BB0616	SO submit design (AIP) for approval of GEO	1	1	22JUN09	and the second second	22JUN09	22JUN09	1	0					4	- 285-	
02L1BB0618	Design (AIP) review/approval by the GEO	28	28	23JUN09		23JUN09	20JUL09	2								
02L1BB0620	Obtain SO's consent for design (AIP)	0	0		09AUG09		09AUG09	2	0						- 198	
02L1BB0622	Design preparation for the DDA submission	30	30	18JUL09	The control of a second	18JUL09	16AUG09	2	0	22						
02L1BB0623	Design (DDA) submission for the DC's approval	1	1	17AUG09	Lott (2) Sectoration	17AUG09	17AUG09	1	0				01	8 12	- 182	
02L1BB0624	Design (DDA) certification by the Design Checker	28	28	18AUG09	111110-002	18AUG09	14SEP09	2	0			-		diam.	1999	
02L1BB0626	Design (DDA) submission for the SO's approval	1	1	17AUG09		17AUG09	17AUG09	1	0	25		1.			1	
02L1BB0628	Design (DDA) review by the SO	66	66	18AUG09		18AUG09	22OCT09	2	1					1	13 4 -	
02L1BB0630	DDA submission for rel. authorities' approval	1	1	24AUG09	24AUG09		24AUG09	1	27					2 -	- 193	
02L1BB0632	Design (DDA) review by the rel. authorities	28	28	25AUG09	21SEP09		21SEP09	2	31	7 L	1			-		
02L1BB0634	Obtain rel, authorities's approval for DDA	1	1	22SEP09	22SEP09		22SEP09	1	25			1	1.00	198	188 -	
02L1BB0636	SO submit design (DDA) for approval of GEO	1	1	22SEP09	22SEP09		22SEP09	1	0							
02L1BB0638	Design (DDA) review/approval by the GEO	28	28	23SEP09	20OCT09		20OCT09	2	0	1.5				17	12	
02L1BB0640	Obtain SO's consent for design (DDA)	0	0		23OCT09	4	23OCT09	2	0	<u> </u>		<u> </u>				
	sign for MAA/MAS/VDS/DC		In concern				00.000	1 2		2						
02L1BB0702	Design preparation for the AIP submission	285	1.000	02JUN08A		02JUN08A		2	0		- Incl		14		Sugar.	
02L1BB0703	Design submission for the DC's approval	2	-	23JUL08A		23JUL08A	03JUN09	1	0						5 83	
02L1BB0704	Design (AIP) certification by the Design Checker	60		24JUL08A		24JUL08A	19JUN09	2	0				121 0			
02L1BB0706	Design (AIP) submission for the SO's approval	2		04JUL08A	Contraction of the local sector in the	04JUL08A	03JUN09	1	1					10	+ 23	
02L1BB0708	Design (AIP) review by the SO	66	66	05JUL08A		05JUL08A	19JUN09	2	1						0.00	
02L1BB0710	AIP submission for rel. authorities' approval	1	1	03JUL08A	03JUL08A	03JUL08A	03JUL08A	1		<u>a</u> _*				1.1.4	803	

ID	Activity		WP3D	AD04	AD04	WP3D	WP3D	Cal	Total	2008	20	09	2010		911	2012	201	.
	Description	Dur	Dur	Start	Finish 08JUN09	Start 04JUL08A	Finish 08JUN09	2	Float 10		-					111010	4931	
02L1BB0712	Design (AIP) review by the rel. authorities	28	28	04JUL08A 09JUN09	09JUN09		09JUN09	1	9	9				t-h d	18	8 -		
02L1BB0714	Obtain rel. authorities's approval for AIP	1	1	27JUN09		27JUN09	27JUN09	1	0	-				H-L	- 11	4		
02L1BB0716	SO submit design (AIP) for approval of GEO		0				25JUL09	2	0			11		11		20	[[응는]	
02L1BB0718	Design (AIP) review/approval by the GEO	28	28	28JUN09		28JUN09	Contraction of the	201	1				1					
02L1BB0720	Obtain SO's consent for design (AIP)	0	0	171101/001	20JUN09	171101/004	20JUN09	2					-	15		1	134-	
02L1BB0722	Design preparation for the DDA submission	30	30	17NOV08A	27JUN09		27JUN09	2	1				-			8 -		
02L1BB0723	Design submission for the DC's approval	1	1	29JUN09	29JUN09	the second second	29JUN09	1	0	8					10		3 Second	-
02L1BB0724	Design (DDA) certification by the Design Checker	28	28	30JUN09	Contraction of the second	30JUN09	27JUL09	2	0				1			j.	14	-
02L1BB0726	Design (DDA) submission for the SO's approval	1	1	29JUN09		29JUN09	29JUN09	1	269								1.5	
02L1BB0728	Design (DDA) review by the SO	66	66	30JUN09	1	30JUN09	03SEP09	2	332		-41	-				-	120	
02L1BB0730	DDA submission for rel. authorities' approval	1	1	29JUN09	Concernance and the second	29JUN09	29JUN09	1	299	4				1.6	- 1	4		1
02L1BB0732	Design (DDA) review by the rel. authorities	28	28	07JUL09		07JUL09	03AUG09	2	363	1		•				6	132	
02L1BB0734	Obtain rel. authorities's approval for DDA	1_	1	04AUG09		04AUG09	04AUG09	1	294	1		1	-			1	120	
02L1BB0736	SO submit design (DDA) for approval of GEO	1	1	04AUG09		04AUG09	04AUG09	1	0				_		-		124	_
02L1BB0738	Design (DDA) review/approval by the GEO	28	28	05AUG09	01SEP09	05AUG09	01SEP09	2	0	4						2	12 - I	
02L1BB0740	Obtain SO's consent for design (DDA)	0	0		04SEP09	1	04SEP09	2	332			•	_			4	123	
Permanent Des	ign for MA and MA/MT Connection															1		
02L1BB0802	Design preparation for AIP submission	90	90	09JUN08A	17JUN09	09JUN08A	17JUN09	2	120	1						10		
02L1BB0803	Design (AIP) submission for the DC's approval	2	2	30JUN08A	18JUN09	30JUN08A	18JUN09	1	100	-			-	1.5	1		1331	
02L1BB0804	Design (AIP) certification by the Design Checker	28	28	24JUL08A	06JUL09	24JUL08A	06JUL09	2	120							8		
02L1BB0806	Design (AIP) submission for the SO's approval	2	2	25JUL08A	07JUL09	25JUL08A	07JUL09	1	102	-			1		13		1.34	
02L1BB0808	Design (AIP) review by the SO	66	66	26JUL08A	11AUG09	26JUL08A	11AUG09	2	120			•		1.121	1	21		
02L1BB0810	AIP submission for rel. authorities' approval	1	1	25JUL08A	07AUG08A	25JUL08A	07AUG08A	1							11	3	的語言	
02L1BB0812	Design (AIP) review by the rel. authorities	28	28	26JUL08A	13JUL09	26JUL08A	13JUL09	2	148			•	1			7		
02L1BB0814	Obtain rel. authorities's approval for AIP	1	1	14JUL09	14JUL09	14JUL09	14JUL09	1	124			ſ l					8.4	
02L1BB0816	SO submit design (AIP) for approval of GEO	1	1	14JUL09	14JUL09	14JUL09	14JUL09	1	100			t i					1.5	
02L1BB0818	Design (AIP) review/approval by the GEO	28	28	15JUL09	11AUG09	15JUL09	11AUG09	2	120		140						164	
02L1BB0820	Obtain SO's consent for design (AIP)	0	0		12AUG09		12AUG09	2	120			•						
02L1BB0822	Design preparation for the DDA submission	30	30	21JUL09	19AUG09	21JUL09	19AUG09	2	120	1						64 		
02L1BB0823	Design (DDA) submission for the DC's approval	1	1	20AUG09	20AUG09	20AUG09	20AUG09	1	101			1						
02L1BB0824	Design (DDA) certification by the Design Checker	28	28	21AUG09	17SEP09	21AUG09	17SEP09	2	122									
02L1BB0826	Design (DDA) submission for the SO's approval	1	1	20AUG09	20AUG09	20AUG09	20AUG09	1	100							31		
02L1BB0828	Design (DDA) review by the SO	66	66	21AUG09	25OCT09	21AUG09	25OCT09	2	120						- 12		134	
02L1BB0830	DDA submission for rel. authorities' approval	1	1	20AUG09	20AUG09	20AUG09	20AUG09	1	129						9	1		
02L1BB0832	Design (DDA) review by the rel. authorities	28	28	28AUG09	24SEP09	28AUG09	24SEP09	2	151								100	
02L1BB0834	Obtain rel. authorities's approval for DDA	1	1	25SEP09	25SEP09		25SEP09	1	120	86		1						
02L1BB0836	SO submit design (DDA) for approval of GEO	1	1	25SEP09	25SEP09		25SEP09	1	98			T		3			183	
02L1BB0838	Design (DDA) review/approval by the GEO	28	28	26SEP09		26SEP09	23OCT09	2	122	00		E .					123	
02L1BB0840	Obtain SO's consent for design (DDA)	0	0	and the state of the	26OCT09		26OCT09	2	120	3		•						
A STREET PERFORMANCE CON	Approach Channel Construction	1. 7							-					-				
02L1BB0902	Design preparation by the Designer	14	14	01AUG09*	14AUG09	01AUG09*	14AUG09	2	86	8		0	-	131		-		
02L1BB0903	Design submission for the DC's approval	1	1	15AUG09		15AUG09	15AUG09	1	70			1		1.0 m				
02L1BB0904	Design certification by the Design Checker	28	28	10000000000	12SEP09		12SEP09	2	86		1					4		
	Besign definition by the Design Oncolor	20	20	10/10/000	12021 00	10,10000	10001 00	-		_			1	4-1-1	11		ETCR -	

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ID	Activity Description	D04	WP3D Dur	AD64 Start	AD04 Finish	WP3D Start	WP3D Finish	0	Total	2006	uli	2009	3	310	2011	20	2 3	013
02L1BB0906	Design submission for the SO's approval	1	1	15AUG09	Contraction of the	15AUG09	15AUG09	1	70			1			10.1000.04		484	
02L1BB0908	Design review by the SO	42	42	16AUG09		16AUG09	26SEP09	2	86							10-1	1.3	
02L1BB0908	Obtain design approval from the SO	0	0	10/10/000	26SEP09	10,10000	26SEP09	2	86			•				1.	3.23	
		, v			200El 00		20021 00	-								1.1	188	_
	D Operation (Air Vent Shaft)	6	6	22NOV08A	01DEC08A	22NOV08A	01DEC08A	1	1								1.12.1	
02L1BB1602	Prepare design/method statement	1	22	02DEC08A	and the second s			1		ń						1011	183	
02L1BB1604	Submit design/method statement to Design Checker	7		03DEC08A		for the local data was not	the second second second second	2		13			1-1			11-11	123	
02L1BB1606	Certify design/m.s. by Design Checker	1	4	24DEC08A		24DEC08A	24DEC08A	1		- 10	-74		+				163	
02L1BB1608	Submit design/m.s. to SO	14	14			25DEC08A	11MAR09A	2		1.1				- 44		and the second s	1161	
02L1BB1610	Design/m.s. review by SO		0	ZJDECUOA	11MAR09A		11MAR09A	1		13						44-	- 1923	
02L1BB1612	Obtain design/m.s. approval from the SO	0	0		TIMAROSA	·	THVIAROSA				- Ť		-			+	- 12	
	ks for Air Vent Shaft Construction			001101/004	10050004	001101/001	40050004	- 4		1.5				10		8 11	1323	
02L1BB1702	Prepare design/method statement	21		03NOV08A		03NOV08A	16DEC08A	1		14	-		2 2 1				1488	
02L1BB1704	Submit design/method statement to Design Checker	1		17DEC08A		17DEC08A		1		134	-11		48.15			-91		
02L1BB1706	Certify design/m.s. by Design Checker	14	14	7.0000000000000000000000000000000000000	1	18DEC08A		2		13	- 1					-	14.5	
02L1BB1708	Submit design/m.s. to SO	1	1	23JAN09A	NOT THE REPORT OF CASE OF	23JAN09A	23JAN09A	1			1		4.90				1	
02L1BB1710	Design/m.s. review by SO	7	7	24JAN09A	AND IN THE AVE. INC.	24JAN09A	23MAR09A	2		13	1					1.2		
02L1BB1712	Obtain design/m.s. approval from the SO	0	0		23MAR09A	N	23MAR09A	1	1		- *	2					- 22	
Permanet Desig	in for Air Vent Shaft			-			1	_		19 I.			1.8				1988	
02L1BB1802	Prepare design/method statement	26	26	05NOV08A			11DEC08A	1										
02L1BB1804	Submit design/method statement to Design Checker	1	1	12DEC08A	12DEC08A	12DEC08A	12DEC08A	1	-	111 mg	1				1	100	124	
02L1BB1806	Certify design/m.s. by Design Checker	21	21	13DEC08A	24MAR09A	13DEC08A	24MAR09A	2	-	80			1.			12-	12.6	
02L1BB1808	Submit design/m.s. to SO	1	1	17DEC08A	24MAR09A	17DEC08A	24MAR09A	1	-	L. N				1		1		
02L1BB1810	Design/m.s. review by SO	42	42	18DEC08A	31MAY09	18DEC08A	31MAY09	2	150	11		1 1	1			125	13.5	
02L1BB1812	Submit design to rel. authorities	1	1	25MAR09A	25MAR09A	25MAR09A	25MAR09A	1	-		1			1		11-	1325	
02L1BB1814	Obtain design approval from rel. authorities	28	28	01MAR09A	28MAY09	01MAR09A	28MAY09	2	153								123	
02L1BB1816	Obtain design/m.s. approval from the SO	0	0		30MAY09		30MAY09	1	125			\$					of Re	
ELS Design for	Construction of Vortex Shaft									1.2							100	
02L1BB1902	Design preparation by the Designer	25	25	23FEB09A	02JUN09	23FEB09A	02JUN09	2	-205		-	1				1		
02L1BB1904	Design submission for the DC's approval	1	1	03JUN09	03JUN09	03JUN09	03JUN09	1	-163									
02L1BB1906	Design certification by the Design Checker	28	28	04JUN09	01JUL09	04JUN09	01JUL09	2	-205			•						
02L1BB1908	Design submission for the SO's approval	1	1	03JUN09	03JUN09	03JUN09	03JUN09	1	-157							8.3	381	
02L1BB1910	Design review by the SO	42	42	11JUN09	15JUL09	11JUN09	15JUL09	2	-205							RB	381	
02L1BB1912	Obtain design approval from the SO	0	0		15JUL09		15JUL09	2	-205			٠	1				1482	
Geotechnical In	strumentation Stg 1 for GL Works																133	
3DL1BBG102	Design preparation by the Designer	14	14	22FEB08A	05MAY08A	22FEB08A	05MAY08A	2		-								
3DL1BBG104	Design certification by the Design Checker	7	7	06MAY08A	29AUG08A	06MAY08A	29AUG08A	2									E.	
3DL1BBG106	Design submission for the SO's approval	1	1	10MAY08A	10MAY08A	10MAY08A	10MAY08A	1		1								
3DL1BBG108	Design review by the SO	14	14	12MAY08A	14JUL08A	12MAY08A	14JUL08A	2								111	12	
3DL1BBG110	Obtain design approval from the SO	0	0		14JUL08A		14JUL08A	2		•								
3DL1BBG112	Install Geotechnical Instruments	6	6	11JUN08A	19JUL08A	11JUN08A	19JUL08A	1								1.4		
3DL1BBG114	Baseline Monitoring	14		21JUL08A	and the second second second			2		1				1			1.28	
	strumentation Stg 2 for Deep Exc.	1.5			A												134	
3DL1BBG202	Design preparation by the Designer	40	40	31AUG08A	240CT08A	31AUG08A	240CT08A	2								1.2		
	see all brobardion of the section	1.18			1	January and	and the second s	1 22	10 J						1.1.1			_

3DL1BBG204	Description	Dur	Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	Cal	Total Float										HH
	Design certification by the Design Checker	14	and the second second	240CT08A	02DEC08A		02DEC08A	2								0		134	1
3DL1BBG206	Design submission for the SO's approval	1	1	05NOV08A	02DEC08A	05NOV08A	02DEC08A	1		5									
3DL1BBG208	Design review by the SO	28	28	06NOV08A	10JUN09	06NOV08A	10JUN09	2	-114		-						1.8		
3DL1BBG210	Obtain design approval from the SO	0	0		10JUN09		10JUN09	2	-114			•	-	1				133	
3DL1BBG212	Install Geotechnical Instruments	12	12	14MAR09A	27MAR09A	14MAR09A	27MAR09A	1	1			•						1986	
3DL1BBG214	Baseline Monitoring	14	14	11JUN09	24JUN09	Contractory of the second	24JUN09	2	-114			5						1153	
3DL1BBG216	Monitor/report Geotechnical Instrumentation	1,587	1,587	28JUL08A	31DEC12	28JUL08A	31DEC12	2	0		-		-		-	_			
.	ges for Works in Portion C									0.0									
Piling Platform f				-											t î op			1143	
02L1CC0002	Design preparation by the Designer	15	15	12MAY08A	27JUN08A	12MAY08A	27JUN08A	2	1								1	223	
02L1CC0004	Design certification by the Design Checker	14		22MAY08A			03JUL08A	2	1								18	1321	
02L1CC0006	Design submission for the SO's approval	1	1	04JUL08A		04JUL08A	04JUL08A	1							100	- 1		기험감	-
02L1CC0008	Design review by the SO	14	14	05JUL08A	A DOLLAR DE LA CALLER		29JUL08A	2						1				123	-
02L1CC0010	Obtain design approval from the SO	0	0		29JUL08A	(29JUL08A	2	1	•									
	ks for Formation of Access Road	+	1		i	i	1							1				120	
02L1CC0102	Design preparation by the Designer	40	40	29SEP08A	01DEC08A	29SEP08A	01DEC08A	2	1		=			1		R			
02L1CC0103	Design submission for the DC's approval	1	1	02DEC08A	02DEC08A	02DEC08A	02DEC08A	1	1 1		i i		- 611			1		11837	
02L1CC0104	Design certification by the Design Checker	14	14	03DEC08A	08DEC08A	03DEC08A	08DEC08A	2		6. P	1		11	100	1.1		21-	1.63	
02L1CC0106	Design submission for the SO's approval	1	1			09DEC08A	09DEC08A	1		3	1			1	1 23 5				-
02L1CC0108	Design review by the SO	28	28	10DEC08A	The second second second second		23MAR09A	2			-							184	
02L1CC0110	Obtain design approval from the SO	0	0		23MAR09A		23MAR09A	2				•		1	111		81	10.2	
	for H-pile Wall B				1					Contraction -	-						1		
02L1CC0202	Design preparation by the Designer	15	15	02JUL09*	16JUL09	02JUL09*	16JUL09	2	179	24				1		- 1	ball in	12.3	
02L1CC0203	Design submission for the DC's approval	1	1	17JUL09	17JUL09	17JUL09	17JUL09	1	147	22	111	1		1	120-1	- 6	< T	1287	
02L1CC0204	Design certification by the Design Checker	28	28	18JUL09	14AUG09		14AUG09	2	179	2			1		12			1.8	
02L1CC0205	Design submission for the SO's approval	1	1	17JUL09	17JUL09		17JUL09	1	147			1			유민이			1.2	
02L1CC0208	Design review by the SO	42	42	18JUL09	28AUG09	18JUL09	28AUG09	2	179	13						1		12	
02L1CC0210	Obtain design approval from the SO	0	0	10000	28AUG09	U)Uatrice_duprice	28AUG09	2	179	2			•		121			1120	
	Design for MAA/MAS/VDS/DC/AVS		i		Control of the office			-		1							12	12	
02L1CC0302	Design preparation for the AIP submission	103	103	26JUN08A	09MAY09A	26JUN08A	09MAY09A	2	1	2 📻	- 14.	-	2		8			- 1.2	
02L1CC0303	Design (AIP) submission for the DC's approval	2	2	23DEC08A	15MAY09A	23DEC08A	15MAY09A	1		100	-		11		11	5	8.1	120	
02L1CC0304	Design (AIP) certification by the Design Checker	28	28	24DEC08A	19MAY09A	24DEC08A	19MAY09A	2	1 6	33	-		- 11	3			81	1.52	
02L1CC0306	Design (AIP) submission for the SO's approval	2	2	23DEC08A	19MAY09A	23DEC08A	19MAY09A	1		50	=				121		1		
02L1CC0308	Design (AIP) review by the SO	66	66	24DEC08A	23JUN09	24DEC08A	23JUN09	2	-141		-				111			1321	
02L1CC0310	AIP submission for rel, authorities' approval	1	1	29MAY09	29MAY09	29MAY09	29MAY09	1	-115	F8				1	TH I				
02L1CC0312	Design (AIP) review by the rel. authorities	28	28	30MAY09	26JUN09	30MAY09	26JUN09	2	-145		10					1	1.5		
02L1CC0314	Obtain rel. authorities's approval for AIP	1	1	27JUN09	27JUN09	27JUN09	27JUN09	1	-118		- (F)	1							
02L1CC0316	SO submit design (AIP) for approval of GEO	1	1	29MAY09	the second second second	29MAY09	29MAY09	1	0	2							-	112	
02L1CC0318	Design (AIP) review/approval by the GEO	28	28	30MAY09		30MAY09	26JUN09	2	0						10			1443	
02L1CC0320	Obtain SO's consent for design (AIP)	0	0		29JUN09		29JUN09	2	-146					1					
02L1CC0322	Design preparation for the DDA submission	30	30	07JUN09	06JUL09	07JUN09	06JUL09	2	-146	1				3	111		B		
02L1CC0323	Design (DDA) submission for the DC's approval	1	1	07JUL09	07JUL09	and the second s	07JUL09	1	-114			1					1		
02L1CC0324	Design (DDA) certification by the Design Checker	28	28		04AUG09	and the second second second	04AUG09	2	-143								120		

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ID	Activity	Contraction of the	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish		Total	2008 2018 2011 2012 2013
	Design (DDA) submission for the SO's approval	Dur 1		07JUL09	07JUL09		07JUL09	-	Float -117	
02L1CC0326		66	66	0730L09	11SEP09	· · · · ·	11SEP09	1	-146	
02L1CC0328	Design (DDA) review by the SO	1	00	07JUL09	07JUL09		07JUL09	1	- 140	
02L1CC0330	DDA submission for rel. authorities' approval	5.5A45.1								
02L1CC0332	Design (DDA) review by the rel. authorities	28	28	15JUL09	11AUG09	THE REPORT OF THE PARTY OF T	11AUG09	2	-116	
02L1CC0334	Obtain rel. authorities's approval for DDA	1	3	12AUG09		12AUG09	12AUG09	1	-95	
02L1CC0336	SO submit design (DDA) for approval of GEO	1	1	12AUG09		12AUG09	12AUG09	1	0	
02L1CC0338	Design (DDA) review/approval by the GEO	28	28	13AUG09	09SEP09	13AUG09	09SEP09	2	0	
02L1CC0340	Obtain SO's consent for design (DDA)	0	0		12SEP09		12SEP09	2	-146	
and the second s	Design for MA and MA/MT Connection	n en	11							
02L1CC0402	Design preparation for the AIP submission	110		18AUG08A	03JUN09	18AUG08A	03JUN09	2	0	
02L1CC0403	Design (AIP) submission for the DC's approval	2	2	05MAY09A	30MAY09	05MAY09A	30MAY09	1	0	
02L1CC0404	Design (AIP) certification by the Design Checker	28	28	06MAY09A	15JUN09	06MAY09A	15JUN09	2	0	
02L1CC0406	Design (AIP) submission for the SO's approval	1	1	04JUN09	04JUN09	04JUN09	04JUN09	1	0	
02L1CC0408	Design (AIP) review by the SO	66	66	05JUN09	09AUG09	05JUN09	09AUG09	2	0	
02L1CC0410	AIP submission for rel. authorities' approval	1	1	04JUN09	04JUN09	04JUN09	04JUN09	1	30	
02L1CC0412	Design (AIP) review by the rel. authorities	28	28	05JUN09	02JUL09	05JUN09	02JUL09	2	36	
02L1CC0414	Obtain rel. authorities's approval for AIP	1	1	03JUL09	03JUL09	03JUL09	03JUL09	1	31	
02L1CC0416	SO submit design (AIP) for approval of GEO	1	1	23JUN09	23JUN09	23JUN09	23JUN09	1	0	
02L1CC0418	Design (AIP) review/approval by the GEO	28	28	24JUN09	21JUL09	24JUN09	21JUL09	2	0	
02L1CC0420	Obtain SO's consent for design (AIP)	0	0		10AUG09		10AUG09	2	0	
02L1CC0422	Design preparation for the DDA submission	30	30	19JUL09	17AUG09	19JUL09	17AUG09	2	0	
02L1CC0423	Design submission for the DC's approval	1	1	18AUG09	18AUG09	18AUG09	18AUG09	1	0	
02L1CC0424	Design (DDA) certification by the Design Checker	28	28	19AUG09	15SEP09	19AUG09	15SEP09	2	0	
02L1CC0426	Design (DDA) submission for the SO's approval	1	1	18AUG09	18AUG09	18AUG09	18AUG09	1	73	
02L1CC0428	Design (DDA) review by the SO	66	66	19AUG09	23OCT09	19AUG09	23OCT09	2	88	
02L1CC0430	DDA submission for rel. authorities' approval	1	1	25AUG09	25AUG09	25AUG09	25AUG09	1	98	
02L1CC0432	Design (DDA) review by the rel. authorities	28	28	26AUG09	22SEP09	26AUG09	22SEP09	2	118	
02L1CC0434	Obtain rel. authorities's approval for DDA	1	1	23SEP09	23SEP09	23SEP09	23SEP09	1	95	
02L1CC0436	SO submit design (DDA) for approval of GEO	1	1	23SEP09	23SEP09	23SEP09	23SEP09	1	0	
02L1CC0438	Design (DDA) review/approval by the GEO	28	28	24SEP09	210CT09	24SEP09	21OCT09	2	0	
02L1CC0440	Obtain SO's consent for design (DDA)	0	0		23OCT09		23OCT09	2	88	
	sign for MAA/MAS/VDS/DC/AVS	-	ii					-		
02L1CC0502	Design preparation for the AIP submission	103	103	26JUN08A	04MAY09A	26JUN08A	04MAY09A	2	1	
02L1CC0503	Design submission for the DC's approval	2		110CT08A		CONTRACT RECEMENT	00 X 0- 000 CHOO	1		
02L1CC0504	Design (AIP) certification by the Design Checker	28		130CT08A	12/10/07/200		19MAY09A	2		
02L1CC0506	Design (AIP) submission for the SO's approval	4	4	05NOV08A			19MAY09A	1	-	
02L1CC0508	Design (AIP) submission for the SO's approval Design (AIP) review by the SO	66	1140,000	06NOV08A		05NOV08A	Concerns to Service and	2	0	
02L1CC0510	AIP submission for rel, authorities' approval	1				28FEB09A		1		
02L1CC0510	Design (AIP) review by the rel. authorities	28	10.000	01MAR09A	ALC: SHELL HARD THE	01MAR09A	NAMES OF A DESCRIPTION OF A DESCRIPTIONO	2	18	
02L1CC0512	Obtain rel. authorities's approval for AIP	1		29MAY09	29MAY09		29MAY09	1	15	
		1		28FEB09A		28FEB09A		1	13	
02L1CC0516	SO submit design (AIP) for approval of GEO		20	01MAR09A	CARLON THE CARLING OF	I I SANT ANTINA ANTINA ANTINA	Concerns and a second second		19	
02L1CC0518	Design (AIP) review/approval by the GEO	28		UTWARUSA		01MAR09A		2		
02L1CC0520	Obtain SO's consent for design (AIP)	0	0		17JUN09	1	17JUN09	2	0	

ID	Activity		WP3D	AD04	AD04	WP3D	WP3D Finish	Cal ID	Total Float	2008	2009	2010	2011	201	2 2013
	Description	Dur 30	Dur	Start 09MAR09A	Finish 24JUN09	Start 09MAR09A	and the second sec	2	O	and the state	-	THE REPORT			
02L1CC0522	Design preparation for the DDA submission	30	30	25JUN09	10000000000000000000000000000000000000	25JUN09	24JUN09	1	0					1 6 6	1122
02L1CC0523	Design submission for the DC's approval	28	28	26JUN09		26JUN09	23JUL09	2	0	1		-		1	
02L1CC0524	Design (DDA) certification by the Design Checker	1	20	25JUN09		25JUN09	25JUN09	1	152					135-1	1 43
02L1CC0526	Design (DDA) submission for the SO's approval		66	26JUN09	30AUG09		30AUG09	2	183		-			1	1.25
02L1CC0528	Design (DDA) review by the SO	66	00	CONTROL REPORTS	200700307202050	02JUL09	02JUL09	1	177	-			- N.	- 15	- 1963
02L1CC0530	DDA submission for rel. authorities' approval	1	28	02JUL09			30JUL09	2	214					188	184
02L1CC0532	Design (DDA) review by the rel. authorities	28	28	03JUL09	1917-1917	03JUL09		+	174						124
02L1CC0534	Obtain rel. authorities's approval for DDA	1	1	31JUL09		31JUL09	31JUL09	1						1 100 -	
02L1CC0536	SO submit design (DDA) for approval of GEO	1	1	31JUL09	and the second sec	31JUL09	31JUL09	1	0	-				- 24.242	
02L1CC0538	Design (DDA) review/approval by the GEO	28	28	01AUG09		01AUG09	28AUG09	2	0				100 C		- 本内
02L1CC0540	Obtain SO's consent for design (DDA)	0	0		31AUG09		31AUG09	2	183		•				
Permanent Des	ign for MA and MA/MT Connection							1		1					
02L1CC0602	Design preparation for the AIP submission	84	84	01JUL08A	100003500000	01JUL08A	17JUN09	2	0			14-1		- North	1430
02L1CC0603	Design (AIP) submission for the DC's approval	2	2	25JUL08A		25JUL08A	18JUN09	1	0	-			1.5		
02L1CC0604	Design (AIP) certification by the Design Checker	28	28	26JUL08A		26JUL08A	06JUL09	2	0	-		aus -		visa en	
02L1CC0606	Design (AIP) submission for the SO's approval	2	2	26JUL08A	07JUL09	26JUL08A	07JUL09	1	0	-				5 p 6	- 1.2
02L1CC0608	Design (AIP) review by the SO	66	66	28JUL08A	08AUG09	28JUL08A	08AUG09	2	0					1.100	
02L1CC0610	AIP submission for rel. authorities' approval	1	1	25JUL08A	08AUG08A	25JUL08A	08AUG08A	1	1				14.0		1.3
02L1CC0612	Design (AIP) review by the rel. authorities	28	28	26JUL08A	13JUL09	26JUL08A	13JUL09	2	24	in the second				1	
02L1CC0614	Obtain rel. authorities's approval for AIP	ॉ	1	14JUL09	14JUL09	14JUL09	14JUL09	1	21		1			and a	
02L1CC0616	SO submit design (AIP) for approval of GEO	1	1	14JUL09	14JUL09	14JUL09	14JUL09	1	0		- E				
02L1CC0618	Design (AIP) review/approval by the GEO	28	28	15JUL09	11AUG09	15JUL09	11AUG09	2	0			1	1912		181
02L1CC0620	Obtain SO's consent for design (AIP)	0	0		09AUG09		09AUG09	2	0		•				
02L1CC0622	Design preparation for the DDA submission	30	30	18JUL09	16AUG09	18JUL09	16AUG09	2	0						
02L1CC0623	Design (DDA) submission for the DC's approval	1	1	17AUG09	17AUG09	17AUG09	17AUG09	1	0		4				1.82
02L1CC0624	Design (DDA) certification by the Design Checker	28	28	18AUG09	14SEP09	18AUG09	14SEP09	2	0						
02L1CC0626	Design (DDA) submission for the SO's approval	1	1	17AUG09	17AUG09	17AUG09	17AUG09	1	419		1			1021	
02L1CC0628	Design (DDA) review by the SO	66	66	18AUG09	22OCT09	18AUG09	22OCT09	2	515		-				
02L1CC0630	DDA submission for rel. authorities' approval	1	1	24AUG09	24AUG09	24AUG09	24AUG09	1	442		1			1.04	1.03
02L1CC0632	Design (DDA) review by the rel. authorities	28	28	25AUG09	21SEP09	25AUG09	21SEP09	2	546					11.3	
02L1CC0634	Obtain rel. authorities's approval for DDA	1	1	22SEP09	22SEP09	22SEP09	22SEP09	1	442	9	1			1.2	123
02L1CC0636	SO submit design (DDA) for approval of GEO	1	1	22SEP09	22SEP09	22SEP09	22SEP09	1	0		Î			1.87	
02L1CC0638	Design (DDA) review/approval by the GEO	28	28	23SEP09	20OCT09	23SEP09	20OCT09	2	0	8			1.15		0.55
02L1CC0640	Obtain SO's consent for design (DDA)	0	0		23OCT09		23OCT09	2	515				12		186
	sment & Design for Stabili. Measure	1.41					Pre-marine and some			1				12	1223
02L1CC0702	Boulder Surevey	30	30	02JUN08A	15AUG084	02JUN08A	15AUG08A	1		8 🖬 💧					1.22
02L1CC0704	Prepare/submit boulder surevey report	25		14JUL08A	a contract of the second second		05SEP08A	1		-					
02L1CC0706	SO review boulder survey report	14		The street of the street of the	COLORING CONTRACTOR STATE		19SEP08A	2		4			1	2.8	
	inage Management Plan		1034	percent and a second data	In contrast called		0.70355035500	1.0000							1000
02L1CC0802	TDMP preparation by the Designer	14	14	04AUG08A	03SEP084	04AUG08A	03SEP08A	2	1	2 51			1	12	1483
02L1CC0803	TDMP submission for the DC's approval	1			- and a second s	a contract of the contract of	08SEP08A	1		1 1 1				188 -	- 23
02L1CC0804	TDMP certification by the Design Checker	28				09SEP08A		2	1	-			S. 1	8 8	198
02L1CC0804	TDMP submission for the SO's approval	20		a same card a proper destruction	and the second sec	and the second second second	11DEC08A	1		-					122
0211000000		-	-	20001004	102000/			1			11-18-1-1-				

D	Activity Description	D04	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish		Total Float	2008	111	2009		010	2011	2012	2013	μĻ
02L1CC0808	TDMP review by the SO	90	and the second se	210CT08A	08JAN09A 2	2000	08JAN09A	2				1	- 1				14.55	
02L1CC0810	TDMP submission for DSD's approval	1	1	210CT08A	210CT08A 2	2010 C 10	210CT08A	1			1			2 - 2 - 2 - 1			1183	- 1
02L1CC0812	TDMP review by the DSD	90	90	220CT08A	08JAN09A 2	MICLANCOND 1010	08JAN09A	2			=						121.21	
02L1CC0814	Obtain DSD's approval for DDA	1	1	08JAN09A	08JAN09A	1992-8-1849-9-16-1979-9-	08JAN09A	1						1 1 1	-	1	123	- 1
02L1CC0816	Obtain SO's consent for TDMP	0	0		08JAN09A		08JAN09A	2			•			1.2	1.15	-	1881	
PRESERVICE AND ADDRESS OF ADDRESS	nent Approach Channel Construction	1			1					20-1-1		1				2	12	
02L1CC0902	Design preparation by the Designer	15	15	03AUG09*	17AUG09	3AUG09*	17AUG09	2	406									
02L1CC0903	Design submission for the DC's approval	1	1	18AUG09	18AUG09 1	102150/2020/2020/	18AUG09	1	330	5	-	1	151					
02L1CC0904	Design certification by the Design Checker	28	28	19AUG09	15SEP09 1	ST 1641 1422 1427 14	15SEP09	2	406	2 h (1139	
02L1CC0906	Design submission for the SO's approval	1	1	18AUG09	18AUG09 1	8.161221 KD XD XD XD XD XD	18AUG09	1	330	4-3		1		17		00		
02L1CC0908	Design review by the SO	42	42	19AUG09		9AUG09	29SEP09	2	406	- 19	- 14			20			1.12	
02L1CC0910	Obtain design approval from the SO	0	0	10110000	29SEP09		29SEP09	2	406	18 -	- 11			115		187		
	strumentation Stg 1 for GL Works	0			20021 00		2002.00								5	10		-
3DL1CCG102	Design preparation by the Designer	14	14	22FEB08A	29APR08A 2	22EEB08A	29APR08A	2		-				100		20	110	
3DL1CCG102	Design certification by the Design Checker	7	7	2012/07/2012 02:00	26MAY08A 3		26MAY08A	2								2	1942	- 1
3DL1CCG104	Design submission for the SO's approval	1	- 1		26MAY08A 1			1		1							12	
3DL1CCG108	Design review by the SO	14	14		14JUL08A 1		14JUL08A	2					1-1-					
3DL1CCG110	Obtain design approval from the SO	0	0	12.00 11 0071	14JUL08A		14JUL08A	2		•		1					1334	
3DL1CCG112	Install Geotechnical Instruments	19		24JUN08A	09AUG08A 2		09AUG08A	1	-							(F)	1983	
3DL1CCG114	Baseline Monitoring	14		26JUL08A	16AUG08A 2	0.2423-222244	16AUG08A	2			- 13						13	
		1 11	1 1 1	200020071	110/10/0000/112		10.10000.1	-				-			1		188	
3DL1CCG202	Instrumentation Stg 2 for Deep Exc.	60	60	28AUG08A	04NOV08A 2	28AUG08A	04NOV08A	2										
3DL1CCG204	Design certification by the Design Checker	14			01DEC08A 1			2		1			1.1			124	183	
3DL1CCG204	Design submission for the SO's approval	2		04NOV08A			02DEC08A	1			-				- 13		12	
3DL1CCG210	Design review by the SO	28		05NOV08A				2	-76		in the second			0.00		21	1282	
3DL1CCG212	Obtain design approval from the SO	0	0	USING VOOR	11JUN09		11JUN09	2	-76			<u>ا</u>					「相談」	
3DL1CCG212	Install Geotechnical Instruments	18	-	14MAR09A		AMAR09A		1	-58		-13				8	1	8168	
3DL1CCG214	Baseline Monitoring	14	14	210100000000000	02JUL09 1		02JUL09	2	-74				- 69		1	95	12.83	
1	Monitor/report Geotechnical Instrumentation			18AUG08A				2	0	11 .	_	1		_				
3DL1CCG218	A REAL PROPERTY OF A READ REAL PROPERTY OF A REAL P	1,000	1,000	TOADGOOA	SIBEOIZ	IGAOGOOA	SIDEOIZ	-				-					100	
	ages for Works in Portion D								-	10								
and the second se	Rd Design at P. D; +14mPD to +69mPD		I sail	17 14 100 4	I CADDOGA	7141004									1 13	<u> A</u>		
02L1DD0102	Design preparation by the Designer	14		17JAN08A	16APR08A 1		16APR08A	2		-						100	1923	-
02L1DD0104	Design certification by the Design Checker	150	10251201		13SEP08A 1		13SEP08A	2					a 11 -	1 2		2	1000	
02L1DD0106	Design submission for the SO's approval	2		25APR08A		ered grade and database same		1								in:		
02L1DD0108	Design review by the SO	90		26APR08A	and the second se	5-550 (TTL) - 1055 (S-1) (S-	04FEB09A	2					3.3		2		1993	
02L1DD0110	Design review by GEO	28	125.62	23JUN08A	29NOV08A 2	23JUNU8A	29NOV08A	2						1			188	
02L1DD0112	Obtain design approval from the SO	0	0		04FEB09A		04FEB09A	2			ľ						1	-
President and the second se	sment & Design for Stabili. Measure	1979	244		AAADDoost	DDDDD	44400000											
02L1DD0302	Boulder Surevey	14		1.021 9412: 91151-120110814	11APR08A	in the second second	11APR08A	1					0.01			124	100	
02L1DD0304	Prepare/submit boulder surevey report	25	1.00.000	Service and a service	26MAY08A 1	i antina a statuti strati		1				-	-	1.1		8		
02L1DD0306	SO review boulder survey report	14	14	27MAY08A	16JUN08A 2	27MAY08A	16JUN08A	2				-						\rightarrow
	Design; +69mPD to +40mPD	-	1 creatil		an ammon a la		104000000										122	
02L1DD0402	Design preparation by the Designer	14	14	17JAN08A	16APR08A 1	1/JAN08A	16APR08A	2			11				L B	21	1122	

ID	Activity Description	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	Cal	Total Float	2008	200	•	2010	2011	2012	2013	m
02L1DD0404	Design certification by the Design Checker	150	the second s		14NOV08A		14NOV08A	2				1:41.1		E I	104	DIS2	-
02L1DD0406	Design submission for the SO's approval	2	2	25APR08A	14NOV08A	25APR08A	14NOV08A	1							14	1.0	
02L1DD0408	Design review by the SO	90	90	26APR08A	04DEC08A	26APR08A	04DEC08A	2						1		1481 二	
02L1DD0412	Obtain design approval from the SO	0	0		04DEC08A		04DEC08A	2						1 1	12	1.13	
Site Formation	Design; +40mPD to +24mPD															一次月	-
02L1DD0502	Design preparation by the Designer	120	120	14APR08A	09MAY09A	14APR08A	09MAY09A	2							123		
02L1DD0504	Design certification by the Design Checker	145	145	05MAY08A	15MAY09A	05MAY08A	15MAY09A	2		0						1 22	
02L1DD0506	Design submission for the SO's approval	2	2	10MAY08A	16MAY09A	10MAY08A	16MAY09A	1	3		-		100		12	181	
02L1DD0508	Design review by the SO	90	90	12MAY08A	03JUN09	12MAY08A	03JUN09	2	-201	1					10		
02L1DD0512	Obtain design approval from the SO	0	0		03JUN09		03JUN09	2	-201						1	122	
Site Formation	Design; +24mPD to 14mPD								1							1.53	
02L1DD0602	Design preparation by the Designer	60	60	28AUG08A	23APR09A	28AUG08A	23APR09A	2		-				1 1	14		
02L1DD0603	Design submission for the DC's approval	2	2	16JAN09A	24APR09A	16JAN09A	24APR09A	1						1	504		
02L1DD0604	Design certification by the Design Checker	28	28	19JAN09A	15MAY09A	19JAN09A	15MAY09A	2	1	1			1 - C		1.2	122	
02L1DD0606	Design submission for the SO's approval	2	2	02FEB09A	15MAY09A	02FEB09A	15MAY09A	1							1.5		
02L1DD0608	Design review by the SO	63	63	03FEB09A	18JUN09	03FEB09A	18JUN09	2	-213	5	-	1.1	75 0		1	1124	
02L1DD0610	Design review by GEO	28	28	28MAY09	24JUN09	28MAY09	24JUN09	2	0								
02L1DD0612	Obtain design approval from the SO	0	0		18JUN09		18JUN09	2	-213				4			13.2	
TBM Launching	Chamber Design								1	8						1.184	
02L1DD0702	Design (AIP) preparation by the Designer	381	381	21APR08A	11MAY09A	21APR08A	11MAY09A	2		_							
02L1DD0703	Design (AIP) submission for the DC's approval	3	3	28JUL08A	12MAY09A	28JUL08A	12MAY09A	1		- Luite			21				
02L1DD0704	Design (AIP) certification by the Design Checker	37	37	21AUG08A	13MAY09A	21AUG08A	13MAY09A	2					100	1 1		1 A A	
02L1DD0706	Design (AIP) submission for the SO's approval	3	3	28JUL08A	13MAY09A	28JUL08A	13MAY09A	1		-			3.	1 1	121		
02L1DD0708	Design (AIP) review by the SO	280	280	29JUL08A	19MAY09A	29JUL08A	19MAY09A	2		-					12	「「「「「」」	
02L1DD0710	AIP submission for rel. authorities' approval	1	1	28AUG08A	28AUG08A	28AUG08A	28AUG08A	1		20 - i î -			18		1	184	
02L1DD0712	Design (AIP) review by the rel. authorities	28	28	28FEB09A	27MAR09A	28FEB09A	27MAR09A	2					13.14	1 1	17		
02L1DD0714	Obtain rel. authorities's approval for AIP	0	0		19MAY09A		19MAY09A	1		1	•		120		181		
02L1DD0716	SO submit Design (AIP) for approval of GEO	1	1	28FEB09A	28FEB09A	28FEB09A	28FEB09A	1		11						184	
02L1DD0718	Design (AIP) review/approval by the GEO	28	28	01MAR09A	28MAY09	01MAR09A	28MAY09	2	-176		-		2				
02L1DD0720	Obtain SO's consent for design (AIP)	0	0		19MAY09A		19MAY09A	2		1000		116					
02L1DD0722	Design preparation for the DDA submission	30	30	07MAR09A	05JUN09	07MAR09A	05JUN09	2	-183	-			10				
02L1DD0723	Design (DDA) submission for the DC's approval	1	1	06JUN09	06JUN09	06JUN09	06JUN09	1	-142	3		1 1 -	1		Co.	14.52	
02L1DD0724	Design (DDA) certification by the Design Checker	28	28	07JUN09	04JUL09	07JUN09	04JUL09	2	-180			1.184	18		1.		
02L1DD0726	Design (DDA) submission for the SO's approval	1	1	06JUN09	06JUN09	06JUN09	06JUN09	1	-144	2			34.		62	12	
02L1DD0728	Design (DDA) review by the SO	66	66	07JUN09	11AUG09	07JUN09	11AUG09	2	-183	2	-				81	13.24	
02L1DD0730	DDA submission for rel. authorities' approval	1	1	13JUN09	13JUN09	13JUN09	13JUN09	1	0						100	123	
02L1DD0732	Design (DDA) review by the rel. authorities	28	28	14JUN09	11JUL09	14JUN09	11JUL09	2	1				25		11	182	
02L1DD0734	Obtain rel. authorities's approval for DDA	1	1	13JUL09	13JUL09	13JUL09	13JUL09	1	0		1					1323	
02L1DD0736	SO submit design (DDA) for approval of GEO	1	1	13JUL09	13JUL09	13JUL09	13JUL09	1	0						3	. 18 St	
02L1DD0738	Design (DDA) review/approval by the GEO	28	28	14JUL09	10AUG09	14JUL09	10AUG09	2	0								
02L1DD0740	Obtain SO's consent for design (DDA)	0	0		12AUG09		12AUG09	2	-183	20		•					
Hopper Design										30					1	13.81	
02L1DD0802	Design preparation by the Designer	119	119	28FEB09A	26JUN09	28FEB09A	26JUN09	2	-212	_	-			È	11	10	

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ID	Activity Description	D84 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	0	Total Float	2908	2009	2010	2011	2012	2013
02L1DD0803	Design submission for the DC's approval	1	1	27JUN09	27JUN09	and the second se	27JUN09	1	-169		IT IT		11-3		
02L1DD0804	Design certification by the Design Checker	28	28	28JUN09	25JUL09	Dents (SET AT REALING)	25JUL09	2	-212					1	(S)
02L1DD0806	Design submission for the SO's approval	1	1	27JUN09	27JUN09		27JUN09	1	-169	1	T.				<u>i</u>
02L1DD0808	Design review by the SO	42	42	28JUN09	08AUG09	Press Target (Access)	08AUG09	2	-212		1	1.		51	84
02L1DD0810	Obtain design approval from the SO	0	0	20001100	08AUG09		08AUG09	2	-212			1 1 2 1		13	
Steel Platform			M				1						1		<u> </u>
02L1DD0902	Design preparation by the Designer	82	82	02JAN09A	24MAR09A	02JAN09A	24MAR09A	2						10	8
02L1DD0903	Design submission for the DC's approval	1		25MAR09A	101.2002/1.7610031003A	25MAR09A		1			100	1 1 1		$z \in \mathcal{C}$	
02L1DD0904	Design certification by the Design Checker	28		26MAR09A	Martin Contractor Contractor	26MAR09A		2	-194				1		8
02L1DD0906	Design submission for the SO's approval	1	1	09JUN09	09JUN09	CONSIGNATION CONTRACTOR	09JUN09	1	-153			17 I.		14	裕
02L1DD0908	Design review by the SO	42	42	10JUN09	21JUL09	a several and the second	21JUL09	2	-194	-				13	81-
02L1DD0910	Obtain design approval from the SO	0	0	10001100	21JUL09	10001100	21JUL09	2	-194			1 1 1	1.0		<u>8</u>
		1 0			2100000		2100200	2	-134		-				<u> </u>
02L1DD1002	try Support & Noise Enclosure Design	82	82	02JAN09A	14JUN09	02JAN09A	14JUN09	2	-157	1				13	<u>3</u>
Contraction of the second second second	Design preparation by the Designer	1	02	15JUN09	143UN09	Contraction of the second second	15JUN09	1	-124				14.3	3	83
02L1DD1003	Design submission for the DC's approval	28	28	16JUN09	102264237232	16JUN09	13JUL09	2	-124						
02L1DD1004	Design certification by the Design Checker	1.031212	20	15JUN09	15JUN09	and second results of	15JUN09	1	-124	4			- 25		8
02L1DD1006	Design submission for the SO's approval	1	40	Composed and the	THE ASSAULT ASSAULT	101110-0011010000	27JUL09	2	-124	4		8	it and		
02L1DD1008	Design review by the SO	42	42	16JUN09	27JUL09	10201409	Contraction and Contraction	2	-157			÷	1		8
02L1DD1010	Obtain design approval from the SO	0	0		27JUL09		27JUL09	2	-157	4					244
	Spiral Ramp & Vehicular Access	20	30	28MAY09	26 11 15100	28MAY09	26JUN09	2	130						102
02L1DD1102	Design preparation for the AIP submission	30	30	27JUN09	26JUN09 27JUN09		27JUN09	1	109	4 - 14		÷ 5 *		1 1	28
02L1DD1103	Design (DDA) submission for the DC's approval	1	1			160.00 A (100.00	27JUI09	2	132					1	£2
02L1DD1104	Design (DDA) certification by the Design Checker	28	28	28JUN09		28JUN09								- 13	2
02L1DD1106	Design (DDA) submission for the SO's approval	1	1	27JUN09	27JUN09		27JUN09	1	107			1 1	i i i i i i i	1.1	
02L1DD1108	Design (DDA) review by the SO	66	66	28JUN09	01SEP09		01SEP09	2	130	-			43		8 -
02L1DD1110	DDA submission for rel. authorities' approval	1	1	04JUL09	04JUL09		04JUL09	1	134			e 6 1	- pic-	- 8	8
02L1DD1112	Design (DDA) review by the rel. authorities	28	28	05JUL09	01AUG09		01AUG09	2	160		- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1-	1		- 14	98
02L1DD1114	Obtain rel. authorities's approval for DDA	1	1	03AUG09	03AUG09		03AUG09	1	131						
02L1DD1116	SO submit design (DDA) for approval of GEO	1	1	03AUG09	03AUG09		03AUG09	1	110				1.1		
02L1DD1118	Design (DDA) review/approval by the GEO	28	28	04AUG09	and the second sec	04AUG09	31AUG09	2	131	1					<u></u>
02L1DD1120	Obtain SO's consent for design (DDA)	0	0		02SEP09		02SEP09	2	130		-		-		<u></u>
	Box Culvert & Open Channel	1 242 1	1 221				In the second second	2	1					1	1
02L1DD1202	Design preparation for the AIP submission	30	30	27JUN09		27JUN09	26JUL09	-	1,550				1.10		84 - C
02L1DD1203	Design (DDA) submission for the DC's approval	1	1	27JUL09	27JUL09		27JUL09	1	1,260				3	- 2	64
02L1DD1204	Design (DDA) certification by the Design Checker	28	28	28JUL09	24AUG09		24AUG09		1,551			1 iii -	4		1
02L1DD1206	Design (DDA) submission for the SO's approval	1	1	27JUL09	27JUL09		27JUL09	1	1,259						S.
02L1DD1208	Design (DDA) review by the SO	66	66	28JUL09	010CT09		01OCT09	2	1,550		-		- 2-1	1	3
02L1DD1210	DDA submission for rel. authorities' approval	1	1	03AUG09		03AUG09	03AUG09		1,285					12	6
02L1DD1212	Design (DDA) review by the rel. authorities	28	28	04AUG09		04AUG09	31AUG09		1,581						2
02L1DD1214	Obtain rel. authorities's approval for DDA	1	1	01SEP09	01SEP09	A CONTRACTOR OF A CONTRACTOR O	01SEP09		1,283						8
02L1DD1216	SO submit design (DDA) for approval of GEO	1	1	01SEP09		01SEP09	01SEP09	-	1,260						34
02L1DD1218	Design (DDA) review/approval by the GEO	28	28	02SEP09		02SEP09	29SEP09		1,552		-			0	<u></u>
02L1DD1220	Obtain SO's consent for design (DDA)	0	0		02OCT09		02OCT09	2	1,550		•		12		

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ID	Activity Description	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	Cal	Total Float	2906	2009	2018	2011	2012	2013
Temporary Drai	nage Management Plan	- Odi	- Contraction	Sector V	, man	Sidir	1 11160	10	1 Inda						
02L1DD1302	TDMP preparation by the Designer	225	225	05MAY08A	27MAR09A	05MAY08A	27MAR09A	2							2
02L1DD1303	TDMP submission for the DC's approval	2	_	08AUG08A	- 251 CALINER 302	08AUG08A		1	10			0.0	11 - C	111 - 11	2
02L1DD1304	TDMP certification by the Design Checker	28		09AUG08A		09AUG08A		2	12			11			4
02L1DD1306	TDMP submission for the SO's approval	2		08AUG08A		08AUG08A	the second second	1	16					1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	stat
02L1DD1308	TDMP review by the SO	90		08AUG08A		08AUG08A		2	12	-				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ha-
02L1DD1310	TDMP submission for DSD's approval	1		17NOV08A		17NOV08A		1	12						8
02L1DD1312	TDMP review by the DSD	90	90	18NOV08A		18NOV08A	in the second	2	o	-		황물			
02L1DD1312	Obtain DSD's approval for DDA	1	1	17JUL09	17JUL09	17JUL09	17JUL09	1	o			181	-1-1		
02L1DD1314	Obtain SO's consent for TDMP	0	0	1130200	17JUL09	TTUCEOU	17JUL09	2	0						
a for the second s	strumentation Stg 1 for GL Works	0	0		1730203		1750203	2							
3DL1DDG102	Design preparation by the Designer	14	14	22FEB08A		22FEB08A	24APR08A	2	_						2
3DL1DDG102		7		25APR08A		25APR08A	and the second sec	-	-		1				-81.
	Design certification by the Design Checker						16JUN08A	2			1 - 1	12	and the Provent		
3DL1DDG106	Design submission for the SO's approval	1		25APR08A	A COLUMN TO A PARTY	25APR08A	16JUN08A	1			h	1.1	1-1-1		
3DL1DDG108	Design review by the SO	14		26APR08A		26APR08A	14JUL08A	2					1		
3DL1DDG110	Obtain design approval from the SO	0	0		14JUL08A		14JUL08A	2							24
3DL1DDG112	Install Geotechnical Instruments	10	205231	04JUN08A	The second second second	04JUN08A	05JUL08A	1							3
3DL1DDG114	Initial reading	14	14	18JUN08A	09JUL08A	18JUN08A	09JUL08A	2					_		
and the local distance in the second s	strumentation Stg 2 for Deep Exc.									2					양기
3DL1DDG202	Design preparation by the Designer	14	14	28MAY09*	10JUN09	28MAY09*	10JUN09	2	195				1.2	1111 20	31.
3DL1DDG204	Design certification by the Design Checker	14	14	11JUN09	24JUN09	11JUN09	24JUN09	2	195	-	0				3
3DL1DDG206	Design submission for the SO's approval	1	1	11JUN09	11JUN09	11JUN09	11JUN09	1	163						<u>2</u>
3DL1DDG208	Design review by the SO	28	28	12JUN09	09JUL09	12JUN09	09JUL09	2	195	+ ,	•	1			22
3DL1DDG210	Obtain design approval from the SO	0	0		09JUL09		09JUL09	2	195		•	12.3	1.16	. N. 32	2
3DL1DDG212	Install Geotechnical Instruments	18	18	10JUL09	30JUL09	10JUL09	30JUL09	1	161		•				
3DL1DDG214	Baseline Monitoring	14	14	31JUL09	13AUG09	31JUL09	13AUG09	2	195						
3DL1DDG216	Monitor/report Geotechnical Insturmentatation	1,605	1,605	10JUL08A	31DEC12	10JUL08A	31DEC12	2	0						22
Design Packa	ges for Works in Portion F														
Main Tunnel De	sign											81.9	1.11		
02L1FF0102	Design preparation for the AIP submission	414	414	08FEB08A	27MAR09A	08FEB08A	27MAR09A	2				11			2
02L1FF0103	Design (AIP) submission for the DC's approval	2	2	02MAY08A	27MAR09A	02MAY08A	27MAR09A	1							
02L1FF0104	Design (AIP) certification by the Design Checker	28	28	03MAY08A	27MAR09A	03MAY08A	27MAR09A	2							3
02L1FF0106	Design (AIP) submission for the SO's approval	1	1	10JUL08A	27MAR09A	10JUL08A	27MAR09A	1	1	-					<u>ii</u> 1
02L1FF0108	Design (AIP) review by the SO	66	66	11JUL08A	03JUN09	11JUL08A	03JUN09	2	-176				17 C		8
02L1FF0110	AIP submission for rel. authorities' approval	1	1	08JUL08A	08JUL08A	1.111111111111111111111111111111111111	08JUL08A	1	1	1 1					61 I
02L1FF0112	Design (AIP) review by the rel. authorities	28	28	09JUL08A	These stress are set of	124-24-24-24-24-24-24-24-24-24-24-24-24-2	05MAR09A	2	1				1.12		刻
02L1FF0114	Obtain rel. authorities's approval for AIP	1	10000	the second second second second	1 1 1 2 1 C 7 A C 1 C 7 F 2 C		06MAR09A	1					12		34
02L1FF0116	SO submit design (AIP) for approval of GEO	1	1	29MAY09	29MAY09		29MAY09	1	0		F 1				100
02L1FF0118	Design (AIP) review/approval by the GEO	28	28	30MAY09		30MAY09	26JUN09	2	0				1131	HYL THE	
02L1FF0120	Obtain SO's consent for design (AIP)	0	0		04JUN09		04JUN09	2	-176		•				2
02L1FF0122	Design preparation for the DDA submission	30		04NOV08A		04NOV08A		2	-176	1 million			1 - 1		18
02L1FF0123	Design (DDA) submission for the DC's approval	1	1	12JUN09	12JUN09		12JUN09	1	-138		1		1 1	19.55	왕님
02L1FF0124	Design (DDA) certification by the Design Checker	28	28	13JUN09		13JUN09	10JUL09	2	-176						37
	Boolgh (Bbry Contineation by the Dealgh Checkel	20	20	10001103	1000100	10001100	1000100	4	-110			1.1			

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ID	Activity	D04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish		Total Float	2098	2009 2010 2011 2012 2013
	Design (DDA) submission for the SO's approval	1	1	12JUN09	12JUN09	12JUN09	12JUN09	1	-136		
02L1FF0126		56	56	12JUN09	The second second second second	16JUN09	10AUG09	2	-176		
02L1FF0128	Design (DDA) review by the SO	1	1	19JUN09		19JUN09	19JUN09	1	-121		
02L1FF0130	DDA submission for rel. authorities' approval	28	28	20JUN09	1	20JUN09	17JUL09	2	-152		
02L1FF0132	Design (DDA) review by the rel. authorities	20	20	18JUL09	1		18JUL09	2	-123		
02L1FF0134	Obtain rel. authorities's approval for DDA		1		18JUL09	18JUL09 13JUL09	13JUL09	1	-140	1	
02L1FF0136	SO submit design (DDA) for approval of GEO	1		13JUL09	13JUL09	Concernment of the state	- 1020-02 - 3290.00	141	-176		
02L1FF0138	Design (DDA) review/approval by the GEO	28	28	14JUL09	10AUG09	14JUL09	10AUG09	2	-176		
02L1FF0140	Obtain SO's consent for design (DDA)	0	0		11AUG09		11AUG09	2	-176	10	
and the second	sment on WSD Yau Kam Tau WTW		1			Inc. and a set					
02L1FF0202	Design preparation for the DDA submission	60		29APR08A		29APR08A	1 100 C C C C C C S C S C S C S	2		8	
02L1FF0203	Design (DDA) submission for the DC's approval	1		03JUL08A		03JUL08A	03JUL08A	1	1 8		
02L1FF0204	Design (DDA) certification by the Design Checker	260	260	1211122/01223 00:0	STATISTICS CONTRACT	04JUL08A	18MAR09A	2		34	to be endorsed by All Reservior Panel Engineer
02L1FF0206	Design (DDA) submission for the SO's approval	1	1	15JUL08A	Marco westerer.	15JUL08A	18MAR09A	1	12		
02L1FF0208	Design (DDA) review by the SO	66	66		ALC: OUT OF ALL CALL	16JUL08A	31MAR09A	2			
02L1FF0210	DDA submission for rel. authorities' approval	1	1	10JUL08A	19800 0000 000 00000	10JUL08A	02APR09A	1			
02L1FF0212	Design (DDA) review by the rel. authorities	28	28			11JUL08A	10JUN09	2	0	8	
02L1FF0214	Obtain rel. authorities's approval for DDA	1	1	11JUN09	11JUN09	11JUN09	11JUN09	1	0	128	
02L1FF0220	Obtain SO's consent for design (DDA)	0	0		31MAR09A	\[31MAR09A	2	1		
Impact Assess	sment on WSD Tai Lam Chung WT No. 3									1	
02L1FF0302	Design preparation for the DDA submission	32	32	14APR08A	27JUN08A	14APR08A	27JUN08A	2	3		
02L1FF0303	Design submission for the DC's approval	1	1	27JUN08A	27JUN08A	27JUN08A	27JUN08A	1		S I	
02L1FF0304	Design (DDA) certification by the Design Checker	285	285	28JUN08A	08JUN09	28JUN08A	08JUN09	2	0		to be endorsed by All Reservior Panel Engineer
02L1FF0306	Design (DDA) submission for the SO's approval	1	1	15JUL08A	15JUL08A	15JUL08A	15JUL08A	1		1	
02L1FF0308	Design (DDA) review by the SO	66	66	16JUL08A	13JUL09	16JUL08A	13JUL09	2	0		
02L1FF0310	DDA submission for rel. authorities' approval	1	1	10JUL08A	10JUL08A	10JUL08A	10JUL08A	1	İ. İ		
02L1FF0312	Design (DDA) review by the rel. authorities	28	28	11JUL08A	15JUN09	11JUL08A	15JUN09	2	28		
02L1FF0314	Obtain rel. authorities's approval for DDA	1	1	16JUN09	16JUN09	16JUN09	16JUN09	1	23		
02L1FF0316	SO submit design (DDA) for approval of GEO	1	1	16JUN09	16JUN09	16JUN09	16JUN09	1	0		
02L1FF0318	Design (DDA) review/approval by the GEO	28	28	17JUN09	14JUL09	17JUN09	14JUL09	2	0		
02L1FF0320	Obtain SO's consent for design (DDA)	0	0		14JUL09		14JUL09	2	0		
Impact Assess	sment on KCRC West Rail Tunnel										
02L1FF0402	Design preparation for the DDA submission	30	30	28APR08A	26JUN08A	28APR08A	26JUN08A	2			
02L1FF0403	Design submission for the DC's approval	1	1	26JUN08A	26JUN08A	26JUN08A	26JUN08A	1	8	1	
02L1FF0404	Design (DDA) certification by the Design Checker	90	90	27JUN08A	02APR09A	27JUN08A	02APR09A	2	1		
02L1FF0406	Design (DDA) submission for the SO's approval	2	2	15JUL08A	03APR09A	15JUL08A	03APR09A	1	5		
02L1FF0408	Design (DDA) review by the SO	267	267	16JUL08A	08JUN09	16JUL08A	08JUN09	2	133		
02L1FF0410	DDA submission for rel. authorities' approval	1	1	14JUL08A	14JUL08A	14JUL08A	14JUL08A	1			
02L1FF0412	Design (DDA) review by the rel. authorities	28	28	15JUL08A	11MAR094	15JUL08A	11MAR09A	2	8		
02L1FF0414	Obtain rel. authorities's approval for DDA	1	1	12MAR09A	11MAR094	12MAR09A	11MAR09A	1			
02L1FF0416	SO submit design (DDA) for approval of GEO	ં	1			29MAY09	29MAY09	1	97		
02L1FF0418	Design (DDA) review/approval by the GEO	28	28		26JUN09	Constant Constant Street	26JUN09	2	115		
02L1FF0418	Obtain SO's consent for design (DDA)	0	0		27JUN09		27JUN09	2	115		
UZLIFFU4ZU	obtain 60's consent for design (bbby)	ji jimi	U		2100.100		1=.00.00	_	4		

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ID	Activity Description	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	Cal ID	Total Float	2088	500		2010	2011	2052	
npact Assess	ment on WSD Tsuen Wan Reservoir G.															100
2L1FF0502	Design preparation for the DDA submission	30	30	05MAY08A	02JUL08A	05MAY08A	02JUL08A	2								
2L1FF0503	Design submission for the DC's approval	1	1	03JUL08A	03JUL08A	03JUL08A	03JUL08A	1		1 1	12			1	1.1	
2L1FF0504	Design (DDA) certification by the Design Checker	260	260	04JUL08A	01APR09A	04JUL08A	01APR09A	2			tc b	e endors	ed by Al	Reservic	r Panel En	gineer
2L1FF0506	Design (DDA) submission for the SO's approval	2	2	15JUL08A	01APR09A	15JUL08A	01APR09A	1			#					1000
2L1FF0508	Design (DDA) review by the SO	60	60	16JUL08A	16JUN09	16JUL08A	16JUN09	2	221	-	-				14-1	1925
2L1FF0510	DDA submission for rel, authorities' approval	1	1	10JUL08A	10JUL08A	10JUL08A	10JUL08A	1				111			134	1.74
2L1FF0512	Design (DDA) review by the rel. authorities	28	28	11JUL08A	10JUN09	11JUL08A	10JUN09	2	226						100	1.22
2L1FF0514	Obtain rel. authorities's approval for DDA	1	1	11JUN09	11JUN09	11JUN09	11JUN09	1	187			-11.				
2L1FF0520	Obtain SO's consent for design (DDA)	0	0		17JUN09		17JUN09	2	221		0			ť.	-10-1	182
rout Trial at I	Foult Zone F1				1											1324
2L1FF0602	MS preparation for the DDA submission	12	12	02MAY08A	20MAY08A	02MAY08A	20MAY08A	2							100	
2L1FF0606	Ms (DDA) submission for the SO's approval	1		- man all - main al	21MAY08A			- 1		1 -		- 151 1			128-1-	123
2L1FF0608	MS (DDA) review by the SO	24			17JUL08A			2			11			1	1.	120
2L1FF0620	Obtain SO's consent for MS (DDA)	0	0		17JUL08A		17JUL08A	2		•	2					
	Instrumentation								01						1	125
DL1FFGI02	Design preparation by the Designer	60	60	28AUG08A	23.JAN094	28AUG08A	23JAN09A	2		-					11 8	1.23
DL1FFGI04	Design certification by the Design Checker	14		24JAN09A		24JAN09A	10JUN09	2	-195	32				-	140	
DL1FFGI06	Design submission for the SO's approval	2		24JAN09A	26MAR09A		26MAR09A	1	-100	20		1.1		E.E.	1	13
DL1FFGI08	Design review by the SO	56		24JAN09A		24JAN09A	20JUN09	2	-160				- 8	-	1	- 13
DL1FFGI10	DDA submission for rel, authorities' approval	1		14MAR09A	and the state of the state of the state of the state of the state of the state of the state of the state of the	14MAR09A		1	-100		1	-1 -1	2-			1431
DL1FFGI12	Design (DDA) review by the rel. authorities	56	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	15MAR09A		15MAR09A	23JUL09	2	-195	2		1 -	1		1924	13
DL1FFGI14	Obtain rel. authorities's approval for DDA	1	1	24JUL09	24JUL09	contentine affect	24JUL09	1	-156	2	F			21-1	122	. HØ-
DL1FFGI16	Obtain design approval from the SO	0	0	2400200	24JUL09	2400103	24JUL09	2	-194	20 -					18	
DL1FFGI18	Install geotechnical instrumentsation	90	90	25JUL09	10NOV09	25 11 11 00	10NOV09	1	-156					8	19	
DL1FFGI20	Baseline Monitoring	14	14	11NOV09	24NOV09	CARL ST BANK OF	24NOV09	2	-188		-			(1.84	- 1939
DL1FT0208	Maintain/monitor geotechnical instrumentation	1000	1,200	25NOV09	08MAR13		08MAR13	2	-188	7				Dirl	11.1	
		1,200	1,200	25140 405	UDIVIAR 15	25140703	USIVIAR 13	2	- 100	5 21	1-			1931		12050
esign Pack	ages for Works in Portion G		-										1			1933
and the state of t	ct Assessment												- 34	P-1	112	
2L1GG0105	Quatation and award consultant	24	24	22JUN09*	20JUL09		20JUL09	1	182	S	-	4		5	12	1.2
2L1GG0115	Prepare preliminary DIA report	36	36	21JUL09	31AUG09	21JUL09	31AUG09	1	182				12	14		
2L1GG0125	Prepare final DIA report	12	12	01SEP09	14SEP09	era al presente record	14SEP09	1	182							-14/2
2L1GG0135	Submission of DIA report to SOR/DSD	1	1	15SEP09	15SEP09	A CONTRACTOR AND A PARTY OF	15SEP09	1	186	-			13	-	1.12	4.2
2L1GG0145	SOR/DSD review/comment DIA report	28	28	22SEP09	19OCT09	NEW ADDRESS STORES	19OCT09	2	227		1				1	122
2L1GG0155	Revise DIA incorporating comments	12	12	20OCT09	03NOV09	200CT09	03NOV09	1	182			•		8 3	12	12
2L1GG0165	SOR/DSD review/approve DIA report	21	21	04NOV09	24NOV09	04NOV09	24NOV09	2	227			2	_		12.3	1.20
2L1GG0175	Obtain consent from SOR and DSD	0	0		24NOV09		24NOV09	2	227		1	٠	1	tes.		1200
emp. Platform	n Design for H-Piling at Portion G													dill.	112	1 201
L1GG0202	Design preparation for the DDA submission	30	30	21JUL09	19AUG09	21JUL09	19AUG09	2	261	3			8	1	10.3	
2L1GG0203	Design (DDA) submission for the DC's approval	1	1	20AUG09	20AUG09	20AUG09	20AUG09	1	211	1					10	123
2L1GG0204	Design (DDA) certification by the Design Checker	28	28	21AUG09	17SEP09	21AUG09	17SEP09	2	263				1			
2L1GG0206	Design (DDA) submission for the SO's approval	1	1	20AUG09	20AUG09	20AUG09	20AUG09	1	210			t				12
2L1GG0208	Design (DDA) review by the SO	58	50	21AUG09	17OCT09	01411000	17OCT09	2	261			-			1.1	1111

ID	Activity Description	D04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	C	Total Float		2968	2009		0110	2011	2812		2013
02L1GG0210	DDA submission for rel. authorities' approval	1	1	27AUG09	27AUG09	27AUG09	27AUG09	1	228									
02L1GG0212	Design (DDA) review by the rel, authorities	28	28	28AUG09	24SEP09	28AUG09	24SEP09	2	284				1 1 1		1	11	118	
02L1GG0214	Obtain rel. authorities's approval for DDA	1	1	25SEP09	25SEP09	25SEP09	25SEP09	1	226				1				1989	
02L1GG0228	Obtain design (DDA) approval from the SO	0	0		180CT09		18OCT09	2	261				•				1923	
ELS Design fo	r Pipe Jacking at Portion G																	
02L1GG0302	Design preparation for the DDA submission	15	15	20AUG09	03SEP09	20AUG09	03SEP09	2	284				61-1-11			2	1123	
02L1GG0303	Design (DDA) submission for the DC's approval	1	1	04SEP09	04SEP09	04SEP09	04SEP09	1	229					1	1		1.123	
02L1GG0304	Design (DDA) certification by the Design Checker	28	28	05SEP09	02OCT09	05SEP09	02OCT09	2	286						1			
02L1GG0306	Design (DDA) submission for the SO's approval	1	1	04SEP09	04SEP09	04SEP09	04SEP09	1	228								1323	
02L1GG0308	Design (DDA) review by the SO	58	58	05SEP09	01NOV09	05SEP09	01NOV09	2	284						1 3		13	
02L1GG0310	DDA submission for rel. authorities' approval	1	1	11SEP09	11SEP09	11SEP09	11SEP09	1	246				6				1128	
02L1GG0314	Design (DDA) review by the rel. authorities	28	28	12SEP09	09OCT09	12SEP09	09OCT09	2	307	1.1								
02L1GG0316	Obtain rel. authorities's approval for DDA	1	1	100CT09	10OCT09	10OCT09	100CT09	1	248								1303	
02L1GG0318	Obtain design (DDA) approval from the SO	0	0		02NOV09		02NOV09	2	284				•	5		201	1923	
Schedule of	Milestones for Cost Centre No. 2L						Sec. 2			18					1		12.3	
ouricadie or		_								18							1223	
02L10D1002	2L 1: On submission of PDP to the SO	0	0		10JAN08A		10JAN08A	2	1	•						13	123	
02L10D1004	2L 2; On acception of PDP by the SO	0	0		04SEP08A		04SEP08A	2			٠		714		1 13	1	- 983	
02L10D1006	2L 2; On submission of AIP to the SO; Portion A	0	0		12MAY09A		12MAY09A	2							1 11			
02L10D1008	2L 4; On acceptance of AIP by the SO; Portion A	0	0		25JUL09		25JUL09	2	1,619			•	0.0	_	1 3	12	1 81	
02L10D1010	2L 5; On subumission of DDA to the SO; Portion A	0	0		28SEP09		28SEP09	2	1,554	12	-		•		1		1123	
02L10D1012	2L 6; On acceptance of DDA by the SO; Portion A	0	0		100CT09		10OCT09	2	1,542	15		ŧ.	•			24	「新潟」	
02L10D1012	2L 7: On submission of AIP to the SO; Portion B	0	0		07JUL09		07JUL09	2	1,637	12		•			1		1451	
02L10D1014	2L 8; On acceptance of AIP by the SO; Portion B	0	0		12AUG09		12AUG09	2	1,601	17					1	83	121	
02L10D1018	2L 9; On submission of DDA to the SO; Portion B	0	0		28SEP09		28SEP09	2	1,554	3			•	171		114		
02L10D1020	2L 10: On acceptance of DDA by the SO; Portion B	0	0		26OCT09		26OCT09	2	1,526	33.			•	1			1953	
02L10D1022	2L 11; On submission of AIP to the SO; Portion C	0	0		25JUL09		25JUL09	2	1,619			•					121	
02L10D1024	2L 12; On acceptance of AIP by the SO; Portion C	0	0		10AUG09		10AUG09	2	1,603	31		4		2	6 17		131	
02L10D1026	2L 13: On submission of DDA to the SO; Portion C	0	0		28SEP09		28SEP09	2	1,554	1.1			•	1	1 1		113	
02L10D1028	2L 14: On acceptance of DDA by the SO; Portion C	0	0		23OCT09		23OCT09	2	1,529				•	11		11		
02L10D1030	2L 15: On acceptance of AIP by the SO; Portion D	0	0		25JUL09		25JUL09	2	1,619	301		•	21	15		1		
02L10D1032	2L 16; On acceptance of DDA by the SO; Portion D	0	0		10OCT09		10OCT09	2	1,542				•					
02L10D1034	2L 17: On submission of AIP to the SO; Portion F	0	0		13JUL09		13JUL09	2	1,631	3119		•						
02L10D1036	2L 18; On acceptance of AIP by the SO; Portion F	0	0		19SEP09		19SEP09	2	1,563			1 8	•			1	1	
02L10D1038	2L 19; On submission of DDA to the SO; Portion F	0	0		28SEP09		28SEP09	2	1,554				•				162	
02L10D1040	2L 20; On acceptance of DDA by the SO; Portion F	0	0		05DEC09		05DEC09	2	1,486	\$ 26			٠			12.5		
02L10D1042	2L 21: On acceptance of AIP by the SO; Portion G	0	0		27MAY09		27MAY09	2	1,678			•					1937	
02L10D1044	2L 22; On acceptance of DDA by the SO; Portion G	0	0		24NOV09		24NOV09	2	1,497	3 33			•			1	1255	
02L10D1046	2L 23; On completion of all works under this CC	0	0		24NOV09		24NOV09	2	1,497				•		1		363	

ID	Activity Description	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish		Total Float	200		2009	2010	2011	2013	2013
Constructio	n of Main Tunnel			Contraction of the local division of the loc		and the second live			- Bassie						111	
	t Fault Zone F1				(Sector					15						
																13
3AL1FT0002	HyD issue XP	0	0		23JUL08A		23JUL08A	2								18.1
3AL1FT0004	Adavance notice to HyD/Road advice	6	6	24JUL08A	30JUL08A	24JUL08A	30JUL08A	1								14.9
3AL1FT0006	Trial pit excavation	4	4	31JUL08A	04AUG08A	31JUL08A	04AUG08A	1								13
3AL1FT0010	Scaffolding, mobilize & set up	7	7	05AUG08A	13AUG08A	05AUG08A	13AUG08A	1		124	for the d	esign of	pre-excav	ation grout	ng at F1	188
3AL1FT0012	Drill & test for 2m Arrangement Test	45	45	14AUG08A	15NOV08A	14AUG08A	15NOV08A	1								
3AL1FT0014	Backfill drilled holes, demobilization & Tidy up	6	6	17NOV08A	22NOV08A	17NOV08A	22NOV08A	1			0					11151
3AL1FT0016	Drill & test for single hole arrangement test	17	17	11AUG08A	04SEP08A	11AUG08A	04SEP08A	1		an in the	•					
3AL1FT0018	Backfill drilled hole, demobilization & tidy up	1	1	05SEP08A	05SEP08A	05SEP08A	05SEP08A	1		ting at F	IER.B27	27.73(5), within 6	months of	DOC	
TBM Manufa	cture/Testing/Delivery					Cont.										156.
	f TBM & Back-ups														1.2	
3AL1FT0302	TBM & Excavation Sys Procurement	30	30	14DEC07A	12JAN08A	14DEC07A	12JAN08A	2		4					12	
3AL1FT0304	TBM design & manufacturing	252	252	21DEC07A	28SEP08A	21DEC07A	28SEP08A	2			- 1					192
3AL1FT0306	TBM workshop tests	7	7	040CT08A	080CT08A	040CT08A	080CT08A	2		1	1			10 F		
3AL1FT0308	TBM dismounting & packing	21	21	09OCT08A	24DEC08A	09OCT08A	24DEC08A	2						5		18.5
Delivery of TB																
3AL1FT0105	TBM shipment to Hong Kong	30	30	06JUL09*	04AUG09	06JUL09*	04AUG09	2	-161							1983
3AL1FT0110	TBM arriving Portion I	3	3	05AUG09	07AUG09	05AUG09	07AUG09	1	-130			1				19.4
3AL1FT0115	Destuffing Containers/Cleaning & Iubrication	24	24	08AUG09	04SEP09	08AUG09	04SEP09	1	-130	183			e i	10		108
TBM Pre-asse	mbly/Test & Commis. at Portion I				-			_							1.	148
3AL1FT0205	Cutterhead	7	7	05SEP09	12SEP09	05SEP09	12SEP09	1	-130	1		1		181		183
3AL1FT0210	Bearing	6	6	05SEP09	11SEP09	05SEP09	11SEP09	1	-129			1				1255
3AL1FT0215	Backup # 1	6	6	12SEP09	18SEP09	12SEP09	18SEP09	1	-122			F.			1.124	1224
3AL1FT0220	Backup # 2	5	5	14SEP09	18SEP09	14SEP09	18SEP09	1	-121			1		100		132
3AL1FT0225	Backup # 3	5	5	19SEP09	24SEP09	19SEP09	24SEP09	1	-122	181		1			1	123
3AL1FT0230	Backup # 4	5	5	19SEP09	24SEP09	19SEP09	24SEP09	1	-121	1		1	1		110	
3AL1FT0240	Baackup # 5	5	5	25SEP09	30SEP09	25SEP09	30SEP09	1	-122	101		1			1194	13
3AL1FT0245	Backup # 6	5	5	25SEP09	30SEP09	25SEP09	30SEP09	1	-121	12		1		12	1171	1953
3AL1FT0250	Backup # 7	5	5	02OCT09	080CT09	02OCT09	08OCT09	1	-80			1			1131	
3AL1FT0255	Backup # 8	5	5	02OCT09	08OCT09	02OCT09	08OCT09	1	-77			1				
3AL1FT0260	Backup # 9	5	5	090СТ09	14OCT09	09OCT09	14OCT09	1	-79			1		TT T	1	
3AL1FT0365	Backup # 10	5	5	09OCT09	140CT09	090СТ09	14OCT09	1	-76			1		-		123
3AL1FT0370	Backup # 11	5	5	15OCT09	20OCT09	15OCT09	20OCT09	1	-78			1			1.13	100
3AL1FT0375	Backup # 12	5	5	15OCT09	20OCT09	15OCT09	20OCT09	1	-75			-1				
TBM Transpor	t from Portion I to Outfall									100						0.2
3AL1FT0405	Cutterhead	1	1	02JAN10	02JAN10	02JAN10	02JAN10	1	-219	18						122
3AL1FT0415	Shield # 1	1	1	04JAN10	04JAN10	04JAN10	04JAN10	1	-210							3.2
3AL1FT0425	Shield # 2	1	1	05JAN10	05JAN10	05JAN10	05JAN10	1	-210	128					TRA L	180
3AL1FT0435	Bearing	1	1	06JAN10	06JAN10	CONTRACTOR OF A	06JAN10	1	-210				6		11	
3AL1FT0445	Erector	1	1	07JAN10	07JAN10	07.IAN10	07JAN10	1	-210		110				1.102	1212

ID	Activity	D04	WP3D	AD04	AD84	WP3D	WP3D	C	Total	2008	din.	2008	201	0	2011	2012	2013
	Description	Dur	Dur	Start	Finish	Start	Finish		Float			ST I					HIS COMPANY
3AL1FT0455	Conveyor	1	1	08JAN10		08JAN10	08JAN10	1	-210				e ferre				ikest -
3AL1FT0465	Backup # 1	1	1	09JAN10		09JAN10	09JAN10	1	-210		- 4		-i-i -		181		14-04
3AL1FT0475	Backup # 2	1	1	11JAN10		11JAN10	11JAN10	1	-208	6		1.0	(10	[長]
3AL1FT0485	Backup # 3	1	1	12JAN10	12JAN10	12JAN10	12JAN10	1	-206	1.4					10	-	433
3AL1FT0495	Backup # 4	1	1	13JAN10	13JAN10	13JAN10	13JAN10	1	-206		_		-				44
3AL1FT0505	Backup # 5	1	1	29JAN10		29JAN10	29JAN10	্র	-219								
3AL1FT0515	Backup # 6	1	1	30JAN10	30JAN10	30JAN10	30JAN10		-219				42				123
3AL1FT0525	Backup # 7	1	1	27MAR10	27MAR10	27MAR10	27MAR10	1	-218							-	
3AL1FT0535	Backup # 8	1	1	31MAR10	31MAR10	31MAR10	31MAR10	1	-218				4		ł.	80	12.3
3AL1FT0545	Backup # 9	1	. 1	08APR10	08APR10	08APR10	08APR10	1	-218				- E	- 1. A			
3AL1FT0555	Backup # 10	. 1	1	12APR10	12APR10	12APR10	12APR10	1	-218				1				134
3AL1FT0565	Backup # 11	1	1	15APR10	15APR10	15APR10	15APR10	1	-218	1.1			, F		124	1	
3AL1FT0575	Backup # 12	1	1	19APR10	19APR10	19APR10	19APR10	1	-218	191			4.				882
Manufacture	Pre-cast Lining/Delivery									-				1.02			
Segmental Lini	ing Mould														1		121
3AL1FTSM02	Procure sub-contract for segmental mould	0	0		21JUL08A		21JUL08A	2		•							
3AL1FTSM04	Prepare shop drwgs for segmental mould	60	60	02FEB09A	05MAR09A	02FEB09A	05MAR09A	2								8	
3AL1FTSM06	Fabrication of segmental mould	90	90	06MAR09A	16MAY09A	06MAR09A	16MAY09A	2			C						1923
3AL1FTSM08	Inspection in Korea	7	7	18MAY09A	20MAY094	18MAY09A	20MAY09A	2									1233
3AL1FTSM10	Painting & packing	7	7	21MAY09A	27MAY09A	21MAY09A	27MAY09A	2					FIF			3	
3AL1FTSM12	Delivery of segmental moulds to HKG	7		28MAY09		28MAY09	03JUN09	2	-107		11		18.3				
Pre-cast Segm		-						-	-	13		-				3	150
3AL1FT0404	Prepare/submit QA/QC System	30	30	12JAN09A	04MAR094	12JAN09A	04MAR09A	2		8.				1 1			
3AL1FT0410	SO approve QA/QC system	28		05MAR09A		05MAR09A		1	-88								123
3AL1FT0412	Approval of Tunnel Linig Design	0	0		11AUG09		11AUG09	2	-176				2 1		10	1 - 1	
3AL1FT0416	Manufactur of segments	330	330	12AUG09		12AUG09	20SEP10	1	1	s/day i.e.	1 pour/	oav.		Total 3	176 rings	1 rina =	5 segments
3AL1FT0418	Delivery of Segments	400	400	02JAN10		02JAN10	12MAY11	1	-200			Ľ	-	1	100 C	S. J	ces a week
3AL1FTSL02	Procure sub-contract for segment lining	0	0		05JAN09A		05JAN09A	1		822							
	trumetation at WSD Tunnel Using PPE	0			000744057		000/1100/1					-					E CAL
	nent to Install G.I. Works	-				The second second				28						2	- 浅泉
3AL1FTMS02	Prepare method statement	69	69	12MAR09A	26MAR094	12MAR09A	26MAR09A	1	1	12					3		習行
3AL1FTMS04	Method statement endorsement by ICE & APRE	30		29MAY09A		29MAY09A		1	-68						38		일양 전
3AL1FTMS04	Method statement endorsement by LD	18	18			04JUL09	24JUL09	1	-68							2	「「「「「「」」
3AL1FTMS12	Method statement endorsement by SOR	12	12			25JUL09	07AUG09	1	-68				i in	13 :	18	per	
		24	24		1	08AUG09	04SEP09	1	-68								的成功
3AL1FTMS14	Method statement endorsement by WSD	45	45			22DEC09*	18FEB10	1	-188	3.4		1					
3AL1FTMS24	Application for electrical power	40	40	2202009	IDI EDIU	2202009	TOLETO	-	-100	11		-					100
At Ting Kau Ai		4		19MAR10	10140	19MAR10	19MAR10	1	-219	11			3				1934
3AL1WT3B02	Arrange WSD to open the valve house	1					19MAR10 23MAR10		-219								1983
3AL1WT3B12	Set up exhoust fans & arrange temp. electricity	3	3			20MAR10		1		2 14			tol	ower down	n the use	ar lovel	481
3AL1WT3B22	Arrange 2 nrs. set of water pumps	2	2			24MAR10	25MAR10	· ·	-219	101			- 100 X 1	CONTRACTOR CONTRACTOR	1		
3AL1WT3B32	Remove the air vent pipe (DN250)	2	2			26MAR10	27MAR10	1	-219	2			noll	owing wat	ertunnel	Shut dow	[]注]
3AL1WT3B42	Remove connection flange (DN900)	1	1	29MAR10	29MAR10	29MAR10	29MAR10	1	-219						18	1	1111

LD -	Activity	AD04		AD04	AD04	WP3D	WP3D	Cal	Total	2008 2010 2011 2012 2013
	Description	Dur	Dur	Start	Finish	Start	Finish	D	Float	
3AL1WT3B52	Connect exhaust fan to valve shaft	3	3	30MAR10	1.00740.4074.0007	30MAR10	01APR10	1	-219	
3AL1WT3B62	Connect new vent pipe to exhaust fan(s)	2	2	07APR10	08APR10		08APR10	1	-219	
3AL1WT3B72	Test and commission exhaust fan(s)	3	3	09APR10	12APR10	09APR10	12APR10	1	-219	
and a set of the set o	rks at Chai Wan Kok Shaft	1				1		-		
3AL1FTCT02	Install electricity take off, switch board &	4	4	27MAR10	THE SHOT WAS ANOTHER	27MAR10	31MAR10	1	-219	stemp dwon transformer
3AL1FTCT12	Install waste reception/disposal area	1	1	13MAR10	No. and Provide Street	13MAR10	13MAR10	1	-219	
3AL1FTCT22	Install toilet and shower	3	3	11MAR10	Avenue of the location	11MAR10	13MAR10	1	-219	
3AL1FTCT32	Set up generatior, two 2" water pumps	2		30MAR10		30MAR10	31MAR10	1	-219	
3AL1FTCW02	UU detection	3	3	15MAR10		15MAR10	17MAR10	1	-219	
3AL1FTCW04	Excavate to lower platform apprx. 0.5m-1m	2	2		THE ASSAULT FOR THE	18MAR10	19MAR10	1	-219	
3AL1FTCW06	Set out & align sheet piling	1	1	20MAR10	Contraction of the second second	20MAR10	20MAR10	1	-219	
3AL1FTCW08	Install sheet piles & excavate to install rails	4	4	22MAR10	Contraction of the second second second second second second second second second second second second second s	22MAR10	25MAR10	1	-219	
3AL1FTCW10	Excavate to the bottom of DN1200 pipe	3	3	26MAR10	a second second second	26MAR10	29MAR10	1	-219	
3AL1FTCW12	Lay conrete blinding to pit	2	2	30MAR10	1 Seattor of the second	30MAR10	31MAR10	1	-219	
3AL1FTCW14	ICE checking	1	1	01APR10	01APR10	2 A Second March Y	01APR10	1	-219	
3AL1FTCW16	WSD Tunnel Shut Down Period	131*	131*	26MAR10	03SEP10	26MAR10	03SEP10	1	0	WSD approval in 2 months advance
3AL1FTCW18	WSD Tunnel #3 commences shut down	1	1	01APR10	01APR10	01APR10	01APR10	1	-219	
3AL1FTCW20	Cut & clean invert and inner face of DN1200	1	1	07APR10	07APR10	07APR10	07APR10	1	-219	
3AL1FTCW22	Plug DN1200 pipe at the face near valve house	1	1	08APR10	08APR10	08APR10	08APR10	1	-219	
3AL1FTCW24	Fabricate trolly & trial	4	4	09APR10	13APR10	09APR10	13APR10	1	-219pe	etent person authorizes entry include 24 hrs ventilation before man entry &
3AL1FTCW26	Install longituditual tensioned wire	2	2	14APR10	15APR10	14APR10	15APR10	1	-219	
3AL1FTCW36	Temporary plug main tunnel to form air seal	2	2	16APR10	17APR10	16APR10	17APR10	1	-219	
Works In Aqueo	luct									
3AL1FTAD04	Install instruments	56	56	19APR10	25JUN10	19APR10	25JUN10	1	-219	
3AL1FTAD06	Inspection	1	1	26JUN10	26JUN10	26JUN10	26JUN10	1	-219	
3AL1FTAD08	TBM crossing affected 120m section	12	12	28JUN10	12JUL10	28JUN10	12JUL10	1	-219	
3AL1FTAD10	De-install instruments	32	32	13JUL10	18AUG10	13JUL10	18AUG10	1	0	
Demobilisation									13	
3AL1FTAE04	Remove trolley system	1	1	19AUG10	19AUG10	19AUG10	19AUG10	1	0	
3AL1FTAE14	Remove the plug at Ting Kau	2	2	20AUG10	21AUG10	20AUG10	21AUG10	1	0	
3AL1FTAE24	Remove ventilation system, reinstate T.K. valve	3	3	23AUG10	25AUG10	23AUG10	25AUG10	1	0	
3AL1FTAE34	Remove temporary portal at junction	1	1	26AUG10	26AUG10	26AUG10	26AUG10	1	0	
Reinstatement	Works									
3AL1FTRS02	Reinstate opening at Chai Wan Kok	7	7	27AUG10	03SEP10	27AUG10	03SEP10	1	0	
3AL1FTRS04	WSD Tunnel #3 re-operates	1	1	03SEP10	03SEP10	03SEP10	03SEP10	1	0	
TBM Assemb	ly & Initial Driving; Day Time Work									
TBM Assembly/	Test & Commiss. at Outfall									
3AL1FT0605	Cutterhead	3	3	04JAN10	06JAN10	04JAN10	06JAN10	1	-219	
3AL1FT0615	Shield (bottom)	4	4	07JAN10	11JAN10	07JAN10	11JAN10	1	-219	
3AL1FT0625	Bearing	1	1	12JAN10	12JAN10	12JAN10	12JAN10	1	-219	
3AL1FT0635	Erector & Conveyor Belt	3	3	13JAN10	15JAN10	13JAN10	15JAN10	1	-219	
3AL1FT0645	Shield (top)	4	4	16JAN10	20JAN10	16JAN10	20JAN10	1	-219	
3AL1FT0655	Backup # 1	3	3	21JAN10	23JAN10	21JAN10	23JAN10	1	-219	
3AL 1F 10000	Баскир # 1	3	3	210/4110	200/10/10	ZIJANIU	2004010	31 - 3 1	-213	

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ID	Activity Description	D04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	C	Total	2968	2009 201	0 2011	×	12 2013
3AL1FT0665	Backup # 2	3	3		27JAN10 2		27JAN10	1	-219		1		84	14/24
3AL1FT0675	Backup # 3	3	3	28JAN10	30JAN10 2	8JAN10	30JAN10	1	-219		1.1			1181
3AL1FT0685	Test & commission stage 1	6	6	01FEB10	06FEB10 0	1FEB10	06FEB10	1	-219		1	1.1		
3AL1FT0695	Backup # 4	3	3	24FEB10	26FEB10 24	4FEB10	26FEB10	1	-199					
3AL1FT0705	Backup # 5	3	3	27FEB10	02MAR10 2	7FEB10	02MAR10	1	-199		1			348
3AL1FT0715	Backup # 6	3	3	03MAR10	05MAR10 0	3MAR10	05MAR10	1	-199					10.22
3AL1FT0725	Backup # 7	3	3	29MAR10	31MAR10 2	9MAR10	31MAR10	1	-218		1 3			193
3AL1FT0735	Backup # 8	3	3	01APR10	08APR10 0	1APR10	08APR10	1	-218					136
3AL1FT0745	Backup # 9	3	3	09APR10	12APR10 0	9APR10	12APR10	1	-218		1			NI24
3AL1FT0755	Backup # 10	3	3	13APR10	15APR10 1	3APR10	15APR10	1	-218		1			1993
3AL1FT0765	Backup # 11	3	3	16APR10	19APR10 1	6APR10	19APR10	1	-218		1			
3AL1FT0775	Backup # 12	3	3	20APR10	22APR10 2	0APR10	22APR10	1	-218		1			123
3AL1FT0785	Test & commission stage 2	12	12	23APR10	07MAY10 2	3APR10	07MAY10	1	-218					333
TBM Initial Ad	vacing; Day Time Work												110	2 20
3AL1FT0704	TBM advancing; Ch. 5098 to Ch. 5084	6	6	08FEB10	17FEB10 0	8FEB10	17FEB10	1	-219			13	21.2	
3AL1FT0708	TBM advances; CH5084-4963	54	54	18FEB10	26APR10 1	8FEB10	26APR10	1	-219					
3AL1FT0720	TBM stop to install rem, items	10	10	27APR10	08MAY10 2	7APR10	08MAY10	1	-219					
The second second second second second second second second second second second second second second second se	Works; Day & Night Work	0.00				1112	1000						18	
TBM Advancin	g upto Crossing WSD Tunnel # 3								2				24 12	1.19
3AL1FT0816	TBM advances; CH4963-4415 (to WSD Tunnel # 3)	40	40	10MAY10	26JUN10 1	0MAY10	26JUN10	1	-219					
3AL1FT0818	TBM crossing WSD Tunnel # 3; CH4415- 4295	12	12	28JUN10	12JUL10 2	8JUN10	12JUL10	1	-219					1.00
TBM Advancin	g upto Breakthrough								1				14.81	
3AL1FT0819	TBM advances; CH4295-4250	5	5	13JUL10	17JUL10 1	3JUL10	17JUL10	1	-219				1983	9181
3AL1FT0820	TBM advances; P6 CH4250-4220	2	2	19JUL10	20JUL10 1	9JUL10	20JUL10	1	-219				Shirl	121
3AL1FT0822	TBM advances; CH4220-3940	14	14	21JUL10	05AUG10 2	1JUL10	05AUG10	1	-219			criterion 1	3.31	
3AL1FT0824	TBM advances; CH3940-3560	24	24	06AUG10	02SEP10 0	6AUG10	02SEP10	1	-219		P5 (5m	KCRC WRT	L Tunnel	Protection Area ch3
3AL1FT0826	TBM advances CH3560-2970	40	40	03SEP10	22OCT10 0	3SEP10	220CT10	1	-219	Intake I-	2 (Ch3160-310	0) ≣ P4 (10m) 8	k P3 (50n	n)
3AL1FT0828	TBM advances; WSD WS Reservior CH2970-2860	13	13	230CT10	06NOV10 2	23OCT10	06NOV10	1	-219			1		
3AL1FT0830	TBM advances; CH2860-1250	83	83	08NOV10	18FEB11 0	8NOV10	18FEB11	1	-219	Intake	I-3 (CH1370-12	250) === F5 (20)	m), F4(50)m), F3(20m)
3AL1FT0832	TBM advances; CH1250-0	91	91	19FEB11	11JUN11 1	9FEB11	11JUN11	1	-219			F 20	(20m), P2	2(25m), P1(10m) & F
3AL1FT0890	Desembly & demobilization of TBM	50	50	13JUN11	10AUG11 1	3JUN11	10AUG11	1	-114				1300	は復
3AL1FT0892	Back grouting (daytime); CH5100-00	382	382	04MAR10	18JUN11 0	4MAR10	18JUN11	Ĩ	-20	4	-	1.7	'9m3/m, '	W/C=44%, W=590kg
3AL1FT0894	Complete maintennce access & dry weather channel	60	60	11AUG11	220CT11 1	1AUG11	220CT11	Ť	-64					
3AL1FT0896	Installation of communication system (Daytime)	60	60	11AUG11	220CT11 1	1AUG11	220CT11	1	-64				•	211
3AL1FT0898	Testing & Commissioning; daytime	28	28	10NOV12	07DEC12 2	2DEC12	18JAN13	2	-462					** 21
3AL1FT0902	Contractor serve notice for Works completion	7	7	08DEC12	14DEC12 1	I9JAN13	25JAN13	2	0				100	
3AL1FT0904	Handover of Portion F	0	0		07DEC12		18JAN13	1	-375			1.1		٠.
3AL1FT0906	SO issues completion certificate	21	21	15DEC12	04JAN13 2	26JAN13	15FEB13	2	0				11	3-
Schedule of	Milestones for Cost Centre No. 6aR	-												
					DAMAD IS		DAMADAG	-	4.970					
6AR1FT0902	6aR 1; On completion of grouting at P7	0	0		31MAR10		31MAR10		1,370	12			1.1.1	-
6AR1FT0904	6aR 2; On completion of grouting at F6c	0	0		19MAY10		19MAY10	2	1,321				1001	8 84

ID	Activity		WP3D	ACI04	AD04	WP3D	WP3D		Total	2008	IIIII	2009	2010	THE REP.	2011	2012	2	919
6AR1FT0906	6aR 3; On completion of grouting at F6b	Dur	Dur	Start	Elnish 27MAY10	Start	Ernish 27MAY10	ID 2	Float	HADLED								
10. Com 10. Com 10. Com 10. Com 10. Com 10. Com 10. Com 10. Com 10. Com 10. Com 10. Com 10. Com 10. Com 10. Com		0	0		31122030101222			2	1,313	ind i						-	199	
6AR1FT0908	6aR 4; On completion of grouting at F6a	7.07	0		15JUN10		15JUN10	2	1,294	19 - I	- 4							
6AR1FT0910	6aR 5; On completion of grouting at WSD T. 3	0		0.00	17JUL10		17JUL10	11 22	1,262		- 1				1.0	1	1240	
6AR1FT0912	6aR 6; On completion of 20% grout by Ith at P6	0	0		17JUL10		17JUL10	2	1,262	-					- 11			
6AR1FT0914	6aR 7; On completion of 40% grout by Ith at P6	0	0		23JUL10		23JUL10	2	1,256	10 J						-	<u>-</u>	
6AR1FT0916	6aR 8; On completion of 60% grout by Ith at P6	0	0		29JUL10		29JUL10	2	1,250									
6AR1FT0918	6aR 9; On completion of 80% grout by Ith at P6	0	0		17JUL10		17JUL10	2	1,262						1.1		14	
6AR1FT0920	6aR 10; On completion of grouting works at P6	0	0		20JUL10		20JUL10	2	1,259	1	_ 1				- 44	in the second		
6AR1FT0922	6aR 11; On completion of grouting wks at P5	0	0		06AUG10		06AUG10	2	1,242		- 1		•			4	2.11	
6AR1FT0924	6aR 12; On completion of grouting wks at P4	0	0		04SEP10		04SEP10	2	1,213				::				1.64	
6AR1FT0926	6aR 13; On completion of grouting wks at P3	0	0		070CT10		07OCT10	2	1,180			12000		•				
6AR1FT0928	6aR 14; On completion of grouting wks at WSD's	0	0		06NOV10		06NOV10		1,150			CH	2865-297) Tsue	n Wan W	lest Serv	ice Res	ervior
6AR1FT0930	6aR 15; On completion of grouting wks at F5	0	0		13NOV10		13NOV10	2	1,143					•	15			
6AR1FT0932	6aR 16; On completion of grouting wks at F4	0	0		26NOV10		26NOV10	2	1,130					•	1.17	10		
6AR1FT0934	6aR 17; On completion of grouting wks at F3	0	0		22DEC10		22DEC10	2	1,104					•	16	<u></u>		
6AR1FT0936	6aR 18; On completion of grouting wks at F2	0	0		21FEB11		21FEB11	2	1,043					•				
6AR1FT0938	6aR 19; On completion of grouting wks at P2	0	0		31MAR11		31MAR11	2	1,005					•	11		1452	
6AR1FT0940	6aR 20; On completion of grouting wks at P1	0	0		27APR11		27APR11	2	978					*	>			
6AR1FT0942	6aR 21; On completion of 10% grout by Ith at F1	0	0		21MAY11		21MAY11	2	954						•		199	
6AR1FT0944	6aR 22; On completion of 20% grout by Ith at F1	0	0		23MAY11		23MAY11	2	952						•	3		
6AR1FT0946	6aR 23; On completion of 30% grout by Ith at F1	0	0		24MAY11		24MAY11	2	951		- 11			a d	•		131	
6AR1FT0948	6aR 24; On completion of 40% grout by Ith at F1	0	0		25MAY11		25MAY11	2	950					1.4	•	-	12	
6AR1FT0950	6aR 25; On completion of 50% grout by Ith at F1	0	0		26MAY11		26MAY11	2	949						•	8		
6AR1FT0952	6aR 26; On completion of 60% grout by Ith at F1	0	0		27MAY11		27MAY11	2	948	0.2				- i-	٠	a -	1874	
6AR1FT0954	6aR 27; On completion of 70% grout by Ith at F1	0	0		28MAY11		28MAY11	2	947	121					•	-		
6AR1FT0956	6aR 28; On completion of 80% grout by Ith at F1	0	0		30MAY11		30MAY11	2	945					d de la	•	2	14-37	
6AR1FT0958	6aR 29; On completion of 90% grout by Ith at F1	0	0		31MAY11		31MAY11	2	944					j.	•		「強調」	
6AR1FT0960	6aR 30; On completion of grouting works at F1	0	0		01JUN11		01JUN11	2	943	10				- I,	•	<u></u>	121	
6AR1FT0970	6aR 31; On completion of all works under this CC	0	0		18JUN11		18JUN11	2	926						ounder.	this Cost	Centre	
Schedule of	Milestones for Cost Centre No. 3aL				-					1.2								
0.01.4574000					40 (41)00 4		40 1411004									2	能疗	
3AL1FT1002	3aL 1; On providing evidence of procuring TBM	0	0		19JAN08A		19JAN08A	2		M .			2		1.36	8	124	
3AL1FT1004	3aL 2; On providing evidence of TBM Factory Test	0	0		080CT08A		080CT08A	2	-		21				- 17	M	2.23	
3AL1FT1006	3aL 3; On delivery of all parts of TBM to the Si	0	0		07AUG09		07AUG09	2	1,606			•		- 1 - A.L.	14	8		
3AL1FT1008	3aL 4; On completion of site comm. & test. of TB	0	0		07MAY10		07MAY10	2	1,333		-14		•			-	8 A.	
3AL1FT1010	3aL 5; On completion of 5% perm. tunnel lining	0	0		18MAY10		18MAY10		1,322	1	1		•		-	3	134	
3AL1FT1012	3aL 6; On completion of 10% perm. tunnel lining	0	0		09JUN10		09JUN10		1,300				•		196	- I	123	
3AL1FT1014	3aL 7; On completion of 15% perm. tunnel lining	0	0		02JUL10		02JUL10		1,277	-14	- 4		•			2 -		
3AL1FT1016	3aL 8; On completion of 20% perm. tunnel lining	0	0		28JUL10		28JUL10	+	1,251				•		11			
3AL1FT1018	3aL 9; On completion of 25% perm. tunnel lining	0	0		13AUG10		13AUG10	2	1,235				•		2		142	
3AL1FT1020	3aL 10; On completion of 30% perm. tunnel lining	0	0		02SEP10		02SEP10	2	1,215				1					
3AL1FT1022	3aL 11; On completion of 35% perm. tunnel lining	0	0		22SEP10		22SEP10	2	1,195					•				
3AL1FT1024	3aL 12; On completion of 40% perm. tunnel lining	0	0		220CT10		22OCT10	2	1,165					•				

ID	Activity Description	D04 Dur	WP3D Dur	AD04 Start	AD04 WP Finish Sta		0	Total Float	2008 2009 2010 2011 2012 2013
3AL1FT1026	3aL 13: On completion of 45% perm. tunnel lining	0	0	and a	10NOV10	10NOV10	2	1,146	
3AL1FT1028	3aL 14; On completion of 50% perm. tunnel lining	0	0		25NOV10	25NOV10	2	1,131	•
3AL1FT1028	3aL 15; On completion of 55% perm, tunnel lining	0	0		10DEC10	10DEC10	2	1,116	
3AL1FT1030	3aL 16; On completion of 60% perm, tunnel lining	0	0		29DEC10	29DEC10	2	1,097	• • • • • • • • • • • • • • • • • • •
3AL1FT1034	3aL 17; On completion of 65% perm. tunnel lining	0	0		14JAN11	14JAN11	2	1,081	★
3AL1FT1036	3aL 18; On completion of 70% perm, tunnel lining	0	0		29JAN11	29JAN11	2	1,066	♦
3AL1FT1038	3aL 19; On completion of 75% perm, tunnel lining	0	0		17FEB11	17FEB11	2	1,047	
3AL1FT1040	3aL 20; On completion of 80% perm. tunnel lining	0	0		10MAR11	10MAR11	2	1,026	♦
3AL1FT1042	3aL 21: On completion of 85% perm. tunnel lining	0	0		01APR11	01APR11	2	1,004	
3AL1FT1044	3aL 22; On completion of 90% perm, tunnel lining	0	0		28APR11	28APR11	2	977	
3AL1FT1044	3aL 23; On completion of 95% perm, tunnel lining	0	0		21MAY11	21MAY11	2	954	
3AL1FT1048	3aL 24; On completion of perm. tunnel lining	0	0		11JUN11	11JUN11	2	933	
3AL1FT1048	3aL 25; On completion of maint, access/flow chan	0	0		220CT11	220CT11	2	800	Or y weather flow channel
3AL1FT1050	3aL 26; On completion of provision of communic.	0	0		220CT11	220CT11	2	800	
3AL1FT1054	3aL 27; On completion of all works under this CC	0	0		07DEC12	18JAN13	2	388	within this cost centre
Schedule of	Milestones for Cost Centre No. 3dL								
3DL10T1202	3dL 1; On complet. of install geo instrrument.	0	0		10NOV09	10NOV09	2	1,511	
3DL10T1204	3dL 2; Maint./monit. geo. inst. for 12 mth	0	0		27DEC08A	27DEC08A	2	1	installed instruments for 12 months from DOC
3DL10T1206	3dL 3; Maint./monitor geo. inst. for 24	0	0		26DEC09	26DEC09	2	1,465	installed instruments for 24 months from DOC
3DL10T1208	3dL 4; Maint./monitor geo. inst. for 36	0	0		26DEC10	26DEC10	2	1,100	Installed instruments for 36 months fr
3DL10T1210	3dL 5: Maint./monitor geo. inst. for 48	0	0		26DEC11	26DEC11	2	735	installed instruments for 48 months from DOC
3DL10T1212	3dL 6: On completion of maint. & monit. of geo.	0	0		08MAR13	08MAR13	2	297	monitoring for installed instruments
3DL10T1214	3dL 7: On installation of FMD at Portion A	0	0		29DEC11	29DEC11	2	732	flow measurement devices at Portion A
3DL10T1216	3dL 8; On installation of FMD at Portion B	0	0		20FEB12	20FEB12	2	679	flow measurement devices for Portion B�
3DL10T1218	3dL 9: On installation of FMD at Portion C	0	0		28JAN12	28JAN12	2	702	flow measurement devices for Portion C
3DL10T1220	3dL 10; On installation of FMD at Portion D	0	0		17APR12	17APR12	2	622	flow measurement devices for Portion D
3DL10T1222	3dL 11; On completion of maint. & monit. of FMD	0	0		07DEC13	18JAN14	2	23	flow monitoring to issue of Maint. Certificate
3DL10T1224	3dL 12; On completion of all works under this CC	0	0		07DEC13	18JAN14	2	23	under this Cost Centre
2	on of Intake I-1	1000					8		
Preliminary									
	perant Hoarding at I-1								
V0007-02	Receive VO7 for transparent hoarding	0	0		19MAY08A	19MAY08A	1		
V0007-04	Procure/prepare/install transparent hoarding	70	70	20MAY08A	11AUG08A 20MA	Y08A 11AUG08A	1		
01R1AI1102	Possession of site	0	0	19MAR08A	19MA	R08A	1	-	◆90d after DOD
01R1AI1104	Obtain TTA (ingress & egress) approval	0		19APR08A	19API		2		
01R1AI1106	Site clearance	30	30	21APR08A	26MAY08A 21AP	ROBA 26MAY08A	1		
01R1AI1108	Obtain tree	6	2010		31JUL08A 13MA		1		
01R1AI1110	Hoarding erection enclosing the Site	18	18	23MAY08A	11AUG08A 23MA	Y08A 11AUG08A	. 1		
01R1AI1112	Site entrance construction	6	6	23JUN08A	25JUL08A 23JUN	108A 25JUL08A	1		
01R1AI1114	Install wheel wahing facilities	7	7	03JUN08A	07JUN08A 03JUN	108A 07JUN08A	1		

ID .	Activity Description	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish		Total Float	2008	atu	2009	201	9 2		2012	2013
01R1AI1116	Erect SOR's secondary site office	6	A DESCRIPTION OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE	28AUG08A		28AUG08A	03SEP08A	1		1			1.1				Contract States
01R1AI1118	Footing for temp. bridge span over Shing M. Nul.	26		10JUN08A	THE REPORT OF THE PARTY	10JUN08A	16JUL08A	1		1			10.00		1000		83
01R1AI1120	Decking for temp, bridge span over Shing M. Nul.	13	-	17JUL08A	Contract Contractory	17JUL08A	01AUG08A	1	1	1	= [] []					1	121 1
01R1AI1120	Install remote control CCTV as per ER 4.4.10	12		04SEP08A		04SEP08A	18SEP08A	1									
16R1AI1101	Tree Identification & Report	14		14MAR08A		14MAR08A		2	-				1626	100	6-4	E R	83
16R7AI1102	1st tree pruning for small 3 nos. trees	1	1	03JUN08A		03JUN08A	03JUN08A	1					13		-	1	He i
16R7AI1104	2nd tree pruning for small 3 nos. trees	1		04JUL08A		04JUL08A	04JUL08A	1				1	1.1		1.10	l. fi	-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
16R7AI1104	Final pruning & uplifting of 3 nos. small trees	2		08SEP08A		08SEP08A	09SEP08A	1		-			10		1		1.93
16R7AI1108	Confirm location for trees to be transplanted	51				02APR08A	27AUG08A	1					-				
16R7AI1100	One stg transplant for big 4 nos. big trees	9				11FEB09A	19FEB09A	1					19.9			1 1	
		¥	5	THEBOSA	TOT EDOOR	THEODIA	TOT EDUDA										122
Permanent	Soil Nailing Works					100 C	-	_							liko:	12	
							1			1			41				
11R2AI1302	Erect working platform & mobilization	8	-	COLUMN DAMAGES	and the property of the second second	17MAY08A	Constraint Constraint	1					1.1			ii	
11R2AI1304	Install test nails & proof loading test; 2 nos.	8		100, 200000 (2010-0000).	and the second second second	24JUN08A	08JUL08A	1						11.	1.0		
11R2AI1306	Soil nailing for A to C rows; 69 nos.	16	0.20		0.00204640602600	2002200715-00027450	14JUL08A	1		P			1.0			l l'	
11R2AI1308	Soil nailing for D to F rows; 71 nos.	29	29	15JUL08A		15JUL08A	05SEP08A	1			i.		11-	_			62
11R2AI1310	Construt soil nail heads; 140 nos.	22	- C272	19JUL08A	Service supervised	19JUL08A	06SEP08A	1									33
11R2AI1312	Demobilization	3	3	08SEP08A	10SEP08A	08SEP08A	10SEP08A	1		1991 - C					1.12		188
Construction	n of Spiral Ramp & Cascade																
Additional GI	Woks to Fnalize Design												1.1	1.2 0	1		181
AGIA-02	Drill for 5 nos, additional GI works	21	21	09SEP08A	040CT08A	09SEP08A	040CT08A	1								I	16
Temp. Pipe-pi	le cofferdam									10			1	1.2	- 08		123
04L1AI1202	Erect piling platform	43	43	220CT08A	24DEC08A	220CT08A	24DEC08A	1			-		1.1	13.3	file?		133
04L1AI1203	Mobilization & set up piling rig	3	3	300CT08A	01NOV08A	300CT08A	01NOV08A	1						121	3.14	P	131
04L1AI1204	Install 273 mm dia. temp. pipe piles; 144 nos.	43	43	08NOV08A	05JAN09A	08NOV08A	05JAN09A	1			=				182		18
04L1AI1226	Demobilize all plant and materials	6	6	06JAN09A	13JAN09A	06JAN09A	13JAN09A	1	1 3	1.						1	12
Excavate +104	1.0 to +100.5mPD; Row 7								0	3.00	1						86
04L1AI1402	Mobilization	1	1	23FEB09A	23FEB09A	23FEB09A	23FEB09A	1		21	1		11				183
04L1AI1404	Bulk excavation; soil (155m3)	4	4	24FEB09A	27FEB09A	24FEB09A	27FEB09A	1	1	2	1				19.5		121
04L1AI1406	Install test tie-back & proof load test	4	4	28FEB09A	04MAR09A	28FEB09A	04MAR09A	1									
04L1AI1408	Install tie backs/wailing & shortcrete	4	4	03MAR09A	06MAR09A	03MAR09A	06MAR09A	1		2					118		
Excavate +100	0.5 to +99.0mPD; Rows 1 & 8	1 25	1.1.2.5			decisioner e en re		1 2	1	1		-			12	1	12
04L1AI1410	Bulk excavation; soil (219m3)	2	2	07MAR09A	09MAR09A	07MAR09A	09MAR09A	1									1.00
04L1AI1412	Install tie backs/wailing & shorcrete	6			and the second s	10MAR09A		1		13	E.						132
	0 to +96.5mPD; Rows 2, 9 & 18	1	d			1.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2				-11					1		125
04L1AI1414	Bulk excavation; soil (710m3)	3	3	17MAR09A	19MAR09A	17MAR09A	19MAR09A	1		18					18.2		[2]
04L1AI1416	Install test tie-back & proof load test	4				26MAR09A		1		ē.]			1.2		125		13
04L1AI1418	Install tie backs/wailing & shortcrete	6				23MAR09A		1		1			100	5 3- 7			10
1	5 to +95.0mPD; Rows3, 10 & 19	1.7	1 1		Latin areas				1	13							
04L1AI1420	Bulk excavation; soil (721m3)	3	3	30MAR09A	04APR09A	30MAR09A	04APR09A	1			0						
04L1AI1422	Install tie backs/wailing & shortcrete	4	4	1947-000 - 1912 E-1724	1 1 22 Y 23 11 22 124	02APR09A		1		50°	8	-	1.1	10.1		-	
076 // 11722		,			20/41100/		25/ 4 / 100/1	1 .	1. 1.3							()	1.4

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ID	Activity	D04	WP3D	AD04	AD04	WP3D	WP3D	0	Total	2006 2009 2010 2011 2012 2013
	Description	Dur	Dur	Start	Finish	Start	Finish	~	Fleat	
Excavate +95.0	to +94.0 mPD; Rows 4, 11 & 20		2.4					1		
04L1AI1424	Bulk excavation; soil (701m3)	3		06APR09A			18APR09A	1		
04L1AI1426	Install tie backs/wailing & shorcrete	5	5	03APR09A	30APR09A	03APR09A	30APR09A	1		
Excavate +94.0	to + 93.0mPD; Rows 5,12,16,21&24									
04L1AI1428	Bulk excavation; soil (818m3)	4	4	20APR09A	27APR09A	20APR09A	27APR09A	1		
04L1Al1430	Install test tie-back & proof load test	4	4	21APR09A	16MAY09A	21APR09A	16MAY09A	1		
04L1AI1432	Install tie backs/wailing & shorcrete	5	5	21APR09A	16MAY09A	21APR09A	16MAY09A	1		
Excavate +93.0	to +92.5mPD; Row 22									
04L1AI1434	Bulk excavation; soil (423m3) & rock (52m3)	3	3	04MAY09A	18MAY09A	04MAY09A	18MAY09A	1	1	
04L1AI1436	Install tie backs/wailing & shorcrete	2	2	19MAY09A	27MAY09A	19MAY09A	27MAY09A	1		
Excavate +92.5	to 91.1mPD; Rows 6,13,16,17&23									
04L1AI1438	Bulk excavation; soil (1002m3) & rock (342m3)	8	8	06MAY09A	23MAY09A	06MAY09A	23MAY09A	1	1	
04L1AI1440	Install test tie-back & proof load test	4	4	08MAY09A	25MAY09A	08MAY09A	25MAY09A	1		
04L1AI1442	Install tie backs/wailing & shorcrete	4	4	18MAY09A	27MAY09A	18MAY09A	27MAY09A	1		
Excavate +91.1	to 89.5mPD; Rows 14, 17 & 25								10	
04L1AI1444	Bulk excavation; soil (724m3) & rock (811m3)	12	12	18MAY09A	01JUN09	18MAY09A	01JUN09	1	-22	
04L1AI1446	Install tie backs/wailing & shorcrete	4	4	02JUN09	05JUN09	02JUN09	05JUN09	1	-22	
Excavate +89.5	to 88.5mPD; Rows 15 & 26							-		
04L1AI1448	Bulk excavation; soil (269m3) & rock (690m3)	9	9	06JUN09	16JUN09	06JUN09	16JUN09	1	-22	
04L1AI1450	Install tie backs/wailing & shorcrete	3	3	17JUN09	19JUN09	17JUN09	19JUN09	1	-22	
Excavate +88.5	to 71.5mPD; Rows 27 to 31									
07R1AI1442	Set up for dewatering	8	8	20JUN09	29JUN09	20JUN09	29JUN09	1	-22	
07R1AI1444	Rock excavation/mucking out/temp. support	168	168	30JUN09	19JAN10		19JAN10	1	-22	371m3 so 1 15,089m3 rock@90m3/day with 2 work fronts
	Vehiucular Access		1 4		1 1	1	1			
04L1AI1452	Cast base slab	6	6	20JAN10	26JAN10	20JAN10	26JAN10	1	-22	
04L1AI1454	Cast walls	12	12	27JAN10	09FEB10		09FEB10	1	-22	1 이 - · · · · · · · · · · · · · · · · · ·
04L1AI1456	Cast roof slab	12	12	10FEB10	26FEB10	DEC 482 2871 842 0	26FEB10	1	-22	
DAR ON VESSEL DO VIE DAS	f Spiral Ramp Structure		1				1	1		
07R1AI1402	Cast base slab	12	12	27FEB10	12MAR10	27EEB10	12MAR10	1	-22	
07R1AI1402	Cast ramp up to +76.51mPD	15	15	13MAR10	30MAR10		30MAR10	1	-22	
07R1AI1404	Cast ramp up to +80.81mPD	15	0.02	31MAR10	21APR10		21APR10	1	-22	
07R1AI1408	Cast ramp up to +85.10mPD	15	15	22APR10	10MAY10		10MAY10	1	-22	
07R1AI1400	Cast ramp up to 89.41mPD	15	15	11MAY10	28MAY10	and the second second	28MAY10	1	-22	
07R1AI1410	Cast ramp up to 93.71mPD	15	15	29MAY10	15JUN10		15JUN10	1	-22	
07R1AI1412	Cast ramp up to 98.01mPD	15	15	17JUN10	05JUL10		05JUL10	1	-22	
07R1AI1414	Cast ramp up to +102.31mPD	15	15	06JUL10	22JUL10		22JUL10	1	-22	
07R1AI1418	Backfill spiral ramp; 2496m3 @ 200m3/day	13	13	23JUL10	06AUG10		06AUG10	1	103	@ 5m3/5minutes
07R1AI1418	Construct RC spiral ramp top	15		07AUG10	24AUG10		24AUG10	1	103	
L	f Cascade Structure	10	10	1110010			21110010	+		
04L1AI1472	Cast base slabs	12	12	23JUL10	05AUG10	23.11.11.10	05AUG10	1	-22	
04L1AI1472	Cast walls 1st lift	12	+	06AUG10	26AUG10	5.5×2.05 3+3/-4	26AUG10	1	-22	
04L1AI1476	Cast walls 2nd lift, 200mm down from soffit	18		27AUG10	16SEP10		16SEP10	1	-22	
04L1AI1478	Cast roof slabs	18		17SEP10	090CT10		09OCT10	1	-22	
04LTAH478		10	10	TOLEIU	0300110	TOLFIU	3500110		-44	

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ID	Activity Description	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	Cal	Total Float	2008 2009 2010 2011 2012
		Pai	Dat	ours	("Inten	Clark	(and the second	-		
	emoval of TBM	04	24	110CT10	08NOV10	110CT10	08NOV10	1	-22	
04L1Al1458	Backfill & form cranage platform	24		HOCHU	11JUN11*	HOGHO	11JUN11*	1	-195	이 아이 아이는 아이는 가지 않는 것이 가 없었다. 이 가 없는 것이 아이가 있는 . 것이 아이가 있는 것이 아이가 있는 것이 아이가 있는 것이 아이가 있는 것이 아이가 있는 것이 아이가 있었다. 이 아이가 있는 것이 아이가 있는 것이 아이가 있는 것이 아이가 있었다. 것이 아이가 있는 것이 아이가 있는 것이 아이가 있었다. 것이 아이가 있는 것이 아이가 있는 것이 아이가 있었다. 것이 아이가 있는 것이 아이가 있는 것이 아이가 있었다. 것이 아이가 있는 것이 아이가 있는 것이 아이가 있었다. 것이 아이가 있는 것이 아이가 않는 않는 것이 않는 것이 아이가 않는 않는 것이 않는 것이 않는 것이 않아이가 않이 않이
04L1AI1460	TBM break through	0	0	40.0.0014.4		10 11 11 14 1				
04L1AI1461	Dissembly & demobilization of TBM	50	50	13JUN11	10AUG11		10AUG11	1	-195	In structure Transmission
04L1AI1462	Cast lower base slab	12	12	06JUL10	19JUL10	06JUL10	19JUL10	1	-19	before TBM retrieval
Construction of	of Box Culvert Structure							-		
04L1AI1463	Cast upper base	6	6	11AUG11	17AUG11	11AUG11	17AUG11	1	-195	
04L1AI1464	Cast walls 1st lift	18	18	18AUG11	07SEP11	18AUG11	07SEP11	1	-195	after retrieval of TBM & gantry crane
04L1AI1466	Cast walls 2nd lift, 200mm down from soffit	18	18	08SEP11	29SEP11	08SEP11	29SEP11	1	-195	
04L1AI1468	Cast roof slabs	18	18	30SEP11	220CT11	30SEP11	220CT11	1	-195	
04L1AI1470	Backfill & compaction above box culvert; ~13m	22	22	240CT11	17NOV11	240CT11	17NOV11	1	-195	
Modification	of Existing Channel in Dry Season									
	fication (Varied)Works (Civil Works)									
07R1AI1502	Break wall & slab at pipe pile location	8	8	02NOV09*	10NOV09	02NOV09*	10NOV09	1	70	
07R1AI1504	Set up pipe pile rig	3	3	11NOV09	13NOV09	11NOV09	13NOV09	1	70	
07R1AI1506	Install pipe piles (30n*12m)	10	10	14NOV09	25NOV09	14NOV09	25NOV09	1	70	
07R1AI1508	Break existing masonry wall	4	4	26NOV09	30NOV09	26NOV09	30NOV09	1	70	
07R1AI1500	PC block/sand back bund wall for water diversion	2	2	01DEC09	- Other resources	01DEC09	02DEC09	1	70	
07R1AI1512	Cut existing slab		1	03DEC09	a substantial and a substantial	No INTRACIONESCO A	03DEC09	1 140	70	
07R1AI1512	Demolish Wo Yi Hop Nullah wall & slab	6	6	04DEC09	1	04DEC09	10DEC09	1	70	
	Construct WYH Nullah wall below slab	6	6	11DEC09	URAN TOTAL STREET	A Constant Constant Constant	17DEC09	1	70	
07R1AI1518	Backfill & SRT behind wall below slab	18	18	18DEC09	THE COLOR CONCACE.	18DEC09	11JAN10	1	70	
07R1AI1520		6	6	12JAN10	The rest of the second second second		18JAN10	1	70	· · · · · · · · · · · · · · · · · · ·
07R1AI1522	Demolish Shing Mun Nullah wall with struts			12JAN10 19JAN10	11 202/22/2020	19JAN10	22JAN10	1	70	
07R1AI1524	Demolish Shing Mun Nullah slab	4	4	1.0000000000000000000000000000000000000	CONTRACTOR OF A	23JAN10	01FEB10	1	70	
07R1AI1626	Construct slab	8	8	23JAN10			12FEB10	1	70	
07R1AI1628	Construct wall for WYH Nullah	10	10	02FEB10		02FEB10	27FEB10	1	70	전 - 사람 이번 이야 하는 이상 이상
07R1AI1630	Construct wall for SM Nullah	10	10	17FEB10		17FEB10		- 1000		
07R1AI1632	Assoc. RC works for trash grill & stop slogs	18	18			01MAR10	20MAR10	1	70	요즘 이 이 이 아이 나는 아이 아이 아이 아이 아이 아이 아이 아이 아이 아이 아이 아이 아이
07R1AI1634	Mass concrete infill	3	3	22MAR10		22MAR10	24MAR10	1	70	
07R1AI1636	PC block & san bag bund wall	3	3	25MAR10	27MAR10	25MAR10	27MAR10	1	70	
Channel Modi	fication Works (Steel Works)					Humbergerangen			1 3 2 3	이 내는 그는 말에 걸렸다.
07R1AI150T	Install steelworks; Phase 3	36	36	01NOV11*	12DEC11	01NOV11*	12DEC11	1	-143	
Piling Works	S CONTRACTOR OF A CONTRACTOR OF A CONTRACTOR OF A CONTRACTOR OF A CONTRACTOR OF A CONTRACTOR OF A CONTRACTOR OF							1		
Piing Works A	Nong Crest Plarform							L. cat		
11R2AI1202	Erect piling platform for upper piles	12	12	22SEP10	07OCT10	22SEP10	07OCT10	1	103	
11R2AI1204	Mobilize piling rig & set up	6	6	08OCT10	140CT10	08OCT10	140CT10	1	103	
11R2AI1206	350mm dia. pre-bored H-piles (upper); 36 nos.	36	36	15OCT10	26NOV10	150CT10	26NOV10	1	103	a@ 1no/day
11R2AI1208	Demobilize piling rig	6	6	27NOV10	03DEC10	27NOV10	03DEC10	1	103	1
Skin Wall & C	rest Platform									
11R2AI1210	Excavate & hack off grout	8	8	04DEC10	13DEC10	04DEC10	13DEC10	1	103	
11R2AI1212	Construct skin wall	12	12	14DEC10	29DEC10	14DEC10	29DEC10	1	103	
11R2AI1214	Construct capping beam	8		30DEC10	08JAN11	30DEC10	08JAN11	1	103	

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ID	Activity		WP3D	AD84	AD04 Finish	WP3D Start	WP3D Finish	0	Total Float	2008 2099 2010 2011 2012 2013
	Description Backfill & construct U-channel	Our 4	Dur 4	Start 10JAN11	The second second	10JAN11	13JAN11	1		
11R2AI1216	Fix rebar/ erect fwk/concrete ramp	12	12		27JAN11		27JAN11	1	103	
11R2AI1218		12	12	140/ARTT	2/3/11/1	1-0/1111	210/0111	1	100	
	bove Inclined Access Ramp	6	6	1BNOV11	24NOV11	19NOV/11	24NOV11	1	-195	
11R2AI1220	Mobilize piling rig & set up				02JAN12		02JAN12	1	-195	🗒 🖉 1no/day
11R2AI1222	350mm dia. pre-bored H-piles (lower); 29 nos.	29	29	25NOV11			02JAN12 09JAN12	1	-195	and morely
11R2AI1224	Demobilize piling rig	6	6	03JAN12	09JAN12	U3JAN IZ	U9JANTZ	1	-195	
Skin Wall & Inc	Ined Access Ramp							1 ar	105	
11R2AI1226	Excavate & hack off grout	6	6		16JAN12		16JAN12	1	-195	
11R2AI1228	Construct skin wall	12		17JAN12	02FEB12		02FEB12	1	-195	
11R2AI1230	Construct capping beam	8	8	03FEB12	11FEB12	· · · · · · · · · · · · · · · · · · ·	11FEB12	1	-195	
11R2AI1232	Backfill & construct U-channel	4	4	13FEB12	16FEB12		16FEB12	1	-195	
11R2AI1234	Fix rebar/erect fwk/concrete ramp	12	12	17FEB12	01MAR12	17FEB12	01MAR12	1	-195	
Remaining V	Vorks Prior to Handover									
07R1AI1606	Finishing & reinstatement works; Portion A	36	36	03FEB12	15MAR12	03FEB12	15MAR12	1	-195	
07R1AI1608	Pre-handover inspections and remedial works	30	30	17FEB12	22MAR12	17FEB12	22MAR12	1	-195	
07R1AI1610	Contractor serve notice for Works completion	7	7	23MAR12	29MAR12	23MAR12	29MAR12	2	0	
07R1AI1612	SO issues completion certificate	21	21	30MAR12	19APR12	30MAR12	19APR12	2	0	
16R7AI1602	Landscaping works at Portion A	30	30	27JAN12	01MAR12	27JAN12	01MAR12	1	-183	150nos. climber, 200nos. woodland≝63nos. trees, 2072⊓os:
16R7AI1604	Establishment Works at Portion A	365	365	02MAR12	01MAR13		01MAR13	2	-181	
3DL1AI1602	Install flow measurement devices at Intake I-1	12	12	13DEC11	29DEC11		29DEC11	1	-143	
3DL1AI1604	Maintain & monitor flow monitoring	365	365	30DEC11	28DEC12		28DEC12	2	-118	
Schedule of	Milestones for Cost Center No. 4L						design of the second			
-						_	29JUN09	2	1,645	♦for Cascade at Intake I-1
04L1AI1802	4L 1; On completion of 50% excavation	0	0		29JUN09			2	1,045	for Cascade at Intake I-1
04L1AI1804	4L 2; On completion of excavation	0	0		19JAN10		19JAN10	2	1,441	Interest and the second
04L1AI1806	4L 3; On completion of 25% concreting	0	0		26FEB10		26FEB10	2	1,222	♦ for Cascade at Intake I-1
04L1AI1808	4L 4; On completion of 50% concreting	0	0		26AUG10		26AUG10	2		for Cascade at Intake I-1
04L1AI1810	4L 5: On completion of 75% concreting	0	0		09OCT10		09OCT10	2	1,178	tor Cascade at Intake I-1
04L1AI1812	4L 6; On completion of Cascade	0	0		220CT11		220CT11	2	800	◆box culvert at Intake I-1
04L1AI1814	4L 7; On completion of connecting BC	0	0		220CT11		220CT11	2	800	within this Cost Centre
04L1AI1816	4L 8; On completion of all works under this CC	0	0		22MAR12		22MAR12	2	648	
Schedule of	Milestones for Cost Centre No. 7R									
				_						
07R1AI1902	7R 1; On completion of trash grills	0	0		12DEC11		12DEC11	2	749	♦ and stop log at Intake I-
07R1AI1904	7R 2; On completion of 25% excavation	0	0		29JUN09		29JUN09	2	1,645	spiral ramp at Intake I-1
07R1AI1906	7R 3; On completion of 50% excavation	0	0		25SEP09		25SEP09	2	1,557	spiral ramp at Intake I-1
07R1AI1908	7R 4; On completion of 75% excavation	0	0		02DEC09		02DEC09	2	1,489	spiral ramp at Intake I-1
07R1AI1910	7R 5: On completion of all excavation	0	0		19JAN10		19JAN10	2	1,441	for spiral ramp at Intake I+1
07R1AI1912	7R 6: On completion of spiral ramp to +80mPD	0	0		21APR10		21APR10	2		spiral ramp at Intake I-1
07R1AI1914	7R 7; On completion of spiral ramp to +90mPD	0	0		02JUN10		02JUN10	2		spiral ramp at Intake I-1
	7R 8; On completion of spiral ramp to +100mPD	0	0		13JUL10		13JUL10	-	1,266	♦spiral ramp at Intake I-1
07R1AI1916	rk o, On completion of spiral ramp to + roomPD	0	0		1330110		1000010		1,200	

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iÐ	Activity Description	AD04 Dur	WP3D Dur	AD84 Start	AD04 Finish	WP3D Start	WP3D Finish	Cal ID	Total Float	2008		2009	2318	2911		2012	2013
07R1Al1918	7R 9; On completion of spiral access ramp	0	0		24AUG10	Contract of	24AUG10	2	1,224	- Contraction of the local division of the l			a	t Intake I-	1		
07R1AI1920	7R 10; On completion of all works under this CC	0	0		22MAR12		22MAR12	2	648				under t	his Cost (Centre		100
																	12
Schedule of I	Milestones for Cost Centre No. 11R														- Sec		34
11R2AI1R02	11R 1; On completion of soil nailing works	0	0		06SEP08A		06SEP08A	2		♦a	t Inta	e -1	3	1-1-1			81
11R2AI1R04	11R 2; On completion of piling at platform	0	0		26NOV10		26NOV10	2	1,130			1.4	- i	wall at p	latform	at Intake	1-1
11R2AI1R06	11R 3; On completion of piling at branch access	0	0		02JAN12		02JAN12	2	728		wa	at brand		at Intake			121-1
11R2AI1R08	11R 4; On completion of all works under this CC	0	0		03DEC10		03DEC10		1,123	Ser -		-		ounder t		Centre	
	n of Intake I-2																20
ALC: 1000 11 100										1							
Preliminary V								- 5			1				1.0		
	/orks to Finalize Design			10050004	10050004	10050004	400ED00A	5.4		÷.,					1.22	i i	124
AGIB-02	Erect platform/mibilization & set up GI rig	3	1.22	12SEP08A	16SEP08A		16SEP08A	1				1.1		de la	÷ .		12
AGIB-04	Drill 3 nos. GI holes for Intake Structures	22	1.1.1.1.1	THOSE STREET,	03NOV08A	100 (22) 100 200		1									123
AGIB-06	Drill 1 hole for Intersection with Main Tunnel	12	12	11NOV08A	24NOV08A	11NOVU8A	24NOV08A	1					-		-		
	P Overhead Cable	-		000ED004	17007004	ROOFDOOA	47007004		_	1 1						2	123
01R1BU0102	Temporary diversion of CLP overhead cable	30	30	02SEP08A	170CT08A	02SEP08A	170C108A	2	1	=				1	-		12
	Omm Watermain						1	r		1 4			1 5	1.	12		83)
01R1BU0202	Temporary Diversion of 100mm dia. Watermain	64*	64*	The second second second	05DEC08A	NEW CONTRACTOR OF CONTRACT	Plant on the second second of	2		1.1			4	date:	1	- 1	22
01R1BU0204	Issue VO35 for temp. diversion	1	1	1.1352 Verseland Verseland	030CT08A	and the second second second	a perfection and a complete the	1							12.1		133
01R1BU0206	Preparation works	26	26	040CT08A	04NOV08A	040CT08A	04NOV08A	1									22
01R1BU0208	Install steel support	3	3	05NOV08A	07NOV08A	05NOV08A	07NOV08A	1	1			- 1			101		12
01R1BU0210	Lay new watermain	2	2	08NOV08A	18NOV08A	08NOV08A	18NOV08A	1									100
01R1BU0212	Obtain ICE certificate for temp. support	0	0		19NOV08A		19NOV08A	1		SL 🚺	•	11	1		1.3		131
01R1BU0214	Pressure test	2	2	20NOV08A	21NOV08A	20NOV08A	21NOV08A	1					1				12
01R1BU0216	Sterilise new pipe & take water sample	3	3	22NOV08A	25NOV08A	22NOV08A	25NOV08A	1					1				list.
01R1BU0218	Watermain connection by WSD	10	10	26NOV08A	05DEC08A	26NOV08A	05DEC08A	2		<u> </u>	8						12
VO #11; Transp	erant Hoarding at I-2									112							1.5
VO011-02	Receive VO11 for transparent hoarding	0	0		14JUL08A		14JUL08A	1		•				10	1.00		
VO011-04	Procure/prepare/install transparent hoarding	51	51	15JUL08A	13SEP08A	15JUL08A	13SEP08A	1			6.7						1124
VO#32; Replace	e Hoarding by Chain Link Fence														11 2	1	
VO032-1202	Receive VO-32 for replacing hoarding by CLF	0	0		16SEP08A		16SEP08A	1	1	A 1				1.	12		13
VO032-1204	Procure/prepare/install transparent hoarding	51	51	17SEP08A	17NOV08A	17SEP08A	17NOV08A	1		-		्रे	9				123
										3					12		13
01R1Bl2102	Possession of Portion B -90d of DOC	0	0	26MAR08A		26MAR08A		2		*		25			123	_	121
01R1Bl2104	Obtain TTA (ingress & egress) approval	0	0		19APR08A		19APR08A	2	3	•					- 12		183
01R1BI2108	Site clearance	30	30	02MAY08A	05SEP08A	02MAY08A	05SEP08A	1	1	Garan				1.2		_	
01R1Bl2112	Erect hoarding	30	30	05JUN08A	16MAR09A	05JUN08A	16MAR09A	1		-	-				127		131
01R1Bl2116	Install remote contorl CCTV as per ER 4.4.10	12	12	28FEB09A	13MAR09A	28FEB09A	13MAR09A	1		_				Eu.	100		1
16R7BI2002	Tree transplanting; 1 no.	72	72	10DEC08A	23APR09A	10DEC08A	23APR09A	1	9		-				1.1		12
Stream Diver	sion/Approach Channel/H-Pile Wall				Dir In												184
	t of Pile Wall at I-2															1	
		0	0		10JUL08A		10JUL08A	1							100		133
VO022-02	Received VO22 for revised layout of pile wall	0	0		10JUL08A		10JUL08A	1	l. di	× 🔷						1	1291

ID	Activity Description	D04 Our	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish		Total Float	2008	2009 2010 2011 2012 2
/0022-04	SOR confirmed to demolish exit. ret. wall	38	38	11JUL08A	21AUG08A	11JUL08A	21AUG08A	1	3		
0022-06	Demolish existing retaining wall	1	1	13SEP08A	13SEP08A	13SEP08A	13SEP08A	1		- R	
/0022-16	Reinstate piling platform	2	2	16SEP08A	17SEP08A	16SEP08A	17SEP08A	1		X	
- A SERVICE ON AN	struct 550 dia. H-pile Wall	-	1							-	
2R3BI2202	Form temp. access ramp along west side of stream	44	44	10JUN08A	31JUL08A	10JUN08A	31JUL08A	1			
2R3BI2204	Additional SI & engineering works	26	26	25AUG08A	24SEP08A	25AUG08A	24SEP08A	1			
2R3BI2206	Mobilize piling rig & set up	5	5	25SEP08A	30SEP08A	25SEP08A	30SEP08A	1		1	
2R3BI2208	Construct piles 1 to 18	13	13	020CT08A		and the second se	170CT08A	1			
2R3BI2210	Piling works stopped by the SOR	8	8	180CT08A	270CT08A	180CT08A	270CT08A	1		1	
2R3BI2212	Construct piles 19-58	28	28	280CT08A	26NOV08A	280CT08A	26NOV08A	1			
2R3BI2214	SOR's instruction to delet pile 59	0	0		02DEC08A		02DEC08A	1	8	•	
2R3BI2216	Demobilize piling rig	4	4	03DEC08A	06DEC08A	03DEC08A	06DEC08A	1		1	
12R3BI2218	Construct skin wall/caping beam/u-channel	70*	70*	25JUN09	15SEP09		15SEP09	1	80		==58 nos; @ 750mm c/c
12R3BI2220	Excavate for skin wall; 4 bays	18	18	25JUN09	16JUL09		16JUL09	1	80		
12R3BI2220	Construct for skin wall; 4 bays	24	24	17JUL09	13AUG09		13AUG09	1	80		
12R3BI2222	Construct capping beam; 4 bays	16	16	14AUG09	-	14AUG09	01SEP09	1	80	-3	
12R3BI2224	Construct drainage; 4 bays	12	12		15SEP09		15SEP09	1	80		
	struct Dry Weather Flow Channel		14	DECE! 00	ICOLI CO	ocon. oo	10021 00		-		
2012 202 202 202 202 202 202 202 202 202	Excavate for new low flow channel	6	6	27MAR09A	03APR09A	27MAR09A	03APR09A	1			• · · · · · · · · · · · · · · · · · · ·
08R1BI2202	Construct new low flow channel	6	6		17JUN09		17JUN09	1	-196		
08R3BI2208	Remove blocck wall/excavate for gantry footing	12	12		02JUL09		02JUL09	1	-196		
08R3BI2200	Construct PC bund wall to protect gantry footing	6	6		09JUL09		09JUL09	1	-196		
Co				0000200	0000100	0000200	0000200				
Control in the sector of the sector is	struct Approach Channel West	12	12	02NOV09*		02NOV09*	14NOV09	1	43		provision of water pump
08R1B12218	Construct temp. concrete block bund	12	12			16NOV09	28NOV09	4	43		
08R1BI2220	Excavate for western portion guide wall & slab	50	50	30NOV09		30NOV09	29JAN10	1	43		
08R1BI2222	Construct western portion of guide wall & slab	6	6		05FEB10		05FEB10	1	43	월대 파이너	
08R1BI2224	Remove concrete block bund	0	0	SUJANTU	USPEBIU	JUJANTU	USPEBIO	, ,	43		+
	struct Approach Channel North			01NOV10*	OCNOV/10	01NOV10*	06NOV10	1	22		provision of water pump
8R1BI2226	Construct temp. concrete block bund	6		templeter ettern			20NOV10	1	22		povision of water pump
08R1Bl2228	Excavate for L-shaped retaining wall	12	12		20NOV10 11DEC10	112 (1 STORAGE) (PSC)	11DEC10	1	22	1	
08R1BI2230	Construct L-shaped retaining wall	18	18		L'Université de la comme		28DEC10	1	22		
08R1BI2232	Excavate eastern portion of guide wall & slab	12	12	TO SALE DE SERVITIEN	28DEC10	TROSERGESSITES/	26JAN11	- XA	22	1 -	
08R1BI2234	Construction of boulder traps; 7nos.	24	24	1.30.0030100701070	26JAN11	29DEC10	26JAN11 26FEB11	1	22		
08R1BI2236	Construct eastern portion of guide wall & slab	24	24		26FEB11	252.0003207520002	1999 BLOCHER (1997)	1	22		
08R1BI2240	Remove temp. concrete blcok bund	6	6	28FEB11	05MAR11	ZOPEBTI	05MAR11	T 16	22		
	struct Remaining Appr. Channel	1. 000	T care	1005011	1. 10.10.11	1005011	10 10 14		100		
8R1BI2242	Remove gantry crane & steel deck	18	18		10JAN12		10JAN12	1	-196	1	
08R1BI2244	Excavation for remaining approach channel	12	12	inches offan. Com	27JAN12		27JAN12	1	-196		
08R1BI2246	Construct remaining approach channel	24	24	Sectore devices	24FEB12	10494 (MAR) HAR 100	24FEB12	1	-196		
08R1BI2248	Close out last section of guide wall	12	12	L Segon in the second of	09MAR12	PERMIT AND A DESCRIPTION	09MAR12	1	-196		
08R1BI2250	Construct trash grill	12	12	25FEB12	09MAR12	25FEB12	09MAR12	1	-196		

ID	Activity		WP3D	AD04	AD04	WP3D	WP3D	Cal		2008 2009 2016 2011 2012 2013
	Description	Dur	Dur	Start	Finish	Start	Finish	D	Float	
Excavate &	Construct Vortex/Drop Shaft									
Steel Deck &	Gantry Crane/Noise Enclosure									
05L1BI2300	Construct 8 nos, mini piles	24	24	20JAN09A		20JAN09A	21FEB09A	1		₽Wan Kei
05L1BI2301	Erect timber platform for mini piling	4	4	23FEB09A	26FEB09A	23FEB09A	26FEB09A	1		
05L1BI2302	Construct 6 nos. mini piles	12	12	27FEB09A	12MAR09A	27FEB09A	12MAR09A	1		
05L1BI2303	Excavation for footing/pile caps	12	12	13MAR09A	26MAR09A	13MAR09A	26MAR09A	1		
05L1BI2304	Construction of footing/pile caps	12	12	27MAR09A	18APR09A	27MAR09A	18APR09A	1		
05L1BI2305	Install steel deck	25	25	04MAY09A	30JUL09	04MAY09A	30JUL09	1	-175	
05L1BI2316	Construct footing for gantry crane	12	12	25AUG09	07SEP09	25AUG09	07SEP09	1_1_	-196	
05L1BI2318	Install gantry crane & noise enclosure	42	42	08SEP09	29OCT09	08SEP09	29OCT09	1	-196	
Ground Treat	ment Works for Vortex Shaft									
05L1BI2306	Setting up	2	2	10JUL09	11JUL09	10JUL09	11JUL09	1	-196	following chanell diversion to west
05L1BI2308	Probing & curtain grouting around shaft	37	37	13JUL09	24AUG09	13JUL09	24AUG09	1	-196	
Excavation an	nd Construction of Vortex Shaft									
05L1BI2320	Excavate shaft; +99mPD to +65mPD (30m)	118	118	30OCT09	23MAR10	30OCT09	23MAR10	1	-196	
05L1BI2321	Set up for lining construction	6	6	11NOV11	17NOV11	11NOV11	17NOV11	1	-196	
05L1BI2322	Construct permanent lining; 30m @ 4m/ 4days	30	30	11NOV11	15DEC11	11NOV11	15DEC11	1	-196	
Excavate &	Construct Air Vent Shaft		1		120, 121	A				
LAGAVALC DE	Sough and the fort strate									
05L1Bl2418	Enlarge the platform for RCD operation	15	15	08DEC08A	27DEC084	08DEC08A	27DEC08A	1		
	Mobilize & set up RCD for excavation	6		29DEC08A		29DEC08A		1		provision of TTA
05L1BI2420	Bore shaft with RCD; 37.5m @1m/day	54		07JAN09A		07JAN09A	13MAR09A	1		
05L1BI2422		5		the second second second second second second second second second second second second second second second s		A 14MAR09A	and a second sec	1		Iprovision of TTA
05L1BI2424	Demobilize RCD rig	3	-	20MAR09A		20MAR09A		4	<u> </u>	
05L1BI2426	Install permanent steel liner	1	-			21MAR09A		1		
05L1Bl2427	Preparation works for casting concrete Damage found on installed steel liner	0	0		25APR09/		25APR09A	1		
05L1BI2428	Removal of steel liner	31	-	27APR09A		27APR09A	ACCESSION OF A STATUTED CONTRACTOR	1	-196	
05L1BI2429		17	17		24JUN09		24JUN09	1	-196	
05L1Bl2430	Remove RCD platform Construct PC bund wall	12	12		09JUL09		09JUL09	1	-196	
05L1BI2432	The second s	0	0		09JUL09	20001100	09JUL09	1	-196	teres and the second second second second second second second second second second second second second second
05L1BI2434	Divert channel to West	12	12		1104020000000000000	02NOV09*	14NOV09	1	-96	24
05L1BI2436	Footing for gantry crane	36	36	0.4450.037.04656	29DEC09	California (California) (Califo	29DEC09	1	-96	
05L1BI2438	Erection of gantry crane	6	6	30DEC09	06JAN10	1/260/26/207053	06JAN10	1	-96	
05L1BI2440	Set up sliding system	36	36	Teperservice out to	Second of the	07JAN10	20FEB10	1	-96	생 ~
05L1BI2446	Install steel casing	30	30	Statistical to be		22FEB10	24FEB10	1	-96	
05L1BI2448	Survey checking & capping concrete			1 9003-0-20006		25FEB10	27FEB10	1	-96	Ifollowing consent from the SOR
05L1BI2450	Preparation & concreting	3	3	00280207.000000				- 1		Notioning consent near the cont
05L1Bl2452	Construct upstand wall	24	24	UTWAR 10-	ZTWARTO	01MAR10*	ZIWARIU	i de	-96	
And the second se	Construct Man Access Shaft	100 A								
Ground Treat	ment for Man Access Shaft						NUCLOS AND ADDRESS	1		
05L1BI2502	Probing & curtain grouting around shaft	31	31	10JUL09	14AUG09	10JUL09	14AUG09	1	-50	
Gantry Crane	& Noise Enclosure at M. A. Shaft									
05L1BI2504	Excavate & construct 4 nos. gantry footings	12	12	15AUG09	28AUG09	15AUG09	28AUG09	1	-50	lincluding 1 wk concrete strength

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ID	Activity Description	D04 Our	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish		Total Float	2008 2009 2010 2011 2012 201
05L1BI2505	Install gantry crane & noise enclosure	36	36	29AUG09	12OCT09	29AUG09	12OCT09	1	-50	Eprovision of TTA
I S and Exca	vation upto Rock Head Level at M.A.	1.5.9.5							1	
5L1BI2503	Install sheet piles	6	6	15AUG09	21AUG09	15AUG09	21AUG09	1	-44	
5L1BI2506	Excavation to rock head level	18	18	130CT09	03NOV09	130CT09	03NOV09	1	-50	
A 2042 March 104 COLUMN 25 LOUGH	Construction of Man Access Shaft	1 0.04			TRESS MORATION			1		
5L1BI2508	Excavation/muck out/temporoary support	127	127	04NOV09	12APR10	04NOV09	12APR10	1	-50	
5L1BI2522	Construct base	4	4	12010/1225-CA322-S	112090411201023	15MAR11	18MAR11	1	-50	after construction of man access adit
05L1BI2522	Set up for 37m shaft construction (wall only)	6	6	19MAR11	1.5-21/01/01/01	19MAR11	25MAR11	1	-50	4
05L1BI2526	Construct wall/stair; 25 landings @ 3 days/land	75	75			26MAR11	28JUN11	1	-50	
5L1BI2528	Removal of gantry crane	12	12			29JUN11	13JUL11	1	-50	
and the second second		8	8	14JUL11		14JUL11	22JUL11	1	-50	이 이 이 이 이 이 이 아이 가 있는 것 같아요. 이 것같은 것 같아요. 이 집 것 같아요. 이 집 집 집 집 집 ? 이 집 집 집 집 집 집 집 집 집 집 집 집
05L1BI2530	Construct wall above ground level	12	12		05AUG11		05AUG11	1	-50	
05L1BI2532	Construct shaft roof	12	12	23JUL11	USAUGTI	2330ETT	USAUGII	and the second	-50	
xcavate &	Construct Deaeration Chamber	-								
5L1BI2602	Probing/grout/excavate/muckout/temp.support	72	72	24MAR10	23JUN10	24MAR10	23JUN10	1	-196	top heading 4m deep=17m, @0.2m/day = 72
5L1BI2604	Drill/excavate/muckout/temp. support for bench	50	50	24JUN10	21AUG10	24JUN10	21AUG10	1	-196	4.5m deep=22*4.5*9=891m3, 17.8m3/day
05L1BI2607	Drill/excavate/muckout/temp. support for bottom	50	50	23AUG10	220CT10	23AUG10	22OCT10	1	-196	4.5m deep ≡ 22*4.5*9=891m3, 17.8m3/day
5L1BI2608	Set up for lining construction	12	12	26AUG11	08SEP11	26AUG11	08SEP11	1	-196	
05L1BI2610	Construct base; 3 bays	9	9	09SEP11	20SEP11	09SEP11	20SEP11	1	-196	
05L1BI2612	Construct walls 2 lifts; 3 bays	24	24	21SEP11	200CT11	21SEP11	200CT11	1	-196	
05L1BI2614	Const. crown/underpin. of air vent & drop shafts	18	18	210CT11	10NOV11	210CT11	10NOV11	1	-196	
3BL1BI2102	Construct Main Adit Tunnel Probing/grout/temp. support/excavation/muck out	200	200	230CT10	27JUN11	230CT10	27JUN11	1	-196	56m @ 4m/11 days
BL1BI2104	Construct permanent lining	50	50	28JUN11	25AUG11	28JUN11	25AUG11	1	-196	including β days for setup of mould
xcavate &	Construct Man Access Adit									
Jpper Horizo										
5L1BI2806	Probing/gorut/excavate/muckout/temporary support	90	90	13APR10	30JUL10	13APR10	30JUL10	1	-50	🛲 26m, @ 4 m/9 day
05L1BI2830	Set up for 23m upper adit construction	6	6		340040535300	26JAN11	01FEB11	1	-50	
05L1BI2834	Construction of permanent lining	32	32			02FEB11	14MAR11	1	-50	
Vertical Secti	The second second second second second second second second second second second second second second second se		-		1.00.020000000					
05L1BI2807	Probing & curtain grouting around shaft	24	24	31JUL10	27AUG10	31JUL10	27AUG10	1	-50	
05L1BI2808	Set up for 7.2m raise (shaft) excavation	2	2	28AUG10		28AUG10	30AUG10	1	-50	
05L1BI2800	Excavate/removal of rock/temporary support	24	24	31AUG10		31AUG10	28SEP10	1	-50	∎@ 0.3m/day & night
05L1BI2810	Construct base of raise shaft	4	4	09DEC10		09DEC10	13DEC10	1	-50	
05L1BI2824	Set up for 9m raise stairway const. (wall only)	6	6			14DEC10	20DEC10	1	-50	
		28		21DEC10		21DEC10	25JAN11	1	-50	
05L1BI2826	Construct wall & stair; 7 landings @4days/landin	20	20	ZIDECIU	200/011	2102010	ZOUMINT	1 1		
Lower Horizo		1.4		000554-	00050/0	0005046	20055240	1 3		
05L1BI2812	Set up for 9.3m lower adit excavation	2	10 00077	29SEP10	the second second	29SEP10	30SEP10	1	-50	
05L1BI2814	Excavate/removal of rock/temporary support	31	31			02OCT10	08NOV10	1	-50	@@0.3m/day & night
05L1BI2816	Set up for 7m lower adit construction	6	6	S STATISTICS		09NOV10	15NOV10	1	-50	
05L1BI2818	Construction of permanent lining for lower adit	20	20	16NOV10	08DEC10	16NOV10	08DEC10	1	-50	

ID	Activity		WP3D Dur	AD04	AD04 Finish	WP3D Start	WP3D Finish		Total Float	2008 2009 2010 2011 2012 2013
	Description	Dur	Dur	Start	Finish	Start	Filish		Float	
Junction Be	tween Main Tunnel & Adit Tunnel							_		
3BL1BI2106	Temp. support & excavation breakthrough	48	48	26AUG11	240CT11	26AUG11	240CT11	1	-127	
3BL1BI2108	Construct collar between MT & AT	48	48	250CT11	19DEC11	250CT11	19DEC11	1	-127	
Remaining V	Vorks Prior to Handover									
08R1BI2102	Finishing & reinstatement works; Portion B	36	36	04FEB12	16MAR12	04FEB12	16MAR12	1	-196	
08R1BI2103	Pre-handover inspections and remedial works	30	30	18FEB12	23MAR12	18FEB12	23MAR12	1	-196	
08R1BI2104	Contractor serve notice for Works completion	7	7	24MAR12	30MAR12	24MAR12	30MAR12	2	0	
08R1BI2105	SO issues completion certificate	21	21	31MAR12	20APR12	31MAR12	20APR12	2	0	
16R7BI2102	Landscaping works at Portion B	72	72	16DEC11	16MAR12	16DEC11	16MAR12	1	-158	
16R7BI2104	Establishment Works at Portion B	365	365	17MAR12	16MAR13	17MAR12	16MAR13	2	-196	
3DL1BI2101	Install flow measurement devices at Intake I-2	12	12	07FEB12	20FEB12	07FEB12	20FEB12	1	-184	
3DL1BI2105	Maintain & monitor flow monitoring	365	365	21FEB12	19FEB13	21FEB12	19FEB13	2	0	
	Milestones for Cost Centre No. 3bL	-		10 A A						
Schedule of	Intestories for oost ochtertor out		-					_		
3BL1BI2A02	3bL 1; On establishing tunnelling equipments	0	0		220CT10	1	22OCT10	2	1,165	equipment for tunnelling at Intake I-
3BL1BI2A02	3bL 2; On completion of 12,5% perm. tunnel linin	0	0		18NOV10		18NOV10	2	1,138	For Adit Tunnel at Intake I-2
3BL1BI2A04	3bL 3: On completion of 25% perm. tunnel lining	0	0		16DEC10		16DEC10	2	1,110	♦ for Adit Tunnel at Intake I-2
13	3bL 4: On completion of 37,5% perm. tunnel linin	0	0		15JAN11		15JAN11	2	1,080	♦ for Adit Tunnel at Inteke I-2
3BL1BI2A08 3BL1BI2A10	3bL 5; On completion of 50% perm. tunnel lining	0	0		15FEB11		15FEB11	_	1,049	♦ for Adit Tunnel at Intake I-2
	3bL 6; On completion of 62.5% perm. tunnel linin	0	0		15MAR11		15MAR11	2	1,021	♦ for Adit Tunnel at Intake I-2
3BL1BI2A12 3BL1BI2A14	3bL 7; On completion of 75% perm. tunnel lining	0	0		12APR11		12APR11	2	993	♦for Adit Tunnel at Intake I-2
	3bL 8; On completion of 87.5% perm. tunnel linin	0	0		09JUL11		09JUL11	2	905	♦for Adit Tunnel at Intake I-2
3BL1Bl2A16 3BL1Bl2A18	3bL 9; On completion of 97.5% perm. tunnel lining	0	0		25AUG11	1	25AUG11	2	858	♦ for Adit Tunnel at Intake I
3BL1BI2A18	3bL 10; On completion of all works under this CC	0	0		19DEC11		19DEC11	2	742	ounder this Cost Centr
					TODEOTT					
Schedule of	Milestones for Cost Centre No. 5L		-							
					0005000	-	08DEC09		1,483	below G.L except for Adit at Intake I-2;
05L1BI2M02	5L 1; On completion of 25% of excavation	0	0		08DEC09		12APR10		1,403	below G.L. except for Adit at Intake I-2
05L1BI2M04	5L 2; On completion of 50% of excavation	0	0		12APR10				1,358	Selow G.L. except for Adit at Intake I-2
05L1BI2M06	5L 3; On completion of 75% of excavation	0	0		23JUN10	_	23JUN10	2	1,165	below G.L. except for Adit Intake I-2
05L1BI2M08	5L 4; On completion of all excavation	0	0		220CT10		220CT10		746	vortex shaft at Intake 12
05L1BI2M10	5L 5; On completion of drop shaft & vortex shaft	0	0		15DEC11		15DEC11	2		◆chamber at Intake I-2
05L1BI2M12	5L 6; On completion of de-aeration chamber	0	0		10NOV11		10NOV11	2	781	◆shaft at Intake I-2
05L1Bl2M14	5L 7; On completion of air vent shaft	0	0		27MAR10		27MAR10	-	1,374	◆shaft at Intake I-2
05L1BI2M16	5L 8; On completion of man access shaft	0	0		05AUG11		05AUG11	2	878	◆snar at Intake I-2
05L1BI2M18	5L 9; On completion of man access adit	0	0		14MAR11		14MAR11	-	1,022	under this Cost Centre
05L1BI2M20	5L 10; On completion of all works under this CC	0	0		23MAR12		23MAR12	2	647	
Schedule of	Milestones for Cost Centre No. 8R	-	-						11.6	
	8R 1; On completion of approach channel	0	0		09MAR12		09MAR12	2	661	channel and assiciated decking at Intake I-2
08R1BI2R02		0	0		09MAR12		09MAR12	2		◆at Intake I-2
08R1BI2R04	8R 2; On completion of trash grill	U	0		USIVIAR12	· L	USIMALY 12	4	001	

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ID	Activity Description	D04 Dur	WP3D Dur	AD04 Start	AD64 Finish	WP3D Start	WP3D Finish	0	Total Float	2008		2009 20	19 2011	2012	2013
08R1BI2R06	8R 3; On completion of all works under this CC	0	0	and the second second second second second second second second second second second second second second second	23MAR12	5035	23MAR12	2	647			uni	der this Cost C	entre	100
Schedule of	Milestones for Cost Centre No. 12R				and the second	Balance -	-			3					120
								_	-				- N		1323
12R3BI2S02	12R 1; On completion of 50% pile retain. wall	0	0		06NOV08A		06NOV08A	2	1		o wall	at Intake I-2			4
12R3BI2S04	12R 2; On completion of pile retain. wall	0	0		26NOV08A		26NOV08A	2		·••		at Intake I-2			
12R3BI2S06	12R 3; On completion of boulder traps	0	0		26JAN11		26JAN11	2	1,069			F.	traps a	at Intake I-2	13101
12R3BI2S08	12R 4; On completion of all works under this CC	0	0		23MAR12		23MAR12	2	647			uni	der this Cost C	entre	131
Constructio	on of Intake I-3														18
Preliminary													1		
the second second second second second second second second second second second second second second second se									-	191		12	1		
Additional GI	Works To Finalize Design	2	-		OFNOV/08A	02101/084		i a	1	1	. 1				
AGIC-02	Erect platform/mibilization & set up GI rig Drill 3 nos, GI holes for Intake Structures	3			05NOV08A			1		21	11		1	191-	14.3
I and the local data and the loc		12	12	UGNUVU8A	19NOV08A	UGNOVU8A	19NOVU8A	1	1	4	-				
	ce Hoarding by Chain Link Fence				100550001	_								1582	
V0032-1302	Received VO-32 for replacing hoarding by CLF	0	0		16SEP08A		16SEP08A	1	i	1000			- 010		
VO032-1304	Procure/prepare/install transparent hoarding	80	80	17SEP08A	06MAR09A	17SEP08A	06MAR09A	1	1						
-															
01R1Cl3102	Possession of Portion C -90d of DOC	0		26MAR08A		26MAR08A		2		· •				all second	122
01R1Cl3104	Site clearance	40		22APR08A	20SEP08A			1					a de la composición de la composición de la composición de la composición de la composición de la composición de		
01R1CI3106	Haording at slope crest	48		03JUN08A	30JUL08A		30JUL08A	1	1						
01R1Cl3110	Set-up wheel washing facilities	6		30JUN08A	03JUL08A		03JUL08A	1		2.5			-		-
01R1Cl3118	Install remote contorl CCTV as per ER 4.4.10	12	12	280C108A	10NOV08A	280C108A	10NOV08A	1	1					_	
Tree Transp	lanting Works			1			2.50			181					
								_						1.6.5	100
16R7CI3202	Tree inspection & report	7	7	01APR08A	26APR08A	01APR08A	26APR08A	2	1	•	_		1	1	123
16R7CI3204	Tree transplant for upper parts; 8 nos.	86*	86*	04JUN08A	13SEP08A	04JUN08A	13SEP08A	1	1			10 10 10		40	1923
16R7CI3206	1st stg tree pruning	2			21JUN08A		21JUN08A	1	3					1.1	12/4
16R7CI3208	2nd stg tree pruning	2	2		04JUL08A		04JUL08A	1				-		1914	1028
16R7CI3210	Final stg. tree pruning & tree uplifting	6	6		13SEP08A		13SEP08A	1	1				12 1	122	
16R7CI3212	Tree transplanting at Ch250-Ch200); 20 nos.	214*			09MAR09A		09MAR09A	1		12					3.54
16R7CI3214	1st stg tree pruning	3		21JUN08A	15JUL08A		15JUL08A	1		8			5.2		143
16R7CI3216	2nd stg tree pruning	3		15JUL08A	12SEP08A		12SEP08A	1	1	-			-	J.c.	1923
16R7CI3218	Final stg tree pruning & tree uplifting	8		28FEB09A	09MAR09A		09MAR09A	1		121				14	1983
16R7CI3220	Tree transplanting at Ch100-Ch0	66*	66*	12NOV09	30JAN10		30JAN10	1	17						12
16R7CI3222	1st stg tree pruning	4	4	12NOV09		12NOV09	16NOV09	1	17	19				-	1.42-
16R7CI3224	2nd stg tree pruning	4	4	15DEC09	18DEC09		18DEC09	1	17			1	1	1.0	
16R7Cl3226	Final stg tree pruning & tree uplifting	10	10	20JAN10	30JAN10	20JAN10	30JAN10	1	17	21					2 53
	ning Wall for Wall A									10					122
Piling Works															8124
13R4CI3400	Mobilize & set up piling rig	6	6	11AUG08A	16AUG08A	11AUG08A	16AUG08A	1							18
13R4CI3401	Drill 28 nos. grout (partially) 11 nos. piles	1			28AUG08A			1						1.1	1.8
13R4CI3402	Piling stopped due to accessive grout loss	. 1			220CT08A			1		-					232
13R4CI3403	Piling resumed date	1	1	26NOV08A	26NOV08A	26NOV08A	26NOV08A	1			1		in the second		

ID	Activity Description	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	Cal ID	Total Float	2008		009	2010	2011	201	2 2013	
13R4CI3405	Complete all H-piles, Wall A; 347nos.	70	70	18AUG08A				1			31				F-16-1	1182	
	Complete all riplies, Wall A, or rios.	1.0			1			1			1				112		
Skin Wall 13R4CI3406	Excavate for skin wall construction; 2130m3	60	60	14JAN09A	02MAR09A	14.IAN09A	02MAR09A	1	I			8					
13R4CI3408	Hack off piles; piles 1 to 347	48	48	04FEB09A	02APR09A		02APR09A	1						1	131	- 122	
			60				19MAY09A	1	- 3	-		- 10		-		1000 -	
13R4Cl3410	Construct skin wall;	60				14APR09A	04JUN09	1	401	-1		18		1			
13R4CI3414	Construct for capping beams,	24		14APR09A					-			1 B					
13R4CI3416	Construct U-channels	37	37	UGIMAYU9A	18JUN09	U6IMAYU9A	1810109	1	394							- 18	
Soil Nailing V	Vorks								12.1								
Soil Nailing Ou	tside Excavation Area														1.1	123	
13R1CI3502	Scaffolding platform for soil nailing	18	18	08SEP08A	280CT08A	08SEP08A	280CT08A	1	1	20 E		12				124	
13R1CI3504	Mobilize & set up drilling & grouting plants	4	4	12SEP08A	17SEP08A	12SEP08A	17SEP08A	1		1					13	1922	
13R1CI3506	Install & grout soil nails; 193 nos. + 8 Test N.	69	69	18SEP08A	09DEC08A	18SEP08A	09DEC08A	1							12	1966	
Soil Nailing W	thin Excavation; Ch. 270-210										T				1.53	ST.	
13R1CI3508	Install & grout soil nails	58*	58*	29JUL09	06OCT09	29JUL09	06OCT09	1	-160						Lite		
Soil Nailing Wit	thin Excavation: Ch. 210-130									- 25:				4		1.3	
13R1CI3510	Install & grout soil nails	117*	117*	12DEC08A	11MAY09A	12DEC08A	11MAY09A	1								1489	
Soil Nailing W	ithin Excavation; Ch.130-0															1.43	
13R1CI3512	Install & grout soil nails	267*	267*	30OCT09	22SEP10	30OCT09	22SEP10	1	17	12		and the second					
CONTRACTOR SPECIFIC CONTRACTOR	ng Outside Excavation	1	-			1		-	-	2						1922	
13R1Cl3522	Scoffolding platform for soil nailing	12	12	10OCT09	23OCT09	10OCT09	23OCT09	1	235	1					143		
13R1CI3532	Install & grout soil nails; 261 no.s + 3 Test N.	100	100		25FEB10		25FEB10	1	235			(interest			1791		- 1
								1								1989	
	Construction						-		-							184	
7	orks for Works Included VO#043	-			OOF FROM		00550004										
VO043-010	Receive VO for revising design	0	0		02FEB09A		02FEB09A	1			Μ,				a sure of	100	
VO043-020	Recieve amendment to VO#043	0	0	State of the second	05MAY09A	Contraction of the second second second second second second second second second second second second second s	05MAY09A	2		1					19.6		
VO043-030	Procurement of lean mix concrete	12		NUMBER OF STREET, STRE	14MAY09A			1	450	1.3					1.1		
VO043-040	Testing & approval of lean mix concrete	18	18	15MAY09A	0610109	15MAY09A	06JUN09	1	-156	<u></u>							
the second second second second second second second second second second second second second second second se	rotect Retained Trees; VO #043	1.1928.0	01525			Sector Contractor Contractor		ki cari	_		C.C.B.	11			1.12	182	
VO043-120	Setting out at site	69	69			Contract of the second second	28APR09A	1	4	원				1	000		
VO043-130	Excavate & muck out manually; 50m @ 4m/day	2		and the second second	30APR09A			1						1		1449	
VO043-140	Erect formwork; 70m2 @ 14m2/day	5			08MAY09A			1	-	ça i					1	1000	- 1
VO043-150	Set up for conreting	2	-		09MAY09A			1		à.	1 -				1		- 10
VO043-160	Pour concrete & removal of formwork	2	2	09MAY09A	11MAY09A	09MAY09A	11MAY09A	1									
Ch.460 to 370;	VO# 043									054		14			1981		- 1
VO043-060	Bulk excavation for benching;1061 @ 45m3/day	12	12	29MAY09	11JUN09	29MAY09	11JUN09	1	-160	S.,							
VO043-070	Fill & compaction; 39 layers @ 1 day/layer	39	39	12JUN09	28JUL09	12JUN09	28JUL09	1	-160				18			1338	
Ch. 370 to Ch.	270; VO #043									80				i.	1985	図念し	
VO043-090	Excavation for access road Ch. 370 to 310	4	4	29JUL09	01AUG09	29JUL09	01AUG09	4	-160	3		1		2	T. Mar	388	
VO043-100	Bulk excavation for benching; Ch. 310 to 270	5	5	03AUG09	07AUG09	03AUG09	07AUG09	1	-160								
VO043-110	Fill & compaction lean mix concerete; 15 layers	15	15	08AUG09	25AUG09	08AUG09	25AUG09	1	-160	ne -						1424	
Works On & Al	Dove Access Road; Ch. 460-270									13			8		1.121		
09R1CI3610	Temporary concrete paving & curing	16	16	26AUG09	12SEP09	26AUG09	12SEP09	1	-139	52		1				184	
	remportary bondione paring a cannig													-	and the second second		

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ID	Activity Description	D04	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	0	Total Float	2008	2009	2010	2011	2012	2013
09R1Cl3620	Excavation of slope batter above access road	47	47	14SEP09	10NOV09		10NOV09	1	321		=10),513m3 @	225m3/day		124
Ch. 270 to Ch.		1			ł										138
09R1CI3624	Excavation & soil nailing	54	54	29JUL09	29SEP09	29JUL09	29SEP09	1	-160		-				124
09R1CI3626	Backfill (grade 200) & compaction	3	3	07OCT09		07OCT09	09OCT09	1	-160	2	- F.				
09R1CI3628	Temporary concrete paving & curing	10	10	10OCT09		10OCT09	210CT09	1	-160		- a 1				123
Ch. 210 to Ch.		1					-								121
09R1CI3630	Excavation as per conforming design	48	48	12DEC08A	11MAY09A	12DEC08A	11MAY09A	1		1 E					
09R1CI3632	Temporary concrete paving & curing	12	12	13NOV09	International States of States	13NOV09	26NOV09	1	55		-				193 - C
VO-084-02	VO#084 revising the design received	0		12MAY09A		12MAY09A		1	1		4		H		20212
VO-084-02	Works resumed as per VO #084	0		16MAY09A		16MAY09A		1			4		5		128
VO-084-22	Excavate slope profile as per VO#084	34		16MAY09A	25JUN09	16MAY09A	25JUN09	1	-79						
VO-084-26	Remove excavated material off site; 6000m3	18	18	22OCT09		22OCT09	12NOV09	1	55	1				11	113
VO-084-32	Soil nailing at Ch. 198 to 210	4	4	30SEP09	06OCT09	30SEP09	06OCT09	1	-160		1				166
VO-084-42	Excavate to access road formation	18	18	26APR11		26APR11	17MAY11	1	-160					15	が高
	0: up to +74.5mPD				1				-					10	618
09R1CI3634	Excavation & soil nailing	62	62	30OCT09	13JAN10	30OCT09	13JAN10	1	17		-	61 C			13.23
09R1CI3636	Temporary concrete paving & curing	15	15	14JAN10	30JAN10		30JAN10	1	17					light - 1	
		10	10		00014115		1							1	il di
09R1CI3638	0; below +74.5mPD Excavate & soil nailing (+74.5 to 88.5mPD)	41	41	06AUG10	22SEP10	06AUG10	22SEP10	1	17			0.00	1 - C		1.123
09R1CI3638	Excavate ock (88.5 to 63mPD; 3239m3 @ 80m3/day	40	40	24SEP10		24SEP10	11NOV10	1	17	-		-		21 T T	100
09R1CI3640	Backfill (grade 200) & compaction	7	7	12NOV10		12NOV10	19NOV10	1	17	2			E I I		CE.
1	 Additional Methylectron (Methylectron) 			12100110	10110110	12110110	, otto i i o	1							100
	oad Paving; Ch. 460 to Ch. 270 Construct drainage as per VO#090; 190m @ 5m/day	32	32	29JUN11	05AUG11	29 ILIN11	05AUG11	1	-160			19 - E	1 a	1.1	
09R1Cl3664		20	20	2950IN11	29AUG11	CONTRACTOR OF A	29AUG11	9	-157						532
09R1CI3674	Road formation; 190m @ 12m/day	16	16	30AUG11		30AUG11	17SEP11	1	-157	1		-	1	151	
09R1CI3684	Lay sub-bse and kerb; 190m @ 12m/day	16	16	19SEP11	ALCON AND LOCAL	19SEP11	080CT11	1	-157				11 1	201	12
09R1CI3694 VO-095-02	Concrete paving; 190m @ 12m/day Green slope arrangement as per VO# 095	24	24	09JUL11	05AUG11	The statement of the statement	05AUG11	1	-157		1			5	100
10.000		27	24	COUCLI	00/100/11	DOUDLIN	0010011	1.00							123
	bad Paving; Ch. 270 to Ch. 130	35	35	18MAY11	28 ILINI11	18MAY11	28JUN11	1	-160					13	
09R1Cl3644	Construct drainage; 140m @ 4m/day	12	12	29JUN11	13JUL11	29JUN11	13JUL11	1	-137	8				13	
09R1CI3646	Backfill trench & road formation; 140m @ 12m/day Lay sub-base and kerb; 140m @12m/day	12	12	14JUL11	27JUL11	14JUL11	27JUL11	1	-125				1150	mm thick	183
09R1CI3648 09R1CI3654		12	12	28JUL11	10AUG11		10AUG11	1	-125						121
	Concrete paving; 140m @ 12m/day	12	12	2000111	TURGOTT	2000111	TUNUUTI	1. 1.00	120					171	18
and the second s	bad paving: Ch. 130 to Ch. 0	33	33	06AUG11	14SED11	06AUG11	14SEP11	1	-160					1.2	
09R1Cl3704	Construct drainage; 130m @ 4m/day	11	11	15SEP11	The second second	15SEP11	27SEP11	1	-160	-3				12-	teter in the
09R1Cl3714	Backfill trench & road formation; 130m @ 12m/day	11	11	28SEP11	ACARCAL IN F	28SEP11	120CT11	1	-160				1	1	
09R1Cl3724	Lay sub-base & kerb; 130m @12m/day	11	11	130CT11		130CT11	250CT11	1	-160	2	-	-			
	Concrete paving; 130m @ 12m/day	11	1.1	1300111	2500111	1300111	2000111	1	-100		-			181	
the second second second second second second second second second second second second second second second s	ning Wall for Wall B			5 - Ph. 1						5			15		12
Piling Works 13R4CI3701	Form piling platform for Wall B	12	12	01FEB10	17FEB10	01FEB10	17FEB10	1	17						
13R4CI3701	Mobilize & set up piling rig	6	6	12010-048078-00-04	And Missing Stress	18FEB10	24FEB10	1	17			1		-	1823
		53	53	1000 (100) (1000 (1000 (1000 (1000 (1000 (1000 (1000 (1000 (1000 (1000 (1000 (1000 (1000 (1000 (1000 (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (1000 (1000) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100)	57.VVVIT07563/56	25FEB10	03MAY10	1	17	2		2 nos.	pile/rig	101	12
13R4CI3704	350mm dia. pre-bored H-piles, Wall B; 98 nos.	53	53	25FEB10	U3MAY10	25FEB10	USIVIATIO	्व	11	_		-10S.	pilenty	1990	20224

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ID	Activity Description	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	Cal ID	Total Float	2008	2	69	2010		2031.	2012		513
13R4CI3705	Demobilize piling rig	6	6	04MAY10	the second second second second second second second second second second second second second second second se	04MAY10	10MAY10	1	17				1	11	1-1		124	
Skin Wall		1.52				1	1			8							121	
13R4CI3706	Excavate for skin wall: 48m3	18	18	11MAY10	01JUN10	11MAY10	01JUN10	1	17	5						-	1.31	
13R4CI3708	Hack off piles; piles 1 to 98	24	24	26MAY10		26MAY10	23JUN10	1	17	2						11-	1 21	
13R4CI3710	Construct skin wall; 6 bays	24	24	09JUN10		09JUN10	08JUL10	1	17		-10	20		3 2	115	2	学生	
13R4CI3712	Excavate for capping beams;	12	12	02JUL10		02JUL10	15JUL10	1	17				4				123	
13R4CI3714	Construct for capping beams;	18	18	09JUL10		09JUL10	29JUL10	1	17						110	8		
13R4CI3716	Construct U-channels	18	18	16JUL10	05AUG10		05AUG10	1	17			1						
	dification Works (Dry Season)																12	
Taking the second second					_											0	14	
and the second se	n for Underground Works	60	60	10050084		12DEC08A	04FEB09A	1	-		-			1.1			12	
09R1CI3802	Form a temporay plant access to stream	32	1 0.001	05FEB09A		05FEB09A	24FEB09A	1			.	1						
09R1CI3804	Break boulders	1000	1				09MAR09A	1		14		1				-		
09R1CI3806	Concrete bedding for bund wall (gabion)	11	10000	25FEB09A		25FEB09A	and the second s	1		12		1.00				the second		
09R1CI3808	Construct bund wall (gabion)	22		10MAR09A		10MAR09A			1						1		1.4	
09R1CI3810	Divert channel to south west	0	0		30APR09A	NI	30APR09A	1	-		~						1.5	
Channel Modif	Contraction of the second se					001101/001				1						4	100	
09R1Cl3812	Breaking of large boulders	30		02NOV09*		02NOV09*	05DEC09	1	21									
09R1CI3814	Excavation of the stream bed & make good	24	24	07DEC09		07DEC09	06JAN10	1	21								1.4	
09R1CI3816	Laying of rock armour	24	24	07JAN10		07JAN10	03FEB10	1	21	2			-		-	1	1923	
09R1Cl3818	Construct bund wall for approch channel const.	24	24	04FEB10	1	04FEB10	06MAR10	1	21				•	1.50			4.4	
09R1CI3820	Divert channel to south west	0	0		06MAR10		06MAR10	1	21	2			•			_		
Excavation	for AVS/VS/DC/MAS/MAA																123	
Open Excavati	ion for Underground Structures													1.1			183	
06L1CI3906	Mobilize drilling rig, backhoes	1	1	30OCT09	30OCT09	30OCT09	30OCT09	1	-160	1	. I.I.I.	1			1			
06L1CI3908	Excavate/mucking out/temporary support	200	200	31OCT09	07JUL10	310CT09	07JUL10	1	-160			-	6	000m3, 3	30m3/day	/ = 200		
Excavation a	& Construction of Main Adit									4			-					
		40	40	08JUL10	22411040	08JUL10	23AUG10	1	-134					10m @	0.3m/day		189	
3CL1Cl3102	Excavation/mucking out/temporary support	40		24AUG10		24AUG10	20SEP10	1	-134	20					Jonnuay	M		
3CL1CI3104	Construction of permanent lining	24	24:	Z4AUG1U	203EP10	24A0G10	203EP10	-	-134	-						-	103	
Construction	n of Man Access Adit (MAA)												1					
06L1CI3112	Cast invert; 1 bay	7	7	15SEP10	22SEP10	15SEP10	22SEP10	1	-160		1.1		1					
06L1Cl3114	Cast walls	12	12	24SEP10	08OCT10	24SEP10	080CT10	1	-160							1	1831	
06L1CI3116	Cast crown	12	12	09OCT10		09OCT10	230CT10	1	-160							S		
Construction	n of Man Access Shaft (MAS)										1		-					
										8						8		
06L1Cl3122	Cast base	3	3	08JUL10	10JUL10	08JUL10	10JUL10	1	-160			2	1	0		1		
06L1CI3124	Set up formworks	6	6	12JUL10	17JUL10	12JUL10	17JUL10	1	-160				1				12	
06L1Cl3126	Construct wall/stair; 14 landings @ 6 days/land.	84	84	19JUL10	270CT10	19JUL10	270CT10	1	-160	1	@4	days/ la	nding	2 2m 8	14 landi	ngs	182	
06L1CI3128	Construct wall above ground level	6	6	31MAR11	07APR11	31MAR11	07APR11	1	-9	1			1	1				
06L1CI3129	Construct shaft roof	12	-	08APR11		08APR11	21APR11	1	-9		1.11				1.0		12621	

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ID	Activity Description	D04	WP3D Dur	AD04 Start	AD04 WP3D Finish Start	WP3D Finish		Total Float	2998 2099 2010 2011 2012 2013
onetrustic		and the second second		C.C.C.		C CHINDIN			
onstructio	n of Deaerarion Chamber (DC)								
	Construct hose	9	9	250CT10	03NOV10 25OCT10	03NOV10	1	-160	
06L1CI3132	Construct base Construct walls 2 lifts	12	12	04NOV10	17NOV10 04NOV10	17NOV10	1	-160	
06L1CI3134	Construct waits 2 lifts Const. crown/underpin of air vent & drop shafts	12		18NOV10	08DEC10 18NOV10	08DEC10	1	-160	
06L1CI3136	A REAL PROPERTY AND A REAL	10	10	IBINOVID	USDECTO TONOVIO	OODLOID	1	-100	
Constructio	n of Vortex Shaft (VS)		-						
		11.00	21			2225042	1 .	100	
06L1CI3142	Set up formworks	6	6	17DEC10	23DEC10 17DEC10	23DEC10	1	-160	
06L1CI3144	Construction of drop shaft; 4m high	6	6	24DEC10	03JAN11 24DEC10	03JAN11	1	-160	@4m/4days
06L1CI3146	Construction of vortex structure	24	24	04JAN11	31JAN11 04JAN11	31JAN11	1	-160	
06L1CI3148	Construct remaining of the vortex	18	18	31MAR11	21APR11 31MAR11	21APR11	1	-160	
Constructio	n of Air Vent Shaft Shaft (AVS)								
							-		
06L1CI3152	Set up formworks	6	6	01FEB11	10FEB11 01FEB11	10FEB11	1	-160	
06L1CI3514	Cast 15m high circular wall	15	15	11FEB11	28FEB11 11FEB11	28FEB11	1	-160	
06L1CI3516	Construct upstand wall	12	12	01MAR11	14MAR11 01MAR11	14MAR11	1	-160	
Backfill Arou	und Structure				And the second second				
06L1CI3162	Granular fill up to +54mPD; 623m3	7	7	09DEC10	16DEC10 09DEC10	16DEC10	1	-160	
06L1CI3164	Granular fill above +54mPD; 1400m3	14	14	15MAR11	30MAR11 15MAR11	30MAR11	1	-160	
Constructio	n of Approach Channel	100							
09R1CI3172	Excavation for Approach Channel	60	60	01NOV10*	12JAN11 01NOV10	12JAN11	1	8	
09R1Cl3174	Construction of Approach Channel; upstream	82	82	20DEC10	31MAR11 20DEC10	31MAR11	1	8	
09R1Cl3176	Construction of boulder trap; 7 nos.	24	24	01NOV11*	28NOV11 01NOV11	28NOV11	1	-165	
09R1Cl3177	Construction of Approach Channel; downstream	40	40	01NOV11	16DEC11 01NOV11	16DEC11	1	-165	
09R1Cl3178	Construction of trash grill	12	12	17DEC11	04JAN12 17DEC11	04JAN12	1	-165	
09R1CI3179	Removal of concrete bolck bund	6	6	05JAN12	11JAN12 05JAN12	11JAN12	1	-165	
Junction Be	tween Main Tunnel & Adit Tunnel	1000		1.00				the second second	
3CL1CI3106	Temp. support & excavation breakthrough	48	48	19JUL11	12SEP11 19JUL11	12SEP11	1	-94	
3CL1CI3108	Construct collar between MT & AT	48	48	14SEP11	10NOV11 14SEP11	10NOV11	1	-94	
-	Works Prior to Handover to Client								
i territari ini g									
09R1CI3142	Finishing & reinstatement works; Portion C	36	36	10DEC11	28JAN12 10DEC11	28JAN12	1	-155	
09R1CI3142	Pre-handover inspections and remedial works	30	30		04FEB12 28DEC11	04FEB12	1	-155	
55111010140	Contractor serve notice for Works completion	7	7	05FEB12	11FEB12 05FEB12	11FEB12	2	667	
09R1CI3144	Source doi to house for thome completion				03MAR12 12FEB12	03MAR12	2	667	
09R1CI3144	SO issues completion certificate	21	21						
09R1CI3146	SO issues completion certificate	21	21 120	12FEB12 31AUG11			-		
09R1CI3144 09R1CI3146 16R7CI3142 16R7CI3144	SO issues completion certificate Landscaping works at Portion C Establishment Works at Portion C	21 120 365	21 120 365	31AUG11	28JAN12 31AUG11 27JAN13 29JAN12	28JAN12 27JAN13	1	-117 -148	

ID	Activity	ALC: NOT THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER O	WP3D	AD04	AD04	WP3D	WPSD	Cal		2008 2009 2010 2011 2012 2013
3DL1CI3143	Description	Dur 365	Dur 365	Start 29JAN12	Finish 27JAN13	Start	Finish 27JAN13	1D 2	-148	
	Maintain & monitor flow monitoring	305	305	233/11/2	210/4110	200/1112	210/1110	-	-140	
Schedule of	Milestones for Cost Centre No. 3cL	- 21	1.0					-		
		1.10	-						1.005	Automotific time line at lateral 2
3CL1Cl3A02	3cL 1; On establishing tunnelling equipments	0	0		14JUL10		14JUL10	2	1,265	Seuipment for tunnelling at Intake I-3
3CL1CI3A04	3cL 2; On completion of 12.5% perm. tunnel linin	0	0		23JUL10		23JUL10	2	1,256	Adit Tunnel at Intake I-3
3CL1CI3A06	3cL 3; On completion of 25% perm. tunnel lining	0	0		02AUG10		02AUG10	2	1,246	Adit Tunnel at Intake I-3
3CL1CI3A08	3cL 4; On completion of 37.5 perm. tunnel lining	0	0		11AUG10		11AUG10	2	1,237	Adit Tunnel at Intake I-3
3CL1CI3A10	3cL 5; On completion of 50% perm. tunnel lining	0	0		20AUG10		20AUG10	2	1,228	Adit Tunnel at Intake I-3
3CL1Cl3A12	3cL 6; On completion of 62.5% perm. tunnel linin	0	0		30AUG10	1	30AUG10	2	1,218	Adit Tunnel at Intake I-3
3CL1CI3A14	3cL 7; On completion of 75% perm. tunnel lining	0	0		08SEP10		08SEP10	2	1,209	♦Adit Tunnel at Intake I-3
3CL1CI3A16	3cL 8; On completion of 87.5% perm. tunnel linin	0	0		20SEP10		20SEP10	2	1,197	Adit Tunnel at Intake I-3
3CL1CI3A18	3cL 9; On completion of perm. tunnel lining	0	0		10NOV11	1	10NOV11	2	781	♦Adit Tunnel at Intake I-3
3CL1CI3A20	3cL 10; On completion of all works under this CC	0	0		10NOV11		10NOV11	2	781	♦under this Cost Centre
Schedule of	Milestones for Cost Centre No. 6L								19-21	
		-							- 3 2	
06L1CI3M02	6L 1; On completion of 50% of excavation	0	0		26FEB10		26FEB10	2	1,403	below G.L. except for Adit Tunnel at Intake I-3
06L1CI3M04	6L 2: On completion of excavation works	0	0		07JUL10		07JUL10	2	1,272	belowe G.L. escept for Adit Tunnel at Inta
06L1CI3M08	6L 3; On completion of vortex shaft	0	0	_	21APR11		21APR11	2	984	◆at Intake I+3
06L1CI3M10	6L 4: On completion of de-aeration chamber	0	0		08DEC10		08DEC10	2	1,118	chamber at Intake I-3
06L1CI3M12	6L 5: On completion of vent shaft	0	0		14MAR11		14MAR11	2	1,022	♦at Intake I-3
06L1CI3M14	6L 6; On completion of man access shaft	0	0		21APR11		21APR11	2	984	♦shaft at Intake I-3
06L1CI3M14	6L 7; On completion of man access adit	0	0		230CT10		230CT10	2	1,164	♦adit at Intake I-3
06L1CI3M18	6L 8; On completion of all works under this CC	0	0		21APR11		21APR11	2	984	Output of the second
	Contraction of the local data and the local data an							-		
Schedule of	Milestone for Cost Centre No. 9R									
					DEOCT44	1	250CT11	2	797	◆at Intake I-3
09R1CI3R02	9R 1; On completion of access road	0	0		250CT11		Stronger Stronger			at Intake I-3
09R1CI3R04	9R 2; On completion of 25% of excavation at G.L	0	0		11JUN09		11JUN09	2		♦at Intake I-3
09R1CI3R06	9R 3; On completion of 50% of excavation at G.L	0	0		01AUG09	1	01AUG09	2	10.000	◆at Intake I-3
09R1CI3R08	9R 4; On completion of 75% of excavation at G.L	0	0		13JAN10		13JAN10	2	1000 million (◆at Intake I-3
09R1CI3R10	9R 5; On completion of excavation at G.L.	0	0		12JAN11		12JAN11	2	a set and these	Channel at Intake I-3
09R1CI3R12	9R 6; On completion of 50% of approach channel	0	0		22FEB11		22FEB11	2		 Channel and associated decking
09R1CI3R14	9R 7; On completion of approach channel	0	0		31MAR11		31MAR11	2	1,005	◆at Intake I-3
09R1Cl3R16	9R 8; On completion of trash grill	0	0		04JAN12		04JAN12	2	726	◆under this Cost Centr
09R1CI3R18	9R 9; On completion of all works under this CC	0	0	_	04FEB12		04FEB12	2	695	Winder this cost centre
Schedule of	Milestones for Cost Centre No. 13R					<u>uldirian</u>				
4004010004	12D 1: On completion of 20% and polling	0	0		29SEP09	1	29SEP09	2	1,553	♦at intake I-3
13R4CI3S01	13R 1; On completion of 30% soil nailing	0	0		255EB10		25FEB10	2		◆at Intake I-3
13R4CI3S02	13R 2; On completion of 60% soil nailing	0	0		23FEB10 22SEP10		23FEB10	2		♦at Intake I-3
13R4CI3S03	13R 3; On completion of all soil naing works	0	0		05DEC08A		05DEC08A	2		◆at Intake I-3
13R4CI3S04	13R 4; On completion of 10% piles by number		100		Concernation party of	7	13DEC08A	2		♦at Intake I-3
13R4CI3S05	13R 5; On completion of 20% piles by number	0	0		13DEC08A		18DEC08A	100		◆at Intake I-3
13R4CI3S06	13R 6; On completion of 30% piles by number	0	0		18DEC08A	`	TODEGUSA	2		

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ID	Activity Description	D04 Our	WP3D Dur	AD04 Start		WP3D Start	WP3D Finish		Total Float	2008		2009	2010	2011 2012	2013
I3R4CI3S07	13R 7; On completion of 40% piles by number	0	0		23DEC08A		23DEC08A	2			♦at I	take I-3	3	1.11	12100
3R4CI3S08	13R 8; On completion of 50% piles by number	0	0		02JAN09A		02JAN09A	2			♦at	ntake I-	3		
3R4CI3S09	13R 9: On completion of 60% piles by number	0	0		09JAN09A		09JAN09A	2			o at	htake I-	3		1430
3R4CI3S10	13R 10: On completion of 70% piles by number	0	0		16JAN09A		16JAN09A	2		12	Øat	ntake I-	3		123
3R4Cl3S11	13R 11; On completion of 80% piles by number	0	0		21JAN09A		21JAN09A	2	1 2	1	Øat	ntake I-	-3		182
3R4CI3S12	13R 12; On completion of 90% piles by number	0	0		17MAR10		17MAR10	2	1,384				\$at Intake I-3		- 1 他生
3R4CI3S13	13R 13: On completion of all piling works	0	0		03MAY10		03MAY10	2	1,337	10			♦at Intake I-3	3	121
3R4CI3S13	13R 14: On completion of boulder traps	0	0		28NOV11		28NOV11	2	763					traps at	Intake I-3
3R4CI3S14 3R4CI3S15	13R 15; On completion of all work under this CC	0	0		28NOV11		28NOV11	2	763					ounder ti	nis Cost Centr
									0.56						1.82
	n of Outfall O-1	-									11				1216
reliminary \			-		224 10 24	-	_		_					100	
	perant Hoarding at Outfall	_			Less Press		104000004	- 1	-		1				1.122
1R1D00106	Receive VO6 for transperant hoarding	0	0		16APR08A		16APR08A	1		1					
1R1DO0108	Procurement for transperent hoarding	21		17APR08A				1	· · ·		÷			a 1 mil	1984
1R1DO0110	Erect hoarding	18	18	21APR08A	02JUL08A 21A	APR08A	02JUL08A	1	-	and a					- 1.2
0 #16; Chain	Link Fence at O-1				1		rocom volorar sauli				Ĩ				
01602	Issue VO16 for chain link fence	0	0		02JUL08A		02JUL08A	1	-				4 4 5 4		122
01612	Preparation works for chain link fence	1		03JUL08A	18AUG08A 03J	- contraction of the second	18AUG08A	1	-	-		1			8.8
01622	Erect chain link fence; 460m	38	38	19AUG08A	19SEP08A 19A	AUG08A	19SEP08A	1		=					
emporary CLI	P Power Supply for TBM Operation				_					-					
1R1DCLP02	Application/approval for temp. CLP Power Supply	200	200	07MAR08A	01AUG08A 07N		and the second se	2					_		1.22
1R1DCLP14	Appoint sub-contractor for design & build TX Rm	67	67	14JUL08A	07NOV08A 14J	and states of the state of the	07NOV08A	1				-		also in	
1R1DCLP24	Design for transformer room	24	24	08NOV08A	11MAR09A 08N	NOV08A	11MAR09A	1		3	-	6 8		1912	
1R1DCLP34	Constuct transformer room	60	60	12MAR09A	14MAY09A 12N	MAR09A	14MAY09A	1	1	1.2	-				450
1R1DCLP44	CLP inspection & defect rectification	14	14	15MAY09A	10JUN09 15N	AGOYAN	10JUN09	3	-181			1			
1R1DCLP54	CLP cabling to TX room & commissioning	32	32	11JUN09	18JUL09 11J	UN09	18JUL09	1	-181			•			132
1R1DCLP74	CLPE cabling from TX room to 24mPD platform	18	18	19SEP09	12OCT09 195	SEP09	12OCT09	1	-165	o., .					
/O#25; Revise	d Fencig Details at O-1 Next to GVT													324	1
/025-02	Receive VO16 for revised details next to GVT	0	0		17SEP08A		17SEP08A	3		1				1. 21	전용
025-12	Preparation works	24	24	22JAN09A	07FEB09A 22J	JAN09A	07FEB09A	1	3	1. I.	2		-		
/025-22	Erect proposed transparent hoarding	4	4	09FEB09A	02MAR09A 09F	FEB09A	02MAR09A	1			#fc	lowing t	ransplanting of 1	160/T293/T140	
055-02	Receive VO#55 in lieu of VO#25	0	0		21JAN09A		21JAN09A	1			•				
														1. 1. 1.	
1R1D00102	Obtain TTA (ingress & egress) approval	0	0		18APR08A		18APR08A	2							
1R1D00103	Implment TTA for diverting footpath	1	1	19APR08A	19APR08A 19A	APR08A	19APR08A	1		1.					1.8
1R1D00104	Obtain excavation permit	0	0		29MAY08A		29MAY08A	2		•					1993
1R1D00112	Erect catch fencing	10	10	26MAY08A	02JUL08A 26M	MAY08A	02JUL08A	1							1123
1R1D00114	Site establishment	30	30	21APR08A	15JUL08A 21A	APR08A	15JUL08A	1	g	faciaRe	-align	ootpath	erect hoarding	catchfence,	1.4
1R1D00116	Site clearance	30	30	21APR08A	05SEP08A 21A	APR08A	05SEP08A	1	1						122
1R1D00118	Install remote contorl CCTV as per ER 4.4.10	12	12	280CT08A	10NOV08A 280	OCT08A	10NOV08A	1		1	1				0.8
6R1D00110	Tree inspection & report	7	7	13MAR08A	28MAR08A 13M	MAR08A	28MAR08A	1	1						12.53

ID	Activity Description	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	Cal ID	Total Float	2008 2008 2010 2011 2012 2013
		Con	Car	CHAIL	THIST					
and the second se	orary Access/Tree Felling					Real Property in the local division of the l				
and the second s	sion Due to Obstruct. from Villagers	1.200				10 11 11 00 1	1000000		-	
WSO02	Works suspension due to obstruct. frm villagers	24	24	19JUL08A	10AUG08A	19JUL08A	10AUG08A	2	-	
			10000000			10.11.11.100.1	0.00000		-	
10R1DO0202	Form temp. access road from +14mPD to +69mPD	158*	158*	19JUN08A	Section Sector Sector		24DEC08A	1		
10R1DOAR04	Const. temp. steel decking over exist Outfall W	11	11	26AUG08A		the state of the s	06SEP08A	1		
10R1DOAR08	Form temp, access road from 14mPD to 28mPD	12	12	19JUN08A	the second second	19JUN08A	18JUL08A	1		
10R1DOAR12	Preparation works for transplanting T160	53	53	11AUG08A	The state of the local state of the	11AUG08A	Channel Sole Street on	1		사람은 특별 이 이 이 이 이 이 이 있는 것이 없는 것이 없다.
10R1DOAR42	Mobilze & set up crane for tree transplant	1	1	270CT08A		270CT08A		1		
10R1DOAR44	Crown pruning for T160	2					290CT08A	1		
10R1DOAR46	Cut root & uplift T160	1					300CT08A	1		
10R1DOAR54	Crown pruning/Cut root & uplift T142	10			21FEB09A			1	1	
10R1DOAR56	Construct access road from +43 to +55mPD	30	30		24DEC08A			1		
16R7DO0202	Tree transplant at Outfall O-1	105	105		06MAR09A		06MAR09A	1		
16R7D00204	Tree transplant above +62mPD	11	11	31OCT08A	12NOV08A	310CT08A	12NOV08A	1	-	
Form Tempo	orary Launching Platform					dia and				
and the second s	oil Nailing; +71mPD to +40mPD									
10R1D0030	+71 to +40mPD (rows to A to P)	229*	229*	13NOV08A	22AUG09	13NOV08A	22AUG09	1	-184	
10R1D0031	Remove boulder/Cut slope for rows A to D	9	9	13NOV08A	06DEC08A	13NOV08A	06DEC08A	1		
10R1D0032	Erect scaffold & Drill/install/grout/P1at row C	12	12	02DEC08A	16DEC08A	02DEC08A	16DEC08A	1		
10R1D0033	Drill/install/grout rows B to C; 18 nos.	14	14	17DEC08A	06JAN09A	17DEC08A	06JAN09A	1		
10R1D0034	Drill/install/grout/testing for P2 at row D	8	8	30DEC08A	06JAN09A	30DEC08A	06JAN09A	2		
10R1D0035	Drill/install/grout D1 to D11	7	7	07JAN09A	16JAN09A	07JAN09A	16JAN09A	1		
10R1D0036	Cut slope for E1 to G20; soil 620m3	2	2	15JAN09A	20JAN09A	15JAN09A	20JAN09A	1		
10R1D0037	Drill/install/grout E1 to G20: 51 nos.	19	19	20JAN09A	11FEB09A	20JAN09A	11FEB09A	1	in a	
10R1D0038	Construct nail heads/remove platform; rows B-G	10	10	02FEB09A	17FEB09A	02FEB09A	17FEB09A	1		
10R1D0039	Erosion mat, wire mesh & hydroseed; rows B-G	10	10	21FEB09A	24FEB09A	21FEB09A	24FEB09A	1		
10R1D0040	Cut slope for H1 to I25; soil 1819m3	12	12	02FEB09A	17FEB09A	02FEB09A	17FEB09A	1		
10R1D0041	Drill/install/grout H1 to I25; 47 nos	13	13	18FEB09A	04MAR09A	18FEB09A	04MAR09A	1		
10R1D0042	Cut slope for J1 to M37; soil 5834m3	20	20	19FEB09A	13MAR09A	19FEB09A	13MAR09A	1		
10R1D0043	Erect working platform for rows J to M	14	14	28FEB09A	16MAR09A	28FEB09A	16MAR09A	1		
10R1D0044	Test nails for P3, P4, P5 & P10	12	12	05MAR09A	07APR09A	05MAR09A	07APR09A	1		
10R1D0045	Drill/install/grout J1 to M37; 134 nos.	20	20	12MAR09A	07APR09A	12MAR09A	07APR09A	1		
10R1D0047	Construct nail heads/remove platform; rows H-M	20	20	14MAR09A	18APR09A	14MAR09A	18APR09A	1		
10R1D0048	Erosion mat, wire mesh & hydroseed; rows H-M	6	6	29MAY09	04JUN09	29MAY09	04JUN09	1	-184	
10R1D0049	Excavate soil 5600m3 & boulde 229m3; Rows N to P	22	22	14MAR09A	18APR09A	14MAR09A	18APR09A	1		
10R1D0050	Erect working platform for rows N to P	10	10	20APR09A	24APR09A	20APR09A	24APR09A	1		
10R1D0051	Drill/install/grout N1 to P31; 111 nos.	20		THE REPORT OF A PARTY OF ALL	13MAY09A	A DOUGH OF AN ANY ANY ANY ANY ANY ANY ANY ANY ANY	The second	1		+ i no. test nail
10R1D0053	Construct nail heads/remove platform; row N to P	14	14	14MAY09A	02JUN09	14MAY09A	02JUN09	1	-161	
10R1D0054	Erosion mat, wire mesh & hydroseed; rows N to P	6	6	03JUN09	09JUN09	03JUN09	09JUN09	1	-161	
A STATE AND A STREET OF AN	oil Nailing; +40mPD to +24mPD									
10R1D0130	+40 to +24mPD (rows Q to X)	205*	205*	20APR09A	22DEC09	20APR09A	22DEC09	1	-219	

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ID	Activity Description	D04 Jur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	0	Total Float	2008 2019 2011 2012 2013
10R1D0131	Excavation; 40 to 30mPD; soil 8291m3/rock 2778m3	43	43	20APR09A	13AUG09	20APR09A	13AUG09	1	-219	
10R1D0132	Reinstate temp, access	30	30	21APR09A	27MAY09A	21APR09A	27MAY09A	1		
10R1D0133	Erect working platfrom for rows Q to U	22	22	11MAY09A	17AUG09	11MAY09A	17AUG09	1	-219	
10R1D0134	Test nails for P6, P7, P8 & P11	12	12	21MAY09A	24AUG09	21MAY09A	24AUG09	1	-219	
10R1D0135	Drill/install/grout Q1 to U10; 99 nos.	13	13	12MAY09A	04SEP09	12MAY09A	04SEP09	1	-219	
10R1D0136	Excavation; 30 to 24mPD; soil 4197m3/rock 7592m3	95	95	27MAY09A	08OCT09	27MAY09A	08OCT09	1	-219	soil 450m3/day & rock 185m3/day
10R1D0137	Drill/install/grout V1 to X14; 37 nos.	10	10	05SEP09	2.2.2.000080200222	05SEP09	16SEP09	1	-219	
10R1D0138	Construct nail heads/remove platform; row V to X	17	17	02SEP09	10000000000000000000000000000000000000	02SEP09	21SEP09	1	-219	
10R1D0139	Erosion mat, wire mesh & hydroseed; rows V to X	10	10	22SEP09		22SEP09	05OCT09	1	-219	
TBM Launching		1.75	1 ////			1		1 .		
10R1D01305	Pipe pile roof support	9	9	18SEP09	28SEP09	18SEP09	28SEP09	1	-212	
10R1D01310	Excavate/construct TBM launching chamber	63	63	09OCT09		09OCT09	22DEC09	1	-219	
10R1D01315	Form launching chamber cradle	12	12	09DEC09		09DEC09	22DEC09	1	-219	
10R1D01315	Ground treatment prior to TBM commence boring	4	4	23DEC09	and the second second	23DEC09	29DEC09	1	-217	에 그는 것을 물러 있는 것을 물러 있었다. 것
			1 1	2002000	2302003	2002000	ZODECCO	1. 1	-211	
10R1DO230	M Access Road; +24 to +14mPD +24 to +14mPD	63*	63*	08JUN09	20411009	08JUN09	20AUG09	1	-181	
		0	0	00301405	06JUN09*	00301103	06JUN09*	1	-172	
10R1D0240	Relocate sedimentation tank	_	12	08JUN09	0.0000000000	08JUN09	20JUN09	1	-172	
10R1D0250	Form access for big breaker	12	1 0		20JUN09	00101409	20JUN09	1	-172	
10R1D0260	Mobilization of big breaker	0							-172	
10R1D0270	Form new TBM access +14mPD to +24mPD	14	14	22JUN09		22JUN09	08JUL09	1		
10R1D0280	Divert access to new TBM access	0	0		08JUL09		08JUL09	1	-172	
10R1DO290	Demolish masonry & ret. wall at +14mPD	28	28	20JUL09	20AUG09	2010109	20AUG09	1	-181	a name of the second second second second second second second second second second second second second second
	Area at +24mPD					1				
10R1DO185	Construct temporary draiange	6	6	011003-14-32-52	10-10-10-10-10-10-10-10-10-10-10-10-10-1	16DEC09	22DEC09	1	-219	
10R1DO195	Concrete slab	12	12		31DEC09	16DEC09	31DEC09	1	-219	
3AL1D00314	Commence TBM initial assembly	0	0	02JAN10		02JAN10		1	-219	
Tower Crane							Internation was			
3AL1DO2005	Foundation	8	1	21AUG09	1	21AUG09	29AUG09	1	-181	
3AL1DO2010	Erection	3	3	at the state	1000 AND 1000	08SEP09	10SEP09	1	-157	
3AL1DO2015	Test & commissioning	া	1	11SEP09		11SEP09	11SEP09	; 1	-157	
3AL1DO2025	Removal of tower crane & reinstatement	12	12	11APR12	24APR12	11APR12	24APR12	1	-207	
TBM Platform										
3AL1DO2505	Pre-fabrication	40	40	18JUN09*	04AUG09	18JUN09*	04AUG09	1	-159	
3AL1DO2515	Foundation	12	12	31AUG09	12SEP09	31AUG09	12SEP09	1	-181	
3AL1DO2525	Erect steel framework	36	36	14SEP09	28OCT09	14SEP09	280CT09	1	-181	
3AL1DO2535	Install platform	12	12	29OCT09	11NOV09	29OCT09	11NOV09	1	-181	
3AL1DO2545	ICE certification	3	3	12NOV09	14NOV09	12NOV09	14NOV09	1	-181	
Noise Enclosu	18									
3AL1DO3005	Pre-fabrication	42	42	22JUN09*	10AUG09	22JUN09*	10AUG09	1	-120	
3AL1DO3015	Foundation	12	12	23SEP09	08OCT09	23SEP09	08OCT09	1	-169	
3AL1DO3025	Erect steel framework	18	18	09OCT09	30OCT09	09OCT09	30OCT09	1	-169	
3AL1DO3035	Cladding	22	22	27JAN10	24FEB10	27JAN10	24FEB10	1	-195	
3AL1DO3045	ICE certification	3	3	25FEB10	27FEB10	25FEB10	27FEB10	1	-195	

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.ID	Activity	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	Cal	Total Float	2008 2018 2010 2011 2012 2013
3AL1FT0802	Apply to EPD for CNP for 24 hrs. tunnel work	12	12			11FEB10	27FEB10	1	-195	
3AL1FT0804	EPD process/approve CNP application	36	36	28FEB10	04APR10		04APR10	2	-237	
		00	00	201 2010	04/11/10	ZOI LDIO	04/11/110		201	
105 Ton Gantry 3AL1D03505	Manufacture	99	99	29MAY09	225EP09	29MAY09	22SEP09	1	-159	
3AL1D03505	Shipping to Hong Kong	6	6	23SEP09	29SEP09		29SEP09	1	-159	
3AL1D03515		1987	8	30SEP09		30SEP09	10OCT09	1	-159	
	Assembly	8					280CT09			
3AL1D03535		4	4	230CT09		230CT09		1	-169	
3AL1D03545	Test & commission	3	3	29OCT09		29OCT09	31OCT09		-169	
3AL1D03555	Receive initial segments and stock	6	6	02JAN10	USJAN1U	02JAN10	08JAN10	1	-209	
Muck Hopper							10000000	n ar	-	
3AL1DO4005	Pre-fabrication	75		22JUN09*		22JUN09*	17SEP09	1	-83	
3AL1DO4015	Foundation	18	18	THE PROPERTY AND INCOME.	The second second	14SEP09	06OCT09	1	-97	
3AL1DO4025	Erect steelwork	18	18	12NOV09		12NOV09	02DEC09	1	-127	
3AL1DO4035	Erect hopper	18	18	03DEC09	23DEC09		23DEC09	1	-127	
3AL1DO4045	Install transfer conveyor	4		24DEC09		24DEC09	30DEC09	1	-127	
3AL1DO4055	M&E works	6	6	(1-(1)(1-(1)(1-(1)(1-(1)(1-(1)(1-(1)(1-(1)(1-(1)(1-(1)(1-(1)(1-(1)(1-(1)(1-(1)(1-(1)(1-(1)(1-(1)(1-(1-(1)(1-(1-(1)(1-(1-(1)(1-(1-(1)(1-(1-(1-(1-(1-(1-(1-(1-(1-(1-(1-(1-(1-(31DEC09	07JAN10	1	-127	
3AL1DO4065	Test & commissioning	3	3	08JAN10	11JAN10	08JAN10	11JAN10	1	-127	
Marti Conveyo					_		-			
3AL1DO4505	Engineering	50	50	29MAY09	27JUL09	29MAY09	27JUL09	1	-105	
3AL1D04515	Pre-fabrication	60	60	28JUL09	07OCT09	28JUL09	07OCT09	1	-105	
3AL1DO4525	Delivery to Hong Kong	25	25	23SEP09	23OCT09	23SEP09	23OCT09	1	-105	
3AL1DO4535	Pre-assembly at Portion I	6	6	240CT09	310CT09	24OCT09	31OCT09	1	-105	
3AL1DO4545	Foundation	3	3	02JAN10	05JAN10	02JAN10	05JAN10	1	-155	
3AL1DO4555	Install belt conveyor stage 1	24	24	06JAN10	02FEB10	06JAN10	02FEB10	1	-155	
3AL1DO4565	Install transfer conveyor	1	1	03FEB10	03FEB10	03FEB10	03FEB10	1	-155	
3AL1DO4575	Install belt conveyor stage 2	6	6	27APR10	04MAY10	27APR10	04MAY10	1	-218	
3AL1DO4585	M&E works	2	2	05MAY10	06MAY10	05MAY10	06MAY10	1	-218	
3AL1DO4595	Test & commission	1	1	07MAY10	07MAY10	07MAY10	07MAY10	1	-218	
LV Station										
3AL1DO5005	Delivery & install containers 1/2/3	4	4	12SEP09	16SEP09	12SEP09	16SEP09	1	-157	
3AL1DO5015	M&E works	12	12	17SEP09	30SEP09	17SEP09	30SEP09	1	-157	
3AL1DO5025	Test & commision	12	12	13OCT09	27OCT09	13OCT09	27OCT09	1	-165	
Cooling Water	System									
3AL1D05505	Pre-fabrication	53	53	09JUL09	08SEP09	09JUL09	08SEP09	1	-129	이는 것이 모든 것이 같아요. 이상이는 것이 같아요.
3AL1D05515	Foundation	10	10	09SEP09	19SEP09	09SEP09	19SEP09	1	-129	
3AL1D05525	Erect cooling system	12	12	21SEP09	06OCT09	21SEP09	06OCT09	1	-129	
3AL1D05535	M&E works	4	4	07OCT09	100CT09	07OCT09	100CT09	1	-129	
3AL1D05545	Test & commission	2	2	12OCT09	130CT09	12OCT09	13OCT09	1	-129	
Grout System										
3AL1DO6005	Pre-fabrication	90	90	22JUN09*	07OCT09	22JUN09*	07OCT09	1	-134	
3AL1D06015	Erect system	6	6	16NOV09	21NOV09	16NOV09	21NOV09	1	-166	
3AL1DO6025	M&E works	3	3	23NOV09	25NOV09	23NOV09	25NOV09	1	-166	
3AL1DO6035	Test & commission	1	4	26NOV09		26NOV09	26NOV09	1	-166	

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ID	Activity	004	WP3D	AD04	AD04	WPSD	WP3D	0	Total	2008 2003 2010 2011 2012 2013
Des Crevel Die	Description	our	Dur	Start	Finish	Start	Finish		Float	
Pea Gravel Pla 3AL1D07505	Pre-fabrication	36	36	22JUN09	03AUG09	22 11 15100	03AUG09	1	-82	
3AL1D07505		4	30	060CT09	09OCT09		090CT09	1	-134	
CREW REAL PROPERTY AND THE			4		100 00000000000000000000000000000000000	And the second second	100000000000000000000000000000000000000	1	1.000	
3AL1D07525	Erect conveyor	2	2	100CT09	12OCT09	Transconstructures	120CT09		-134	
3AL1D07535	M&E works	4	4	130CT09		130CT09	16OCT09	1	-134	
3AL1D07545	Test & commission	2		17OCT09	19OCT09	THE RECEIPTION OF THE PARTY OF	19OCT09	1	-134	
3AL1D07555	Install conveyor connecting to TBM	4	4	27APR10	30APR10	27APR10	30APR10	1	-213	
Ventilation Sys	stem									
3AL1D08005	Pre-fabrication	72	72	29MAY09	21AUG09	29MAY09	21AUG09	1	-14	
3AL1D08015	Erect system	2	2	27APR10	28APR10	27APR10	28APR10	1	-213	
3AL1DO8025	M&E works	1	1	29APR10	29APR10	29APR10	29APR10	1	-213	
3AL1D08035	Test & commission	1	1	30APR10	30APR10	30APR10	30APR10	1	-213	
Micsellaneous										
3AL1D08502	Install transformer & hormonic filter	2	2	27APR10	28APR10	27APR10	28APR10	1	-218	
3AL1D08512	Remove invert segments; 19 nos.	2	2	27APR10	28APR10	27APR10	28APR10	1	-218	
3AL1D08522	Make good slab	3	3	28APR10	30APR10	28APR10	30APR10	1	-218	
3AL1D08532	Install rail switch	1	1	03MAY10	03MAY10	03MAY10	03MAY10	1	-214	
VO # 49 & 53:	Additional Drainage & Stairway		1		-					
VO-04910	Received Variation orders	0	0		26FEB09A		26FEB09A	1	6	
VO-04920	Preparation works for varied works	14	14	27FEB09A	14MAR09A	27FEB09A	14MAR09A	1		
VO-04930	Construct u-channel & stairway; +71mPD to +55mPD	60	1781	16MAR09A	A POSICIONAL 0004 001	16MAR09A	107-108-1094-1094-00-000	1	-179	
VO-04940	Construct u-channel & stairway;+55mPD to +47mPD	27	27	05JUN09	07JUL09	11/2012/07/07/12:50:000	07JUL09	1	-184	
VO-04950	Construct u-channel & stairway; +47mPD to +41mPD	40	40	08JUL09	22AUG09	1112/2010/1114/06/	22AUG09	1	-184	전에 가지 말 같이 집 집 집 집 집 집 집 집 집 집 집 집 집 집 집 집 집 집
VO-04960	Construct u-channel & stairway; +41 to +24 mPD	60	60	060CT09	15DEC09	315-300CAR-00-0	15DEC09	1	-219	
					(ODLOOD		1002000	L-i-	210	
	ed Slope Profile with Add. Supports	0	0		27MAY09A		27MAY09A	1		
VO-088000	Received VO #088			001441/00	7224152015261586		Contraction of the second	10	010	
VO-088005	Excavate from 38.5mPD to 36.5mPD	6	6	29MAY09	04JUN09		04JUN09	1	-218	
VO-088010	Procure and prepare materials	9	9	29MAY09	08JUN09	Construction of the second	08JUN09	1	-219	
VO-088015	SOR confirm soil nails location	2	2	05JUN09	06JUN09	12-22-22-22-22-22-22-22-22-22-22-22-22-2	06JUN09	1	-218	
VO-088020	Drill/install/grout soil nails; rows AA-AB	7	1	09JUN09	16JUN09	1000000000	16JUN09	1	-219	
VO-088025	Install wire mesh & shorcrete 150mm	3	3	17JUN09	19JUN09		19JUN09	1	-219	
VO-088030	Excavate from +36.5 mPD to 34.5mPD	6	6	20JUN09	26JUN09		26JUN09	1	-219	
VO-088035	SOR confirm soil nails location	2	2	27JUN09	29JUN09		29JUN09	1	-219	
VO-088040	Drill/install/grout soil nails; rows AC-AD	7	7	30JUN09	08JUL09		08JUL09	1	-219	
VO-088045	Install wire mesh & shorcrete 150mm	3	3	09JUL09	11JUL09		11JUL09	1	-219	
VO-088050	Excavate from +34.5 mPD to 32.5mPD	6	6	13JUL09	18JUL09		18JUL09	1	-219	
VO-088055	SOR confirm soil nails location	2	2	20JUL09	21JUL09	20JUL09	21JUL09	1	-219	
VO-088060	Drill/install/grout soil nails; rows AE-AF	7	7	22JUL09	29JUL09	22JUL09	29JUL09	1 1	-219	
VO-088065	Install wire mesh & shorcrete 150mm	3	3	30JUL09	01AUG09	30JUL09	01AUG09	1	-219	
VO-088070	Excavate from +34.5 mPD to 32.5mPD	6	6	03AUG09	08AUG09	03AUG09	08AUG09	1	-219	
VO-088075	SOR confirm soil nails location	2	2	10AUG09	11AUG09	10AUG09	11AUG09	1	-219	
VO-088080	Drill/install/grout soil nails; row AG	5	5	12AUG09	17AUG09	12AUG09	17AUG09	. 1	-219	
VO-088085	Install wire mesh & shorcrete 150mm	3	3	18AUG09	20AUG09	18AUG09	20AUG09	1	-219	

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ID	Activity Description	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	Cal	Total Float	2008 2009 2010 2011 2012 2015
Instruction from	A PARTY OF A PARTY OF A PARTY OF A PARTY OF A PARTY OF A PARTY OF A PARTY OF A PARTY OF A PARTY OF A PARTY OF A		- and the second second second second second second second second second second second second second second se							
SORI-10	Suspension of rock drilling & breaking	1	1	20JUN09*	20JUN09	20JUN09*	20JUN09	1	-219	
SORI-20	Erection of noise bearriers	3	3	22JUN09	24JUN09	22JUN09	24JUN09	1	-219	
Construct St	piral Ramp & Associ. Vehicular Access							C*		
Spiral Ramp	and the second second second second		_							
10R1D00402	Install 273mm dia, temp, pipe piles; 40 nos,	12	12	08MAY10	22MAY10	08MAY10	22MAY10	1	-938	M starts operating day & night 40 nos.*13m long
0R1D00402	Soil excavation & install wailing & tie backs	24	24	24MAY10	12000000000000000000000000000000000000	24MAY10	21JUN10	1	-93	432m3 soil including temp. supports mesures
0R1D00406	Rock excavation for spiral ramp; 4629m3	70	70	22JUN10		22JUN10	11SEP10	1 1	-93	4000m3 rock mincluding temp. supports mesures
0R1D00414	Construct base of spiral ramp; Outfall O-1	12	12	13SEP10		13SEP10	27SEP10	1	-93	
0R1D00416	Cast sprial ramp up to +6.73mPD	15	15	28SEP10		28SEP10	150CT10	1	-93	
0R1D00418	Cast sprial ramp up to +11.58mPD	15	15	180CT10	20024410000	180CT10	03NOV10	1	-93	
10R1D00420	Cast sprial ramp up to +16.00mPD	15	15	04NOV10	Construction of page officer	04NOV10	20NOV10	1	-93	
10R1D00422	Cast sprial ramp up to +20.00mPD	15	15	22NOV10	and the second second second	22NOV10	08DEC10	1	-93	
I0R1D00424	Cast sprial ramp up to +24.23mPD	15	15	09DEC10		09DEC10	28DEC10	1	-93	
10R1D00425	Backfill spiral ramp; 1700m3	4	4	29DEC10		29DEC10	03JAN11	1	-93	@ 5m3/5minutes/480m3/day
10R1D00426	Construct spiral ramp top; Outfall O-1	20	20	04JAN11	26JAN11	04JAN11	26JAN11	1	-93	
0R1D00428	Construct vehicular access bet, tunnel & s, ramp	10	10	12JUL11	22JUL11	12JUL11	22JUL11	1	-2	
0R1D00430	Commission of Spiral Ramp	6	6	27JAN11		27JAN11	02FEB11	1	-93	
/ehicular Acce		11 184	1,	1201/01/01/1		II (agassaconasment)	Concession and the full of			
10R1D00407	Install 40 nos. roof piles # 375mm c/c	24	24	110CT10	08NOV10	02NOV10	29NOV10	1	-128	
0R1D00408	Excavation for vehicular access underneath CPR	70	70	09NOV10	Carlenning of the	30NOV10	25FEB11	1	-128	sheet pile roofing & lagging ~180m2 soil 450m3 + rock 50m3
0R1D00410	Construct base for vehicular access	12	12	02FEB11	18FEB11	26FEB11	11MAR11	1	-128	
10R1D00412	Construct wall & roof for vehicular access	24	24	19FEB11	A CONTRACTOR OF THE	12MAR11	09APR11	1	-128	
	Box Culvert/Open Channel By Mining			THE REPORT				1107		
ower Fart E	box curvers open channel by mining									
10R1D00502	Site possession of Portion E-650d of DOC	0	0	080CT09	1	08OCT09	1	2	-453	
0R1D00504	Divert exist, outfall "W" under CPR arch bridge	36	36	09NOV09	19DEC09		13JAN10	1	-395	
0R1D00506	Remove rock armour & form platform @+2.3mPD	36	36	21DEC09		14JAN10	27FEB10	1	-395	
0R1D00508	Install temp. pile for pipe roofing	96	96	04FEB10	the second residence in the	01MAR10	28JUN10	1	-395	
0R1D00510	Excavate for box-culvert; 2 cells	44	44	07JUN10		29JUN10	19AUG10	1	-395	
0R1D00512	Construct base slabs of box culvert: 2 cells	20	20	30JUL10		20AUG10	11SEP10	1	-395	Concete 160m3
0R1D00514	Construt wall & roof of box culvert; 2 cells	40	40	23AUG10		13SEP10	01NOV10	1	-395	Econcrete 390m3
10R1D00516	Excavate for box-culvert: 2 cells	44	44	110CT10	01DEC10	02NOV10	22DEC10	1	-395	esoil 2900m3
0R1D00518	Construct base slabs of box culvert; 2 cells	20	20	02DEC10	24DEC10	23DEC10	18JAN11	1	-395	Concete 160m3
I0R1D00520	Construt wall & roof of box culvert; 2 cells	40	40	28DEC10	16FEB11	19JAN11	09MAR11	1	-395	Concrete 390m3
10R1D00522	Excavate for open channel	24	24	17FEB11	16MAR11	10MAR11	07APR11	1	-395	
10R1D00526	Construct open channel at 2.3 mPD	24	24	17MAR11	14APR11	08APR11	09MAY11	1	-395	
IOR1D00528	Reinstate existing outfall "W"	6	1	08APR11		03MAY11	09MAY11	1	-395	
	ortal Head & Associated Strutures							-		
			-							
10R1D00602	Excavate tapered open channel/ upper cascade	24	24	12JUL11	08AUG11	12JUL11	08AUG11	1	-219	
10R1D00604	Construct tapered open channel & upper cascade	48	1.1222-121	09AUG11		09AUG11	06OCT11	1	-131	

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ID	Activity Description	D04 Our	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	0	Total Float	2008 2009 2010 2011 2012 2013
10R1DO0606	Dismantle & removal of tower crane	12	12	17NOV12	30NOV12	28DEC12	11JAN13	1	-395	
3AL1D00602	Dismantle/remove TBM backup system	24	24	13JUN11	11JUL11	13JUN11	11JUL11	1	-219	■including gantry crane
3AL1D00606	Construct portal head wall	24	24	09AUG11	05SEP11	09AUG11	05SEP11	1	-131	
Cascade & L	Ipper Part Box Culvert by Mining									
Upper Cascad	9			_	_					
10R1D00704	Drive sheet piles	18	18	12JUL11	01AUG11	12JUL11	01AUG11	1	-219	Following removal of TBM & TBM facilities
10R1D00706	Excavate & temp. support to services	60	60	02AUG11	130CT11	02AUG11	130CT11	1	-219	
10R1DO0708	Construct base slab	24	24	140CT11	10NOV11	140CT11	10NOV11	1	-219	
10R1D00710	Construct side walls	18	18	11NOV11	01DEC11	11NOV11	01DEC11	1	-219	
10R1D00712	Construct roof	24	24	02DEC11	03JAN12	02DEC11	03JAN12	1	-219	
10R1D00714	Construct upstand	12	12	04JAN12	17JAN12	04JAN12	17JAN12	1	-219	
10R1D00716	Backfill	6	6	16JAN12	21JAN12	16JAN12	21JAN12	1	-219	
10R1DO0730	Excavate for lower cascade construction	13	13	26JAN12	09FEB12	26JAN12	09FEB12	1	-219	
10R1D00732	Construct lower cascade	48	48	10FEB12	10APR12	10FEB12	10APR12	1	-219	
10R1D00734	Construct, baffle, railing etc.	48	48	10FEB12	10APR12	10FEB12	10APR12	1	-207	
Seabed Prot	ection Works					1000		-		
	orks for Outfall Basin Construction									
VO061-002	Receive VO # 061	0	0		30JUN09*	1	30JUN09*	1	-395	
V0061-004	Appoint Independent Hydrographic Surveyor	60	60	02JUL09	09SEP09	02JUL09	09SEP09	1	-395	
V0061-006	Carry out sounding survey	6	6	10SEP09	COMPANY INTERVIEW	080CT09	140CT09	1	-395	
V0061-008	Prepare/submit drwgs./report of sounding survey	6	6	17SEP09		150CT09	210CT09	1	-395	
V0061-010	SOR approves drwgs./report of sounding survey	6	6	24SEP09		22OCT09	29OCT09	1	-395	
VO061-012	SOR issue Supplm. Environmental Review Report	30	30	02JUL09	05AUG09		05AUG09	1	-59	
V0061-014	Apply for Variation Environmental Permit (VEP)	6	6	06AUG09	The subscreent state	06AUG09	12AUG09	1	-59	
VO061-016	EPD review/issue VEP	30	30	13AUG09	16SEP09		16SEP09	1	-59	
VO061-018	Prepare/submit Revised EM&A Manual by ET	30	30	17SEP09		17SEP09	23OCT09	1	-59	
VO061-020	IEC endorse Revised EM&A Manual	12	12	240CT09	07NOV09		07NOV09	1	-59	
V0061-022	EPD acknowledge Revised EM&A Manual	6	6	09NOV09		09NOV09	14NOV09	1	-59	
VO061-024	Carry out baseline monitoring	28	28	16NOV09	17DEC09	16NOV09	17DEC09	1	-59	
VO061-026	Prepare/submit baseline report by ET	12	12	18DEC09	04JAN10	18DEC09	04JAN10	1	-59	
VO061-028	IEC endorse baseline report	12	12	05JAN10	18JAN10	05JAN10	18JAN10	1	-59	
VO061-030	EPD approve baseline report	30	30	19JAN10	25FEB10	19JAN10	25FEB10	1	-59	
VO061-032	Appoint sub-contractor for varied works	60	60	02JUL09	09SEP09	02JUL09	09SEP09	1	-377	이상 이 이 이 이 이 이 이 있는 것이 이 있는 것이 이 있는 것이 이 있는 것이 이 이 있는 것이 없는 것이 않는 것이 없는 이 않이 않이 않이 않이 않이 않이 않이 않이 않이 않이 않이 않이
VO061-034	Prepare/submit method statement	30	30	02OCT09	07NOV09	10SEP09	16OCT09	1	-395	
VO061-036	IEC endorse method statement	12	12	09NOV09	21NOV09	17OCT09	31OCT09	1	-7	
VO061-038	SOR approve method statement	24	24	23NOV09	19DEC09	02NOV09	28NOV09	1	-7	
VO061-040	Apply for marine notice	6	6	09NOV09	14NOV09	30NOV09	05DEC09	1	-395	
VO061-042	Revew/issue marine notice by Marine Department	30	30	16NOV09	and the second sec	07DEC09	13JAN10	1	-395	
VO061-044	Apply for dumping permit	6	6	09NOV09	14NOV09	30NOV09	05DEC09	1	-37	
VO061-046	Review/issue dumping permit by EPD	60	60	16NOV09	27JAN10	07DEC09	20FEB10	1	-37	
VO061-048	Commence works for basin construction	0	0	15APR11]	11MAY11		1	-395	following construction of box cult
VO #061; Outfa	all Basin Construction									
VO61-050	Excavation in rock armour to +2.3mPD	57	36	15APR11	25JUN11	11MAY11	22JUN11	1	-395	

IÐ	Activity	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	Cal	Total Float	2008 2009 2019 2011 2012 2013
1004 055	Description Dredge in rock armour to -3.75mPD	51	36	27JUN11	and the second sec	23JUN11	04AUG11	1	-395	
/061-055	Place grade 400 rockfill & levelling layer	18	12	26AUG11	16SEP11		18AUG11	1	-395	
061-060	The second	15	15	17SEP11	060CT11		29AUG11	1	-395	
/061-065	Form seawall type 2(W)	4	4	070CT11		30AUG11	02SEP11	1	-395	
/061-070	Construct detail Y				180CT11		09SEP11	1	-395	
061-075	Construct mass concrete	6	6	120CT11	steepercence with, -		100CT11	1	-395	
061-080	Form seawall type 1	23	23	190CT11	14NOV11	recipe Agentianity	and the second second second	-		
061-085	Construct mass concrete	12	12	15NOV11	28NOV11	and a second and	240CT11	1	-395	
061-090	Form seawall type 2 (E)	15	15	29NOV11	15DEC11		10NOV11	1	-395	
061-095	Construct detail X	4	4	16DEC11	20DEC11		15NOV11	1	-395	an and the second second second second second second second second second second second second second second s
O61-100	Construct mass concrete	6	6	21DEC11	30DEC11		22NOV11	1	-395	
061-105	Construct coping	14	14	02JAN12	17JAN12		08DEC11	1	-250	
061-110	Place infill blocks M1 & M4	18	18	18JAN12	10FEB12		03JAN12	1	-250	
061-115	Dredge in sea bed to -3.75mPD for seawall (W)	10	12	190CT11	290CT11		24SEP11	1	-345	for seawall type 5, 2B, 4, & 1A (W)
061-120	Place grade 400 rockfill & levelling layer	12	12	310CT11	12NOV11	26SEP11	110CT11	1	-251	
061-125	Form seawall type 5, 2B, 4 & 1A (W)	51	51	14NOV11	16JAN12	120CT11	09DEC11	1	-251	
061-130	Backfill sea walls west & north (half)	36	36	17JAN12	01MAR12	10DEC11	28JAN12	1	-251	
O61-135	Place type 2 armour	10	10	02MAR12	13MAR12	30JAN12	09FEB12	1	-251	21 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
061-140	Dredge in sea bed to -3.75mPD for seawall (E)	9	24	02JAN12	11JAN12	23NOV11	20DEC11	1	-395	for seawall type 6, 3 & 2A (E)
061-145	Place grade 400 rockfill & levelling layer	12	12	12JAN12	28JAN12	21DEC11	07JAN12	1	-395	
061-150	Form seawall type 6, 3 & 2A (E)	38	40	30JAN12	13MAR12	09JAN12	27FEB12	1	-395	
O61-155	Backfill sea walls east & north (half)	36	36	14MAR12	30APR12	28FEB12	13APR12	1	-287	
/061-160	Place type 2 armour	10	10	02MAY12	12MAY12	14APR12	25APR12	1	-287	
061-165	Dredge in sea bed for stepped blocks	15	50	14MAR12	30MAR12	28FEB12	02MAY12	1	-395	
/061-170	Place levelling layer	175	224	31MAR12	02NOV12	13MAR12	11DEC12	1	-395	
061-175	Place stepped blocks	175	224	19APR12	16NOV12	and the second second	27DEC12	1	-395	
/061-180	Place type 2 armour to reinstate exist. seawall	24	24	Statement of the state	09JUN12	the second second second second second second second second second second second second second second second s	25MAY12	1	-287	
1.494.petro 1.11.878	Form ground beam (W)	12	12	11FEB12	24FEB12		17JAN12	11	-250	
061-185		12	12	- mental and	09MAR12	Construction and the	03FEB12	1	-244	
061-190	Form ground beam (E)	12	12	ode for Data at the form	09MAR12		03FEB12	1	-250	
061-195	Form invert slab (W)	12	12				17FEB12	1	-244	
/061-200	Form invert slab (E)		12	10MAR12	30MAR12	The second second	24FEB12	1	-250	
/061-205	Form end wall (W)	18			25APR12	Strate in the strate	16MAR12	1	-250	
/061-210	Form end wall (E)	18	18	31MAR12	10JUL12		22JUN12	1	-287	
/061-215	Reinstate rock armour	24	24	11JUN12	1.0.0000000000000	201VIAT 12		1	-395	
/061-220	Complete basin	0	0		16NOV12		27DEC12	1	-395	
emaining V	Vorks Prior to Handover									
0R1DO0904	Finishing & reinstatement works; Portion D	36	36	190CT12	30NOV12	28NOV12	11JAN13	1	-395	
0R1D00906	Pre-handover inspections and remedial works	30	30				18JAN13	1	-395	
0R1D00908	Contractor serve notice for Works completion	7	7	A-20-4-20-20-20-00-00-00-00-00-00-00-00-00-00-	THE REPORT OF A CARL		25JAN13	2	0	14 C
0R1D00900	SO issues completion certificate	21	21	15DEC12	III III III III III III IIII IIII IIII IIII	THE STATE OF STATE OF STATE	15FEB13	1 2	0	8.
	Landscaping works at Portion D	120	120				11JAN13	1	-369	
6R7D00902	Establishment Works at Portion D	365	365				11JAN14	2	-455	
6R7D00904		200, 0. K. J			17APR12			1	-219	
DL1D00902	Install flow measurement devices at Outfall O-1	12	12	JUMAR 12	TIMEN12	JUNAR 12	TRAFINIZ		213	

Sheet 56 of 58

ID	Activity Description	Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	0	Total Float	2008 2009 2010 2011 2012 2013
3DL1DO0903	T & C for flow measurement system	28	28	02APR12	10MAY12	02APR12	10MAY12	1	-219	
3DL1D00904	Maintain & monitor flow monitoring	365	365	11MAY12	10MAY13	11MAY12	10MAY13	2	0	
Schedule of	Milestones for Cost Centre No. 10R									
10R1DO1002	10R 1; On completion of 20% excavation works	0	0		09APR09A		09APR09A	2	1 1 2 2	Dutfil 0-1
10R1DO1004	10R 2; On completion of 40% excavation works	0	0		13AUG09		13AUG09	2	1,600	♦Outfall O-1
10R1DO1006	10R 3; On completion of 60% excavation works	0	0		08OCT09	•	08OCT09	2	1,544	♦Outfall O-1
10R1DO1008	10R 4; On completion of 80% excavation works	0	0		11SEP10		11SEP10	2	1,206	♦Outfall O-1
10R1DO1010	10R 5; On completion all excavation works	0	0		09FEB12		09FEB12	2	690	◆at Outfall O-1
10R1DO1012	10R 6; On completion of cascade structure	0	0		10APR12		10APR12	2	629	◆at Outfall O-1
I0R1D01014	10R 7; On completion of spiral ramp to +16mPD	0	0		20NOV10		20NOV10	2	1,136	◆at Outfall O-1
10R1DO1016	10R 8; On completion of spiral access ramp	0	0		02FEB11		02FEB11	2	1,062	◆at Outfall O-1
10R1DO1018	10R 9; On completion box-culvert & open channel	0	0		17JAN12		03JAN12	2	713	and open channel underneath CPR
10R1DO1020	10R 10; On completion of seabed protection wks	0	0		16NOV12		27DEC12	2	409	protection works at Outfall O-1
10R1D01022	10R 11; On completion of all works under this CC	0	0		07DEC12		18JAN13	2	388	under this Cost Centre
Schodulo of	Milestones for Cost Centre No. 14R	1.0				-	-	-		
ochequie or	milestones for cost centre no. 14N								- 10 C	
4R5DO1102	14R 1; On complet. of remove exist. rock armour	0	0		25JUN11		22JUN11	2	919	♦armour at Outfall O-1
14R5D01104	14R 2; On complet. of 50% soil nailing by number	0	0		07APR09A		07APR09A	2		humber at Outfall O-1
14R5D01106	14R 3; On completion all soiling works	0	0		16SEP09		16SEP09	2	1,566	Anailing at Outfall O-1
14R5DO1108	14R 4; On completion of all works under this CC	0	0		25JUN11		22JUN11	2	919	♦under this Cost Centre
Preliminary \	Works				1.0.0	100 C	and the second second			
01R6GG0102										
0110000102	SO consent Drainage Impact Assessment Report.	D	0		24NOV09		24NOV09	1	181	
	SO consent Drainage Impact Assessment Report. Obtain TTA (ingress & egress) approval	0	0 0		24NOV09 25NOV09		24NOV09 25NOV09	1 2	181 0	
1R6GG0112	Tec Motory			26NOV09		26NOV09			the second secon	
01R6GG0112 01R6GG0114	Obtain TTA (ingress & egress) approval	0	0	26NOV09 26NOV09				2	0	
01R6GG0112 01R6GG0114 01R6GG0116	Obtain TTA (ingress & egress) approval Possession of Portion G -700d of DOC	0	0		25NOV09		25NOV09	2 2	0	
01R6GG0112 01R6GG0114 01R6GG0116 8DL6GG0104	Obtain TTA (ingress & egress) approval Possession of Portion G -700d of DOC Site clearance/Site Establishment	0 0 30	0 0 30		25NOV09 02JAN10	26NOV09	25NOV09 02JAN10	2 2 1	0 0 165	
01R6GG0112 01R6GG0114 01R6GG0116 0DL6GG0104 0DL6GG0106	Obtain TTA (ingress & egress) approval Possession of Portion G -700d of DOC Site clearance/Site Establishment Obtain approval for Geotechnical Instrumentation	0 0 30 0	0 0 30 0	26NOV09	25NOV09 02JAN10 25NOV09	26NOV09 26NOV09	25NOV09 02JAN10 25NOV09	2 2 1 2	0 0 165 0	
01R6GG0112 01R6GG0114 01R6GG0116 3DL6GG0104 3DL6GG0106 3DL6GG0108	Obtain TTA (ingress & egress) approval Possession of Portion G -700d of DOC Site clearance/Site Establishment Obtain approval for Geotechnical Instrumentation Installation of Geotechnical Instrumentation Monitor/report Geotechnical Instrumentation	0 0 30 0 12	0 0 30 0 12	26NOV09 26NOV09	25NOV09 02JAN10 25NOV09 09DEC09	26NOV09 26NOV09	25NOV09 02JAN10 25NOV09 09DEC09	2 2 1 2 1	0 0 165 0 0	
01R6GG0112 01R6GG0114 01R6GG0116 8DL6GG0104 8DL6GG0106 8DL6GG0108 Piling Works	Obtain TTA (ingress & egress) approval Possession of Portion G -700d of DOC Site clearance/Site Establishment Obtain approval for Geotechnical Instrumentation Installation of Geotechnical Instrumentation Monitor/report Geotechnical Instrumentation	0 0 30 0 12	0 0 30 0 12	26NOV09 26NOV09	25NOV09 02JAN10 25NOV09 09DEC09	26NOV09 26NOV09	25NOV09 02JAN10 25NOV09 09DEC09	2 2 1 2 1	0 0 165 0 0	
01R6GG0112 01R6GG0114 01R6GG0116 0DL6GG0104 0DL6GG0106 0DL6GG0108 0DL6GG0108 0DL6GG0108 0DL6GG0108	Obtain TTA (ingress & egress) approval Possession of Portion G -700d of DOC Site clearance/Site Establishment Obtain approval for Geotechnical Instrumentation Installation of Geotechnical Instrumentation Monitor/report Geotechnical Instrumentation	0 0 30 0 12 904	0 30 0 12 904	26NOV09 26NOV09	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12	26NOV09 26NOV09 10DEC09	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12	2 2 1 2 1	0 0 165 0 0 1 0	
01R6GG0112 01R6GG0114 01R6GG0116 8DL6GG0104 8DL6GG0106 8DL6GG0108 8DL6GG0108 8DL6GG0108 8DL6GG0108 8DL6GG0200 15R6GG0200	Obtain TTA (ingress & egress) approval Possession of Portion G -700d of DOC Site clearance/Site Establishment Obtain approval for Geotechnical Instrumentation Installation of Geotechnical Instrumentation Monitor/report Geotechnical Instrumentation	0 0 30 12 904	0 30 0 12 904 904 0 3	26NOV09 26NOV09 10DEC09 	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12 30 17OCT09 12DEC09	26NOV09 26NOV09 10DEC09	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12 29DEC12 17OCT09 12DEC09	2 2 1 2 1 1 1	0 0 165 0 0 10 10 209 165	
01R6GG0112 01R6GG0114 01R6GG0116 0DL6GG0104 0DL6GG0106 0DL6GG0108 0DL6GG0108 0DL6GG0108 0DL6GG0108 0DL6GG0108 0DL6GG0200 05R6GG0202 05R6GG0204	Obtain TTA (ingress & egress) approval Possession of Portion G -700d of DOC Site clearance/Site Establishment Obtain approval for Geotechnical Instrumentation Installation of Geotechnical Instrumentation Monitor/report Geotechnical Instrumentation Obtain SO's consent for temp. works design Mibilization & set up for temp. platform	0 0 30 12 904 0 3	0 30 0 12 904 904 0 3	26NOV09 26NOV09 10DEC09 400000000000000000000000000000000000	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12 3000000000000000000000000000000000000	26NOV09 26NOV09 10DEC09 10DEC09 14DEC09	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12 29DEC12 17OCT09 12DEC09 03MAY10	2 2 1 2 1 1 1	0 0 165 0 0 0 209 165 165	
11R6GG0112 11R6GG0114 11R6GG0114 20L6GG0104 20L6GG0106 20L6GG0108 20L6GG0108 20L6GG0108 20L6GG0108 20L6GG0108 20L6GG0200 5R6GG0200 5R6GG0204 5R6GG0206	Obtain TTA (ingress & egress) approval Possession of Portion G -700d of DOC Site clearance/Site Establishment Obtain approval for Geotechnical Instrumentation Installation of Geotechnical Instrumentation Monitor/report Geotechnical Instrumentation Obtain SO's consent for temp, works design Mibilization & set up for temp, platform Construct steel working platform for H-pilling	0 0 30 0 12 904 0 3 110	0 30 0 12 904 0 3 110 3	26NOV09 26NOV09 10DEC09 10DEC09 10DEC09 14DEC09	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12 30 17OCT09 12DEC09	26NOV09 26NOV09 10DEC09 10DEC09 14DEC09 04MAY10	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12 29DEC12 17OCT09 12DEC09	2 2 1 2 1 1 1 1 1 1 1 1	0 0 165 0 0 10 10 209 165	
11R6GG0112 11R6GG0114 11R6GG0114 11R6GG0104 10L6GG0106 10L6GG0108 10L6GG0108 10L6GG0108 10L6GG0108 10L6GG0108 10L6GG0200 5R6GG0202 5R6GG0204 5R6GG0208	Obtain TTA (ingress & egress) approval Possession of Portion G -700d of DOC Site clearance/Site Establishment Obtain approval for Geotechnical Instrumentation Installation of Geotechnical Instrumentation Monitor/report Geotechnical Instrumentation Obtain SO's consent for temp. works design Mibilization & set up for temp. platform Construct steel working platform for H-piling Mibilization & set up for H-piling; Wall 1	0 0 30 0 12 904 0 3 110 3	0 30 0 12 904 0 3 110 3	26NOV09 26NOV09 10DEC09 10DEC09 10DEC09 14DEC09 04MAY10	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12 7000000000000000000000000000000000000	26NOV09 26NOV09 10DEC09 10DEC09 14DEC09 14DEC09 04MAY10 07MAY10	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12 77OCT09 12DEC09 03MAY10 06MAY10 18JUN10	2 2 1 2 1 1 1 1 1 1 1 1 1 1	0 0 165 0 0 0 209 165 165 165 165	
01R6GG0112 01R6GG0114 01R6GG0116 30L6GG0104 30L6GG0106 30L6GG0108 201100 2016GG0200 15R6GG0202 15R6GG0204 15R6GG0208 15R6GG0208 15R6GG0210	Obtain TTA (ingress & egress) approval Possession of Portion G -700d of DOC Site clearance/Site Establishment Obtain approval for Geotechnical Instrumentation Installation of Geotechnical Instrumentation Monitor/report Geotechnical Instrumentation Obtain SO's consent for temp. works design Mibilization & set up for temp. platform Construct steel working platform for H-piling Mibilization & set up for H-piling; Wall 1 52 nos. 600mm dia. H-piles; Wall 1 @1.5 nr/day	0 0 30 0 12 904 0 3 110 3 35	0 30 0 12 904 3 10 3 35	26NOV09 26NOV09 10DEC09 10DEC09 10DEC09 14DEC09 04MAY10 07MAY10	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12 700000 170CT09 12DEC09 03MAY10 06MAY10	26NOV09 26NOV09 10DEC09 10DEC09 14DEC09 04MAY10 07MAY10 19JUN10	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12 700CT09 12DEC09 03MAY10 06MAY10	2 2 1 2 1 1 1 1 1 1 1 1 1 1	0 0 165 0 0 0 209 165 165 165 165 165	=====================================
D1R6GG0102 D1R6GG0112 D1R6GG0114 D1R6GG0104 3DL6GG0106 3DL6GG0108 Piling Works 15R6GG0200 15R6GG0204 15R6GG0208 15R6GG0208 15R6GG0210 15R6GG02110 15R6GG0212 15R6GG0212 15R6GG0214	Obtain TTA (ingress & egress) approval Possession of Portion G -700d of DOC Site clearance/Site Establishment Obtain approval for Geotechnical Instrumentation Installation of Geotechnical Instrumentation Monitor/report Geotechnical Instrumentation Monitor/report Geotechnical Instrumentation Obtain SO's consent for temp, works design Mibilization & set up for temp, platform Construct steel working platform for H-piling Mibilization & set up for H-piling; Wall 1 52 nos. 600mm dia. H-piles; Wall 1 @1.5 nr/day Excavate & construct skin wall 1 at Portion G	0 0 30 12 904 0 3 110 3 35 35	0 30 0 12 904 3 110 3 35 35	26NOV09 26NOV09 10DEC09 10DEC09 14DEC09 04MAY10 07MAY10 19JUN10	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12 29DEC12 17OCT09 12DEC09 03MAY10 06MAY10 18JUN10 30JUL10	26NOV09 26NOV09 10DEC09 40DEC09 14DEC09 04MAY10 07MAY10 19JUN10 19JUN10	25NOV09 02JAN10 25NOV09 09DEC09 29DEC12 29DEC12 17OCT09 12DEC09 03MAY10 06MAY10 18JUN10 30JUL10	2 2 1 2 1 1 1 1 1 1 1 1 1 1 1	0 0 165 0 0 0 209 165 165 165 165	

ID	Activity Description	AD04 Dur	WP3D Dur	AD04 Start	AD04 Finish	WP3D Start	WP3D Finish	Cal ID	Total Float	2008	2009 2010 2011 2012 2013
Drainage Im	provement Works			100		da se					
15R6GG0301	Obtain approval of ELS design package incl MS	0	0		02NOV09		02NOV09	2	284		◆as per ER.B28.08, 4 weeks prior to work comme
15R6GG0302	Install ELS & construct shaft for pipe jacking	90	90	04JAN10	26APR10	04JAN10	26APR10	1 1	180		
15R6GG0304	Construct 1.5m dia. drainage by pipe jacking	85	85	27APR10	07AUG10	27APR10	07AUG10	1	180		===85m, @1m/day
15R6GG0306	Construct 1.5m dia. drainage by open trenching	24	24	01NOV10*	27NOV10	01NOV10*	27NOV10	1	111		■72m, @3m/day
15R6GG0308	Construct .75m & 1.5m U and Stepped Channel	12	12	29NOV10	11DEC10	29NOV10	11DEC10	1	111		\$56m, @5m/day
15R6GG0310	Construct 3 nos, manhole & 2 nos, catchpit	35	35	13DEC10	25JAN11	13DEC10	25JAN11	1	111	-	Contraction Contraction Contraction
15R6GG0312 15R6GG0402	Reinstate carriageway & footway Pre-handover inspections and remedial works	24 12	24 12	1.0000000000000	25FEB11 11MAR11	26FEB11	25FEB11 11MAR11	1	111 111		■72m, @3m/day fincluding CCTV inspection
		1.4627.1		0.2263410259425-1026	11MAR11 18MAR11	ANTER COMPARENTS	11MAR11 18MAR11	1	997	4	
15R6GG0404 15R6GG0408	Contractor serve notice for Works completion SO issues completion certificate	7	7	12MAR11 19MAR11	Cases down a	19MAR11	08APR11	2	997		
The second second second second second second second second second second second second second second second se	Milestones for Cost Centre No. 15R										
15R6GG0502	15R 1; Ол completion of all temp. works	0	0		26APR10	_	26APR10	2	1,344		prior to commence pipe jacking at Portion
15R6GG0504	15R 2; On completion of 25% of pipejacking	0	0		06MAY10		06MAY10	2	1,334		pipe jacking method at Portion G
15R6GG0506	15R 3; On completion of 50% of pipejacking	0	0		14MAY10		14MAY10	2	1,326		pipe jacking method at Portion G
	15R 4; On completion of 75% of pipejacking	0	0		25MAY10		25MAY10	2	1,315		pipe jacking method at Portion G
15R6GG0508			0		07AUG10		07AUG10	2	1,241		pipe jacking method at Portion G
15R6GG0508	15R 5; On completion of all pipejacking	0	0		01110010		in the second of the second second	and the second second			

Implementation Status of Environmental Mitigation Measures

IMPLEMENTATION SCHEDULE February 2010

EIA Ref.	Recommended Mitigation Measures	Who to implement the measure ?	Location of the measure	What requirements or standards for the measure to achieve ?	Status
Air Q	uality	1			
3.6.1	Specific As mentioned in Section 3.5, exceedances of 1-hour and 24-hour average TSP guideline	DSD's Contractor	Construction Work Sites	Air Pollution Control (Construction Dust) Regulation	\checkmark
	levels have been predicted at most of the ASRs. Hence, mitigation measures are considered necessary in order to suppress the potential dust impact.				
	The dust suppression measures set out in the <i>Air Pollution Control (Construction Dust)</i> <i>Regulation</i> , in fact, are more extensive. Therefore, it is expected that with watering the construction site every four times daily together with strict implementation of dust suppression measures as stipulated in the <i>Air Pollution Control (Construction Dust)</i> <i>Regulation</i> , the dust level is expected to be reduced by over 75%.				\checkmark
	General To further ensure compliance with the guideline and AQO limit at the ASRs at all time, it is recommended to implement the <i>Air Pollution Control (Construction Dust) Regulation</i> and include good site practice in the contract clauses to minimize cumulative dust impact.In addition, a comprehensive dust monitoring and audit programme is recommended to ensure proper implementation of the identified mitigation measures. Details of the monitoring and audit requirements are provided in a separate EM&A Manual.				
	• effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building or if a canopy is provided at the first floor level, from the first floor level, up to the highest level of the scaffolding where a scaffolding is erected around the perimeter of a building under construction;				N/A
	• dump truck for material transport should be totally enclosed by impervious sheeting;				\checkmark
	• any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated within 24 hours of the excavation or unloading;				\checkmark
	 stockpile of dusty materials should not extend beyond the pedestrian barriers, fencing or traffic cones;]			\checkmark
	• dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;				\checkmark

EIA Ref.	Recommended Mitigation Measures	Who to implement the measure ?	Location of the measure	What requirements or standards for the measure to achieve ?	Status
3.6.1	• the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;	DSD's Contractor	Construction Work Sites	Air Pollution Control (Construction Dust) Regulation	\checkmark
	• where a site boundary adjoins a road, street or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit;				\checkmark
	• every main haul road should be scaled with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet;				\checkmark
	 the portion of road leading only to a construction site that is within 30m of a designated vehicle entrance or exit should be kept clear of dusty materials; 				\checkmark
	 stockpile of dusty materials should be either covered entirely by impervious sheeting, placed in an area sheltered on the top and the 3 sides; or sprayed with water so as to maintain the entire surface wet; 				\checkmark
	• all dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet;				\checkmark
	• vehicle speed should be limited to 10 kph except on completed access roads;				\checkmark
	• every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites;				\checkmark
	• the load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle; and				\checkmark
	• the working area of excavation should be sprayed with water immediately before, during and immediately after the operations so as to maintain the entire surface wet.				\checkmark
Noise 4.6.1	During Construction	DSD's	Construction	PN 2/93 Noise from	
	Appropriate mitigation measures such as the use of quiet equipment and movable barriers will be developed to ensure that noise can be reduced to acceptable levels without causing programme delays	Contractor	Work Sites	Construction Activities & EIAO	\checkmark
	Good Site Practice	-			
	Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during construction:				
	 only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction works; 				\checkmark
	• machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;				\checkmark

EIA Ref.	Recommended Mitigation Measures	Who to implement the measure ?	Location of the measure	What requirements or standards for the measure to achieve ?	Status
4.6.1	• plant known to emit noise strongly in one direction should, where possible, be orientated to direct noise away from the NSRs;	DSD's Contractor	Construction Work	PN 2/93 Noise from Construction Activities &	\checkmark
	• mobile plant should be sited as far away from NSRs as possible; and		Sites	EIAO	\checkmark
	• material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.				\checkmark
	For Drill and Blast WorksCharge mass per delay should be decreased by minimising the number of blastholes firing on each delay.				N/A
	• Smaller blasthole patterns and longer delays should be used between dependent charges.				N/A
	• Times of blasting should be established to suit the situation and firing blasts when neighbours are busy with their daily tasks (and at a regular time such as lunch time).				N/A
	 For TBM Tunnelling For the tunnel excavation, it is anticipated that beyond the initial length (say within 30m), excavation will be carried out well within the tunnel and door should be provided to further minimize the noise nuisance to the nearby receivers. 				N/A
4.6.2	During Operation Good site practice and noise management can significantly reduce the impact of maintenance activities on nearby NSRs. The following package of measures should be followed during	DSD's Contractor	Project Area	NCO & EIAO	
	construction	_			
	 only well-maintained plant should be operated on-site; machines and plant that may be in intermittent use should be shut down between work 				N/A
	• machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; and				N/A
	• plant known to emit noise strongly in one direction should, where possible, be orientated to direct noise away from the NSRs.				N/A
	Quality		1		
5.9.1	During Construction	DSD's Contractor	Construction Work Sites	Practice Note for Professional Persons with	\checkmark
	Mitigation measures and a spill control and response plan have been prepared for works at the intakes and work sites.	_		regard to site drainage (ProPECC PN 1/94) and	
	<i>Precautions to be taken at any time of year when rainstorms are likely:</i>Temporarily exposed surfaces should be covered e.g. by tarpaulin.			WQO	\checkmark
	 Temporarily exposed surfaces should be covered e.g. by tarpaulin. Temporary access roads should be protected by crushed stone or gravel. 	-			\checkmark
	 Trenches should be dug and backfilled in short sections. Measures should be taken to minimize the ingress of rainwater into trenches. 	-			\checkmark
	Actions to be taken when a rainstorm is imminent or forecast:Silt removal facilities, should be checked to ensure that they can function properly.				\checkmark

	Recommended Mitigation Measures	Who to implement the measure ?	Location of the measure	What requirements or standards for the measure to achieve ?	Status
1	• Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric.	DSD's Contractor	Construction Work Sites	WQO	\checkmark
Ī	• All temporary covers to slopes and stockpiles should be secured.				\checkmark
	Actions to be taken during or after rainstorms:Silt removal facilities should be checked and maintained to ensure satisfactory working conditions.				\checkmark
	Spill Control and Response Plan				
	1 Prevention and Precaution Measures				
	<i>General Precautions</i>No discharge of silty water into watercourses.				\checkmark
	• All materials to be used during construction and operation shall be identified and their hazard potential evaluated.				\checkmark
	• Maintenance of vehicles and equipment involving activities with potential for leakage and spillage shall only be undertaken with the areas appropriately equipped to control these discharges.				\checkmark
	• Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials.	-			\checkmark
	• Any construction plant which causes pollution to catchwaters or water gathering ground due to leakage of oil or fuel shall be removed off-site immediately.				\checkmark
	• Suitable containers shall be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport	-			\checkmark
	• Chemical waste containers shall be suitably labelled to notify and warn the personnel who are handling the wastes to avoid accidents.	-			\checkmark
	• Storage areas shall be selected at safe locations on site and adequate space shall be allocated to the storage area.	-			\checkmark
	Prevent obstructions and tripping hazards.				\checkmark
	Storage PrecautionsAll chemical storage containers shall be correctly labelled.				\checkmark
Ē	 Solid and impermeable enclosure walls or storage shelves shall be used. 				\checkmark
ŀ	Only compatible chemical wastes shall be stored in the same storage area.	1			\checkmark
-	• The storage areas shall be inspected to detect any leakages or defective containers on a regular basis.				\checkmark
	• Suitable notices warning of hazards, emergency response plans, telephone numbers etc shall be posted around the site, including storage areas.	1			\checkmark
ſ	• Large and heavy containers shall be stored at ground level.				\checkmark

:	Recommended Mitigation Measures	Who to implement the measure ?	Location of the measure	What requirements or standards for the measure to achieve ?	Status
	Chemical waste containers shall be stored below eye level.				\checkmark
1	• Adequate space for handling of the containers shall be provided	DSD's	Construction	WQO	\checkmark
	• Spill response kits shall be located adjacent/near to the storage areas.	Contractor	Work Sites		\checkmark
Ī	• A log of chemical wastes shall be maintained.				\checkmark
Ī	Incompatible chemicals shall be stored separately.				\checkmark
Ī	2 Responses/Action Plan	-			
	All Workers shall be made aware of emergency telephone numbers and the location of all relevant pollution control equipment. Training be given in emergency response/action plans. The action include the following steps:				\checkmark
	• Only trained personnel who are equipped with protective clothing and equipment shall be allowed to enter the spillage area for clean up.				\checkmark
	• Spills shall be transferred appropriate back into containers using suitable equipment.				\checkmark
	• Absorbent materials shall be used to clean up the spills and shall be disposed of as chemical wastes.				\checkmark
	• Where appropriate suitable solvents may be used to clean the contaminated area after removal of all contaminated materials.				\checkmark
	• All necessary protective devices, safety equipment, containers and clean up materials for emergency use shall be maintained to a high standard.				\checkmark
	3 Spill Clean Up and Disposal	-			
	Effect the response plan.				\checkmark
ſ	Control the leakage and absorb the spillage using suitably absorbent materials.				\checkmark
	Provide safety equipment and personal protective equipment for handling of chemical wastes would be similar to that for handling of chemicals.				\checkmark
	Safety equipment includes but is not limited to:Fire extinguishers.				\checkmark
	• Spades, brushes, dustpan, mop and bucket (or similar readily available on site).				\checkmark
	• Absorbent material such as dry sand, tissues and toweling (all materials readily available on-site).				\checkmark
	Containers including plaster bags, drums, etc.				\checkmark
	Absorbing materials.				\checkmark
Ī	Pumps.				\checkmark
	<i>Personal protective equipment includes as appropriate:</i>First-aid kits.]			\checkmark
Ī	• Safety helmet and goggles.				\checkmark
ľ	Gloves which can resist chemical reaction.	1			\checkmark

EIA Ref.	Recommended Mitigation Measures	Who to implement the measure ?	Location of the measure	What requirements or standards for the measure to achieve ?	Status
	• Protective boot and clothing.	DSD's	Construction	WQO	\checkmark
5.9.1	Respirators and gas masks.	Contractor	Work Sites		\checkmark
	• Face visor and masks.				\checkmark
5.9.2	Emergency Responses to Spillages				
	Emergency plans and clean up procedures will need to be provided by the Contractor recognising his specific working methods and construction programme, activities and sequences. Agreement must be sought prior to commencement of the construction work but the following principles should be considered.				
	The emergency plans should include the procedures for:				\checkmark
	spill prevention and precaution;	_			
	response actions; and	_			\checkmark
	• spill clean up and disposal.				\checkmark
	Spill prevention and precaution embraces good site practice and covers:				\checkmark
	good housekeeping practices;	_			
	chemical storage requirements; and				\checkmark
	chemical transfer and transport.				\checkmark
5.9.3	During Operation	DSD's Contractor	Project Area		
	Regular inspection of the tunnels is essential to monitor the structural integrity and proper functioning of the drainage tunnel, which allows repairing of structural deterioration when it begins to develop. It is recommended that routine inspection shall be carried out at least two times per year for the drainage tunnel at the beginning and end of wet season from April to September.				N/A
Waste	Management				
6.5.1	During Construction	DSD's Contractor	Construction Work	Waste Disposal Ordinance (Cap.354); Waste Disposal	
	Vegetation Removed from Site Clearance		Sites	(Chemical Wastes)	\checkmark
	Wastes generated from site clearance shall be sorted and excavated topsoil segregated from			(General) Regulation (Cap	
	roots for re-use in landscaping works, thus eliminating the need for off-site disposal. Construction and Demolition Materials	-		354) and ETWBTC No. 15/2003, Waste anagement	
	Construction and Demolition Materials The Contractor should reuse any C&D material on-site. C&D waste should be segregated and stored in different containers to other wastes to encourage the re-use or recycling of materials and their proper disposal. The use of wooden hoardings shall not be allowed. An alternative material, which can be reused or recycled, for example, metal (aluminium, alloy, etc) shall be used.			on Construction Site	\checkmark

EIA Ref.	Recommended Mitigation Measures	Who to implement the measure ?	Location of the measure	What requirements or standards for the measure to achieve ?	Status
6.5.1	project is suitable for public fill. The public fill reception facility at Tuen Mun Area 38 provides a suitable facility for the reuse of surplus inert C&D material generated from the project.		Construction Work Sites	WDO (Cap.354), ETWBTC No. 15/ 2003, ETWBTC No. 12/2002 and ETWBTC No. 31/2004	
	Under the contract, the contractor will be required to minimise the generation of C&D material and reuse it on site through the following: (a) to plan in the design and construction, methods to minimise the generation of C&D	_			√
	material;				
	(b) to submit a Waste Management Plan (WMP) in accordance with Environment Transport and Works Bureau Technical Circular (ETWBTC) No. 15/2003 or any superseding circular(s);				\checkmark
	 (c) to reuse recycled aggregates in accordance with ETWBTC No. 12/2002 or any superseding circular(s); 				\checkmark
	(d) to observe the requirements of the Trip-Ticket System, stipulated in ETWBTC No. 31/2004 or any superceding circular(s), for disposal of C&D material;				\checkmark
	(e) to incorporate a Waste Management System into the WMP for effective management and control of C&D materials to avoid/reduce/minimise the generation of C&D material during construction.				\checkmark
	The contractor will be required to properly sort into inert C&D materials, metals, timber and other non-inert C&D material in the workplace to prevent cross-contamination.				\checkmark
	In addition, DSD will conduct site inspection to monitor the contractors' performance in the implementation of the WMP and other relevant specified requirements.	DSD	Construction Work Sites	WDO (Cap.354) and ETWBTC No. 15/2003	\checkmark
	<i>Excavated Materials</i> Excavated materials should be segregated from other wastes to avoid contamination thereby ensuring acceptability at public filling areas and avoiding the need for disposal at landfill. <i>Municipal Waste</i>	DSD's Contractor	Construction Work Sites	WDO (Cap.354) and ETWBTC No. 15/2003	~
	Temporary refuse collection facilities should be set-up by the contractor and wastes should be stored in appropriate containers prior to collection and disposal.				\checkmark
	Domestic effluent generated by the workforce will be directed to foul sewer or chemical toilets if public facilities are not available.				\checkmark
6.5.1	Waste Management Plan A Waste Management Plan (WMP) for the construction of the Project should be prepared as part of the contractors submission. It will provide recommendations for appropriate recycling or disposal route and should include method statement for stockpiling and transportation of the excavated material and other construction wastes should also be included in the WMP and approved before the commencement of construction. All mitigation measures arising from the approved WMP shall be fully implemented.	DSD's Contractor	Construction Work Sites	WDO (Cap.354), ETWBTC No. 15/2003 and ETWBTC No. 33/2002	\checkmark

EIA Ref.	Recommended Mitigation Measures	Who to implement the measure ?	Location of the measure	What requirements or standards for the measure to achieve ?	Status
	For the purpose of enhancing the management of C&D material including rock, and to minimize its generation at source, a C&D Material Management Plan (C&DMMP) has been prepared for this project and would be processed in accordance with the Environment, Transport and Works Bureau Technical Circular (Works) No. 33/2002 - Management of Construction and Demolition Material Including Rock.				N/A
Ecology	1		1		
7.7.1	Avoidance The surface structures are located mainly on existing disturbed areas (ie pollution and urbanisation) and have generally avoided the natural stream sections of higher species diversity and abundance of aquatic organisms. The major construction activities at streams are scheduled to avoid wet season of high water flow which may adversely affect the downstream natural habitats due to the construction	DSD's Contractor	Construction Work Sites	EIAO	√ √
	runoff.				·
7.7.2	Minimisation				
	The previous discussion in Section 7.6.4 has indicated that the impacts on ecological resources due to the construction and operation of the proposed Project are generally expected to be low. The following mitigation measures to minimise impacts and disturbance to the surrounding habitats, are recommended. <i>Measures for Construction Runoff</i>	-			
	Install sheet piles/cofferdam/weir along the boundary of the works area within the stream habitats in particular Sam Dip Tam Stream and Tso Kung Tam Stream before the commencement of works to prevent construction runoff during construction. Provision of adequate designed sand/ silt removal facilities such as sand traps, silt traps and sediment basin in the areas which could potentially be affected may be required.				\checkmark
	Good Construction Practice	-			\checkmark
	Erect fences along the boundary of the works area before the commencement of works to prevent tipping, vehicle movements, and encroachment of personnel onto adjacent areas, particularly the stream habitats.	DSD's Contractor	Construction Work Sites	EIAO	\checkmark
	Avoid any damage and disturbance, particularly those caused by filling and illegal dumping, to the remaining and surrounding natural stream habitats.				\checkmark
	Regularly check the work site boundaries to ensure that they are not breached and that no damage occurs to surrounding areas.				\checkmark
	Prohibit and prevent open fires within the site boundary during construction and provide temporary fire fighting equipment in the work areas.				\checkmark
	Treat any damage that may have occurred to individual major trees in the adjacent area with surgery.				\checkmark

EIA Ref.	Recommended Mitigation Measures	Who to implement the measure ?	Location of the measure	What requirements or standards for the measure to achieve ?	Status
	Reinstate temporary work sites/disturbed areas, particularly stream of natural bottom and bank, plantation, intertidal habitat, and the areas located within the proposed Ecological Park, immediately after completion of the construction works, ie through on-site tree/shrub planting and reprovision of natural or semi-natural bottom (also refer to Section 7.7.3), in order to facilitate the recolonisation of the wildlife recorded during the baseline surveys. Tree/shrub species used should make reference from those in the surrounding area	DSD's Contractor	Construction Work Sites	EIAO	~
7.7.3	Compensation Provide natural stream bed (approximately 0.03 ha) for the new Dry Weather Flow Channel (created from village-orchard) by laying natural stones at Intake I-2 (Figure 7.7). The reinstated stream bed shall mimic the existing natural conditions with certain portion of big boulders creating the lentic and lotic zones for the aquatic fauna, and while it will be developed during detailed design may draw on concepts shown in Figure 2.18. Provide natural stream bed (approximately 0.5 ha,) for the Approach Channel and Dry				N/A
	Weather Flow Channel by laying natural stones at Intake I-3 (Figure 7.8). The reinstated stream bed shall mimic the existing natural conditions (rocky bottom with very limited aquatic plants) with certain portion of big boulders creating the lentic and lotic zones for the aquatic fauna, and while it will be developed during detailed design may draw on concepts shown in Figure 2.18.				N/A
	Provide natural bottom (ie retain the existing stream bed or reinstate the stream bed by providing boulders/ rocks, riprap or gabion) for the affected stream sections (Figure 7.8) in order to allow natural colonisation of aquatic fauna.				N/A
	Provide at least 2.2 ha of compensatory planting on the permanent and temporary affected plantation areas, particularly the slopes along access road and adjacent to Intake I-3 and cascade at Outfall O-1, after construction to stabilise the slope to present soil erosion and consequent stream sedimentation. Among the 2.2 ha compensatory planting, at least 0.5 ha of compensatory tree planting on the new formed slope along the access road of the Intake I-3 and 0.5 ha of compensatory tree planting over the cascade (by constructing intermediate platform) at Outfall O-1 will be provided (location refer to Figures $7.4 - 7.6$). Species used for planting should take reference from the species identified in Appendix F and be native to Hong Kong or South China region.				N/A
	Provide armour rocks for the affected intertidal habitat in order to allow natural colonisation of intertidal organisms.				N/A

EIA Ref.	Recommended Mitigation Measures	Who to implement the measure ?	Location of the measure	What requirements or standards for the measure to achieve ?	Status
Cultural	Heritage				
8.6	As no impacts on recorded archaeological sites or area with archaeological potential were identified within the Study Area, no mitigation measure for archaeological resources is considered necessary.				N/A
	The construction methods to be employed should seek to avoid potential vibration impacts to Kuen Yuen Tung Monastery at Lo Wai, the Western Monastery, Yuen Yuen Home for the Aged, Hong Hoi Chee Hong Temple, Chiu Yum Tsing Yuen, Tse's Grave, Wan Lin Bridge and Sam Dip Tam Rock Carving in Sam Dip Tam and the Tin Hau Temple, Yam Kom Tau Village Rural Committee and the Yeung's Ancestral Hall in Yau Kom Tau as these sites fall within 50 m of the Preferred Option of the drainage tunnel alignment or associated Intakes/Outfall construction activities. Construction works that generates excessive vibration in close proximity to these sites should be restricted to protect the building from adverse vibration impacts and to ensure that the building structures will not be damaged as a result of these impacts.	DSD's Contractor	Construction Work Sites	EIAO	V
	In order to ensure that no structural or superficial damage will be caused by the construction activities, a precautionary approach involving a pre-construction condition survey and establishment of appropriate vibration limits for the potentially impacted structures should be adopted. Protection measures for the potentially impacted structures, if considered necessary from the pre-construction condition survey, should be implemented prior to the commencement of construction works. Vibration monitoring during the construction phase should be undertaken as part of the EM&A programme.	Qualified archaeologist/ built heritage specialist	Construction Work Sites	EIAO	V
Fisherie					
10.6	In accordance with the guidelines in the <i>EIAO-TM</i> on fisheries impact assessment the general policy for mitigating impacts to fisheries, in order of priority are avoidance, minimization and compensation.	DSD's Contractor	Construction Work Sites	EIAO	N/A
	Impacts to fisheries resources and fishing operations have largely been avoided during the construction and operation of the drainage tunnel through the avoidance of dredging, reclamation and filling activities. Good construction practice and associated measures were recommended in Water Quality Assessment in Section 5 to control water quality impacts to within acceptable levels and are also expected to control impacts to fisheries resources. Hence, no fisheries-species mitigation measures are required during construction and operation of the drainage tunnel.				N/A
Remarks	operation of the drainage tunnel.				

Non-compliance of mitigation measure Not applicable x

N/A

Appendix E

Status of License and Permit





Updated Status of Environmental Permit & Licence

Application Date	Environmental Permit / Licence	Issued Date	Ref No.	Account No.	Permit / Licence No.	Permit / Licence Validity Date	Remarks
2 Jan 2008	Registration as a Waste Producer	3 Jan 2008	001026707				Contractor had received the acknowledge receipt on 3 Jan 2008.
2 Jan 2008	Waste Disposal (Chemical Waste) (General) - Chemical Waste Producer	26 Feb 2008		5111-324-M2703-01			
2 Jan 2008	Waste Disposal (Charges for Disposal of Construction Waste) Regulation - Billing Account	17 Jan 2008		7006574			
10 Jan 2008	Notification Pursuant to Section 3(1) of the Air Pollution Control (Construction Dust) Regulation	10 Jan 2008	001026901				Contractor had received the acknowledge receipt on 10 Jan 2008.
25 Feb 2008	Water Pollution Control Ordinance – Outfall O- 1	7 Aug 2008	001028154		EP760/323/012997I	7 Aug 2008 - 31 Aug 2013	Contractor had received the acknowledge receipt on 3 March 2008. Public Notice had been issued on 16 June 2008. Application fees had been paid on 28 July 2008. Licence had been issued on 7 Aug 2008.
9 Apr 2008	Notification of Change in the Registration of Chemical Waste Producer	29 Apr 2008		5111-324-M2703-01			MCSJV's Managing Director had been changed from Mr. Richard Myrans to Mr. Christopher Shaw.
10 Apr 2008	Further Environmental Permit	6 May 2008	FEP-088/2008		FEP-01/275/2007		Contractor had received the acknowledge receipt on 17 April 2008. FEP had been issued on 6 May 2008.
18 Apr 2008	Water Pollution Control Ordinance – Intake I-1	19 Jun 2008	001029978		EP760/327/013315I	19 Jun 2008 - 30 Jun 2013	Contractor had received the acknowledge receipt on 8 May 2008. Application fees had been paid on 13 June 2008. Licence had been issued on 19 June 2008.
18 Apr 2008	Water Pollution Control Ordinance – Intake I-2	2 Jul 2008	001029959		EP760/321/013020I	2 Jul 2008 - 31 Jul 2013	Contractor had received the acknowledge receipt on 8 May 2008. Application fees had been paid on 26 June 2008. Licence had been issued on 2 July 2008.
18 Apr 2008	Water Pollution Control Ordinance – Intake I-3	5 Aug 2008	001029960		EP760/323/013324I	5 Aug 2008 - 31 Aug 2013	Contractor had received the acknowledge receipt on 8 May 2008. Public Notice had been issued on 16 June 2008. Application fees had been paid on 28 July 2008. Licence had been issued on 5 Aug 2008.
18 Apr 2008	Water Pollution Control Ordinance – Portion I	26 Jun 2008	001029974		EP760/350/013334I	26 Jun 2008 - 30 Jun 2013	Contractor had received the acknowledge receipt on 8 May 2008. Application fees had been paid on 13 June 2008. Licence had been issued on 26 June 2008.
3 Jun 2008	Variation of Environmental Permit	27 Jun 2008	VEP-264/2008		EP-275/2007/A		Application was submitted by DSD on 3 June 2008. Licence had been issued on 27 June 2008.





Updated Status of Environmental Permit & Licence

Application Date	Environmental Permit / Licence	Issued Date	Ref No.	Account No.	Permit / Licence No.	Permit / Licence Validity Date	Remarks
18 Jun 2008	Variation of Environmental Permit	27 Jun 2008	VEP-266/2008		FEP-01/275/2007/A		Contractor had received the acknowledge receipt on 23 June 2008. Licence had been issued on 27 June 2008.
23 Jul 2008	Water Pollution Control Ordinance – Intake I-1 (Intersection of Wo Yi Hop Lane and Ho Fung College)	27 Aug 2008	001031974		EP760/325/013536I	27 Aug 2008 - 31 Aug 2013	Contractor had received the acknowledge receipt on 25 July 2008. Application fees had been paid on 19 Aug 2008. Licence had been issued on 27 Aug 2008.
2 Sep 2008	Variation of Environmental Permit	25 Sep 2008	VEP-271/2008		EP-275/2007/B		Application was submitted by DSD on 2 Sept 2008. Licence had been issued on 25 Sept 2008.
21 Nov 2008	Construction Noise Permit 1) Chai Wan Kok Valve House (Near Summit Terrace - Tusen Wan) 2) Valve House (Near The Wonderland - Castle Peak Road- Ting Kau)		001034930				Contractor had applied the permit on 21 Nov 2008. Contractor had received the acknowledge receipt on 2 Dec 2008. Notice of Refusal had been received on 6 Dec 2008.
13 Jan 2009	Construction Noise Permit - Outfall O-1		301201				Contractor had applied the permit on 13 Jan 2009. Contractor had received the acknowledge receipt on 13 Jan 2009. Notice of Refusal had been received on 20 Jan 2009.
19 Jan 2009	Construction Noise Permit - Intake I-1	3 Feb 2009	301401		GW-RW0052-09	23 Feb 2009 - 22 Aug 2009	Contractor had applied the permit on 19 Jan 2009. Contractor had received the acknowledge receipt on 20 Jan 2009. CNP had been issued on 3 Feb 2009.
22 Jan 2009	Construction Noise Permit - Intake I-3		301474				Contractor had applied the permit on 22 Jan 2009. Contractor had received the acknowledge receipt on 22 Jan 2009. Notice of Refusal had been received on 2 Feb 2009.
3 Feb 2009	Construction Noise Permit - Outfall O-1		301841				Contractor had applied the permit on 3 Feb 2009. Contractor had received the acknowledge receipt on 6 Feb 2009. Notice of Refusal had been received on 12 Feb 2009.
25 Feb 2009	Construction Noise Permit - Intake I-3	10 Mar 2009	302429		GW-RW0079-09	16 March 2009 - 15 Sept 2009	Contractor had applied the permit on 25 Feb 2009. Contractor had received the acknowledge receipt on 26 Feb 2009. CNP had been issued on 10 March 2009.
2 Mar 2009	Construction Noise Permit - Outfall O-1	12 Mar 2009	302525		GW-RW0080-09	16 March 2009 - 15 May 2009	Contractor had applied the permit on 2 March 2009. Contractor had received the acknowledge receipt on 2 March 2009. CNP had been issued on 12 March 2009.





Updated Status of Environmental Permit & Licence

Application Date	Environmental Permit / Licence	Issued Date	Ref No.	Account No.	Permit / Licence No.	Permit / Licence Validity Date	Remarks
23 Mar 2009	Construction Noise Permit - Intake I-1	3 Apr 2009	303326		GW-RW0108-09	6 April 2009 - 5 Oct 2009	Contractor had applied the permit on 23 March 2009. Contractor had received the acknowledge receipt on 24 March 2009. CNP had been issued on 3 April 2009.
29 Apr 2009	Water Pollution Control Ordinance – Intake I-3 (Additional Discharge Point)		305058				Contractor had applied the Licence on 29 April 2009. Contractor had received the acknowledge receipt on 11 May 2009. Public notices had been issued on 21 Dec 2009. Waiting for EPD further notification.
12 May 2009	Construction Noise Permit - Outfall O-1	29 May 2009	305266		GW-RW0198-09	29 May 2009 - 24 Nov 2009	Contractor had applied the permit on 12 May 2009. Contractor had received the acknowledge receipt on 15 May 2009. CNP had been issued on 29 May 2009.
5 Oct 2009	Further Environmental Permit	27 Oct 2009	FEP-096/2009		FEP-01/275/2007/B		Contractor had received the acknowledge receipt on 7 Oct 2009. FEP had been issued on 27 Oct 2009.
19 Jan 2010	Construction Noise Permit - Outfall O-1		313499				Contractor had applied the permit on 19 Jan 2010. Contractor had received the acknowledge receipt on 19 Jan 2010. Notice of Refusal had been received on 25 Jan 2010.
19 Jan 2010	Water Pollution Control Ordinance – Outfall O- 1 (Additional Discharge Point)		313803				Contractor had applied the permit on 19 Jan 2010. Contractor had received the acknowledge receipt on 28 Jan 2010. Waiting for EPD further notice.
27 Jan 2010	Construction Noise Permit - Outfall O-1	5 Feb 2010	313788		GW-RW0060-10	10 Feb 2010 - 31 March 2010	Contractor had applied the permit on 27 Jan 2010. Contractor had received the acknowledge receipt on 27 Jan 2010. Waiting for EPD further notice.
4 Feb 2010	Construction Noise Permit - Chai Wan Kok - Valve House	10 Feb 2010	314068		GW-RW007S-10	23 Feb 2010 - 06 March 2010	Contractor had applied the permit on 4 Feb 2010. Contractor had received the acknowledge receipt on 4 Feb 2010. Waiting for EPD further notice.

Appendix F

Calibration Certificates

Project Title: Monitoring Location: Calibration Date: **Calibration Due Date** Time:

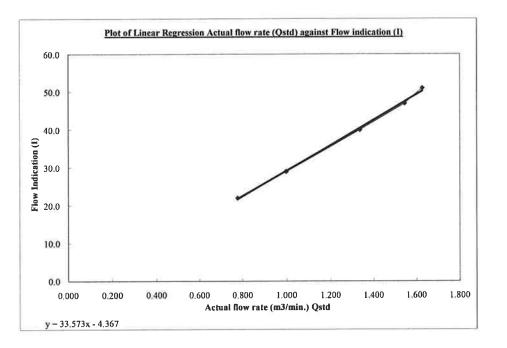
Design and Construction of Tsuen Wan Drainage Tunnel Heng Hoi Chi Hong Ship Temple 29-Jan-10 29-Маг-10 13:10

Sampler Model:	BM2000HX	
Serial No.:	5875	
Calibrator Orifice no.:	1559	
Slope (m):	1.97702	- Y
Intercept (b):	-0.00070	- i
Correction coeff. (r)	0.99992	_
Standard pressure (mmHg) Pstd:	763.9	
Standard temp. (K) Tstd:	290.80	
Calibration pressure (mmHg) Pa:	764.6	[
Calibration temp. (K) Ta:	291.4	

Flow(corrected) =	√H×	$\frac{Pa}{Pstd}$ ×	Tstd Ta
$Qstd = \frac{1}{m} \times (\sqrt{H \times M})$	Pa Psid	$\times \frac{T_{s/d}}{T_a}$	- b)

Sample no.	Pressure Drop (H), inch	Flow (corrcted), m ³ /min	Actual flow rate (Qstd), m ³ /min	Flow indication (I), arbitrary
1	10.1	3.215	1.627	51.0
2	9.1	3.052	1.544	47.0
3	6.8	2,638	1.335	40.0
4	3.8	1.972	0.998	29.0
5	2.3	1.534	0.776	22.0

Correlation Coefficient: 0.9991



Remark 1HPa = 0.750062 mmHg

Calibrated by:

Mak Kei Ho HO (

(

)

)

Date: 1-2-2010

Date: 1/2/2010

Checked by:

Tsang Yu Man /sa

Project Title: Monitoring Location: Calibration Date: **Calibration Due Date** Time:

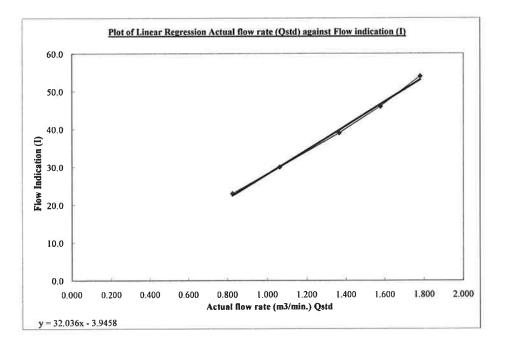
Design and Construction of Tsuen Wan Drainage Tunnel Ho Fung College 29-Jan-10 29-Mar-10 14:00

Sampler Model:	BM2000HX	
Serial No.:	4994	
Calibrator Orifice no.:	1559	
Slope (m):	1.97702	
Intercept (b):	-0.00070	
Correction coeff. (r)	0.99992	
Standard pressure (mmHg) Pstd:	763.9	
Standard temp. (K) Tstd:	290.80	
Calibration pressure (mmHg) Pa:	764.6	
Calibration temp. (K) Ta:	291.4	_

Flow(corrected) = $\sqrt{H \times \frac{Pa}{Pstd} \times \frac{Tstd}{Ta}}$ $Qstd = \frac{1}{m} \times (\sqrt{H \times \frac{Pa}{Pstd} \times \frac{Tstd}{Ta}} - b)$

Sample no.	Pressure Drop (H), inch	Flow (corrcted), m ³ /min	Actual flow rate (Qstd), m ³ /min	Flow indication (I), arbitrary
1	12.1	3.519	1.780	54.0
2	9.5	3.118	1.578	46.0
3	7.1	2.696	1,364	39.0
4	4.3	2.098	1.062	30.0
5	2.6	1.631	0.826	23.0

Correlation Coefficient: 0.9984



Remark 1HPa = 0.750062 mmHg

Calibrated by:

Mak Kei Ho 1-10 (

(

Date: 1-2-2010

Checked by:

Tsang Yu Man Tsap

)

)

Date: 1/2/2010

Project Title: Monitoring Location: Calibration Date: **Calibration Due Date** Time:

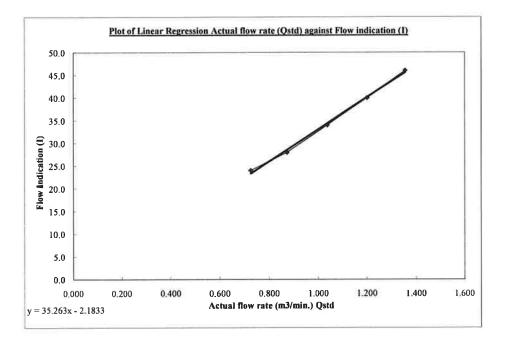
Design and Construction of Tsuen Wan Drainage Tunnel Long Beach Gardan 29-Jan-10 29-Mar-10 15:00

Sampler Model:	TE5005X
Serial No.:	0390
Calibrator Orifice no.:	1559
Slope (m):	1.97702
Intercept (b):	-0.00070
Correction coeff. (r)	0.99992
Standard pressure (mmHg) Pstd:	763.9
Standard temp. (K) Tstd:	290.80
Calibration pressure (mmHg) Pa:	764.6
Calibration temp. (K) Ta:	291.4

F low(corrected) = \sqrt{H}	$\frac{Pa}{Pstd} \times$	Tstd Ta
$Qstd = \frac{1}{m} \times (\sqrt{H \times \frac{Pa}{Psta}})$	$\frac{T_{sta}}{T_a}$	

Sample no.	Pressure Drop (H), inch	Flow (corrcted), m ³ /min	Actual flow rate (Qstd), m ³ /min	Flow indication (1), arbitrary
1	7.0	2.677	1,354	46.0
2	5.5	2.373	1.200	40.0
3	4.1	2.049	1.037	34.0
4	2.9	1.723	0.872	28.0
5	2.0	1.431	0.724	24.0

Correlation Coefficient: 0.9983



Remark 1HPa = 0.750062 mmHg

Calibrated by:

Mak Kei Ho Mo (

Date: 1-2-2010

Checked by:

Tsang Yu Man Ka f (

)

)

Date: ______ 2/2010

Project Title: Monitoring Location: Calibration Date: Calibration Due Date Time:

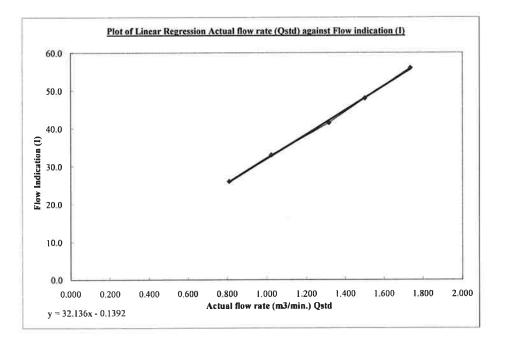
Design and Construction of Tsuen Wan Drainage Tunnel **Greenview Terrance** 29-Jan-10 29-Mar-10 15:45

Sampler Model:	TE5005X
Serial No.:	0646
Calibrator Orifice no.:	1559
Slope (m):	1.97702
Intercept (b):	-0.00070
Correction coeff. (r)	0.99992
Standard pressure (mmHg) Pstd:	763.9
Standard temp. (K) Tstd:	290.80
Calibration pressure (mmHg) Pa:	764.6
Calibration temp. (K) Ta:	291.4

Flow(corrected) =	H×7	Pa Pstd ×	Tstd Ta
$Qsid = \frac{1}{m} \times (\sqrt{H \times -1})$	Pa Psid	Tsid Ta	- b)

Sample no.	Pressure Drop (H), inch	Flow (corrcted), m ³ /min	Actual flow rate (Qstd), m ³ /min	Flow indication (I), arbitrary
1	11.5	3.431	1.736	56.0
2	8.6	2.967	1.501	48.0
3	6.6	2.599	1.315	41.5
4	4.0	2.023	1.024	33.0
5	2.5	1.600	0.809	26.0

Correlation Coefficient: 0.9995



Remark 1HPa = 0.750062 mmHg

Calibrated by:

Mak Kei Ho Ho (

(

Date: 1-2-2010

Date: _//2/2010.

Checked by:

Tsang Yu Man Traf

)

)



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

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Ma Operator		9 Rootsmeter Orifice I.I		333620 1559	Ta (K) - Pa (mm) -	293 - 765.81
PLATE OR Run # 1 2 3 4 5	VOLUME START (m3) 	VOLUME STOP (m3) NA NA NA NA NA NA	DIFF VOLUME (m3) 1.00 1.00 1.00 1.00 1.00	DIFF TIME (min) 1.4130 0.9900 0.8850 0.8420 0.6970	METER DIFF Hg (mm) 3.2 6.4 7.9 8.7 12.7	ORFICE DIFF H2O (in.) 2.00 4.00 5.00 5.50 8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
1.0205	0.7222	1.4317		0.9958	0.7047	0.8748
1.0163	1.0266	2.0247		0.9917	1.0017	1.2371
1.0142	1.1460	2.2637		0.9896	1.1182	1.3831
1.0132	1.2033	2.3742		0.9886	1.1741	1.4506
1.0078	1.4459	2.8633		0.9834	1.4109	1.7495
intercept (b) = -0.00070 intercept (b) = -0.0004			1.23797 -0.00043 0.99992			
y axis =	SQRT [H20 (I	Pa/760) (298/5	[[a)]	y axis =	SQRT [H20 (7	[a/Pa)]

CALCULATIONS

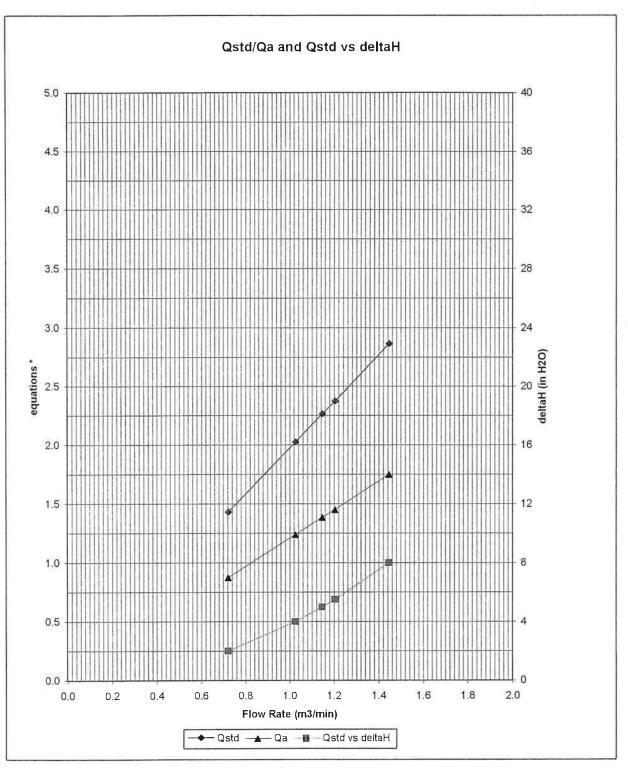
Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time
Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

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



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



AIR POLLUTION MONITORING EQUIPMENT

* y-axis equations: Qstd series: $\sqrt{\Delta H \left(\frac{P a}{P s t d}\right) \left(\frac{T s t d}{T a}\right)}$ Qa series: $\sqrt{(\Delta H (T a / P a))}$ # 1559



輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C093599

Certificate of Calibration

This is to certify that the equipment

Description : Precision Sound Level Meter Manufacturer : Rion Model No. : NA-27 Serial No. : 00201194

has been calibrated for the specific items and ranges. The results are shown in the Calibration Report No. C093599.

The equipment is supplied by

Co. Name: Envirotech Services Co.

Address : Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

Date of Issue : 10 July 2009

Certified by : <u>Char Um</u> H C Chan

The test equipment used for calibration are traceable to the National Standards as specified in this report. This report shall not be reproduced except in full and with prior written approval from this laboratory.

Calibration and Testing Laboratory of Sun Creation Engineering Limited

c/o=4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong Tel: 2927-2606 Fax: 2744-8986 F-mail: callab*ia* suncreation.com Website: www.suncreation.com



輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C093598

Certificate of Calibration

This is to certify that the equipment

Description : Sound Level Calibrator Manufacturer : Rion Model No. : NC-73 Serial No. : 10786708

has been calibrated for the specific items and ranges. The results are shown in the Calibration Report No. C093598.

The equipment is supplied by

Co. Name : Envirotech Services Co.

Address : Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

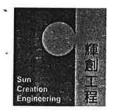
Date of Issue : 10 July 2009

Certified by: Com for C H C Chan

The test equipment used for calibration are traceable to the National Standards as specified in this report. This report shall not be reproduced except in full and with prior written approval from this laboratory.

Calibration and Testing Laboratory of Sun Creation Engineering Limited

e o. 4/F, Tsing Shan Wan Exchange Building, I Hing On Lane, Tuen Mun, New Territories, Hong Kong Tel: 2927-2606 Fax: 2744-8986 E-mail: callabat suncreation.com Website: www.suncreation.com



Certificate No. : C093473

Certificate of Calibration

This is to certify that the equipment

Description : Precision Integrating Sound Level Meter Manufacturer : Rion Model No. : NL-18 Serial No. : 00360030

has been calibrated for the specific items and ranges. The results are shown in the Calibration Report No. C093473.

The equipment is supplied by

Co. Name : Envirotech Services Co.

Address : Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

Date of Issue : 6 July 2009

Certified by : <u>Chan tim</u> (HC Chan

The test equipment used for calibration are traceable to the National Standards as specified in this report. This report shall not be reproduced except in full and with prior written approval from this laboratory.

Calibration and Testing Laboratory of Sun Creation Engineering Limited



Certificate No. : C093472

Certificate of Calibration

This is to certify that the equipment

Description : Sound Level Calibrator Manufacturer : Rion Model No. : NC-73 Serial No. : 10997142

has been calibrated for the specific items and ranges. The results are shown in the Calibration Report No. C093472.

The equipment is supplied by

Co. Name : Envirotech Services Co.

Address : Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

Date of Issue : 6 July 2009

Certified by: <u>Chan iAn Chan</u> HC Chan

The test equipment used for calibration are traceable to the National Standards as specified in this report. This report shall not be reproduced except in full and with prior written approval from this laboratory.

Calibration and Testing Laboratory of Sun Creation Engineering Limited

c/o 4/F. Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong Tel: 2927 2606 Fax: 2744-8986 E-mail: callab@suncreation.com Website: www.suncreation.com

Batch:HK0927823Date of Issue:31/12/2009Client:HYDER CONSULTING LTDClient Reference:TWDT

ALS)

Calibration of Turbidity System

Item :	Turbidimeter
Model No. :	Eutech Instruments TN-100
Serial No. :	215619
Equipment No. :	
Calibration Method :	This meter was calibrated in accordance with standard method APHA (19th Ed.) 2130B
Date of Calibration :	31 December, 2009

Testing Results :

Expected Reading	Recording Reading
0.00 NTU	0.10 NTU
4.00 NTU 16.0 NTU	3.84 NTU 15.3 NTU
40.0 NTU 160 NTU	37.0 NTU 172 NTU
Allowing Deviation	±10%

Mr Chan Kwok Fai, Godfrey Laboratory Manager - Hong Kong

ALS Environmental

ALS Technichem (HK) Pty Ltd

Page 2 of 2



Batch: Date of Issue: Client: Client Reference:

HK0924882 02/12/2009 HYDER CONSULTING LTD

Calibration of pH System

Item :	Multi-parameter Instrument / Mehrparameter-MeBgerat
Model No. :	WTW pH / Oxi 340i
Serial No. :	08101283
Equipment No. :	
Calibration Method :	This meter was calibrated in accordance with standard method APHA (19th Ed.) 4500-H $^+$ B
Date of Calibration :	27 November, 2009
Testing Results :	

Expected Reading		
4.00	4.09	
7.00	7.08 9.90	
10.0		
Allowing Deviation	<u>+</u> 0.2	

Mr Chan Kwok Fai, Godfrey Laboratory Manager - Hong Kong

ALS Environmental

ALS Technichem (HK) Pty Ltd

(00)



Batch: Date of Issue: Client: Client Reference:

HK0924882 02/12/2009 HYDER CONSULTING LTD

Calibration of Thermometer

Item :	Multi-parameter Instrument / Mehrparameter-M	leBgerat
Model No. :	WTW pH / Oxi 340i	
Serial No. :	08101283	
Equipment No. :		
Calibration Method :	In-house Method	
Date of Calibration :	27 November, 2009	
Testing Results :		
Reference Te	emperature (⁰ C)	Recorded Terr

Reference Temperature (°C)	Recorded Temperature (°C)		
21.5 ⁰ C 32.0 ⁰ C	20.9 ⁰ C 31.3 ⁰ C		
Allowing Deviation	±2.0 ⁰ C		

Mr Chan Kwok/Fai, Godfrey Laboratory Manager - Hong Kong

ALS Environmental

ALS Technichem (HK) Pty Ltd



Batch: Date of Issue: Client: Client Reference: HK0924882 02/12/2009 HYDER CONSULTING LTD

Calibration of DO System

Item :	Multi-parameter Instrument / Mehrparameter-MeBgerat
Model No. :	WTW pH / Oxi 340i
Serial No. :	08101283
Equipment No. :	
Calibration Method :	This meter was calibrated in accordance with standard method APHA (18th Ed.) 4500-O C & G
Date of Calibration :	27 November, 2009
Testing Results :	

Expected Reading	Recording Reading	
3.54 mg/L	3.47 mg/L	
6.11 mg/L	6.03 mg/L 8.28 mg/L	
3.54 mg/L 6.11 mg/L 8.30 mg/L		
Allowing Deviation	±0.2 mg/L	

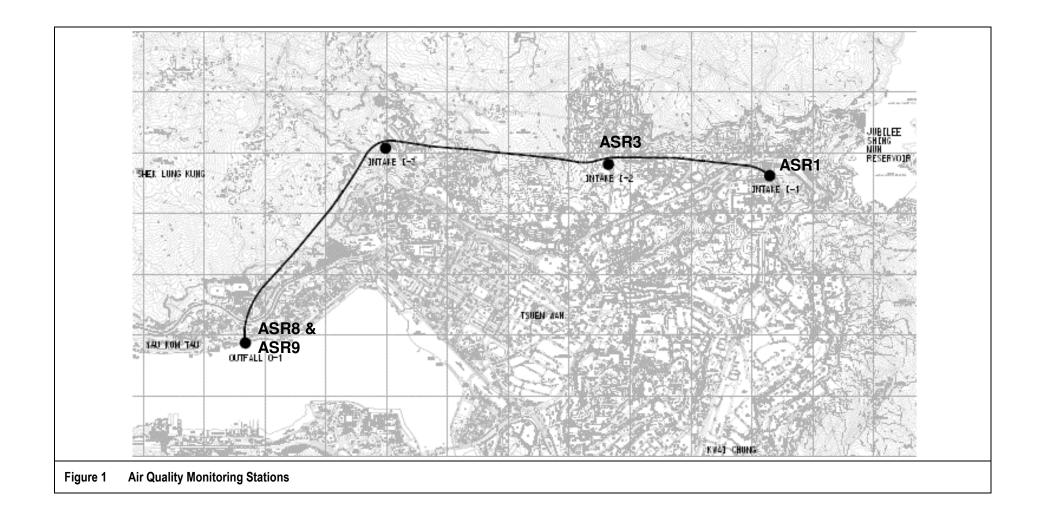
Mr Chan Kwok Fai, Godfrey Laboratory Manager - Hong Kong

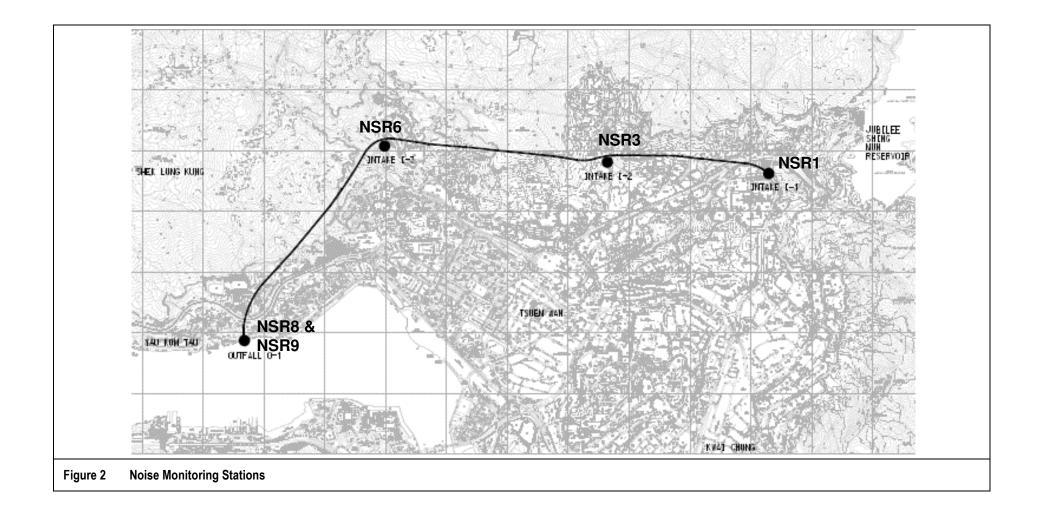
ALS Environmental

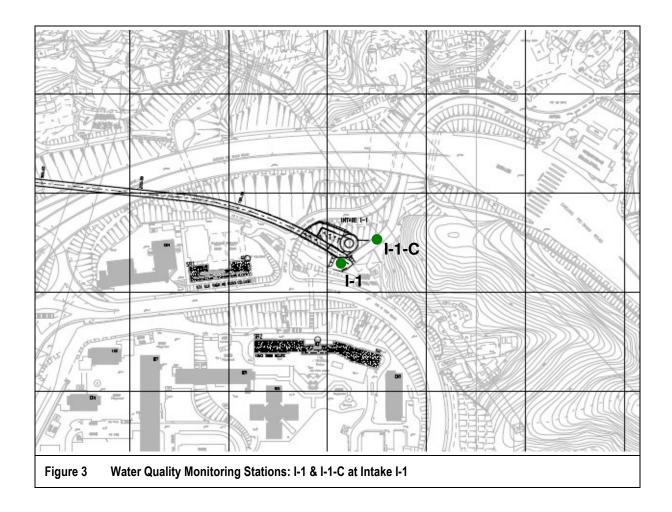
ALS Technichem (HK) Pty Ltd

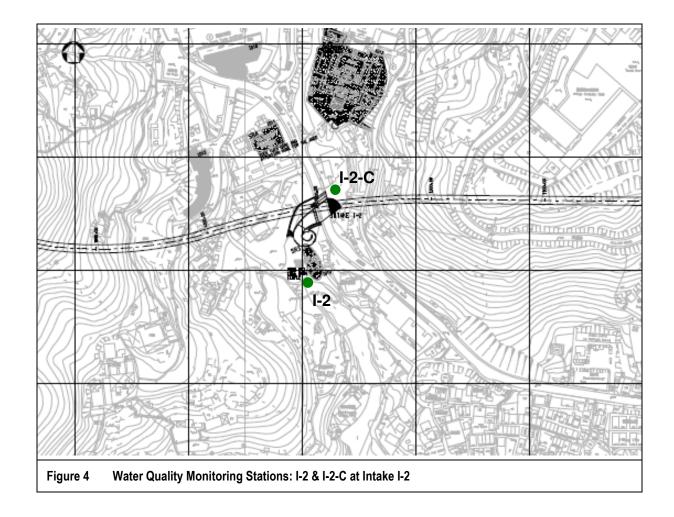
Appendix G

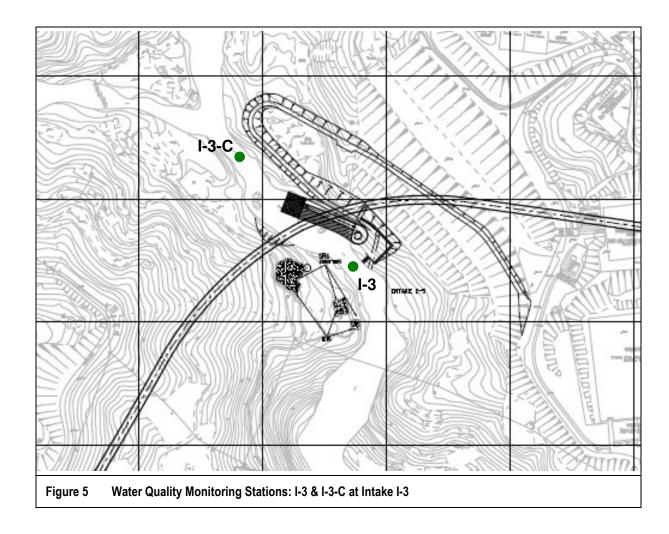
Monitoring Locations

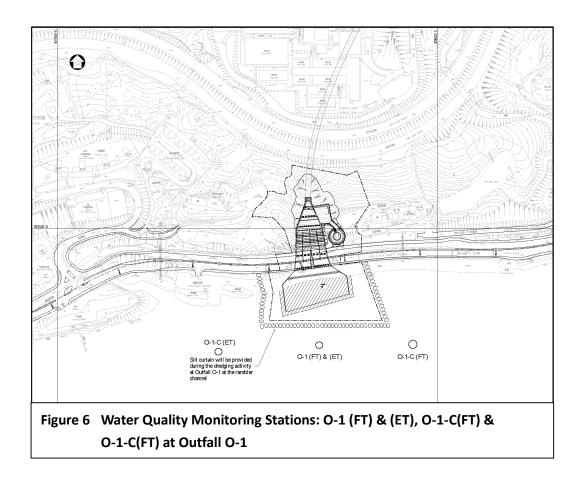












Appendix H

EM&A Schedule

Contract No. DC/2007/12 – Design and Construction of Tsuen Wan Drainage Tunnel Impact Monitoring Programme – February 2010

Date		Air	Noise	Water
01-Feb-10	Mon			\checkmark
02-Feb-10	Tue	\checkmark	✓	
03-Feb-10	Wed			\checkmark
04-Feb-10	Thu			
05-Feb-10	Fri			✓
06-Feb-10	Sat			
07-Feb-10	Sun			
08-Feb-10	Mon	✓	✓	✓
09-Feb-10	Tue			
10-Feb-10	Wed			✓
11-Feb-10	Thu			
12-Feb-10	Fri	✓		✓
13-Feb-10	Sat			
14-Feb-10	Sun			
15-Feb-10	Mon			
16-Feb-10	Tue			
17-Feb-10	Wed			✓
18-Feb-10	Thu	\checkmark	✓	
19-Feb-10	Fri			✓
20-Feb-10	Sat			
21-Feb-10	Sun			
22-Feb-10	Mon			✓
23-Feb-10	Tue			
24-Feb-10	Wed	✓	✓	✓
25-Feb-10	Thu			
26-Feb-10	Fri			✓
27-Feb-10	Sat			
28-Feb-10	Sun			

Note:

Shaded area indicates public holiday.

Air - Monitoring 1-hour TSP is undertaken three times per every six days

Noise - Noise measurements is undertaken once every week at (0700-1900 Monday to Saturday)

Water – Water measurements is undertaken three times per week

Additional noise monitoring were undertaken on 5, 12, 19 and 26 February 2010 at NSR 6 and NSR 9.

Contract No. DC/2007/12 – Design and Construction of Tsuen Wan Drainage Tunnel Impact Monitoring Programme – March 2010 (tentative)

Date		Air	Noise	Water
01-Mar-10	Mon			\checkmark
02-Mar-10	Tue	\checkmark	✓	
03-Mar-10	Wed			\checkmark
04-Mar-10	Thu			
05-Mar-10	Fri			\checkmark
06-Mar-10	Sat			
07-Mar-10	Sun			
08-Mar-10	Mon	\checkmark	\checkmark	\checkmark
09-Mar-10	Tue			
10-Mar-10	Wed			\checkmark
11-Mar-10	Thu			
12-Mar-10	Fri	\checkmark		\checkmark
13-Mar-10	Sat			
14-Mar-10	Sun			
15-Mar-10	Mon			✓
16-Mar-10	Tue			
17-Mar-10	Wed			✓
18-Mar-10	Thu	✓	✓	
19-Mar-10	Fri			\checkmark
20-Mar-10	Sat			
21-Mar-10	Sun			
22-Mar-10	Mon			\checkmark
23-Mar-10	Tue			
24-Mar-10	Wed	\checkmark	✓	\checkmark
25-Mar-10	Thu			
26-Mar-10	Fri			\checkmark
27-Mar-10	Sat			
28-Mar-10	Sun			
29-Mar-10	Mon	✓	✓	\checkmark
30-Mar-10	Tue			
31-Mar-10	Wed			\checkmark

Note:

Shaded area indicates public holiday.

Air – Monitoring 1-hour TSP is undertaken three times per every six days

Noise - Noise measurements is undertaken once every week at (0700-1900 Monday to Saturday)

Water - Water measurements is undertaken three times per week

k:\eb000364 tsuen wan drainage tunnel\f-reports\monitoring schedule\monitoring_schedule feb10-may10.doc

Contract No. DC/2007/12 – Design and Construction of Tsuen Wan Drainage Tunnel Impact Monitoring Programme – April 2010 (tentative)

Date		Air	Noise	Water
01-Apr-10	Thu	\checkmark		
02-Apr-10	Fri			
03-Apr-10	Sat			
04-Apr-10	Sun			
05-Apr-10	Mon			
06-Apr-10	Tue			
07-Apr-10	Wed	✓	✓	✓
08-Apr-10	Thu			
09-Apr-10	Fri			✓
10-Apr-10	Sat			
11-Apr-10	Sun			
12-Apr-10	Mon			✓
13-Apr-10	Tue	✓	✓	
14-Apr-10	Wed			✓
15-Apr-10	Thu			
16-Apr-10	Fri			✓
17-Apr-10	Sat			
18-Apr-10	Sun			
19-Apr-10	Mon	✓	✓	✓
20-Apr-10	Tue			
21-Apr-10	Wed			✓
22-Apr-10	Thu			
23-Apr-10	Fri	✓		✓
24-Apr-10	Sat			
25-Apr-10	Sun			
26-Apr-10	Mon			✓
27-Apr-10	Tue			
28-Apr-10	Wed			✓
29-Apr-10	Thu	\checkmark	✓	
30-Apr-10	Fri			✓

Note:

Shaded area indicates public holiday.

Air – Monitoring 1-hour TSP is undertaken three times per every six days

Noise - Noise measurements is undertaken once every week at (0700-1900 Monday to Saturday)

Water - Water measurements is undertaken three times per week

Contract No. DC/2007/12 – Design and Construction of Tsuen Wan Drainage Tunnel Impact Monitoring Programme – May 2010 (Tentative)

Date		Air	Noise	Water
01-May-10	Sat			
02-May-10	Sun			
03-May-10	Mon			\checkmark
04-May-10	Tue			
05-May-10	Wed	\checkmark	\checkmark	\checkmark
06-May-10	Thu			
07-May-10	Fri			\checkmark
08-May-10	Sat			
09-May-10	Sun			
10-May-10	Mon			✓
11-May-10	Tue	\checkmark	✓	
12-May-10	Wed			\checkmark
13-May-10	Thu			
14-May-10	Fri			✓
15-May-10	Sat			
16-May-10	Sun			
17-May-10	Mon	✓	✓	✓
18-May-10	Tue			
19-May-10	Wed			✓
20-May-10	Thu			
21-May-10	Fri	✓		✓
22-May-10	Sat			
23-May-10	Sun			
24-May-10	Mon			✓
25-May-10	Tue			
26-May-10	Wed			✓
27-May-10	Thu	✓	✓	
28-May-10	Fri			✓
29-May-10	Sat			
30-May-10	Sun			
31-May-10	Mon			✓

Note:

Shaded area indicates public holiday.

Air – Monitoring 1-hour TSP is undertaken three times per every six days

Noise - Noise measurements is undertaken once every week at (0700-1900 Monday to Saturday)

Water - Water measurements is undertaken three times per week

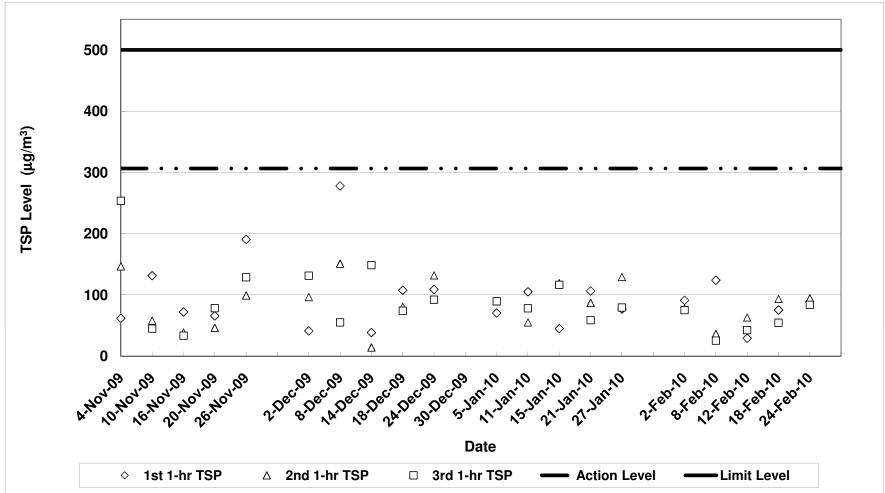
Appendix I

Monitoring Results

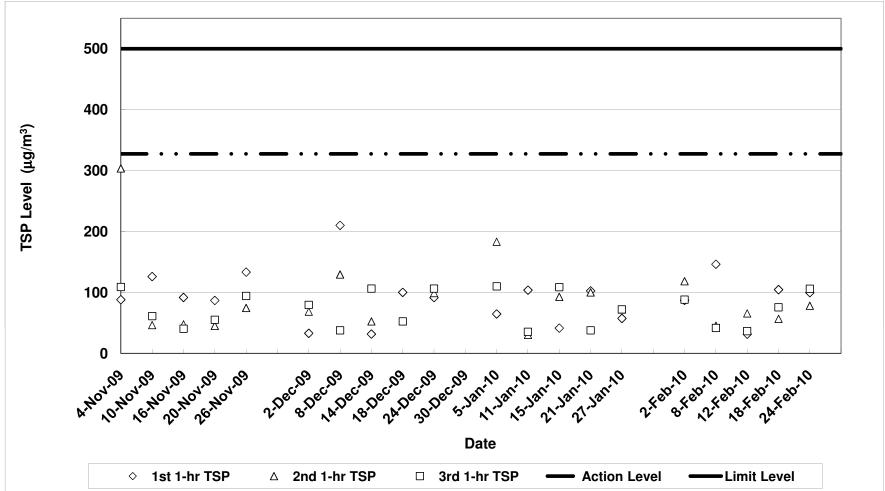
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel

Air Quality Impact Monitoring Results (1-Hour TSP)

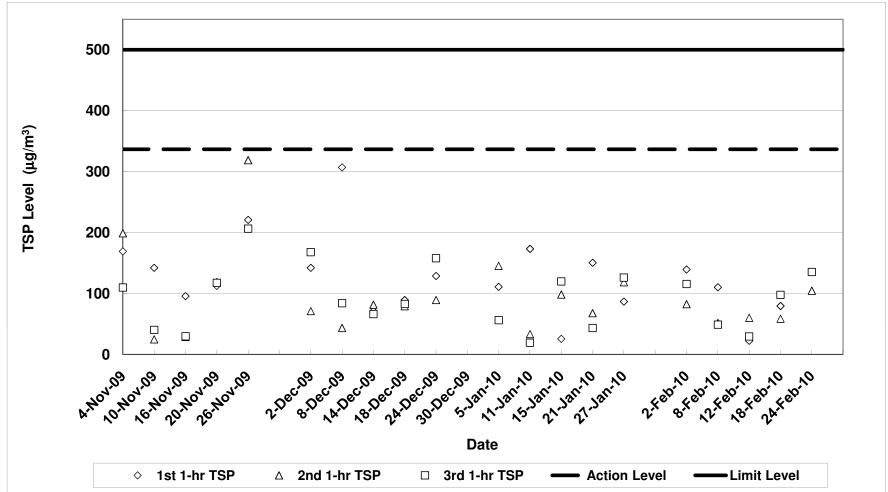
Location	Monitoring Date	Weather	Wind Speed	Temp	Timer-I	Timer-F	Time (mins)	Flow-I	Flow-F	Flow-I	Flow-F	Flow-avg	Volume	Weight-I (g)	Weight-f (g)	Weight-diff. (g)	1-hr TSP	Average 1-Hr TSP	Action/Limit	Observation	Remark
		Conditions	with Direction (m/s)	(2 ²)				(CFM)	(CFM)	(m ³ /min)	(m³/min)	(m ³ /min)	(m³)				(µg/m³)	(µg/m³)	Levels (µg/m ³)	/ Site Condition	
		Cloudy	0.8E	19	588442	588542	60.0	40	40	1.37	1.37	1.37	82.31	2.7762	2.7837	0.0075	91.1				
	02-Feb-10	Cloudy Cloudy	0.8E	19 19	588542 588642	588642 588742	60.0 60.0	40 40	40	1.37	1.37	1.37	82.31 82.31	2.7723	2.7787	0.0064	77.8 75.3	81.4		Excavation work	Traffic
		Bainy	0.5E	18	588742	588842	60.0	40	40	1.37	1.37	1.37	82.31	2.7871	2.7973	0.0102	123.9				
	08-Feb-10	Rainy	0.5E	18	588842	588942	60.0	40	40	1.37	1.37	1.37	82.31	2.7675	2.7705	0.0030	36.4	62.0		Excavation work	Traffic. Construction works are mainly undertaken during Hour 1.
		Rainy	0.5E	18	588942	589042	60.0	40	40	1.37	1.37	1.37	82.31	2.8171	2.8192	0.0021	25.5				
	12-Feb-10	Cloudy Cloudy	1.2E	18 18	589042 589142	589142 589242	60.0 60.0	40 40	40	1.37	1.37	1.372	82.31 82.31	2.9361	2.9385 2.9203	0.0024	29.2 63.2	45.0		Hammer work	Traffic
Sik Sik Yuen Ho Fung College - Intake		Cloudy	1.2E	18	589242	589342	60.0	40	40	1.37	1.37	1.37	82.31	2.9356	2.9391	0.0035	42.5		306.6/500		
(ASR1)		Cloudy	1.1E	13	589342	589442	60.0	40	40	1.37	1.37	1.37	82.31	2.9250	2.9312	0.0062	75.3		300.0/300		
	18-Feb-10	Cloudy Cloudy	1.1E 1.1E	13 13	589442 589542	589542 589642	60.0 60.0	40 40	40 40	1.37	1.37	1.37	82.31 82.31	2.9181 2.9181	2.9258 2.9226	0.0077	93.6 54.7	74.5		Nil	Traffic
		Cloudy	0.8E	22	589642	589742	60.0	40	40	1.37	1.37	1.37	82.31	2.9161	2.9213	0.0043	88.7				
	24-Feb-10	Cloudy	0.8E	22	589742	589842	60.0	40	40	1.37	1.37	1.37	82.31	2.8999	2.9077	0.0078	94.8	89.1		Nil	Traffic
		Cloudy	0.8E	22	589842	589942	60.0	40	40	1.37	1.37	1.37	82.31	2.9101	2.9170	0.0069	83.8				
	-	-	-		-	-	-	-	-	-	-	-	-	-							
			-		-		-	-	-	-	-	-	-	-							
	02-Feb-10	Cloudy	0.5E	19	556990	557090	60.0	40	40	1.32	1.32	1.32	79.29	2.7708	2.7777	0.0069	87.0	98.0		Excavation work	Troffic
	02-Peb-10	Cloudy Cloudy	0.5E	19 19	557090 557190	557190 557290	60.0 60.0	40 40	40 40	1.32	1.32	1.32	79.29	2.7762	2.7856	0.0094	118.6 88.3	90.0		EAGAVARON WORK	Traffic
		Rainy	0.4E	18	557290	557390	60.0	40	40	1.32	1.32	1.32	79.29	2.7931	2.8047	0.0116	146.3				Traffic. Construction works are mainly undertaken
	08-Feb-10	Rainy	0.4E	18	557390	557490	60.0	40	40	1.32	1.32	1.32	79.29	2.7949	2.7985	0.0036	45.4	77.8		Excavation work, Cutting	during Hour 1.
		Rainy Cloudy	0.4E	18 18	557490 557590	557590 557690	60.0 60.0	40 40	40 40	1.32	1.32	1.32	79.29 79.29	2.7734 2.7753	2.7767	0.0033	41.6 31.5				
	12-Feb-10	Cloudy	1.1E	18	557690	557790	60.0	40	40	1.32	1.32	1.32	79.29	2.7753	2.9000	0.0025	65.6	44.6		Hammer work	Traffic
Hong Hoi Chee Hong		Cloudy	1.1E	18	557790	557890	60.0	40	40	1.32	1.32	1.32	79.29	2.9326	2.9355	0.0029	36.6		327.4/500		
Temple - Intake (ASR3)	18-Feb-10	Cloudy	1.2E	13	557890	557990	60.0	40	40	1.32	1.32	1.32	79.29	2.9205	2.9288	0.0083	104.7	79.0	327.4/300		Traffic
	18-Feb-10	Cloudy Cloudy	1.2E	13 13	557990 558090	558090 558190	60.0 60.0	40 40	40 40	1.32	1.32	1.32	79.29	2.9210	2.9255	0.0045	56.8 75.7	79.0		Nii Iraiic	Iramc
		Cloudy	0.5E	22	558190	558290	60.0	40	40	1.32	1.32	1.32	79.29	2.9103	2.9182	0.0079	99.6				
	24-Feb-10	Cloudy	0.5E	22	558290	558390	60.0	40	40	1.32	1.32	1.32	79.29	2.8993	2.9055	0.0062	78.2	94.6			
		Cloudy	0.5E	22	558390	558490	60.0	40	40	1.32	1.32	1.32	79.29	2.9055	2.9139	0.0084	105.9				
	-	-	-				-	-					-								
				1.1			-	-			-		-	-							
		Cloudy	1.2E	19	611980	612080	60.0	40	40	1.20	1.20	1.20	71.77	2.7930	2.8030	0.0100	139.3				
	02-Feb-10	Cloudy Cloudy	1.2E	19 19	612080	612180 612280	60.0 60.0	40 40	40	1.20	1.20	1.20	71.77	2.7695	2.7754	0.0059	82.2 115.6			Breaking by backhoe, excavation work	Traffic
		Rainy	0.5E	18	612280	612380	60.0	40	40	1.20	1.20	1.20	71.77	2.7996	2.8075	0.0079	110.1				
	08-Feb-10	Rainy	0.5E	18	612380	612480	60.0	40	40	1.20	1.20	1.20	71.77	2.7978	2.8015	0.0037	51.6	70.1		Concrete work	Traffic. Construction works are mainly undertaken during Hour 1.
		Rainy	0.5E	18	612480 612580	612580	60.0	40	40	1.20	1.20	1.20	71.77	2.7995	2.8030	0.0035	48.8				
	12-Feb-10	Cloudy	1.3E	18	612580	612680	60.0 60.0	40	40	1.20	1.20	1.20	71.77	2.7923	2.7939	0.0016	22.3 59.9	37.2			Traffic
Long Beach Gardens -		Cloudy	1.3E	18	612780	612880	60.0	40	40	1.20	1.20	1.20	71.77	2.7798	2.7819	0.0021	29.3		336.6/500	· · · · · · · · · · · · · · · · · · ·	
Outfall (ASR8)		Cloudy	1.2E	13	612880	612980	60.0	40	40	1.20	1.20	1.20	71.77	2.9249	2.9306	0.0057	79.4		000.0 000		
	18-Feb-10	Cloudy	1.2E	13	612980	613080	60.0 60.0	40	40	1.20	1.20	1.20	71.77	2.9260	2.9302	0.0042	58.5 97.5	78.5		Breaking by backhoe	Traffic
		Cloudy	1.2E	22	613180	613280	60.0	40	40	1.20	1.20	1.20	71.77	2.9104	2.9201	0.0097	135.1				
	24-Feb-10	Cloudy	1.2E	22	613280	613380	60.0	40	40	1.20	1.20	1.20	71.77	2.9194	2.9269	0.0075	104.5	124.9		Drillimg, crane operation	Traffic
		Cloudy	1.2E	22	613380	613480	60.0	40	40	1.20	1.20	1.20	71.77	2.8900	2.8997	0.0097	135.1				
1	-	-		-	-	-	-	-	-		-		-	-	-	-					
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
1	02-Feb-10	Cloudy	1.5E	19 19	543880	543980 544080	60.0	40 40	40 40	1.25	1.25	1.25	74.94	2.7691	2.7788	0.0097	129.4 68.1	100.5		Breaking by backhoe, excavation work	Traffic
	02-160-10	Cloudy Cloudy	1.5E	19 19	543980 544080	544080 544180	60.0	40	40	1.25	1.25	1.25	74.94 74.94	2.7846	2.7897 2.7774	0.0051	68.1 104.1	100.0		breaking of backride, excavation work	
1		Rainy	0.5E	18	544180	544280	60.0	40	40	1.25	1.25	1.25	74.94	2.8302	2.8441	0.0139	185.5				Traffic. Construction works are mainly undertaken
	08-Feb-10	Rainy	0.5E	18	544280 544380	544380 544480	60.0	40	40	1.25	1.25	1.25	74.94 74.94	2.8213	2.8266	0.0053	70.7	110.3		Concrete work	during Hour 1.
1		Rainy Cloudy	0.5E 1.0E	18 18	544380 544480	544480 544580	60.0 60.0	40	40	1.25	1.25	1.25	74.94	2.8288	2.8344 2.7972	0.0056	74.7 48.0			-	
	12-Feb-10	Cloudy	1.0E	18	544580	544680	60.0	40	40	1.25	1.25	1.25	74.94	2.7784	2.7833	0.0049	65.4	53.4		Crane operation	Traffic
Greenview Terrance -		Cloudy	1.0E	18	544680	544780	60.0	40	40	1.25	1.25	1.25	74.94	2.7736	2.7771	0.0035	46.7		329.2/500		
Outfall (ASR9)	18-Feb-10	Cloudy	1.1E	13 13	544780 544880	544880 544980	60.0	40	40	1.25	1.25	1.25	74.94	2.9355	2.9430	0.0075	100.1	89.4		Breaking by backhoe	Traffic
	10-160-10	Cloudy Cloudy	1.1E 1.1E	13 13	544880 544980	544980 545080	60.0 60.0	40	40	1.25	1.25	1.25	74.94	2.9269 2.9140	2.9336 2.9199	0.0067	89.4	05.4		creating by backfilde	Traffic.
		Cloudy	1.2E	22	545080	545180	60.0	40	40	1.25	1.25	1.25	74.94	2.9145	2.9215	0.0070	93.4				
	24-Feb-10	Cloudy	1.2E	22	545180	545280	60.0	40	40	1.25	1.25	1.25	74.94	2.9235	2.9302	0.0067	89.4	96.5		Crane operation	Traffic
		Cloudy	1.2E	22	545280	545380	60.0	40	40	1.25	1.25	1.25	74.94	2.8995	2.9075	0.0080	106.7				
	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-					
		-	-	-	-	-	-	-	-		-	-				-					



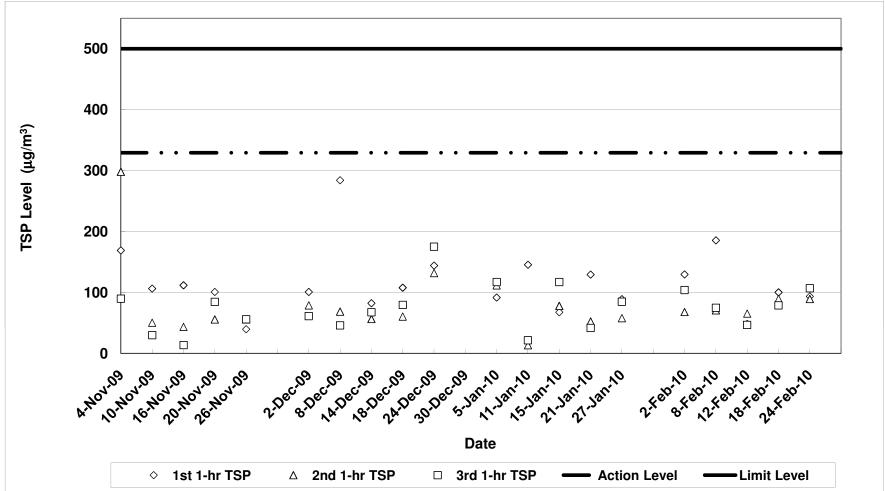
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Air Quality Monitoring (1-hr TSP) Results at Sik Sik Yuen Ho Fung College - Intake (ASR1) Nov-09 to Feb-10



Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Air Quality Monitoring (1-hr TSP) Results at Hong Hoi Chee Hong Temple - Intake (ASR3) Nov-09 to Feb-10



Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Air Quality Monitoring (1-hr TSP) Results at Long Beach Gardens - Outfall (ASR8) Nov-09 to Feb-10



Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Air Quality Monitoring (1-hr TSP) Results at Greenview Terrance - Outfall (ASR9) Nov-09 to Feb-10

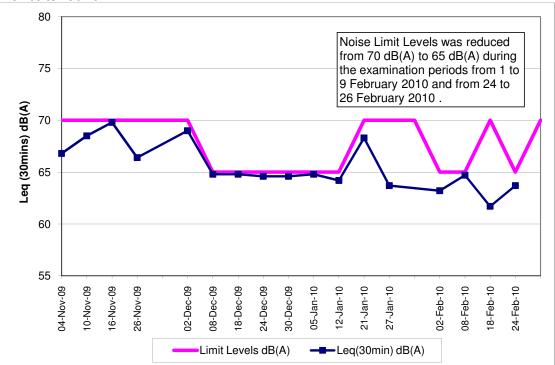
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel

Noise Impact Monitoring Results

Monitoring Locations	Date	Weather	Temperature	Wind Speed	Wind	Start Time	End Time	BL ¹	LL ²	L _{eq(30min)}	L _{10(30min)}	L _{90(30min)}	CNL ³	Observation /	Remark
		Conditions	(°C)	(m/s)	Direction			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Site Condition	
Sik Sik Yuen Ho Fung College	02-Feb-10	Cloudy	19	0.8	E	15:16	15:46		65	63.2	65.7	59.2	-	Excavation work	Traffic noise
NSR 1	08-Feb-10	Rainy	18	0.5	E	16:12	16:42		65	64.7	67.1	59.7	-	Excavation work	Traffic noise.
	18-Feb-10	Cloudy	8	1.2	E	14:28	15:58	66.1	70	61.7	64.4	56.5	-	Nil	Traffic noise
	24-Feb-10	Cloudy	22	0.8	E	16:00	16:30		65	63.7	66.5	59.8	-	Crane operation	Traffic noise
	-	-	-	-	-				-				-		
Hong Hoi Chee Hong Temple	02-Feb-10	Cloudy	19	0.5	E	14:37	15:07		75	70.7	72.9	67.3	-	Truck crane	Traffic noise
NSR 3	08-Feb-10	Rainy	18	0.5	E	15:33	16:03		75	67.0	70.8	63.0	-	Excavation work, cutting	Traffic noise
	17-Feb-10	Cloudy	7	1.1	E	15:10	15:40	57.9	75	58.3	60.2	55.3	-	Nil	Traffic noise
	24-Feb-10	Cloudy	22	0.5	E	15:20	15:50		75	71.9	74.5	64.9	-	Steel bending and erection	Traffic noise
	-			-	-				-				-		
Squatters	02-Feb-10	Cloudy	19	0.3	E	10:00	10:30		75	65.7	67.2	63.9	-	Drilling and excavation work	Nil
NSR 6	05-Feb-10*	Cloudy	18	0.6	E	10:55	11:25		75	70.1	71.6	66.6	-	Excavation work, breaking by backhoe, soil nailing	Nil
	08-Feb-10	Rainv	18	0.5	E	10:10	10:40		75	69.7	73.2	61.5	-	Excavation work, breaking by backhoe	Nil
	12-Feb-10*	Cloudy	15	1.4	E	10:35	11:05		75	48.5	50.5	44.7	-	Hammer work	Nil
	17-Feb-10	Cloudy	8	1.3	E	13:35	14:05	61.2	75	44.2	46.6	40.5	-	Nil	Aircraft noise, bird noise
	19-Feb-10*	Rainy	9	1.2	E	09:35	10:05		75	68.4	70.4	63.4	-	Breaking by backhoe, drilling	Aircraft noise
	24-Feb-10	Cloudy	22	0.3	E	10:00	10:30		75	68.2	71.3	60.3	-	Breaking by backhoe, excavation work	Aircraft noise
	26-Feb-10*	Cloudy	21	0.5	E	09:40	10:10		75	68.3	70.4	63.1	-	Breaking by backhoe, drilling	Nil
	-			-	-				-				-		
Long Beach Gardens	02-Feb-10	Cloudy	19	1.2	E	10:40	11:10		75	65.0	67.4	63.1	-	Excavation work, breaking by backhoe	Traffic noise
NSR 8	08-Feb-10	Rainy	18	1.1	E	14:40	15:10		75	63.3	65.5	59.3	-	Concrete work	Traffic noise
	17-Feb-10	Cloudy	7	1.3	E	10:18	10:48	60.9	75	59.0	61.1	56.5	-	Breaking by backhoe	Traffic noise
	24-Feb-10	Cloudy	22	1.2	E	14:24	14:54		75	66.3	68.0	64.3	-	Drilling and crane operation	Traffic noise
	-			-	-				-				-		
Greenview Terrace	02-Feb-10	Cloudy	19	1.5	E	11:20	11:50		75	72.8	75.5	68.2	-	Excavation work, breaking by backhoe	Traffic noise
NSR 9	05-Feb-10*	Rainy	18	0.8	E	13:17	13:47		75	67.4	69.8	63.0	-	Breaking by backhoe, excavation work	Traffic noise, aircraft noise
	08-Feb-10	Rainy	18	0.5	E	14:00	14:30		75	68.3	70.2	66.2	-	Concrete work	Traffic noise
	12-Feb-10*	Cloudy	15	1.4	E	12:35	13:05		75	60.6	63.0	56.1	-	Hammer work	Traffic noise
	17-Feb-10	Cloudy	7	1	E	11:10	11:40	59.7	75	62.3	63.9	59.8	-	Breaking by backhoe	Traffic noise
	19-Feb-10*	Rainy	9	1.1	E	12:25	12:55	1 '	75	59.5	61.8	56.5	-	Nil	Traffic noise
	24-Feb-10	Cloudy	22	1.2	E	13:44	14:14		75	62.9	64.7	60.8	-	Crane operation	Traffic noise, aircraft noise
	26-Feb-10*	Cloudy	21	0.8	E	12:23	12:53		75	59.7	61.6	57.2	-	Nil	Traffic noise, aircraft noise
	-	-	-	-	-	-	-		-				-	-	
1: Baseline Noise Level 2: Limit Level 3: Corrected Noise Level															

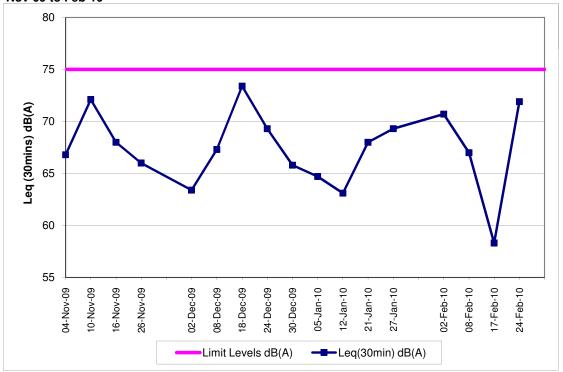
Note: The limit level of NSR1 is 65dB(A) during school examination period. Red Bold indicates an exceedance of Limit Level

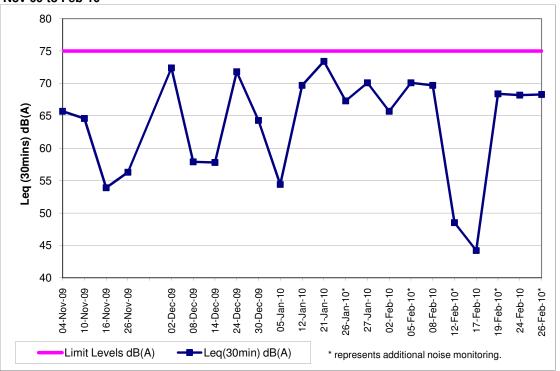
* means addional noise monitoring



Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Noise Monitoring Results at Sik Sik Yuen Ho Fung College (NSR 1) Nov-09 to Feb-10

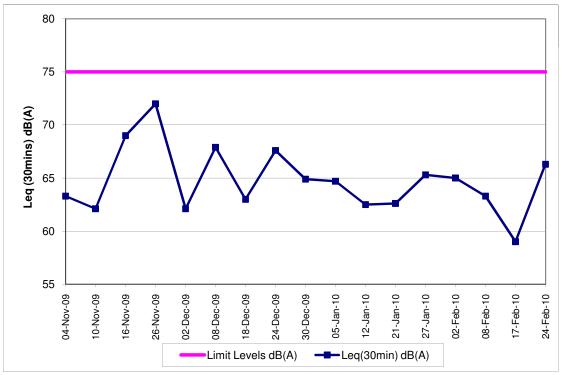
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Noise Monitoring Results at Hong Hoi Chee Hong Temple (NSR 3) Nov-09 to Feb-10

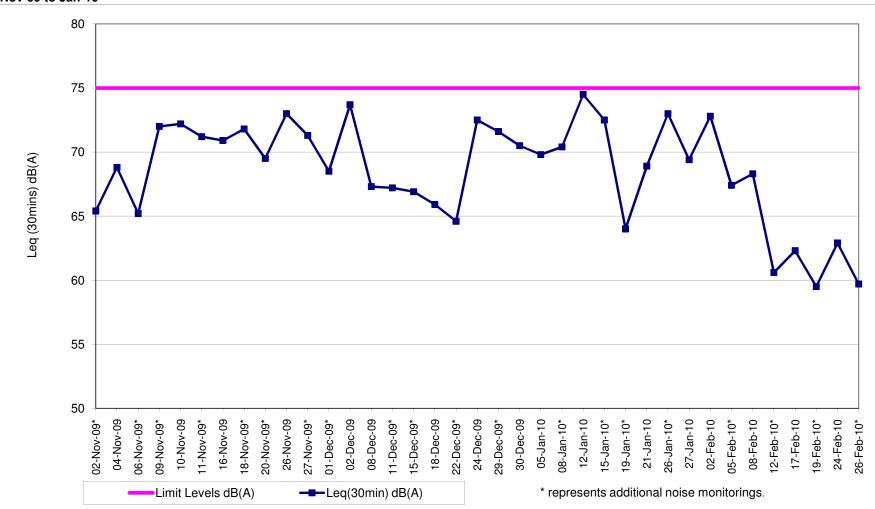




Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Noise Monitoring Results at Squatters (NSR 6) Nov-09 to Feb-10

Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Noise Monitoring Results at Long Beach Gardens (NSR 8) Nov-09 to Feb-10





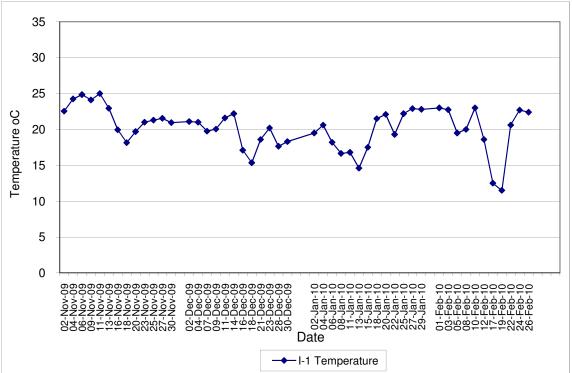
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Noise Monitoring Results at Greenview Terrace (NSR9) Nov-09 to Jan-10

Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel

Water Quality Impact Monitoring Results

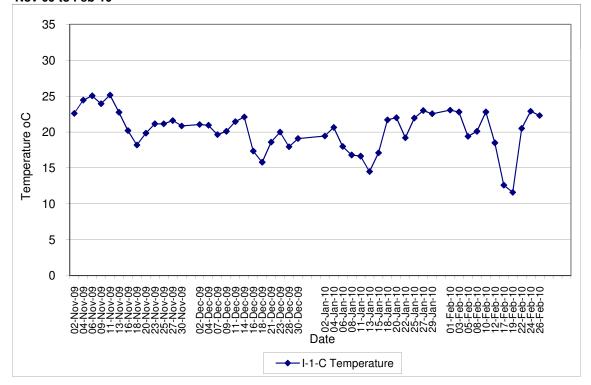
Monitoring Locations	Date	Start Time	Weather	Water Denth(m)	1	Temp 2	Ava	1	DO(mg/L) 2 Ava	Action/Limit Level of DO(mg/L)	pH	Avg	Tu	rbidity(NTU) 2 Av	Acti	tion/Limit vel of Tby	4	SS (mg/L) 2		Action/Limit Level of SS(mo/L)	Remarks:	Action to be taken
Sik Sik Yuen Ho Fung College	01-Feb-10		Sunny		23.00			6.71	6.76 6.74		7.42 7.46		7.02	7.10 7.0	6	reioi i by	8.20	9.40	8.80	Level of 33(Illg/L)	Drilling, Excavation by backhoe	Nil
l-1	03-Feb-10		Cloudy	<1	22.70	22.80	22.75	6.11	6.13 6.12		7.60 7.60	7.60	4.05	4.00 4.0	3		4.90	5.30	5.10		Breaking by backhoe, excavation work	Nil
	05-Feb-10	11:40	Cloudy	<1	19.50	19.50	19.50	6.67	6.62 6.65		7.48 7.48	7.48	3.90	3.76 3.8	3		6.00	6.80	6.40		Excavation work	The exceedance was due to natural variation and no action was undertaken
	08-Feb-10	11:43			20.00	20.00	20.00	5.56	5.62 5.59	_	7.64 7.64	7.04	0.54	6.50 6.5		-	3.60	4.00	3.80		Excavation work	The exceedance was due to natural variation and no action was
			Rainy	<1									6.54									undertaken.
	10-Feb-10	10:23	Fine	<1	23.00	23.00	23.00	5.84	5.99 5.92		7.63 7.64	7.64	8.62	8.77 8.7	0			5.10	6.05		Excavation work	Nil
	12-Feb-10 17-Feb-10	10:08	Bainy	<1	12.50	12.50	18.60	5.73	5.76 5.75 6.45 6.48	3.42 / 3.34	7.82 7.82	7.82	2.70	2.74 2.7 5.65 5.6	9.7	75 / 12.47	3.50	2.00 3.90	2.00 3.70	8.85 / 10.17	Hammer work	NII
	19-Feb-10	11:20	Rainy	<1	11.50	11.50	11.50	7.24	7.29 7.27		7.60 7.60	7.60	8.80	5.65 5.6 8.92 8.8	6		6.00	5.70	5.85		NI	Nil
	22-Feb-10	11:10	Cloudy	<1	20.60	20.60	20.60	5.63	5.68 5.66		7.51 7.51	7.51	7.12	7.24 7.1	8		5.80		5.55		Nil	Nil
	24-Feb-10	11:47	Cloudy		22.70				6.25 6.23 5.27 5.24		7.55 7.54 7.45 7.45			5.62 5.5 6.17 6.1		-	7.70	7.20	7.45 7.05		Crane operation	Nil
	- 20-Feb-10	-	-	-	- 22.40	- 22.40	- 22.40	- 5.20	5.27 5.29	_	7.45 7.45	7.45	-		9	-	-	7.90	7.05		Steel bending and erection	-
		-			-	-	-	-				-	-					-	-		-	-
		-			-	-	-	-										-	-		-	•
Sik Sik Yuen Ho Fung College I-1-C	01-Feb-10 03-Feb-10				23.10 22.80				6.80 6.84 6.20 6.22	_	7.40 7.40 7.68 7.68		7.15	7.23 7.1		-	9.10 5.30	9.00 5.60	9.05 5.45		NI	Nil
									6.68 6.72	_			3.96	3.86 3.9		-	4.80	4.80	4.80		Ni	Nil
	08-Feb-10	11:33	Rainy	<1	20.10	20.10	20.10	5.83	5.88 5.86		7.63 7.63	7.63	6.99	7.03 7.0	1		2.80	2.00	2.40		Nil	Nil
									5.82 5.84					8.94 8.9 2.90 2.8		_	5.80 2.00	5.10 2.00	5.45 2.00		Nil	NI
	12-Feb-10 17-Feb-10	09:55	Bainy	<1	18.50	18.50	18.50	6.11	6.16 6.14 6.83 6.79		7.89 7.89 7.35 7.35			2.90 2.8		-	3.90	4.00	3.95		N	NI
	19-Feb-10	11:10	Rainy	<1	11.60	11.60	11.60	7.75	7.79 7.77	- /-	7.60 7.60	7.60	8.97	9.07 9.0		- /-	6.30	6.60	6.45		Nil	NI
	22-Feb-10	11:00	Cloudy	<1	20.50	20.50	20.50	5.74	5.78 5.76		7.50 7.50	7.50	7.38	7.25 7.3	2		5.60		5.50		Nil	NI
	24-Feb-10	11:35	Cloudy	<1	22.90	22.90	22.90	6.08	6.11 6.10		7.50 7.50	7.50	5.77	5.92 5.8	5	_	7.30	7.10	7.20		NI	NI
	26-FeD-10 -	- 11:20		<1	22.30	- 22.30	- 22.30	5.17	5.23 5.20	-	7.45 7.45	/.45	6.18	6.22 6.2	U	-	7.40	7.00	7.20		-	-
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Hong Hoi Chee Hong Temple	01-Feb-10	10:05	Sunny	<1	23.40	23.40	23.40	6.57	6.61 6.59		7.51 7.52	7.52	2.02	2.07 2.0	5	_	2.00	2.00	2.00		Steel bending and erection	Nil
1-2	03-Feb-10	09:33	Cloudy	<1	19.30	22.30	19.25	5.5/	5.61 5.59 7.33 7.31	_	7.26 7.25	7.26	1.60	1.63 1.6 1.76 1.8	2	-	2.00	2.00			Excavation work	NII
	08-Feb-10	11:10	Rainy	<1	20.30	20.20	20.25	5.50	5.53 5.52		7.62 7.61	7.62	4 72	4 70 4 7	2		2.00	2.00	2.00		Excavation work	Nil
	10-Feb-10	09:47	Fine	<1	23.20	23.20	23.20	6.10	6.17 6.14		7.55 7.56	7.56	2.27	2.41 2.3	4		2.20	2.80	2.50		Excavation work	Nil
	12-Feb-10	10:35	Cloudy	<1	18.10	18.10	18.10	5.54	5.60 5.57		7.61 7.61	7.61	2.70	2.77 2.7	4	_	2.00	2.00	2.00		Crane operation	Nil
	17-Feb-10 19-Feb-10	10:49	Rainy	<1	12.00	12.00	12.00	6.49	6.31 6.28 6.57 6.53	3.66 / 3.63	7.30 7.30	7.30	3.07	1.62 1.5 3.18 3.1	6.0	.63 / 6.99	2.00	2.00	2.00 2.60	7.68 / 8.34	NI	NII
	22-Feb-10	10:27	Cloudy	<1	20.10	20.10	20.10	5.82	5.87 5.85		7.43 7.42	7.43	1.77	1.85 1.8	1		2.00		2.00		Nil	Nil
	24-Feb-10	11:10	Cloudy	<1	23.10	23.10	23.10	5.51	5.59 5.55		7.40 7.40	7.40	1.98	1.95 1.9	7		2.00	2.00	2.00		Steel bending and erection	Nil
	26-Feb-10	10:49	Cloudy	<1	23.00	23.00	23.00	5.18	5.10 5.14	_	7.61 7.61	7.61	2.10	2.14 2.1	2		2.00	2.00	2.00		Steel bending and erection	Nil
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Hong Hoi Chee Hong Temple	01-Feb-10								6.69 6.66	_	7.50 7.50			2.12 2.1		1	2.00	2.00	2.00		Nil	Nil
I-2-C	03-Feb-10	09:22	Cloudy	<1	22.20	22.20	22.20	5.80	5.73 5.77 6.98 6.90	_	7.27 7.27	7.27	1.60	1.66 1.6	3	-	2.00	2.00	2.00		Ni	Nil
									5.58 5.56					4.97 4.9		-		2.00	2.00			Nil
	10-Feb-10	09:36	Fine	<1	23.10	23.20	23.15	6.07	6.11 6.09		7.60 7.60	7.60	2.72	2.78 2.7	5		2.20	2.30	2.25		Ni	Nil
	12-Feb-10	10:25	Cloudy	<1	18.20	18.20	18.20	5.45	5.50 5.48					3.16 3.1			2.40		2.20		Nil	Nil
	17-Feb-10 19-Feb-10	10:38	Rainy	<1	11.80	11.80	11.80	6.36	6.40 6.38 6.80 6.82	- /-	7.30 7.30 7.50 7.49	7.30	1.59	1.63 1.6 3.22 3.1	1	- /-	2.00	2.00 2.60	2.00	- /-	NI	Nil
	22-Feb-10	10:28	Cloudy	<1	20.00	20.00	20.00	5.85	5.91 5.88	-	7.40 7.40	7.40	1.83	191 18	7	-		2.00	2.00		N	Nil
	24-Eeb-10	10:56	Cloudy	<1	23.00	23.00	23.00	5.60	5.64 5.62		7.40 7.41	7.41	2.18	2.23 2.2 2.23 2.2	1		2.00	2.00	2.00		Nil	Nil
	26-Feb-10	10:37	Cloudy	<1	23.00	23.00	23.00	5.31	5.37 5.34		7.50 7.50	7.50	2.18	2.23 2.2	1		2.00	2.00	2.00		Nil	Nil
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Squatters	01-Feb-10	09:25	Sunny	<1	23.30	23.30	23.30	7.00	7.05 7.03					2.26 2.2				2.00	2.00		Drilling, excavation work	Nil
1-3	03-Feb-10	09:00	Cloudy	<1	22.60	22.60	22.60	5.85	5.91 5.88	-	7.27 7.28	7.28	1.10	1.14 1.1 1.14 1.1	2		2.00	2.00	2.00		Dritting, excavation work	Nit
	08-Feb-10	10:30	Bainy	<1	19.20	19.20	19.20	5.45	6.92 6.89 5.49 5.47	-				1.14 1.1 3.70 3.6		-		2.00 2.60	2.00		Drilling, breaking by backhoe Excavation work, breaking by backhoe	Nii
	10-Feb-10	09:10	Fine	<1	24.00	24.00	24.00	5.93	5.98 5.96		7.45 7.46	7.46	3.27	3.24 3.2	6		2.80	2.90	2.85		Excavation work	Nil
	12-Feb-10	11:18	Cloudy	<1	18.30	18.20	18.25	5.46	5.41 5.44		7.50 7.49	7.50	1.72	1.79 1.7			2.00	2.00	2.00		Excavation work, breaking by backhoe	Nil
									6.40 6.38	3.65 / 3.51	7.27 7.26			1.82 1.8	21	.99/4.18	2.00	2.00	2.00	6.13/7.23	NI	Nil The exceedance was due to natural variation and no action was
	19-Feb-10	09:54	Rainy	<1	11.20	11.20	11.20	6.48	6.52 6.50	3.65 / 3.51	7.55 7.54	7.55	3.81	3.72 3.7	7 3.9	.99/4.18	3.40	4.20	3.80	6.13/7.23	Drilling, breaking by backhoe	I he exceedance was due to natural variation and no action was undertaken.
	22-Feb-10	09:37	Cloudy		20.20				6.13 6.11		7.27 7.27		2.01	2.11 2.0			2.00	2.00	2.00		Breaking by backhoe, excavation work	Nil
	24-Feb-10	10:25	Cloudy	<1	23.50	23.50	23.50	5.46	5.51 5.49		7.30 7.30	7.30	3.28	3.38 3.3	3		2.80	2.10	2.45		Breaking by backhoe, excavation work	Nil
	26-Feb-10	09:33	Cloudy	<1	23.20	23.20	23.20	5.25	5.31 5.28	-	7.63 7.62	7.63	1.80	1.84 1.8	2	-	2.00	2.00	2.00		Drilling, breaking by backhoe	Nil
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Squatters I-3-C	01-Feb-10	09:10	Sunny	<1	23.40	23.30	23.35	7.12	7.08 7.10	_	7.60 7.60	7.60	2.30	2.35 2.3	3		2.00	2.00	2.00		Nil	Nil
I-3-C	03-Feb-10	08:50	Cloudy	<1	22.70	22.60	22.65	6.00	5.95 5.98 6.79 6.77		7.29 7.28	7.29	1.15	1.22 1.1 1.18 1.1	9	_	2.00	2.00	2.00		NI	Nil
	08-Feb-10	10:48	Rainy	<1	20.40	19.00	20.40	5.56	6.79 6.77 5.59 5.58	-	7.38 7.38 7.47 7.48	7.48	3.74	1.18 1.1 3.85 3.8		-	2.00	2.00	2.00		Nil	Nil
									6.12 6.10					3.45 3.4		- F	3.80		3.15		Nil	Nil
	12-Feb-10	11:05	Cloudy	<1	18.00	18.00	18.00	5.48	5.41 5.45		7.50 7.51	7.51	1.81	1.86 1.8	4		2.00	2.00	2.00		Nil	Nil
	17-Feb-10	09:50	Rainy	<1	11.90	12.00	11.95		6.32 6.31 6.54 6.52	- /-	7.25 7.26	7.26	2.07	2.12 2.1 3.80 3.7	0	- /-	2.00	2.00	2.00	- /-	Nil	Nil
	22-Feb-10	09:42	Cloudy	<1	20.10	20.00	20.05	6.22	6.18 6.20	-	7.51 7.52 7.25 7.25			2.22 2.1		H	2.00	2.10	2.55		Nil	Nil
	24-Feb-10	10:10	Cloudy	<1	23.30	23.30	23.30	5.43	5.45 5.44		7.27 7.28	7.28	3.33	3.41 3.3	7		2.10	2.60	2.35		Nil	Nil
	26-Feb-10	09:22	Cloudy	<1	23.10	23.10	23.10	5.28	5.33 5.31		7.62 7.61	7.62	1.81	1.92 1.8	7		2.00	2.00	2.00		Nil	Nil
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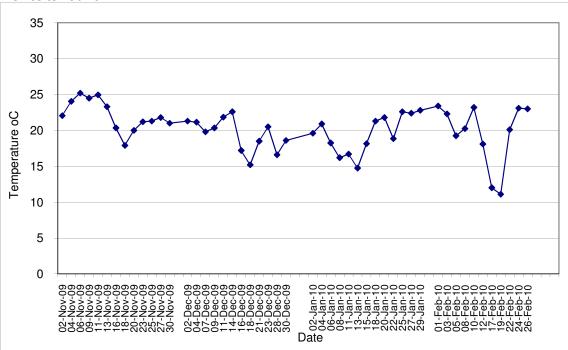
Note: Blue Italic indicates an exceedance of Action Level Red Bold indicates an exceedance of Limit Level



Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Sik Sik Yuen Ho Fung College (I-1) Nov-09 to Feb-10

Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Sik Sik Yuen Ho Fung College (I-1-C) Nov-09 to Feb-10

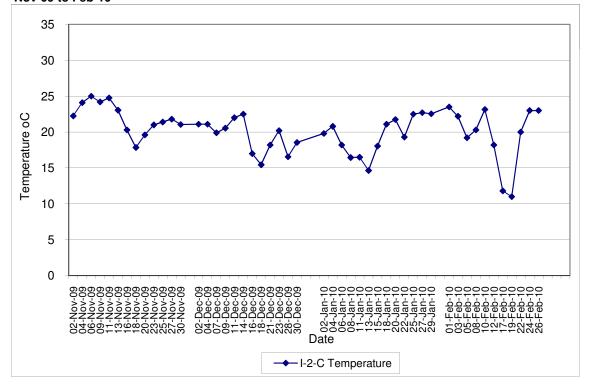


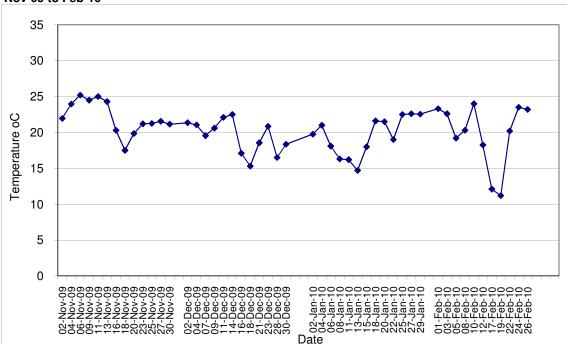


----I-2 Temperature

Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Hong Hoi Chee Hong Temple (I-2) Nov-09 to Feb-10

Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Hong Hoi Chee Hong Temple (I-2-C) Nov-09 to Feb-10

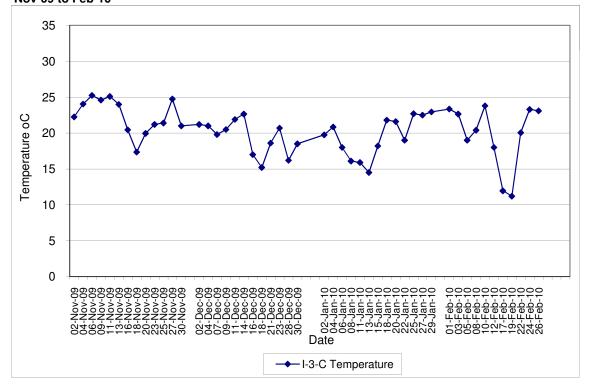


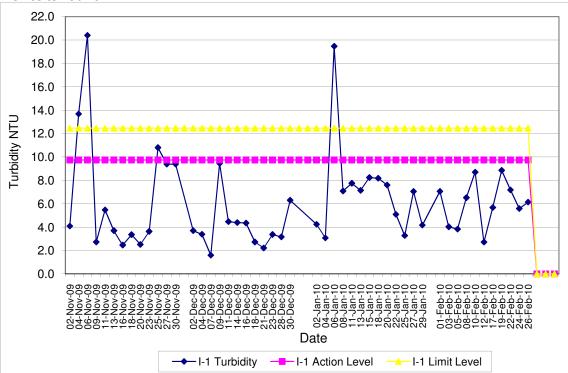


----I-3 Temperature

Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Squatters (I-3) Nov-09 to Feb-10

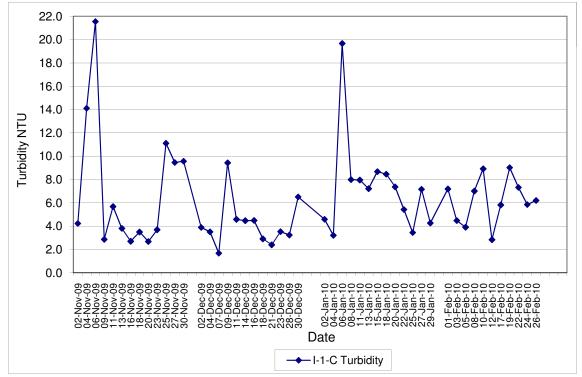
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Squatters (I-3-C) Nov-09 to Feb-10

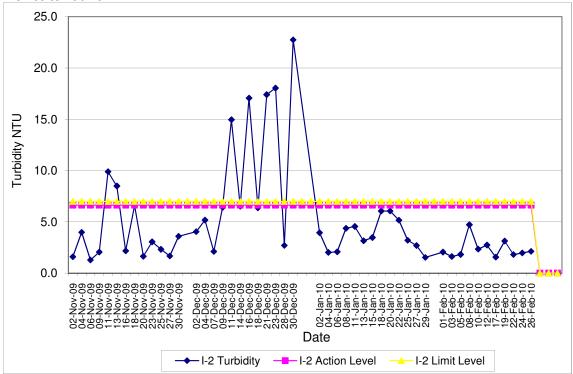




Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Sik Sik Yuen Ho Fung College (I-1) Nov-09 to Feb-10

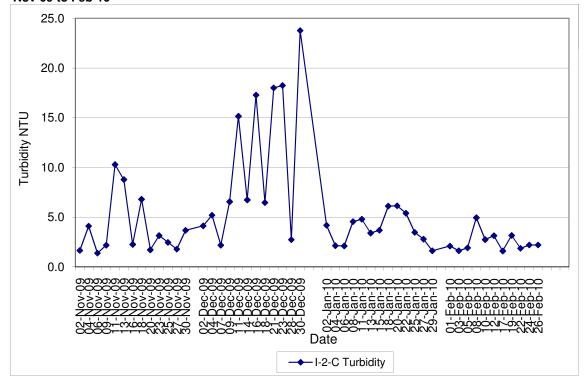
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Sik Sik Yuen Ho Fung College (I-1-C) Nov-09 to Feb-10



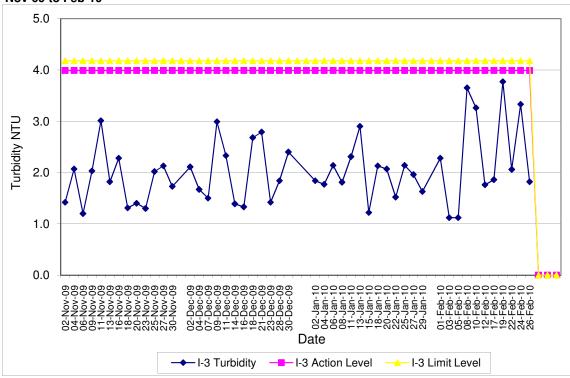


Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Hong Hoi Chee Hong Temple (I-2) Nov-09 to Feb-10

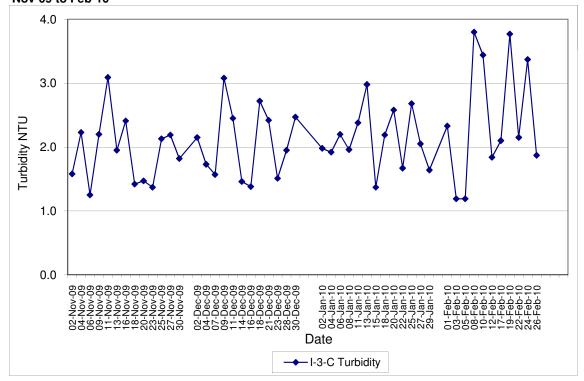
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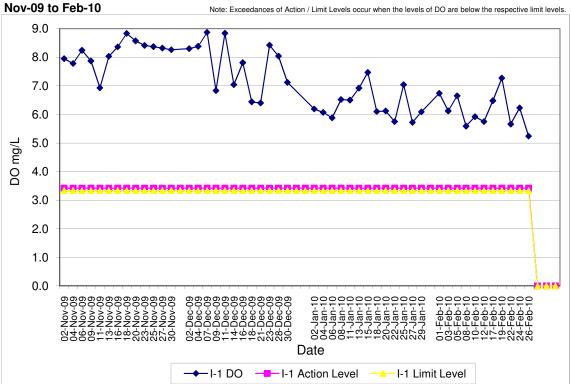
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Squatters (I-3) Nov-09 to Feb-10



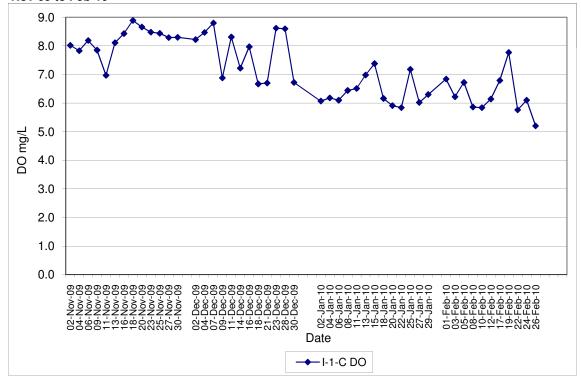
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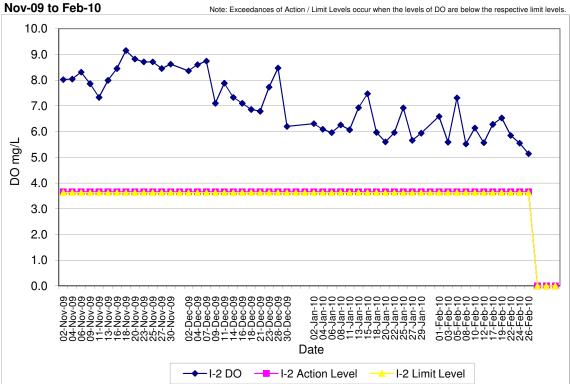
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Sik Sik Yuen Ho Fung College (I-1)



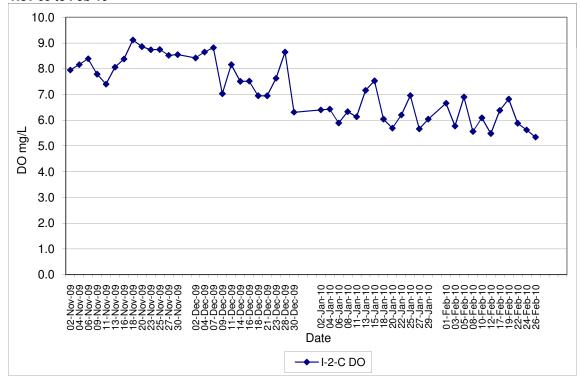
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Sik Sik Yuen Ho Fung College (I-1-C) Nov-09 to Feb-10



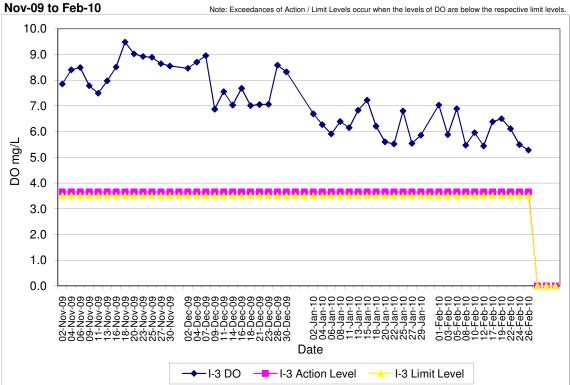
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Hong Hoi Chee Hong Temple (I-2)



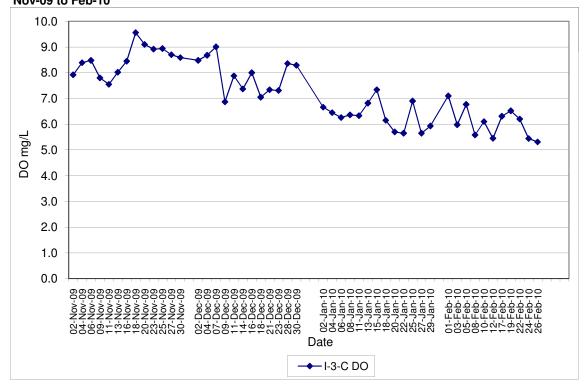
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Hong Hoi Chee Hong Temple (I-2-C) Nov-09 to Feb-10

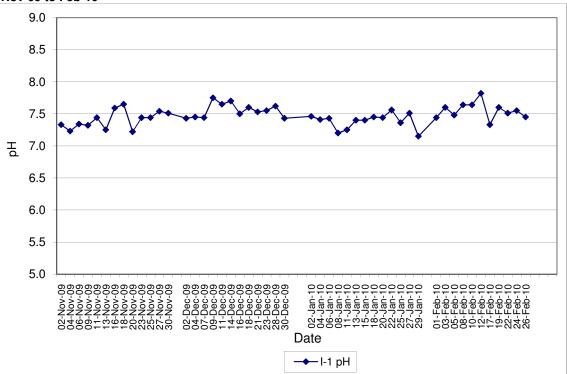


Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Squatters (I-3)



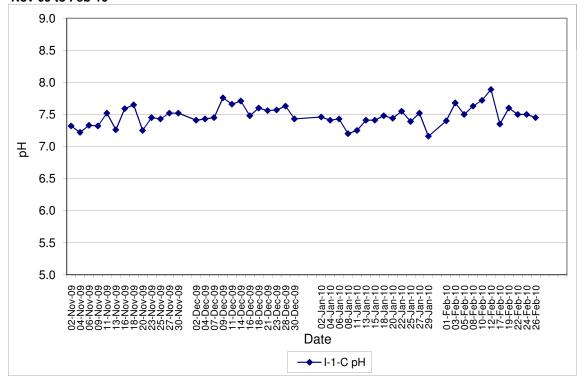
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Squatters (I-3-C) Nov-09 to Feb-10

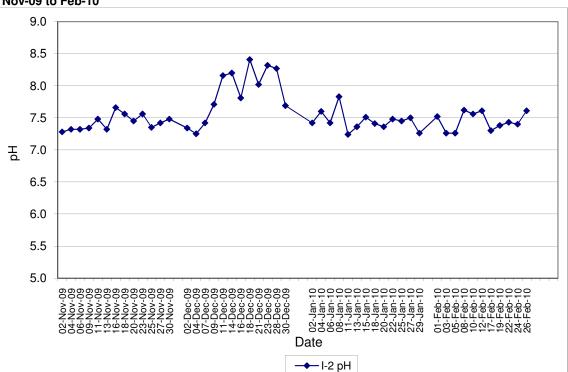




Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Sik Sik Yuen Ho Fung College (I-1) Nov-09 to Feb-10

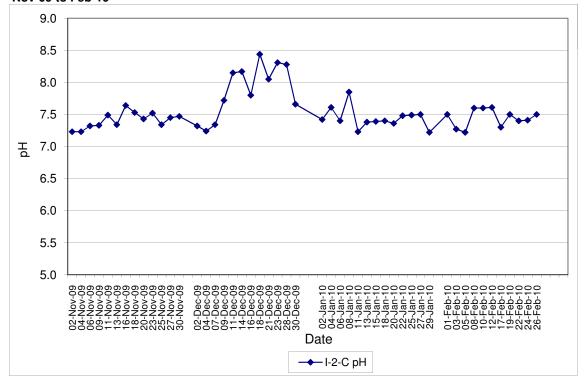
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Sik Sik Yuen Ho Fung College (I-1-C) Nov-09 to Feb-10

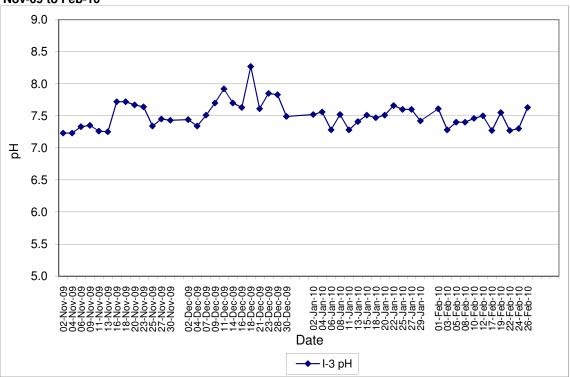




Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Hong Hoi Chee Hong Temple (I-2) Nov-09 to Feb-10

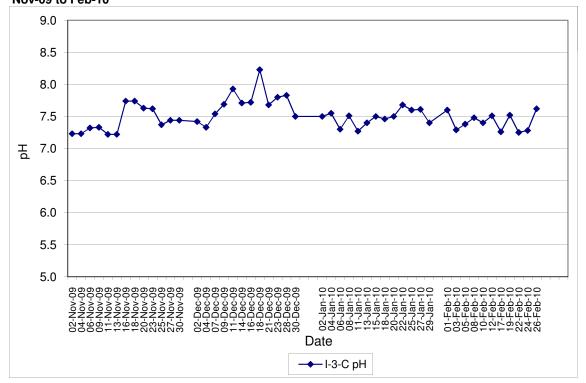
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Hong Hoi Chee Hong Temple (I-2-C) Nov-09 to Feb-10

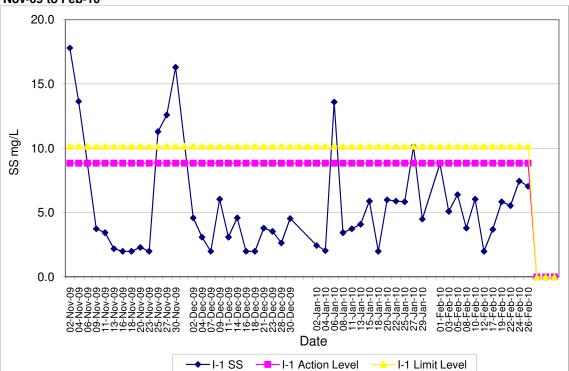




Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Squatters (I-3) Nov-09 to Feb-10

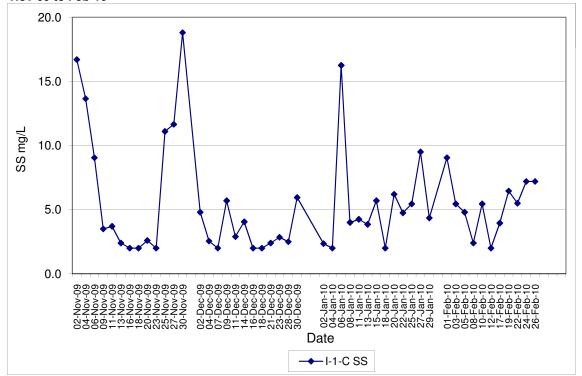
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Squatters (I-3-C) Nov-09 to Feb-10

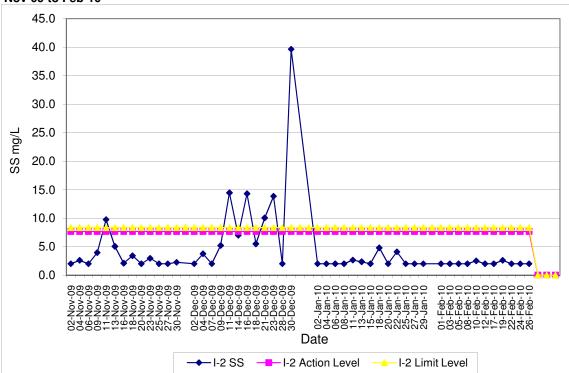




Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Sik Sik Yuen Ho Fung College (I-1) Nov-09 to Feb-10

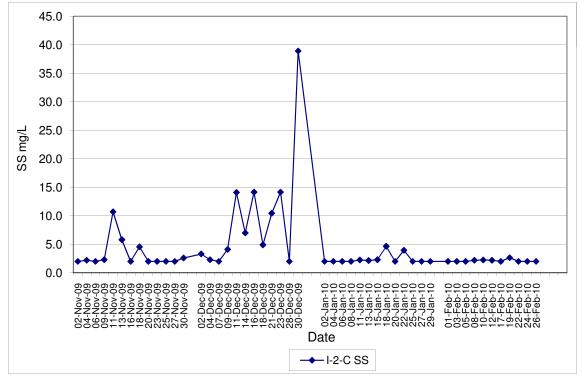
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Sik Sik Yuen Ho Fung College (I-1-C) Nov-09 to Feb-10

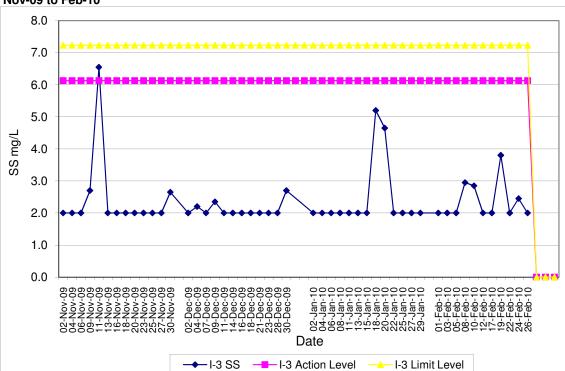




Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Hong Hoi Chee Hong Temple (I-2) Nov-09 to Feb-10

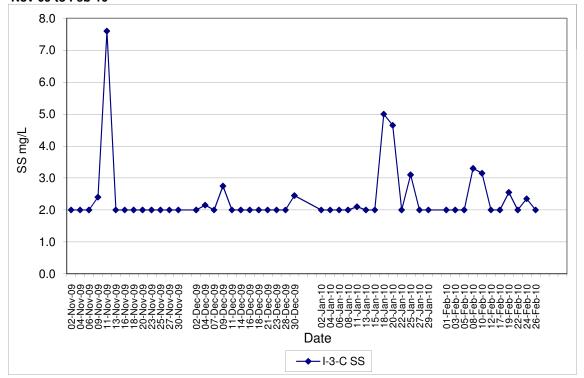
Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Hong Hoi Chee Hong Temple (I-2-C) Nov-09 to Feb-10





Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Squatters (I-3) Nov-09 to Feb-10

Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel Water Quality Results at Squatters (I-3-C) Nov-09 to Feb-10



Appendix J

Interim Notifications of Environmental Quality Limits Exceedances

Interim Notifications of Environmental Quality Limits Exceedances

Incident Report on Action Level or Limit Level Non-compliance

Project	Tsuen Wan Drainage Tunnel
Date	05-Feb-10
Time	11:40 AM
Monitoring Location	Sik Sik Yuen Ho Fung College (I-1)
Parameter	Suspended Solid
Action & Limit Levels	8.85 / 10.17
Measured Level	6.40 (higher than 130% of control station's SS)
Possible reason for Action or Limit Level Non-compliance	A lower SS level of 4.8 is recorded at Control Station (I-1-C)
Actions taken / to be taken	The measured SS level was below baseline Action/Limit Levels and was within the range of baseline SS concentration (1-10.5mg/L). Construction activities, such as disposal of C&D materials, and site cleaning and tidying, were undertaken during the measurement and no direct disturbance was observed from the site. Thus, the exceedance is considered to be natural variation and no action should be taken.
Remarks	Following mitigation measures were provided: (1) sandbags were used at the gap of the bridge to avoid wastewater from site activities directly running down to the channel of I-1. (2) Water quality mitigation measures were implemented at working area and no wastewater was observed down to the channel-I1. (3) Sand/silts removal facilites was installed at the location of I-1.

Prepared by:

Terence Kong

Designation:

renender heng

Environmental Team Leader

Signature:

len tog

Date:

11-Feb-10

Photographic record for exceedance of Suspended Solid recorded at Sik Sik Yuen Ho Fung College (I-1) on 05-Feb-10



Site photo



Interim Notifications of Environmental Quality Limits Exceedances

Incident Report on Action Level or Limit Level Non-compliance

Project	Tsuen Wan Drainage Tunnel
Date	08-Feb-10
Time	11:43 AM
Monitoring Location	Sik Sik Yuen Ho Fung College (I-1)
Parameter	Suspended Solid
Action & Limit Levels	8.85 / 10.17
Measured Level	3.80 (higher than 130% of control station's SS)
Possible reason for Action or Limit Level Non-compliance	A lower SS level of 2.40 is recorded at Control Station (I-1-C)
Actions taken / to be taken	The measured SS level was below baseline Action/Limit Levels and was within the range of baseline SS concentration (1-10.5mg/L). Construction activities, such as disposal of C&D materials, and site cleaning and tidying, were undertaken during the measurement and no direct disturbance was observed from the site. Thus, the exceedance is considered to be natural variation and no action should be taken.
Remarks	Following mitigation measures were provided: (1) sandbags were used at the gap of the bridge to avoid wastewater from site activities directly running down to the channel of I-1. (2) Water quality mitigation measures were implemented at working area-I1. (3) Sand/silts removal facilites was installed at the location of I-1.

Prepared by:

Terence Kong

Designation:

Environmental Team Leader

Signature:

len tog

Date:

18-Feb-10

Photographic record for exceedance of Suspended Solid recorded at Sik Sik Yuen Ho Fung College (I-1) on 08-Feb-10



Site photo



Interim Notifications of Environmental Quality Limits Exceedances

Incident Report on Action Level or Limit Level Non-compliance

Project	Tsuen Wan Drainage Tunnel
Date	19-Feb-10
Time	9:54 AM
Monitoring Location	Squatters (I-3)
Parameter	Suspended Solid
Action & Limit Levels	6.13 / 7.23
Measured Level	3.80 (higher than 130% of control station's SS)
Possible reason for Action or Limit Level Non-compliance	A lower SS level of 2.55 is recorded at Control Station (I-3-C).
Actions taken / to be taken	The measured SS level was below baseline Action Level and below Limit Level, and it was within the range of baseline SS concentration (1 -7.5 mg/L). Only site cleaning and tidying was undertaken during the measurement and no direct disturbance was observed from the site. Thus, the exceedance is considered to be contributed by natural variation and no action should be required.
Remarks	The following mitigation measures were provided: (1) Sedimentation Pond and Sand/silts removal facilities was installed at the location of I-3 in order to treat the wastewater from construction activities . (2) Silt removal facilities were checked and maintained regularly to ensure that they are functioned properly . (3) Sandbags were used to place within the site in order to segregate the watercourses and the working area.

Prepared by:

Terence Kong

Designation:

Environmental Team Leader

Signature:

len tong

Date:

01-Mar-10

Photographic record for exceedance of Suspended Solid recorded at Squatters (I-3) on 19-Feb-10



Site photo







Photo taken at I-3-C

Appendix K

Complaint Log

COMPLAINT LOG

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
	CIR-001	9 March 2009 at Outfall	Public through EPD	EPD has received a complaint (EPD ref: EP3/N22/RW/04846- 09) regarding to muddy effluent discharged from the outfall of the construction site from a public on 9 March 2009. Site investigation was also carried out by EPD with the Contractor on the same day.	Findings/ ObservationsIn the afternoon on 9 March 2009, the Contractor was carrying out regular maintenance for removing silt accumulated in the wastewater treatment plant. During the maintenance works, some residual silt inside the plant was accidentally leaked out to the outfall discharge outlet. The reason was that a flexible pipe for disposing silt was found connecting to the concrete platform of the outfall discharge outlet. Conclusion/Remedial Action The complaint was valid and it was due to maintenance works at the wastewater treatment plant at the outfall area. The contractor had cleaned up the silt at discharge outlet and the channel at the outfall area on 12 March 2009 as shown in the attached photo. The ET will closely inspect the discharge outlet and the channel during the routine site inspections and provide advice to the Contractor. The Contractor was also advised to provide mitigation measures during any occasion of the maintenance work on the wastewater treatment plant. The discharge pipe of the treatment plant should be plugged and ensure not functioned when carrying out maintenance works on the wastewater treatment plant in order to prevent the discharge of silt or muddy water to the outlet.Flexible pipe for discharge of sludge should not be placed on the concrete platform under the outfall discharge outlet. For disposal of slit or sludge in the	Closed

Contract No. DC/2007/12 Design and Construction of Tsuen Drainage Tunnel Environmental Monitoring and Audit

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
					wastewater treatment plant, tanker should be used.	
2	CIR-002	8 May 2009 at Outfall	Public through EPD	EPD has received a complaint (EPD ref: EP3/N22/RW/09755- 09) regarding to construction dust from the outfall construction site on 8 May 2009. Site investigation was also carried out by EPD with the Contractor on 14 May 2009.	 <u>Findings/ Observations</u> Regular 1-hour TSP monitoring, in accordance with EM&A Manual, is performed by Environmental Team. The monitoring station concerned is ASR9 (i.e. at the podium level of Greenview Terrace facing to the construction site). The closest date for the 1-hour TSP concentration monitoring was on 6 May 2009 and 12 May 2009 at Greenview Terrace, ASR9. Soil nailing works and loading & unloading excavated materials were observed during monitoring. In accordance with the EM&A Manual and the Baseline Monitoring Report, all 1-hour TSP concentrations at ASR9 were below the established Action and Limit Levels. No exceedance was recorded on 6 and 12 May 2009. The contractor and the environmental team were also undertaken site investigation on the subject area in response to the complaint. It was confirmed that the air quality mitigation measures as recommended in EIA have been provided by the Contractor. The mitigation measures are as follows: Water spraying was provided to the exposed surface. Several automatic sprinklers were provided at the outfall construction site for water spraying of the haul road. Water spraying was provided during dust generating works (e.g. rock breaking and soil nailing works). 	Closed
					 response to the complaint. It was confirmed that air quality mitigation measures as recommended EIA have been provided by the Contractor. The mitigation measures are as follows: Water spraying was provided to the exposisurface. Several automatic sprinklers were provided at outfall construction site for water spraying of haul road. Water spraying was provided during d generating works (e.g. rock breaking and s nailing works). 	the in The sed the the ust soil Its,

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
					action & limit level exceedance on construction dust are identified. Air quality mitigation measures as recommended in EIA have been implemented in order to control and minimise the air quality impact and nuisance arising from the construction activities. Nevertheless, in view of the recent dry and sunny weather, the haul road and the exposed area would be dry very quickly. The Contractor was recommended to provide more frequent water spraying especially in the dry and sunny weather.	
3	CIR-003	14 May 2009 at Outfall	Public through EPD	EPD has received a complaint (EPD ref: EP/RW/080206) regarding to daytime construction rock breaking at 7:15 am and dusty at the outfall construction site on 14 May 2009.	The closest date to the complaint for the 1-hour TSP monitoring & daytime construction noise monitoring was on 12, 18 and 27 May 2009 at Greenview Terrace, ASR9 and NSR9. Soil nailing, excavation, rock breaking, loading and unloading the materials were observed during monitoring period. The measured noise levels complied with the limit level in accordance with the EIAO-TM. All 1-hour TSP concentrations at ASR9 were below the established Action and Limit Levels. No 1-hour TSP exceedance was recorded. The contractor and the environmental team were also undertaken site investigation on the subject area in response to the complaint. Air quality mitigation measures as recommended in EIA have been implemented by the Contractor. However, noise mitigation measures could be further improved. Based on our site inspection and monitoring results, the complaint for dust is considered not justifiable since no action & limit level exceedance on construction dust is identified. Air quality mitigation measures as recommended in EIA have also been implemented in order to control and minimise the air	Closed

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
					 quality impact arising from the construction activities. In view of the recent dry and sunny weather, the haul road and the exposed area would be dry very quickly. The Contractor was recommended to enhance water spraying especially in the dry and sunny weather. On the other hand, the complaint for noise is considered due to works and the Contractor was agreed to improve the on-site noise mitigation measures such as the following measures. ET's site inspection and the joint inspection with relevant parties was conducted on 29 May 2009 and 4 June 2009 respectively to confirm all the below measures have been implemented. For the idling plant, it should be switched off to reduce noise level generated. The sound insulation sheets and noise insulation materials should be placed to enclose the breaking tip tightly and also aside or surrounding the breaking activities as recommended in the following photos 1-3 in noise mitigation measures. Noise monitoring frequency was increased in order to check the effectiveness of the mitigation measures. The additional measurement was taken on 27 May, 8 June, 10 June and 12 June 2009 after all the measures implemented. The noise levels (L_{eq. 30 min}) were 70.9 dB (A), 70.5 dB (A), 70.3 dB (A) and 70.3 dB (A) respectively, which comply with the limit level in accordance with the EIAO-TM. Soil nailing, excavation and rock breaking were observed during monitoring period. The measures were well in place and seemed effective during the measurement. 	

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
4	CIR-004	10 July 2009 at Outfall	Public through EPD	EPD has received a complaint (EPD ref: EP3/N22/RW/15137- 09) regarding to construction dust from the outfall construction site on 10 July 2009.	 <u>Findings/ Observations</u> 1-hour TSP concentration monitoring was on 10 July 2009 at Greenview Terrace, ASR9. Soil nailing works, concrete breaking, excavation and loading & unloading excavated materials were observed during monitoring. All 1-hour TSP concentrations at ASR9 were below the established Action and Limit Levels. No exceedance was recorded on 10 July 2009. The contractor and the environmental team were also undertaken site investigation on the subject area in response to the complaint. It was confirmed that the air quality mitigation measures as recommended in EIA have been provided by the Contractor. The mitigation measures are as follows: Water spraying was provided to the exposed surface. Automatic sprinklers were provided at the outfall construction site for water spraying of the haul road. Water spraying was provided during dust generating works (e.g. rock breaking and soil nailing works). Tarpaulin was used for covering the dusty works in the Portal area. <u>Conclusion/Remedial Action</u> The complaint is considered not justifiable since no action & limit level exceedance on construction dust are identified 	Closed
5&6	CIR-005	29 July 2009 & 11 August 2009 at Outfall	Public through SOR	SOR has received two complaints (SOR ref: (DC/2007/12)/M45/500/02480, 02500) from Greenview Terrace	<u>Findings/ Observations</u> Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials were generally observed during monitoring period in July and August 2009. According to the noise monitoring results from	Same Case with Complaint No. 11

Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
			regarding to daytime construction noise exceedance recorded at NSR9 on 8, 22, 23, 27 and 29 July 2009 and a large amount dust generated at the outfall construction site. The complaint dates were corresponded to 29 July and 11 August 2009.	 6 July 2009 to 31 August 2009 at NSR 9, the measured noise levels complied with the limit level in accordance with the EIAO-TM. All 1-hour TSP concentrations at ASR9 were below the established Action and Limit Levels from 6 July 2009 to 25 August 2009. <u>Conclusion/Remedial Action</u> The dust complaint on 22 July 2009 was due to the soil nailing works. The Contractor was reminded enhance the dust mitigation measures during soil nailing works. A designated staff was provided to spray water continuously during soil nailing. A nylon bag was placed on the drilling hole and keeping wet to suppress dust. A sprinkler was added at the hillside of the site and water spraying was provided continuously during operation of drilling to suppress dust. The documented complaint for noise is considered to trigger the action level and the Contractor was also reminded to enhance the on-site noise mitigation measures are proposed as follows: A staff from the Contractor would re-schedule the noisy plants to mitigate the escalation of noise level. The designated staff was reminded to record all the weather condition including raining and wind speed. Tools box talk for the Contractor's Team was carried out for reminding that the movable barrier should be placed to the breaking activities as much as possible. Movable noise barriers were placed on site and the 	
	Log Ref.	Log Ref. Date/Location	Log Ref. Date/Location Complainant	regarding to daytime construction noise exceedance recorded at NSR9 on 8, 22, 23, 27 and 29 July 2009 and a large amount dust generated at the outfall construction site. The complaint dates were corresponded to 29	 regarding to daytime construction noise exceedance recorded at NSR 9 on 8, 22, 32, 7 and 29 July 2009 and a large amount dust generated at the outfall construction site. buly 2009 and a large amount dust generated at the outfall construction site. buly and 11 August 2009. conclusion/Remedial Action The complaint dates were corresponded to 29 July and 11 August 2009. Conclusion/Remedial Action The Contractor was reminded enhance the dust mitigation measures during soil nailing works. The Contractor was reminded to spray water continuously during soil nailing. A nylon bag was placed on the drilling hole and keeping wet to suppress dust. A sprinkler was added at the hillside of the site and water spraying was provided continuously during operation of drilling hole and keeping wet to suppress dust. The documented complaint for noise is considered to the frager the action level and the Contractor was designated to take the reaction of unclass. The contractor was designated to take the reaction got and the contractor was designated to take the reaction got and the contractor was designated to take the reading of Leq (5mins) at the root of Greenview Terrace. In case of the Leq (5min) exceed 73 dB(A), the Contractor was designated to take the weather condition including raining and wind speed. Tools box talk for the Contractor's Team was carried out for reminding that the movable barrier should be placed to the breaking activities as much as possible.

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
					 movable noise barriers were also modified. Existing 25 ton rock breaker had been replaced by the another breaker. The breaking tap of the 25 ton rock breaker had been replaced by another breaking tap. A joint filler wall was installed at the vertical face of westbound to mitigate the noise rebound from the vertical face to high level of Greenview Terrace. From the additional monitoring data and monitoring data under regular EM&A requirements, noise level (L_{eq, 30 min}) between 6 July to 31 August 2009 was in the range of 71 to 74 dB(A) to the nearest integer. The noise monitoring frequency was maintained in twice per week to check whether the mitigation measures are effective. From the information of the Contractor, all the mitigation measures were implemented on 31 August 2009. Noise levels (L_{eq, 30 min}) were also re-measured after the implementation of the mitigation measures. Noise level (L_{eq, 30 min}) from 4 Sep to 28 Sep 2009 was in the range of 70 to 73 dB(A) to the nearest integer after the implementation of the mitigation measures. In our investigation, there was no exceedance of the measured noise level at Greenview Terrace. 	
7	CIR-006	12 August 2009 at Outfall	Public through SOR	SOR has received a complaint (SOR ref: (DC/2007/12)/M45/500/02527) from Greenview Terrace, via Apple Daily regarding to daytime construction noise level (L _{eq(30min)}) was sometimes more than 80 dB(A) and a large amount dust	<u>Findings/ Observations</u> Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials were generally observed during monitoring period in July and August 2009. According to the noise monitoring results from 6 July 2009 to 31 August 2009 at NSR 9, the measured noise levels complied with the limit level in accordance with the EIAO-TM. All 1-hour TSP concentrations at ASR9 were below the established	Closed

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
				generated at the outfall construction site. The complaint date was corresponded to 12 August 2009.	 Action and Limit Levels from 6 July 2009 to 25 August 2009. <u>Conclusion/Remedial Action</u> The dust complaint was considered not justifiable since no action & limit level exceedance on construction dust were identified. However, it was a recurrent case from Greenview Terrace. The Contractor was recommended to enhance water spraying continuously especially in rock breaking activities. On the other hand, there was no noise levels (L_{eq(30min)}) from the measurement taken from ET was more than 80 dB(A). However, it was a recurrent case from Greenview Terrace. The Contractor was reminded to enhance the on-site noise mitigation measures. The enhanced mitigation measures are proposed as follows: A staff from the Contractor was designated to take the reading of Leq (5mins) at the roof of Greenview Terrace. In case of the Leq (5min) exceed 73 dB(A), the Contractor would re-schedule the noisy plants to mitigate the escalation of noise level. The designated staff was reminded to record all the weather condition including raining and wind speed. Tools box talk for the Contractor's Team was carried out for reminding that the movable barrier should be placed to the breaking activities as much as possible. Movable noise barriers were placed on site and the movable noise barriers were also modified. Existing 25 ton rock breaker had been replaced by the another breaker. The breaking tap of the 25 ton rock breaker had 	

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
					 been replaced by another breaking tap. A joint filler wall was installed at the vertical face of westbound to mitigate the noise rebound from the vertical face to high level of Greenview Terrace. From the additional monitoring data and monitoring data under regular EM&A requirements, noise level (L_{eq, 30 min}) from 6 July to 31 August 2009 was in the range of 71 to 74 dB(A) to the nearest integer. The noise monitoring frequency was maintained in twice per week to check whether the mitigation measures are effective. From the information of the Contractor, all the mitigation measures were implemented on 31 August 2009. Noise levels (L_{eq, 30 min}) were also remeasured after the implementation of the mitigation measures. Noise level (L_{eq, 30 min}) from 4 Sep to 28 Sep 2009 was in the range of 70 to 73 dB(A) to the nearest integer after the implementation of the mitigation measures. 	
8	CIR-007	14 August 2009 at Outfall	Public through EPD	EPD has received a complaint (EPD ref: EP3/N22/RW/17978- 09) from Greenview Terrace regarding to daytime construction noise from the outfall construction site. The complaint date was corresponded to 14 August 2009.	<u>Findings/ Observations</u> Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials were generally observed during monitoring period in July and August 2009. According to the noise monitoring results from 6 July 2009 to 31 August 2009 at NSR 9, the measured noise levels complied with the limit level in accordance with the EIAO-TM. <u>Conclusion/Remedial Action</u> This was a recurrent case from Greenview Terrace. The documented complaint for noise is considered to trigger the action level and the Contractor was reminded to enhance the on-site noise mitigation measures continuously. The enhanced mitigation measures are proposed as follows:	Same Case with Complaint No. 11

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
					 A staff from the Contractor was designated to take the reading of Leq (5mins) at the roof of Greenview Terrace. In case of the Leq (5min) exceed 73 dB(A), the Contractor would re-schedule the noisy plants to mitigate the escalation of noise level. The designated staff was reminded to record all the weather condition including raining and wind speed. Tools box talk for the Contractor's Team was carried out for reminding that the movable barrier should be placed to the breaking activities as much as possible. Movable noise barriers were placed on site and the movable noise barriers were also modified. Existing 25 ton rock breaker had been replaced by the another breaker. The breaking tap of the 25 ton rock breaker had been replaced by another breaking tap. A joint filler wall was installed at the vertical face of westbound to mitigate the noise rebound from the vertical face to high level of Greenview Terrace. From the additional monitoring data and monitoring data under regular EM&A requirements, noise level (Leq, 30 min) from 6 July to 31 August 2009 was in the range of 71 to 74 dB(A) to the nearest integer. The noise monitoring frequency would be maintained in twice per week to check whether the mitigation measures were implemented on 31 August 2009. Noise levels (L_{eq, 30 min}) were also re-measured after the implementation of the mitigation measures. Noise level (L_{eq, 30 min}) from 4 Sep to 28 Sep 2009 was in the range of 70 to 73 	

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
					dB(A) to the nearest integer after the implementation of the mitigation measures.	
9	CIR-008	17 August 2009 at Portion D of the Site	Public through SOR	SOR has received a complaint (SOR ref:(DC/2007/12)/M45/500/02546) from Long Bench Garden regarding to noise nuisance generated from the daytime construction work (rock-breaking) in Portion D of the Site. The complaint date was corresponded to 17 August 2009.	 <u>Findings/ Observations</u> Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials were generally observed during monitoring period in August 2009. The monitoring results from 3 August 2009 to 31 August 2009 at NSR 8 showed the measured noise levels complied with the limit level in accordance with the EIAO-TM. The contractor and the environmental team were also undertaken site investigation on the subject area in response to the complaint. Noise mitigation measures should be enhanced continuously due to this complaint. <u>Conclusion/Proposed Action</u> The documented complaint for noise is considered to trigger the action level and the Contractor was reminded to enhance the on-site noise mitigation measures are recommended as follows: Movable noise barriers had been placed towards the direction of Long Bench Garden, particular for the pipe pile works in the portal. Tools box talk for construction team was carried out for reminding that the movable barrier should be placed to the breaking activities as much as possible. The existing noisy 25 ton rock breaker had been replaced by the other breaker. A joint filler wall had been fixed on the vertical face of west bound to absorb the noise generated towards Long Beach Garden. 	Closed

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
					week by ET due to this complaint. The measured noise levels were complied with the limit level in accordance with the EIAO-TM. No further complaint was received from Long Bench Garden within the reporting month.	
10	CIR-009	22 August 2009 at Outfall	Public through SOR	A complaint (SOR ref: (DC/2007/12)/M45/500/02628) was received from Greenview Terrace regarding to daytime construction noise level (Leq(30min)) was sometimes exceeded 75 dB(A) at the outfall construction site. The complaint date was corresponded to 22 August 2009.	 <u>Findings/ Observations</u> Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials were generally observed during monitoring period in July and August 2009. The monitoring results from 6 July 2009 to 31 August 2009 at NSR 9 showed the measured noise levels complied with the limit level in accordance with the EIAO-TM. The contractor and the environmental team were also undertaken site investigation on the subject area in response to the complaint. Noise mitigation measures should be enhanced continuously due to this complaint. <u>Conclusion/Proposed Action</u> The documented complaint for noise is considered to trigger the action level and the Contractor was reminded to enhance the on-site noise mitigation measures are recommended as follows: A staff from the Contractor was designated to take the reading of Leq (5mins) at the roof of Greenview Terrace. In case of the Leq (5min) exceed 73 dB(A), the Contractor would re-schedule the noisy plants to mitigate the escalation of noise level. The designated staff was reminded to record all the weather condition including raining and wind speed. Tools box talk for the Contractor's Team was carried out for reminding that the movable barrier 	Same Case with Complaint No. 11

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
					 should be placed to the breaking activities as much as possible. Movable noise barriers were placed on site and the movable noise barriers were also modified. Existing 25 ton rock breaker had been replaced by the another breaker. The breaking tap of the 25 ton rock breaker had been replaced by another breaking tap. A joint filler wall was installed at the vertical face of westbound to mitigate the noise rebound from the vertical face to high level of Greenview Terrace. From the additional monitoring data and monitoring data under regular EM&A requirements, noise level (L_{eq, 30 min}) from 6 July to 31 August 2009 was in the range of 71 to 74 dB(A) to the nearest integer. The noise monitoring frequency was maintained in twice per week to check whether the mitigation measures are effective. From the information of the Contractor, all the mitigation measures were implemented on 31 August 2009. Noise levels (L_{eq, 30 min}) from 4 Sep to 28 Sep 2009 was in the range of 70 to 73 dB(A) to the nearest integer after the implementation of the mitigation measures. In our investigation, there was no exceedance of the measured noise level at Greenview Terrace. 	
11	CIR-010	24 September 2009 at Outfall	Public through SOR	A complaint (SOR ref: (DC/2007/12)/M45/500/02749) was received from Greenview Terrace regarding to daytime construction noise level	<u>Findings/ Observations</u> Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials were generally observed during monitoring period in July and September 2009. The monitoring results from 6 July 2009 to 29 October 2009 at NSR 9 showed the	Closed

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
				(Leq(30min)) was sometimes exceeded 75 dB(A) at the outfall construction site.	 measured noise levels complied with the limit level in accordance with the EIAO-TM. The contractor and the environmental team were also undertaken site investigation on the subject area in response to the complaint. Noise mitigation measures have been enhanced continuously due to this complaint. Conclusion/Proposed Action The documented complaint for noise is considered to trigger the action level and the Contractor was reminded to enhance the on-site noise mitigation measures continuously. The enhanced mitigation measures were implemented as follows: A staff from the Contractor was designated to take the reading of Leq (5mins) at the roof of Greenview Terrace. In case of the Leq (5min) exceed 73 dB(A), the Contractor would re-schedule the noisy plants to mitigate the escalation of noise level. The designated staff was reminded to record all the weather condition including raining and wind speed. Tools box talk for the Contractor's Team was carried out for reminding that the movable barrier should be placed to the breaking activities as much as possible. Movable noise barriers were also modified. Existing 25 ton rock breaker had been replaced by the another breaker. The breaking tap of the 25 ton rock breaker had been replaced by another breaking tap. A joint filler wall was installed at the vertical face of westbound to mitigate the noise rebound from the vertical face to high level of Greenview Terrace. 	

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
					From the additional monitoring data above and the regular monitoring under EM&A requirements, the measured noise levels were complied with the limit level in accordance with the EIAO-TM. From the noise level on 25 September 2009 and 2 October 2009, the trend of noise level seemed to be increased since the decoration work at 14/F Greenview Terrace was the domain noise source during the monitoring. The noise level during that time would be considered for reference only. There was no exceedance of the measured noise level at Greenview Terrace in our investigation.	
12	CIR-011	2 October 2009 at I-3	Public through EPD	EPD has received a complaint (EPD ref: EP3/N22/RW/22016- 09) regarding to construction dust at the Intake-3 on 2 October 2009.	 <u>Findings/ Observations</u> There is no representative air monitoring location as stated in the EM&A Manual. The contractor and the environmental team were undertaken site investigation on the subject area at 08-Oct-09 in response to the complaint. Air quality mitigation measures as recommended in EIA have been implemented by the Contractor. However, the dust impact by exposed area could be further improved. The mitigation measures during the site investigation were observed as follows: Water spraying was provided to the exposed surface. Wheel washing facilities for dump trucks was provided at the site exit. Water spraying was provided during excavation and loading/unloading works 	Closed
					Conclusion/Proposed Action Based on our site inspection, the complaint for dust is	

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
					considered justifiable as it is due to windy erosion on the exposed surface. Air quality mitigation measures as recommended in EIA have also been implemented in order to control and minimise the air quality impact arising from the construction activities. In view of the recent dry season, the haul road and the exposed area would be dry very quickly. The Contractor was recommended to provide water spraying more frequently especially in the dry season.	
13	(DC/2007/12)/ M45/500/2923 & email on 11 November 2009 from MCSJV	9 November 2009 at Outfall	Greenview Terrace through EPD	Movable noise barrier was not placed close enough to the piling machine.	 Immediate Action The rig was re-orientated and the barrier was placed closed to the drilling head. Follow-up Action Training was conducted to the operator to ensure that the workers aware that the barrier should be placed closed not the drilling head not the machine itself. In order to prevent future occurrence, a permit to dig system was adopted. It should be checked by the Contractor and endorsed by the SOR before starting the drilling rig. 	Closed
14	(DC/2007/12)/ M45/500/2978 & email on 19 November 2009 from MCSJV	18 November 2009 at Outfall	Greenview Terrace through EPD	Rock-breaking activity carried out in the eastern area of Portion D, closest to Greenview Terrace, was not totally screened and line of sight of the breaker was observed from the NSR.	 The follow up action was checked and a permit to dig system has been implemented. Follow up Action The bamboo scaffold was extended further away from stage 3 scaffold to further screen off the activities to the Greenview. The length of the extension was about 8 to 10 m. A strong reminded was given to the relevant staff and sub-contractor and the barrier should be placed in the right orientation before breaking. 	Closed

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
					 The mitigation measures were strictly followed as stated in the proposal. The follow up action and relevant records was checked. 	
15.	CIR-12	19 January 2010 at Intake-3 construction site	Public through EPD	EPD has received a public complaint (EPD ref: EP3/N22/RW/01270-10) regarding effluent discharge at Intake-3 construction site on 19 January 2010.	Findings/ ObservationsThe effluent discharge on 19 January 2010 was due tothe leakage of Gabion wall at I3. The water from therock drilling work was flowing through the gap of theGabion Wall to the watercourses at I3.Immediate ActionThe contractor had sealed the gap at the Gabion Wallimmediately after the incident.Conclusion/Proposed ActionBased on our site inspection, the complaint was dueto leakage of Gabion wall. The area would be checkedand maintained continuously to avoid recurrencecase. The above identified mitigation measures havebeen implemented by the Contractor on 22 January2010 and ET has also checked the implementation on31 January 2010. The ET will closely inspect thewatercourses during the routine site inspections andprovide advice to the Contractor.	Closed as no new complaint was received in the reporting month.
16	CIR-13	19 January 2010 at Intake-3 construction site	Public through EPD	EPD has received a public complaint (EPD ref: EP3/N22/RW/01319-10) regarding daytime construction noise at Intake-3 construction site on 19 January 2010.	Findings/ Observations The monitoring station concerned is NSR6 (i.e. at Squatter facing to the construction site). Excavation, soil nailing, rock drilling and breaking, loading and unloading the materials were generally observed during monitoring period in mid-January 2010. The measured noise levels in January 2010 complied with the limit level in accordance with the EM&A Manual. These cases would also be treated as two action level exceedances on noise. The Contractor and the Environmental Team were also undertaken site	Closed as no new complaint was received in the reporting month.

Complaint No.	Log Ref.	Date/Location	Complainant	Details of Complaint	Investigation / Mitigation Action	Status
					 investigation on the subject area in response to complaint. The noise mitigation measures during the site investigation were recommended as follows: Sound insulation sheets were installed covering the working area during breaking and rock drilling in order to block the line of sight to the NSR. Noise insulation materials were used to enclose the drilling rig tightly. <u>Conclusion/Proposed Action</u> Based on the site inspection and monitoring results, the complaint was due to noise generated by rock breaking work. The identified mitigation measures have been discussed with the Contractor and the Contractor has submitted the remedial proposal. The proposal was implemented by the Contractor on 25 January 2010 and ET has also checked the implementation on 31 January 2010. The Contractor was also advised to review the mitigation measures from time to time near the NSR at I3. The ET will closely inspect the area during the routine site inspections and provide advice to the Contractor. 	
17	CIR-13	21 January 2010 at Intake-3 construction site	Public through EPD	EPD has received a public complaint (EPD ref: EP3/N22/RW/01444-10) regarding daytime construction noise at Intake-3 construction site on 21 January 2010.	Refers to Investigation /Mitigation Action for Complaint No. 16.	Closed as no new complaint was received in the reporting month.

Signed by Environmental Team Leader:

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Date:

5 March 2010