Highways Department

Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin

Contract No. HY/2003/10 - Environmental Team for Lai Chi Kok Viaduct and Eagle's Nest Tunnel

Monthly EM&A Report Part II – Eagle's Nest Tunnel & Associated Works (Version 1)

September 2005



REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

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ABBREVIATION AND ACRONYM

AL Levels	Action and Limit Levels
E / ER	Engineer/Engineer's Representative
EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring and Audit
EMIS	Environmental Mitigation Implementation Schedule
EP	Environmental Permit
EPD	Environmental Protection Department
ET	Environmental Team
HVS	High Volume Sampler
IEC	Independent Environmental Checker
RE	Resident Engineer
RH	Relative Humidity
TSP	Total Suspended Particulates
TDD	Territory Development Department
QA/QC	Quality Assurance / Quality Control
SLM	Sound Level Meter
WMP	Waste Management Plan

EXECUTIVE SUMMARY

Introduction

- This is the twenty-second monthly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the "Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin, Lai Chi Kok Viaduct & Eagle's Nest Tunnel". This report documents the findings of EM&A Works conducted in September 2005 for Contract No. HY/2003/02, Eagle's Nest Tunnel and Associated Works (the Project).
- The major site activities undertaken in the reporting month included slope cutting, blasting, excavation works and construction of portal buildings.

Environmental Monitoring and Audit Works

- Environmental monitoring and audit works for the Project was performed regularly as stipulated in the EM&A Manual and the results were checked and reviewed. Site audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.
- Summary of events and actions taken in the reporting month is tabulated in Table I.

Table I Summary of Events Recorded in the Reporting Month

Parameter	No. of	Events	No. of Events	Action Taken
rarameter	Action Level	Limit Level	Due to the Project	Acuon Tuken
1-hr TSP	1 ^a	0	0	Notification of exceedance was issued.
24-hr TSP	0	0	0	N/A
Noise	1 ^b	0	0	Complaint investigation

Remarks:

- a. On 12 Sept 05, the 1-hr TSP level at Station AM3 exceeded the Action Level. Based on the filed observation and EPD's API records, it was considered that the exceedance was due to the poor ambient air quality over Hong Kong and not related to the Project works.
- b. A noise Action Level exceedance was recorded due to the public noise complaint received on 28 Sept 05.

Environmental Licenses and Permits

• Licenses/Permits granted to the Project include the Environmental Permit (EP) for the Project, Registration of Chemical Waste Producer (RCWP), Construction Noise Permits (CNPs) and Water Discharge Licenses (WDLs).

Key Information in the Reporting Month

• Summary of key information in this reporting month is tabulated in Table II.

Table II Summary Table for Key Information in the Reporting Month

Event	Event Details		Action	Status	Remark
Event	Number	Nature	Taken	Status	Keinai K
Complaint received	1	Noise	Complaint investigation	On-going	
Changes to the assumptions and key construction / operation activities recorded	0		N/A	N/A	
Status of submissions under EP	0		N/A	N/A	
Notifications of any summons & prosecutions received	0		N/A	N/A	

Future Key Issues:

Major site activities for the coming month include:

- Slope cutting;
- Haul road construction;
- Soil nail installations;
- Stepped channel and retaining wall construction;
- Installation of water proofing membrane in tunnels;
- Portal building construction.

The anticipated environmental impacts will be mainly on dust from slope work, haul roads and stockpiles.

1. INTRODUCTION

Background

- 1.1 Route 9 (Kowloon Section) (R9K) (hereinafter call the R9K-Project) forms part of the Route 9 between Cheung Sha Wan and Sha Tin (R9-CSWST) project, which will be a new expressway connecting West Kowloon and Sha Tin. It will be the fourth external link between Sha Tin and Kowloon and will form an important link between the northeast New Territories and the west Kowloon, Lantau Island and the western New Territories. R9K is being managed and implemented by the Highways Department (HyD).
- 1.2 The engineering design of R9K is covered under Agreement No. CE 50/98 "Route 9 between Cheung Sha Wan and Sha Tin Design Construction Assignment". The main consultant engaged under Agreement No. CE 50/98 is Maunsell Hyder Joint Venture (MHJV), who will act as the Engineer for the construction contracts. The works of R9K mainly comprise a 1.4km dual 3-lane Lai Chi Kok Viaduct from Lai Wan Interchange to Butterfly Valley; 0.5 km of dual 3-lane at-grade carriageway linking to the 2.1 km dual 3-lane twin-bore Eagle's Nest Tunnel with associated portal buildings; a toll plaza with an administration building located with the Sha Tin valley woodland; a ventilation building and an adit; associated noise barriers, noise enclosures, drainage, slope and landscape works; and electrical and mechanical works for the whole R9-CSWST. The remainder of the R9-CSWST forms the Sha Tin Section (R9S) of the project and is being managed and implemented separately by the Civil Engineering and Development Department (CEDD).
- 1.3 The R9-CSWST project is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). An environmental impact assessment (EIA) report has been prepared in 1998 for the R9-CSWST project (1998 R9 EIA) to consider the key issues of noise, air quality, water quality, ecological, construction waste, landscape and visual, land use and cultural impacts, and identify possible mitigation measures.
- 1.4 An Updated Final EIA report was subsequently completed in August 1999 for the R9-CSWST project (1999 R9 EIA), to cater for some changes in R9K portion as mentioned in paragraph 1 of the report. The 1999 R9 EIA was endorsed by Environmental Protection Department (EPD) in November 1999. The 1998 R9 EIA and the 1999 R9 EIA (R9 EIA Reports) were included in the EIA register under the EIAO as report no. EIA-135/BC and AEIAR-022/1999 respectively. An Environmental Monitoring and Audit (EM&A) Manuals for each of the R9 EIA Reports (EM&A Manuals) were also included as part of the EIA reports in the register.
- 1.5 Subsequent to the endorsement of the R9 EIA Reports by EPD in November 1999, the project programme was deferred to start in 2002/2003 for completion by 2006/07. The implementation of the project was then separated into the R9S and R9K portion. An Environmental Permit (EP) No. EP-103/2001 was issued on 17 September 2001 for R9K to the HyD as Permit Holder and a varied EP No. EP-103/2001/A was subsequently issued on 20 May 2003 for R9K (R9K EP) to HyD as Permit Holder. A varied EP-103/2001/C was recently issued on 22 July 2005.

- 1.6 The major construction activities of two civil contracts of the R9K project, Contract No. HY/2003/01 entitled "Route 9 – Lai Chi Kok Viaduct" and Contract No. HY/2003/02 entitled "Route 9 – Eagle's Nest Tunnel and Associated Works", were commenced on 15th December 2003 for completion in April 2007.
- 1.7 "Route 9" was recently re-tiled as "Route 8 (previously known as Route 9)". Cinotech Consultants Limited (Cinotech) was commissioned by HyD to undertake the Environmental Monitoring and Audit works for "Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin Environmental Team (ET) for Lai Chi Kok Viaduct and Eagle's Nest Tunnel (Contract No. HY/2003/10)". Dr. Priscilla CHOY of Cinotech Consultants Ltd. was appointed as the ET Leader under Condition 2.2 of the EP. Mr. David YEUNG of CH2M-IDC Hong Kong Ltd. was appointed as the IEC under Condition 2.1 of the EP. This is the twenty-second monthly EM&A report summarizing the EM&A works for the Project in September 2005.

Project Organizations

- 1.8 Different parties with different levels of involvement in the project organization include:
 - Project Proponent Major Works Project Management Office (MWPMO) of Highways Department (HyD)
 - Engineer / Engineer's Representative (E/ER) Maunsell-Hyder Joint Venture (MHJV)
 - Environmental Team (ET) Cinotech Consultants Limited
 - Independent Environmental Checker (IEC) CH2M-IDC Hong Kong Ltd.
 - Contractor Leighton-Kumagai Joint Venture (LKJV)
- 1.9 The responsibilities of respective parties are detailed in Section 1.8.3 of the EM&A Manual (1999) of the Project.
- 1.10 The key contacts of the Project are shown in **Table 1.1**.

Construction Programme

- 1.11 The site activities undertaken in the reporting month were:
 - Regular blasting at North Portal and South Portal;
 - Soil nail installation at Butterfly Valley;
 - Cut slop, drainage works and haul road construction at Butterfly Valley;
 - Chlorine barrier wall construction at Portion X;
 - Pile cap construction at South Portal, North Portal, Toll Plaza and Ventilation Adit;
 - Surface blasting and retaining wall construction at Butterfly Valley;
 - Water proofing membrane and lining construction in tunnels;
 - Excavation and mucking out from tunnels;
 - Excavation, concreting of blinding layer, column and wall at South Portal, North Portal, Toll Plaza and Ventilation Adit;
 - Permanent rock dowels and shotcreting at Ventilation Adit;
 - Footbridge, subway construction and drainage works at Toll Plaza.

Summary of EM&A Requirements

- 1.12 The EM&A programme requires construction phase monitoring for air quality and construction noise, and environmental site audit. The EM&A requirements for each parameter are described in the following sections, including:
 - All monitoring parameters;
 - Action and Limit levels for all environmental parameters;
 - Event / Action Plans;
 - Environmental mitigation measures, as recommended in the project EIA study final report; and
 - Environmental requirements in contract documents.

Party	Role	Name	Position	Phone No.	Fax No.
		Mr. K.T. Lee	SE3/R8K	2762 3684	
HyD	Permit Holder	Mr. Albert Cheung	E6/R8K	2762 3598	2714 5198
		Mr. George Law	E4/R8K	2762 3675	
	Engineer	Mr. Conrad Ng	Project Manager	2605 6262	2691 2649
MHJV		Mr. Peter Poon	CRE	3552 2500	
IVITIJ V	Engineer's Representative	Mr. Eric Wong	RE (S & EP)	3552 2551	2743 9200
	Representative	Ms. Sammie Chan	TO (EN)	3552 2605	
	tech Environmental Team	Dr. Priscilla Choy	The ET Leader	2151 2089	3107 1388
Cinotech		Mr. KK Chan	Audit Team Leader	2151 2077	
		Mr. Henry Leung	Monitoring Team Leader	2151 2087	010, 1000
CH2M-	Environmental	Mr. David Yeung	Independent Environmental Checker	2507 2203	2507 2293
IDC		Mr. Billy Yu	Assistant Independent Environmental Checker	2872 2949	2507 2295
LKJV	Contractor	Mr. Ray Brewster	Project Director	9092 6128	2743 1600
LKJV	Contractor	Mr. Kevin Harman	QA/E Manager	3352 2128	2/43 1000
Enquiries I	Enquiries Hotline				-
Complaint	Complaint Hotline 3552 23				

Table 1.1 Key Project Contacts

- 1.13 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 4 of this report.
- 1.14 This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the required monitoring parameters, namely dust and noise levels and audit works for the Project in September 2005.

2. AIR QUALITY

Monitoring Requirements

2.1 Monitoring of 1-hour and 24-hour TSP was conducted to monitor the air quality. The established Action/Limit Levels for the environmental monitoring works were shown in **Appendix A**.

Monitoring Locations

2.2 Three designated monitoring stations, AM1, AM3 and AM4 was selected for impact dust monitoring for the Project. **Table 2.1** describes the air quality monitoring locations, which are also depicted in **Figure 1a** and **1b**.

Table 2.1 Locations for Air Quality Monitoring

Station	Description	Location
AM1	Yew Chung International School / PLK Choi Kai Yau SchoolRooftop	
AM3	Slope no. 07SW-D/FR4 near Garden Villa	On Ground
AM4 Government Quarters		Ground Floor ¹

Note: ¹The HVS was installed on the ground floor, which is close to the refuse collection station of the Government Quarters.

Monitoring Equipment

2.3 **Table 2.2** summarizes the equipment used in the impact air monitoring programme. Copies of calibration certificates are attached in **Appendix B**.

Table 2.2Air Quality Monitoring Equipment

Equipment	Model and Make	Quantity
Calibrator	GMW25; S/N: 1536	1
HVS Sampler	Graseby GMW Model GS2310 High Volume TSP Sampler and associated equipment and shelter	3

Monitoring Parameters, Frequency and Duration

2.4 **Table 2.3** summarizes the monitoring parameters and frequencies of impact dust monitoring for the whole construction period. The air quality monitoring schedule for the reporting period is shown in **Appendix C**.

Table 2.3 Impact Dust Monitoring Parameters, Frequency and Duration

Parameters	Frequency
1-hr TSP	Three times / 6 days
24-hr TSP	Once / 6 days

Monitoring Methodology and QA/QC Procedure

Instrumentation

2.5 Graseby GMW Model GS2310 TSP High Volume Sampler (HVS) was employed for 1-hour & 24-hour TSP monitoring. The sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50). Moreover, the HVS also met all the requirements in Sections 2.2 – 2.4 of the Updated EM&A Manual (1999).

Operating/Analytical Procedures

- 2.6 Operating/analytical procedures for the operation of HVS were as follows:
 - A horizontal platform was provided with appropriate support to secure the samplers against gusty wind.
 - No two samplers were placed less than 2 meters apart.
 - The distance between the sampler and an obstacle, such as buildings, was at least twice the height that the obstacle protrudes above the sampler.
 - A minimum of 2 meters of separation from walls, parapets and penthouses was required for rooftop samples.
 - A minimum of 2 meters separation from any supporting structure, measured horizontally was required.
 - No furnaces or incineration flues were nearby.
 - Airflow around the sampler was unrestricted.
 - The sampler was more than 20 meters from the drip line.
 - Any wire fence and gate, to protect the sampler, should not cause any obstruction during monitoring.
- 2.7 Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 1.1 m³/min. and 1.4 m³/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50. For TSP sampling, fiberglass filters (G810) were used.
- 2.8 The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- 2.9 The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.

- 2.10 The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.
- 2.11 The shelter lid was closed and secured with the aluminum strip. The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number). After sampling, the filter was removed and sent to the laboratory for weighing. The elapsed time was also recorded.
- 2.12 Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than ± 3 °C; the relative humidity (RH) should be < 50% and not vary by more than $\pm 5\%$. A convenient working RH is 40%.

Maintenance/Calibration

- 2.13 The following maintenance/calibration was required for the HVS:
 - The high volume motors and their accessories were properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply are in good working condition.
 - High volume samplers were calibrated at bi-monthly intervals using GMW-25 Calibration Kit throughout all stages of the air quality monitoring.

Results and Observations

- 2.14 All 1-hour TSP monitoring was conducted as scheduled during the reporting month, except that the monitoring at Station A4 was suspended on 26 September 2005 due to adverse weather condition.
- 2.15 On 12 September 2005, the 1-hr TSP level at Station AM3 exceeded the Action Level. However, based on our field observation and EPD's monitoring data (Air Pollution Index), it was considered that the exceedance was due to the poor ambient air quality but not related to R8-ENT construction works. The exceedance report is provided in **Appendix H**. No Limit Level exceedance was recorded.
- 2.16 All 24-hour TSP monitoring was conducted as scheduled during the reporting month, except that the monitoring at AM3 was suspended on 23 September 2005 due to power disruption to the monitoring equipment. No Action/Limit Level exceedance was recorded.
- 2.17 Wind data monitoring equipment has been installed in Shatin Heights for logging wind speed and wind direction. These wind data is summarized in **Appendix D**.
- 2.18 The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendices E** and **F**, respectively.

3. NOISE

Monitoring Requirements

- 3.1 Monitoring and audit of construction noise levels is required to be conducted, in accordance with the EM&A Manual, to ensure that any unacceptable noise impacts could be readily detected and timely and appropriate action be undertaken to rectify the situation.
- 3.2 The construction noise levels shall be measured in terms of the A-weighted equivalent continuous sound pressure level (L_{eq}). L_{eq} (30min) shall be used as the monitoring parameter for the time period between 0700-1900 hours on normal weekdays. For all other time periods, L_{eq} (5min) shall be employed for comparison with the Noise Control Ordinance (NCO) criteria. As supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.
- 3.3 Three designated noise monitoring stations, namely NM1, NM5 & NM6 were selected for impact monitoring in accordance to the EM&A manual (1999) and the subsequent EPD approval of the relocations.
- 3.4 Noise monitoring is also required to be conducted at station NM7 in accordance with the EM&A Manual (1998). The noise monitoring at the station is required to be conducted under CEDD's construction Contract No. ST 89/02 "Sha Tin Heights Tunnel and Approaches" in accordance with the requirement of Environmental Permit No. EP104/2001/A. The impact noise monitoring results at station NM7 are also presented in this report.
- 3.5 **Appendix A** shows the established Action and Limit Levels for the environmental monitoring works.

Monitoring Locations

3.6 Noise monitoring was conducted at four designated monitoring stations as summarized in Table 3.1. Figures 1a & 1b show the locations of these stations.

Monitoring Station	Description	Location
NM1	Yew Chung International School / PKL Choi Kai Yau School	Rooftop
NM5	Villa Carlton	Ground Floor ¹
NM6	Government Quarters	Rooftop of Refuse Collection Station
NM7	Garden Villa	Rooftop

Table 3.1Noise Monitoring Stations

Note: ¹ The noise measurement was taken at 2.3m above the ground floor of Villa Carlton, where has a line of sight of the construction site in the opposite.

Monitoring Equipment

3.7 Table 3.2 summarizes the noise monitoring equipment model being used. Copies of calibration certificates are attached in **Appendix B**.

Table 3.2Noise Monitoring Equipment

Equipment	Model and Make	Qty.
Integrating Sound Level Meter	B&K Model 2238	5
Calibrator	B&K 4231	2
Wind Speed Anemometer	RS232 Integral Vane Digital Anemometer	1

Monitoring Parameters, Frequency and Duration

3.8 Table 3.3 summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix C**.

Table 3.3 Noise Monitoring Parameters, Frequency and Duration

Station	Parameter	Period ¹	Frequency	Measurement
NM1	$\begin{array}{c} L_{10}(30 \text{ min.})dB(A) \\ L_{90}(30 \text{ min.})dB(A) \\ L_{eq}(30 \text{ min.})dB(A) \end{array}$	(a) 0700 1000 hrs. on weakdawa	Once per	Façade
NM5				Façade
NM6		(c) 0700-2300 hrs. on holidays	week	Free Field
NM7		(d) 2300-0700 hrs on any days		Façade

Note: ¹(b), (c) and (d) will only be conducted if construction works are undertaken during these periods.

Monitoring Methodology and QA/QC Procedures

- The Sound Level Meter was generally set on a tripod at a height of 1.2 m above the ground, depending to the actual monitoring condition.
- For free field measurement (if any), the meter was positioned away from any nearby reflective surfaces. All records for free field noise levels were adjusted with a correction of +3 dB(A).
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - frequency weighting : A
 - time weighting : Fast
 - time measurement : 30 minutes / 5 minutes
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.
- The wind speed was frequently checked with the portable wind meter.

- At the end of the monitoring period, the L_{eq} , L_{90} and L_{10} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- Noise measurement was paused during periods of high intrusive noise if possible and observation was recorded when intrusive noise was not avoided.
- Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s.

Maintenance and Calibration

3.9 The microphone head of the sound level meter and calibrator was cleaned with soft cloth regularly. The meters were sent to the supplier to check and calibrate on a yearly interval.

Results and Observations

- 3.10 Noise monitoring was performed at the four designated locations during the daytime period (0700-1900 hours) as scheduled in this reporting month. Restricted-hour monitoring was also conducted at NM5, NM6 and NM7.
- 3.11 All the Construction Noise Levels (CNLs), except the monitoring (0700-1900 on weekdays) at NM1 and NM6, reported in this report were adjusted with the corresponding baseline level, in order to facilitate the interpretation of the noise exceedance.
- 3.12 Noise monitoring results and graphical presentations are shown in Appendix G.
- 3.13 No Limit Level exceedance was recorded in the reporting month.
- 3.14 One public noise complaint was received on 28 September 2005, triggering a noise Action Level exceedance. The details of the complaint could refer to Section 4.

4. ENVIRONMENTAL AUDIT

Site Audits

- 4.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix I**.
- 4.2 Site audits were conducted on 8, 14, 21 and 28 September 2005 by ET. The audit session on 8 September 2005 was conducted with the representatives of HyD, IEC, ER, the Contractor and ET.

Review of Environmental Monitoring Procedures

4.3 The monitoring works conducted by the monitoring team were inspected regularly. The following observations have been recorded for the monitoring works:

Air Quality Monitoring

- The monitoring team recorded all observations around the monitoring stations within and outside the construction site.
- The monitoring team recorded the temperature and weather conditions on the monitoring days.

Noise Monitoring

- The monitoring team recorded all observations around the monitoring stations, which might affect the monitoring result.
- Major noise sources were identified and recorded. Other intrusive noise attributing to the result was trimmed off by pausing the monitoring temporarily.

Status of Environmental Licensing and Permitting

4.4 All permits/licenses obtained for the Project are summarized in **Table 4.1**.

Implementation Status of Environmental Mitigation Measures

4.5 According to the Environmental Permit and the EM&A Manuals, the mitigation measures detailed in the documents are required to be implemented. An updated summary of the EMIS is provided in **Appendix K**.

Table 4.1	Summary of Environmental Licensing and Permit Status
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Permit No.	Valid	Period	Details	Status
I CI IIII INO.	From	То	Details	Status
Environmental Permit (EP	')			
EP-103/2001/C	22/07/05	N/A	<u>Construction and operation of</u> (a) All civil works (including highways, traffic, geotechnical, drainage, structural, architectural and landscaping works) for the Lai Chi Kok Viaduct, the interchange with Ching Cheung Road, the main road within Butterfly Valley and the Eagle's Nest Tunnel; (b) All E&M works (including ventilation, Traffic Control & Surveillance System (TCSS), toll collection system and lighting) for the whole Route 9 between Cheung Sha Wan and Sha Tin; (c) The permanent slope works above the northern portal of the Eagle's Nest Tunnel; (d) The architectural works (including fitting out and furnishings) of the portal buildings of the Sha Tin Heights Tunnel.	Valid
Registration of Chemical V				
WPN 5213-761-L2595-01	26/01/04	N/A	N/A	Valid
Water Discharge Licence			· · · · · · · · · · · · · · · · · · ·	
EP482/261/0327/I	03/05/04	31/05/09	Discharge of industrial trade effluent and effluent arsing from construction activities at the construction site at Ventilation Adit on Tai Po Road (behind Shell Filling Station) opposite Pinehilll Development Highways.	Valid
EP482/261/0326/I	01/04/04	30/04/09	Discharge of industrial trade effluent and effluent arsing from construction activities at the construction site at Mui Kong Tsuen, Butterfly Valley, Lai Chi Kok, Kowloon.	Valid
No. 3156	23/02/04	22/02/09	Discharge of industrial trade effluent and all other wastewater arising from the works areas at North Portal of Route 9 - Eagle's Nest Tunnel and Associated Works (Contract HY/2003/02).	Valid
Construction Noise Permit	(CNP)	1		
GW-RW0214-05	06/04/05	07/10/05	<i>Location</i> : Butterfly Valley <i>Time period</i> : general holiday (including Sundays) between 0700 and 2300 hours, and any other day between 1900 and 2300 hours.	Valid
GW-RW0503-05	06/08/05	05/02/06	<i>Location</i> : Ventilation Adit <i>Time period</i> : general holiday (including Sundays) between 0700-2300, and any other day between 1900 and 2300 hours.	Valid
GW-RW0504-05	06/08/05	05/02/06	<i>Location</i> : Ventilation Adit <i>Time period</i> : Any day between 2300-0700 on next day.	Valid

Permit No.	Valid	Period	Details	Status
rernint No.	From	То	Detans	Status
GW-RN0359-05	11/08/05	15/02/06	<i>Location</i> : South Portal <i>Time period</i> : general holiday (including Sundays) between 0900 and 2300 hours, and any other day between 1900 and 2300 hours.	Valid
GW-RN0358-05	11/08/05	10/02/06	<i>Location</i> : South Portal <i>Time period</i> : Any day between 2300-0700 on next day.	Valid
GW-RN0339-05	01/08/05	31/01/06	<i>Location</i> : North Portal <i>Time period</i> : general holiday (including Sundays) between 0900 and 2300 hours, and any other day between 1900 and 2300 hours.	Valid
GW-RN0338-05	01/08/05	31/01/06	<i>Location</i> : North Portal <i>Time period</i> : Any day between 2300-0700 on next day.	Valid

4.6 During site inspections in the reporting month, no non-conformance was identified. The observations and recommendations are summarized in **Table 4.2**.

Summary of Exceedances

1-hr TSP Monitoring

4.7 An Action Level exceedance was recorded at AM3 on 12 September 2005. However, it was considered that the exceedance was not related to the construction activities of the Project. No further action was required.

24-hr TSP Monitoring

4.8 No Action/Limit Level exceedance was recorded in this reporting month.

Construction noise

4.9 No Limit Level exceedance was recorded in this reporting month. One Action Level exceedance was triggered by public noise complaints received on 28 September 2005.

Implementation Status of Event Action Plans

4.10 The Event Action Plans for air quality and noise are presented in **Appendix J**.

Summary of Complaints and Prosecutions

4.11 One environmental complaint was received on 28th September 2005, regarding blasting noise at around 2am near South Portal Tunnel. The complaint investigation was in progress.

Parameters	Date	Observations / Recommendations	Remedial Actions
Water Quality	8-Sept-05	Regarding the overflow at Portion D4 into other's construction site. The water quality of the outfall was found satisfactory. It was also noted that the Contractor had diverted most of the clear stream water to the outlet to avoid overloading the treatment facility. Nevertheless, the Contractor was recommended to review the situation regularly to avoid any discharge of sub-standard water.	N/A
Air Quality	8-Sept-05 14-Sept-05 21-Sept-05	The stockpile at the loading and unloading area at Portion H3 was observed dry. The Contractor was reminded to maintain the stockpile wet to avoid dust emission.	Rectification / improvement was observed during the site audit on 28-Sept-05.
	8-Sept-05	Uncovered cement bags (more than 20 bags) were observed at Portion D3. The Contractor was reminded to provide proper covers for the cement bags.	Rectification / improvement was observed during the site audit on 14-Sept -05.
	21-Sept-05	Spot check was conducted at Garden Villa to inspect the condition of dump trucks leaving the site via TAR1. Two dump trucks, which were working for ENT Contract, were found inadequately covered and 1 truck was found uncovered.	Rectification / improvement was observed during the site audit on 28-Sept-05.
Chemical and Waste Management	28-Sept-05	The fuel was observed placed on bare ground without the drip tray at Mui Kong Tsuen. The contractor was reminded to store the fuel properly.	Rectification / improvement was observed during the site audit on 05-Sept-05.
Others	14-Sept-05	Stagnant water was observed near the chemical storage area at North Portal. The contractor was reminded to remove the standing water.	Rectification / improvement was observed during the site audit on 21-Sept -05.

Table 4.2	Observations and Recommendations of Site Audit
-----------	---

- 4.12 Another complaint was received in the last reporting month on 30 August 2005. The complainant expressed her dissatisfaction about the noise nuisance caused by drilling works at the Butterfly Valley and blasting works at 0045 hours of 28 August 2005. According to the results of the routine noise monitoring and the ad-hoc noise measurement taken at Government Quarters (NM6) on 1 and 2 September 2005, the noise levels did not exceed the noise criteria. The complaint was considered not justifiable. Nevertheless, proactive actions (use of temporary noise barriers) were taken by the Contractor to minimize the nuisance at the nearby residents. No further adverse comment was received from the complainant.
- 4.13 No environmental related prosecution was received in the reporting month.
- 4.14 There were 17 environmental complaints and no prosecution received since the commencement of the Project. The updated Complaint Log is shown in **Appendix M**.

5. FUTURE KEY ISSUES

Key Issues for the Coming Month

- 5.1 Key issues to be considered in the coming month include:
 - Potential dust emission from slope works and haul road construction at Butterfly Valley, excavation and mucking out from portals and vehicle movement on haul roads;
 - Noise generation from excavation works, rock breaking works at Butterfly Valley;
 - Surface runoff generated from site area in Butterfly Valley and Toll Plaza;
 - The capacity of drainage system and associated de-silting facilities at Toll Plaza area;
 - Provision of proper covers for dump trucks leaving site;
 - Storage of chemicals/fuel and chemical oil at Portion D3.

Monitoring Schedule for the Next Month

5.2 The tentative environmental monitoring schedule for next month is shown in **Appendix C**.

Construction Program for the Next Month

5.3 The tentative construction program for the Project is provided in **Appendix L**. The major construction activities in coming months include:

Butterfly Valley

• Cut slope, haul road, drainage works, soil nailing, surface blasting, retaining wall, water mains construction.

South Portal Tunnel and Building

• Blasting, excavation and mucking out, water proofing membrane installation, tunnel lining construction, excavation and concreting of blinding layer, columns and walls.

North Portal Tunnel and Building

• Blasting, excavation and mucking out, water proofing membrane installation, tunnel lining construction, excavation and concreting of blinding layer, columns and walls.

Toll Plaza's Structures and Building

• Footbridge and subway construction, drainage works, construction of building's columns and walls.

Ventilation Adit Tunnel and Building

• Blasting, excavation and mucking out, permanent rock dowels and shot-creting, footing construction, excavation and concreting of blinding layer, columns and walls.

Other Works Areas

• Chlorine barrier wall construction at Portion X.

6. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 6.1 Environmental monitoring works were performed in the reporting month and all monitoring results were checked and reviewed.
- 6.2 On 12 September 2005, the 1-hr TSP level at Station AM3 exceeded the Action Level. However, it was considered that the exceedance was not related to the Project works.
- 6.3 A noise Action Level exceedance was triggered by a complaint on 28 September 2005.
- 6.4 One environmental complaint, forwarded by the RSS, was received on 28 September 2005, regarding nighttime blasting near South Portal. Complaint investigation was in progress. No environmental related prosecution was received in this reporting month.

Recommendations

6.5 According to the environmental audit performed in the reporting month, the following recommendations were made:

Dust Impact

- To ensure adequate water spray or other dust suppression measures are applied for the dust emissive works, such as breaking, drilling and soil nail installation works.
- To provide frequent water spray on haul roads and stockpiles of dusty materials;
- To cover idle soil slope surface to prevent wind erosion.

Water Impact

- To review the capacity of existing desilting facility on site, especially for the discharge at the site in Butterfly Valley and Toll Plaza.
- To keep the sedimentation facilities well maintained and perform de-silting regularly.
- To cover the idled slope surfaces by tarpaulin sheeting during rainstorms.

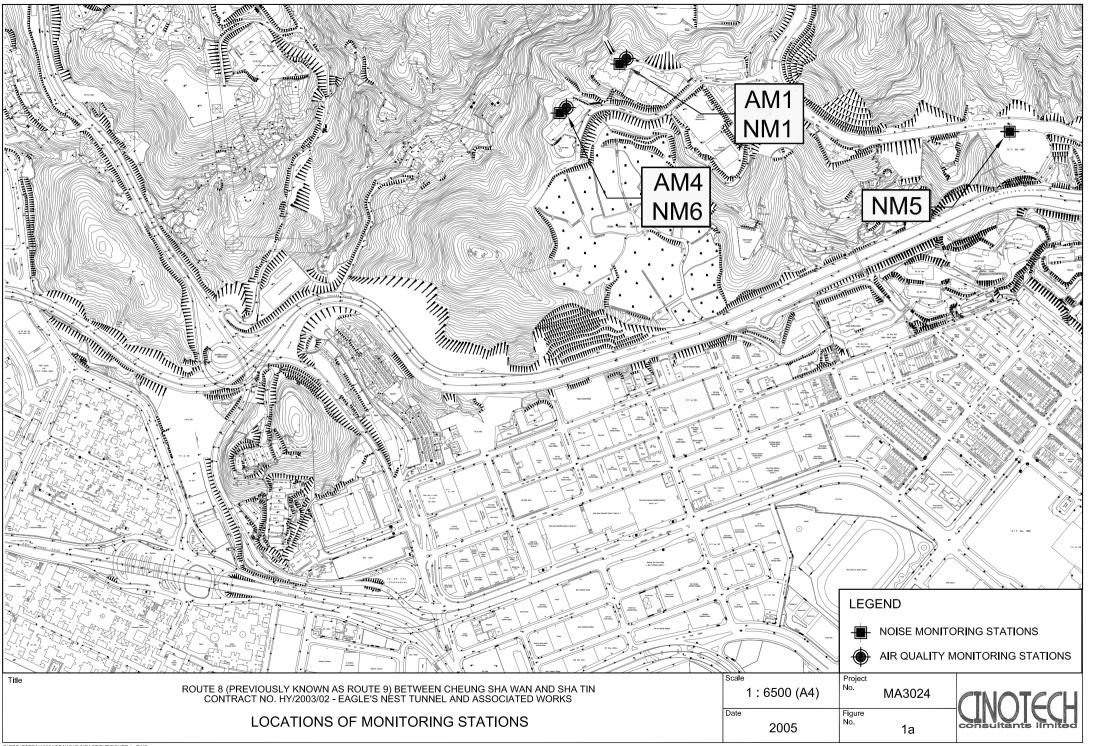
Noise Impact

- To provide temporary noise barriers for noisy activities (such as breaking works).
- To implement a systematic checking system in order to ensure compliance of CNP conditions during the restricted-hour works.

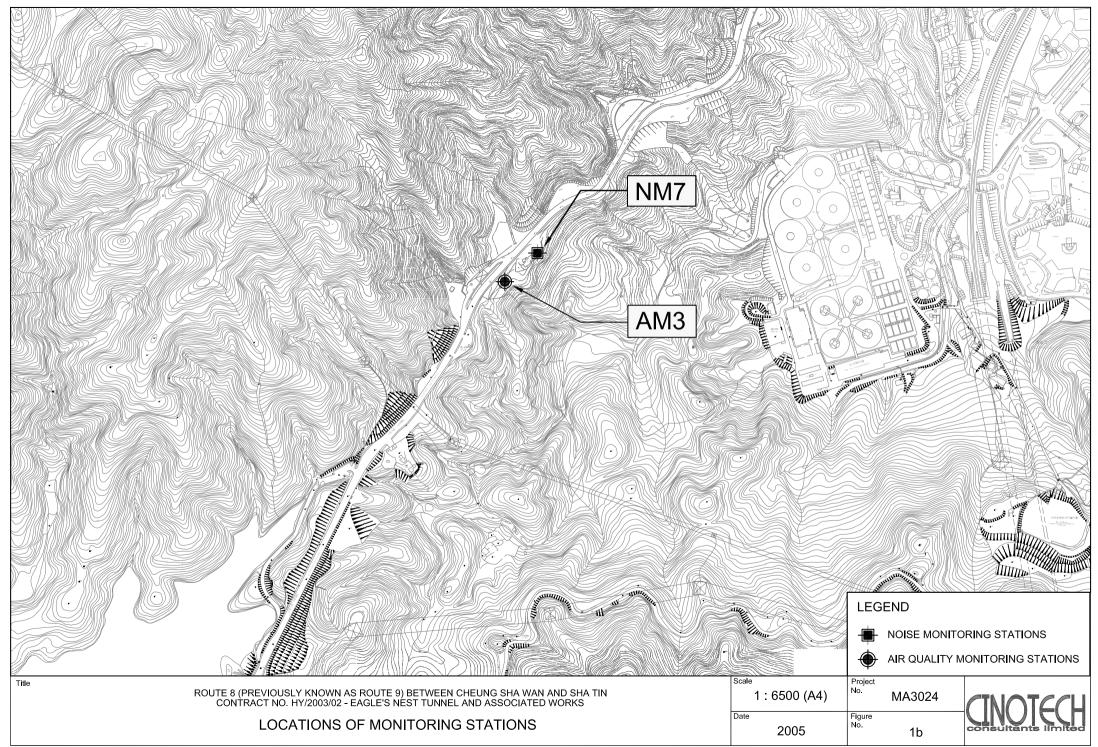
Waste/Chemical Management

- To ensure proper storage of chemical and chemical waste on site.
- To check for any accumulation of waste materials or rubbish on site.
- To avoid any discharge or accidental spillage of chemical waste or oil directly.

FIGURES



F:\PEOJECTS\MA3024\DRAWING\IMPACT\ENT\FIGURE 1a.DWG



APPENDIX A ACTION AND LIMIT LEVELS

Appendix A - Action and Limit Levels (ENT)

1-Hour TSP

Location	Action Level, μg/m ³	Limit Level, µg/m ³
AM1	296	
AM3	350	500
AM4	294	

24-Hour TSP

Location	Action Level, µg/m ³	Limit Level, µg/m ³
AM1	168	
AM3	200	260
AM4	170	

Construction Noise

Period	Action Level		Limit Lev	vel, dB(A)	
renou	for all stations	NM1	NM5	NM6	NM7
0700-1900 hrs on normal weekdays		70/65*	75	75	75
0700-2300 hrs on holidays & 1900- 2300 hrs on all other days	When one documented complaint is received	-	70	65	60
2300-0700 hrs of next day		-	55	50	45

(*) Since NM1 is an educational institution, the noise Limit Level (0700-1900 hrs on normal days) is taken as 70 dB(A). The Limit Level will be reduced to 65 dB(A) during school examination periods.

APPENDIX B COPIES OF CALIBRATION CERTIFCATES

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET



File No. MA3024/18/0012

Station	Po Leung Kuk Choi Kai Yau School	Operator:	WL	
Date:	5-Aug-05	Next Due Date:	4-Oct-05	
Equipment No .:	A-01-18	Serial No.	0723	
		Ambient Condition		

Temperature, Ta (K)	304.5	Pressure, Pa (mmHg)	754.7

	Or	ifice Transfer St	andard Informa	ation	
Equipment No.:	A-04-03	Slope, mc	0.0572	Intercept, bc	0.0261
Last Calibration Date:	23-Apr-05		-	$c = [\Delta H x (Pa/760) x (298/Ta)]$	
Next Calibration Date:	22-Apr-06		Qstd = $\{ [\Delta H x]$	$(Pa/760) \times (298/Ta)]^{1/2} - bc\} /$	' mc

Calibration		Orfice			HVS
Calibration Point	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	∆W (HVS), in. of oil	$[\Delta W \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}$ axis
1	12.7	3.51	60.96	7.3	2.66
2	* 9.6	3.05	52.94	5.6	2.33
3	7.5	2.70	46.74	4.6	2.11
4	4.7	2.14	36.91	3.1	1.74
5	3.0	1.71	29.39	1.9	1.36
Slope , mw = Correlation c		0.9984), check and recalibrate.	Intercept, bw -	.201	5
Slope , mw = Correlation c	0.0405 oefficient* =	0.9984	Intercept, bw -		5
Slope , mw = Correlation c *If Correlation C	0.0405 oefficient* = Coefficient < 0.990	0.9984), check and recalibrate. Set Point (Intercept, bw - - Calculation	. 0.201	5
Slope , mw = Correlation c *If Correlation C	0.0405 oefficient* = Coefficient < 0.990 eld Calibration Cu	0.9984), check and recalibrate. Set Point (urve, take Qstd = 43 CFM	-		5
Slope , mw = Correlation c *If Correlation C	0.0405 oefficient* = Coefficient < 0.990 eld Calibration Cu	0.9984), check and recalibrate. Set Point (-	· 0.201	5
Slope , mw = Correlation c *If Correlation C	0.0405 oefficient* = Coefficient < 0.990 eld Calibration Cu	0.9984), check and recalibrate. Set Point (urve, take Qstd = 43 CFM	- Calculation		5

Remarks:				 	
Conducted by: Checked by:	Lun	Signature: Signature:	Ru	Date: Date:	8-8-05 8 August 55

High-Volume TSP Sampler **5-POINT CALIBRATION DATA SHEET**



File No. MA2027/A14/0013

Station Garden Vilia Date: 10-Aug-05		Operator:	КС		
		Next Due Date:	9-Oct-05	_	
Equipment No .:	A-01-14		Serial No.	1354	-
			Ambient Condition		
Temperati	ıre, Ta (K)	301.7	Pressure, Pa (mmHg)	754.4	

	Or	ifice Transfer St	andard Inform	ation	
Equipment No.:	A-04-03	Slope, mc	0.0572	Intercept, bc	0.0261
Last Calibration Date:	23-Apr-05	mc x Qstd + bc = $[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$			
Next Calibration Date:	22-Apr-06	Qstd = { $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ -bc} / mc			

		Calibration of	TSP Sampler			
Q-libertion		Orfice		HVS		
Calibration Point	∆H (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	∆W (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2} Y$ axis	
1	11.1	3.30	57.22	6.8	2.58	
2	. 9.0	2.97	51.48	5.6	2.34	
3	6.5	2.52	43.68	4.1	2.00	
4	4.5	2.10	36.27	2.8	1.66	
5	2.8	1.66	28.51	1.7	1.29	
Slope , mw = Correlation co	oefficient* =		Intercept, bw -	0.019	1	

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM From the Regression Equation, the "Y" value according to

mw x Qstd + bw = $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$

Therefore, Set Point; $W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = 3.90$

Remarks: Email Conducted by: K.C. Signature: Checked by: K.C. Signature: 10/8/0° 10/8/0° Date: Date:

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET



	C	(2.41)		Operatory	WL	File No.	
Station <u>o</u> Date:	Government Quarter 5-Aug-05	(24hr)			4-Oct-		-
Equipment No.:					3460		
Equipment 140	A-01-17	·····		Sentar 140.			-
			Ambient	Condition			
Temperature	e, Ta (K)	304.5	Pressure, Pa	(mmHg)		754.7	
		0	· · · · · · · · · · · · · · · · · · ·			an management	
Environmen	at Max		ifice Transfer Sta Slope, mc	0.0572	Intercept	t ha	0.0261
Equipmer Last Calibrat		A-04-03 23-Apr-05	Slope, Ille		$bc = [\Delta H x (Pa/76)]$		
Next Calibrat		22-Apr-06			x (Pa/760) x (298)		
INEXT Calibrat	tion Date:	22-Api-00		Qstu – į[dir	x (1 a/ /00) x (290		/ 1110
			Calibration of	TSP Sampler			
Calibration		Ort	fice			HVS	
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	0) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of oil	[ΔW x (Pa/	760) x (298/Ta)] ^{1/2} Y axis
1	13.0	3	.55	61.68	7.8		2.75
2	. 10.7	3	.22	55.92	6.2		2.45
3	8.2	2	82	48.90	5.0		2.20
4	5.2	2		38.84	3.3		1.79
5	3.2	1	.76	30.37	2.1		1.43
NCO 11 O	efficient* =	and the second	991				
*If Correlation Co		and the second		-			
	 pefficient < 0.99	0, check and reca	librate. Set Point C	alculation			
From the TSP Field	 pefficient < 0.99 ld Calibration C	0, check and reca urve, take Qstd = e "Y" value accor	librate. Set Point C 43 CFM		98/Ta)] ^{1/2}		
From the TSP Fiel	Defficient < 0.99	0, check and reca urve, take Qstd = e "Y" value accor mw x Q	librate. Set Point C 43 CFM ding to	x (Pa/760) x (2	98/Ta)] ^{1/2} 3.93		-
From the TSP Fiel	Defficient < 0.99	0, check and reca urve, take Qstd = e "Y" value accor mw x Q	librate. Set Point C 43 CFM ding to Pstd + bw = [ΔW	x (Pa/760) x (2			-
From the TSP Fiel From the Regressi Therefore, Set	Defficient < 0.99	0, check and reca urve, take Qstd = e "Y" value accor mw x Q	librate. Set Point C 43 CFM ding to Pstd + bw = [ΔW	x (Pa/760) x (2			-
From the TSP Fiel	Defficient < 0.99	0, check and reca urve, take Qstd = e "Y" value accor mw x Q	librate. Set Point C 43 CFM ding to Pstd + bw = [ΔW	x (Pa/760) x (2			-

F:\Equipment\Calibration\HVS\A-01-17\20050805

Unit C, 1/F, Goldlion Holdings Center 13-15 Yuen Shun Circuit, Shatin, Hong Kong. Tel: (852) 2898 7388 Fax: (852) 2898 7076

TEST REPORT

APPLICANT: Cinotech Consultants Limited 1602-1610 Delta House, 3 On Yiu Street, Shatin, N.T.

Test Report No.:	C/05/50503
Date of Issue:	2005-05-03
Date Received:	2005-05-03
Date Tested:	2005-05-03
Date Completed:	2005-05-03
Page:	1 of 1

ATTN:

Mr. Henry Leung

Certificate of Calibration

Item for calibration:

Description
Manufacturer
Model No.
Serial No.
Project No.
Equipment No.

: RS232 Integral Vane Digital Anemometer : AZ Instrument : 451104 : 9020746 : C13 : A-03-01

Test conditions:

Room Temperature Relative Humidity Pressure : 21 degree Celsius : 70% : 100.8 kPa

Methodology:

The anemometer has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

	Reference Set Point	Instrument Readings
Measuring Air Velocity, m/s	2.00	2.00
Temperature, °C	20.0	20.1

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

Patrick

PATRICK TSE Operation Manager

Date:	04/23/2005		Rootsmete	Contraction of the second s	9736553 1888A		Ta: Pa:	22.00 C 761.0 mm Ho
Operator: RA Calibrator Model #: G25A			Calibrator S/N: 1888A Pa: 76 Placed in service:					701.0 mm ng
	Run	Vol. Init. (m3)	Vol. Final (m3)	∆ Vol. (m3)	∆ Time (min)	ΔP (mm Hg)	∆H (in H2O)	
	1	1.00	2.00	1.00	1.404	3.08	2.00	
	2	3.00	4.00	1.00	0.997	6.17	4.00	
	3	5.00	6.00	1.00	0.889	7.85	5.00	
	4	7.00	8.00	1.00	0.848	8.59	5.50	
	5	9.00	10.00	1.00	0.700	12.42	8.00	

Andersen Instruments, Inc. Drifice Transfer Standard Certification Worksheet

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\frac{\sqrt{\Delta H} \left(\frac{Pa}{Pstd}\right) \left(\frac{Tstd}{Ta}\right)}{(y-axis)}$	Va	Qa (x-axis)	√⊿H(Ta / Pa) (y-axis)
1.007	0.717	1.422	0.996	0.709	0.881
1.003	1.006	2.011	0.992	0.995	1.246
1.000	1.125	2.248	0.990	1.113	1.393
0.999	1.179	2.358	0.989	1.166	1.461
0.994	1.420	2.844	0.984	1.405	1.762
	m =	2.0208		m =	1.2658
	b =	-0.024947		b =	-0.015460
	r = 0.999989			r =	0.999989

Calculations

Vstd ==ZVol((Pa -=ZP) / Pstd)(Tstd / Ta) Qstd ==Vstd / ZTime $Va = \Delta Vol((Pa - \Delta P) / Pa)$ Qa = Va / $\Delta Time$ page 1

For subsequent flow rate calculations:

$$Qstd = 1 / m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b$$

Standard Conditions: Tstd: 298.18 ° K Pstd: 760 mm Hg

For additional information consult:

1. The Federal Register, Vol. 47, No.234, pp. 54896-54921, Dec. 6, 1982

2. Quality Assurance Handbook, Vol II (EPA 60074-77-277a), Section 2.11

3. Andersen Instruments, Inc. Instruction Manual

Notes:

1. Copies of this calibration are not kept on file.

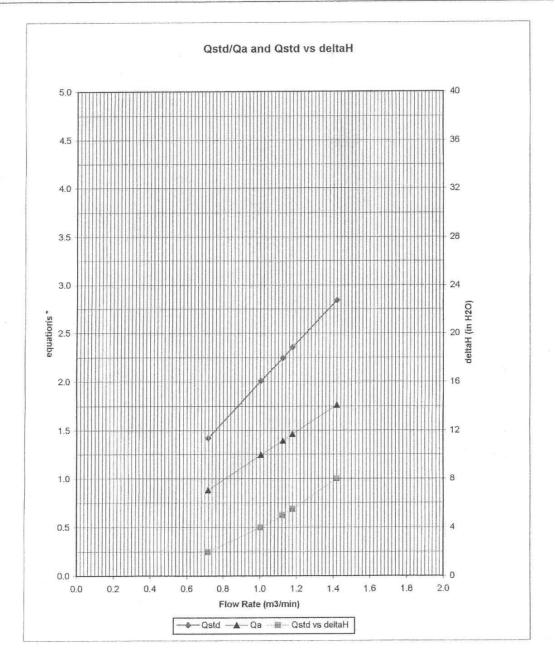
2. EPA recommends calibrators should be recalibrated after one year of use.

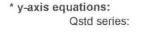
 $Qa = 1 / m((\sqrt{\Delta H(Ta / Pa)}) - b)$

where: ∆H: calibrator manometer reading (in H2O) ∆P: rootsmeter manometer reading (mm Hg) Ta: actual absolute temperature (° K) Pa: actual barometric pressure (mm Hg) b: intercept m: slope

Andersen Instruments, Inc.

Orifice Transfer Standard Certification





 $p_{i}^{(\ell)}$



Qa series:

606 - 608 Cornell Centre, 50 Wing Tai Road, Chai Wan, Hong Kong. Tel: (852) 2898 7388 Fax: (852) 2898 7076

TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No .:	C/N/41218/1
	1601-1610 Delta House,	Date of Issue:	2004-12-18
	3 On Yiu Street,	Date Received:	2004-12-17
	Shatin, N.T.	Date Tested:	2004-12-17
		Date Completed:	2004-12-18

ATTN:

Mr. Henry Leung

Certificate of Calibration

Item for calibration:

Description
Manufacturer
Model No.
Serial No.
Microphone No.
Equipment No.

Test conditions:

Room Temperatre Relative Humidity : Integrating Sound Level Meter : Brüel & Kjær : B&K 2238 : 2337665 : 2289749 : N-01-01

Page:

1 of 1

: 20 degree Celsius : 64%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

William Yip Laborary Manager

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TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No .:	C/N/41218/1
	1601-1610 Delta House,	Date of Issue:	2004-12-18
	3 On Yiu Street,	Date Received:	2004-12-17
	Shatin, N.T.	Date Tested:	2004-12-17
		Date Completed:	2004-12-18

ATTN:

Mr. Henry Leung

Certificate of Calibration

Item for calibration:

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2337666
Microphone No.	: 2289250
Equipment No.	: N-01-02
s:	

Test conditions:

Room Temperatre Relative Humidity : 20 degree Celsius : 64%

Page:

1 of 1

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

William Yip Laborary Manager

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TEST REPORT

APPLICANT: Cinotech Consultants Limited 1602-1610 Delta House, 3 On Yiu Street, Shatin, N.T.

Test Report No .:	C/N/50905-1
Date of Issue:	2005-09-06
Date Received:	2005-09-05
Date Tested:	2005-09-06
Date Completed:	2005-09-06
Next Due Date:	2006-09-05
Page:	1 of 1

ATTN:

Mr. Henry Leung

Certificate of Calibration

Item for calibration:

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2359311
Microphone No.	: 2346382
Equipment No.	: N-01-03
ons:	
Room Tomporatro	· 22 degree Celsius

Test conditions:

Room Temperatre Relative Humidity : 22 degree Celsius : 65%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY: For and On Behalf of **WELLAB Ltd.**

Patrick

PATRICK TSE Laborary Manager

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TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No.:	C/N/50905-2
	1602-1610 Delta House,	Date of Issue:	2005-09-06
	3 On Yiu Street,	Date Received:	2005-09-05
	Shatin, N.T.	Date Tested:	2005-09-05
		Date Completed:	2005-09-06
		Next Due Date:	2006-09-05

ATTN:

Mr. Henry Leung

Certificate of Calibration

Item for calibration:

Description Manufacturer Model No. Serial No. Equipment No.

Test conditions:

Room Temperatre Relative Humidity Pressure : Integrating Sound Level Meter : Brüel & Kjær : B&K 2238 : 2359303 : N-01-04

Page:

1 of 1

: 21 degree Celsius : 62% : 1006.5hPa

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

Patrick

PATRICK TSE Operation Manager

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TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No .:	C/N/41013/1
	1601-1610 Delta House,	Date of Issue:	2004-10-15
	3 On Yiu Street,	Date Received:	2004-10-13
	Shatin, N.T.	Date Tested:	2004-10-14
		Date Completed:	2004-10-15

ATTN:

Mr. Henry Leung

Certificate of Calibration

Item for calibration:

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2394976
Microphone No.	: 2407349
Equipment No.	: N-01-05

Test conditions:

Room Temperatre Relative Humidity : 23 degree Celsius : 60%

Page:

1 of 1

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

William Yip Laborary Manager

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606 - 608 Cornell Centre, 50 Wing Tai Road, Chai Wan, Hong Kong. Tel: (852) 2898 7388 Fax: (852) 2898 7076

TEST REPORT

APPLICANT:	Cinotech Consultants Limited 1601-1610 Delta House,	Test Report No.: Date of Issue:	C/04/1115-1 2004-11-15
	3 On Yiu Street,	Date Received:	2004-11-15
	Shatin, N.T.	Date Tested:	2004-11-15
		Date Completed:	2004-11-15
ATTN:	Mr. Henry Leung	Page:	1 of 1

Item for calibration:

Description Manufacturer Model No. Serial No. Project No. Equipment No. : Acoustical Calibrator : Brüel & Kjær : 4231 : 2326353 : C13 : N-02-01

Test conditions:

Room Temperatre	: 20 degree Celsius	
Relative Humidity	: 65%	
Pressure	: 1019.4 hPa	

Methodology:

The sound calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

Sound Pressure Level	Measured SPL	Tolerance
At 94 dB SPL	94.0	$94.0\pm~0.1~\mathrm{dB}$

PREPARED AND CHECKED BY: For and On Behalf of **WELLAB Ltd.**

WILLIAM YIP Laboratory Manager

Unit C, 1/F, Goldlion Holdings Center 13-15 Yuen Shun Circuit, Shatin, Hong Kong. Tel: (852) 2898 7388 Fax: (852) 2898 7076

TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No .:	C/05/50305
	1602-1610 Delta House,	Date of Issue:	2005-03-05
	3 On Yiu Street,	Date Received:	2005-03-04
	Shatin, N.T.	Date Tested:	2005-03-05
	0	Date Completed:	2005-03-05

Page:

1 of 1

ATTN:

Mr. Henry Leung

Item for calibration:

Description: Acoustical CalibratorManufacturer: Brüel & KjærModel No.: 4231Serial No.: 2343007Project No.: C13Equipment No.: N-02-02

Test conditions:

Room Temperatre	: 19 degree Celsius
Relative Humidity	: 70%
Pressure	: 1020.1hPa

Methodology:

The sound calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

Sound Pressure Level	Measured SPL	Tolerance
At 94 dB SPL	94.0	$94.0\pm~0.2~\mathrm{dB}$

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

Patriels

PATRICK TSE Operation Manager

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Unit C, 1/F, Goldlion Holdings Center 13-15 Yuen Shun Circuit, Shatin, Hong Kong. Tel: (852) 2898 7388 Fax: (852) 2898 7076

TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No.:	C/N/50905-1A
	1602-1610 Delta House,	Date of Issue:	2005-09-06
	3 On Yiu Street,	Date Received:	2005-09-05
	Shatin, N.T.	Date Tested:	2005-09-05
		Date Completed:	2005-09-06
		Mart Day Date	2006 00 05

ATTN:

Mr. Henry Leung

Next Due Date: 2006-09-05 Page: 1 of 1

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: Brüel & Kjær
Model No.	: 4231
Serial No.	: 2412367
Equipment No.	: N-02-03

Test conditions:

Room Temperatre **Relative Humidity** Pressure

: 21 degree Celsius : 62% : 1006.5hPa

Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	$94.0 \pm 0.1 \text{ dB}$
At 114 dB SPL	114.0	$114.0 \pm 0.1 \text{ dB}$

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

Patrick.

PATRICK TSE **Operation Manager**

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APPENDIX C ENVIRONMENTAL MONITORING AND AUDIT SCHEDULE

Environmental Monitoring for Eagle's Nest Tunnel Air Quality and Noise Monitoring Schedule for September 2005

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28-Aug	29-Aug	30-Aug	31-Aug	1-Sep	2-Sep	3-Sep
	1 hr TSP	1 hr TSP	24 hrs TSP	1 hr TSP Noise		
4-Sep	5-Sep	6-Sep	7-Sep	8-Sep	9-Sep	10-Sep
		1 hr TSP 24 hrs TSP	1 hr TSP	1 hr TSP Noise		
11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep
	1 hr TSP 24 hrs TSP	1 hr TSP		1 hr TSP Noise		24 hrs TSP
18-Sep	19-Sep	20-Sep	21-Sep	22-Sep	23-Sep	24-Sep
		1 hr TSP	1 hr TSP	1 hr TSP Noise	24 hrs TSP	
25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	30-Sep	1-Oct
	1 hr TSP			1 hr TSP 24 hrs TSP	1 hr TSP Noise	

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

- AM1 Yew Chung International School /Po Leung Kuk Choi Kai Yau School
- AM3 Garden Villa
- AM4 Government Quarters

- NM1 Yew Chung International School /Po Leung Kuk Choi Kai Yau School
- NM5 Villa Carlton
- NM6 Government Quarters
- NM7 Garden Villa

Environmental Monitoring for Eagle's Nest Tunnel Tentative Air Quality and Noise Monitoring Schedule for October 2005

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
2-Oct	3-Oct	4-Oct	5-Oct	6-Oct	7-Oct	8-Oct
		1 hr TSP	24 hrs TSP	1 hr TSP	1 hr TSP Noise	
9-Oct	10-Oct	11-Oct	12-Oct	13-Oct	14-Oct	15-Oct
	1 hr TSP		24 hrs TSP	1 hr TSP	1 hr TSP Noise	
16-Oct	17-Oct	18-Oct	19-Oct	20-Oct	21-Oct	22-Oct
	1 hr TSP	24 hrs TSP	1 hr TSP	1 hr TSP Noise		
23-Oct	24-Oct	25-Oct	26-Oct	27-Oct	28-Oct	29-Oct
	24 hrs TSP	1 hr TSP	1 hr TSP	1 hr TSP Noise		24 hrs TSP
30-Oct	31-Oct	1-Nov	2-Nov	3-Nov	4-Nov	5-Nov
	1 hr TSP	1 hr TSP		1 hr TSP Noise	24 hrs TSP	

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

- AM1 Yew Chung International School /Po Leung Kuk Choi Kai Yau School
- AM3 Garden Villa
- AM4 Government Quarters

- NM1 Yew Chung International School /Po Leung Kuk Choi Kai Yau School
- NM5 Villa Carlton
- NM6 Government Quarters
- NM7 Garden Villa

APPENDIX D WIND DATA

Date	Time	Wind Speed m/s	Direction
1-Sep-2005	0:00	3.6	NE
1-Sep-2005	1:00	2.2	ESE
1-Sep-2005	2:00	1.8	 N
1-Sep-2005	3:00	0.9	N
1-Sep-2005	4:00	0.4	
1-Sep-2005	5:00	1.3	Ν
1-Sep-2005	6:00	0	
1-Sep-2005	7:00	0.9	Ν
1-Sep-2005	8:00	1.3	N
1-Sep-2005	9:00	4	W
1-Sep-2005	10:00	5.8	W
1-Sep-2005	11:00	5.8	W
1-Sep-2005	12:00	6.7	W
1-Sep-2005	13:00	7.6	W
1-Sep-2005	14:00	7.6	W
			W
1-Sep-2005	15:00 16:00	8.5	W
1-Sep-2005		6.7	W
1-Sep-2005	17:00		
1-Sep-2005	18:00	4	SW SW
1-Sep-2005	19:00	2.2	
1-Sep-2005	20:00	2.7	WSW
1-Sep-2005	21:00	4.9	W
1-Sep-2005	22:00	4.9	WSW
1-Sep-2005	23:00	2.7	NE
2-Sep-2005	0:00	0.4	NE
2-Sep-2005	1:00	0	NNE
2-Sep-2005	2:00	0.4	ENE
2-Sep-2005	3:00	0.4	ENE
2-Sep-2005	4:00	0.4	NE
2-Sep-2005	5:00	0.4	N
2-Sep-2005	6:00	0	ENE
2-Sep-2005	7:00	0	NE
2-Sep-2005	8:00	0	NE
2-Sep-2005	9:00	0	NE
2-Sep-2005	10:00	0.4	W
2-Sep-2005	11:00	0	N
2-Sep-2005	12:00	0.4	NE
2-Sep-2005	13:00	1.3	Ν
2-Sep-2005	14:00	1.8	N
2-Sep-2005	15:00	1.3	ENE
2-Sep-2005	16:00	1.3	ENE
2-Sep-2005	17:00	0.9	ENE
2-Sep-2005	18:00	0.4	ENE
2-Sep-2005	19:00	0	E
2-Sep-2005	20:00	0	ENE
2-Sep-2005	21:00	0	SE
2-Sep-2005	22:00	0	SSE
2-Sep-2005	23:00	0	S
3-Sep-2005	0:00	0.4	SE
3-Sep-2005	1:00	0	
3-Sep-2005	2:00	0	SW
3-Sep-2005	3:00	0.4	NNE
3-Sep-2005	4:00	0.4	Ν
3-Sep-2005	5:00	0.4	NW

Date	Time	Wind Speed m/s	Direction
3-Sep-2005	6:00	0	NE
3-Sep-2005	7:00	0.9	ENE
3-Sep-2005	8:00	0	SSE
3-Sep-2005	9:00	0	SE
3-Sep-2005	10:00	0.9	WNW
3-Sep-2005	11:00	0.4	SW
3-Sep-2005	12:00	0	WSW
3-Sep-2005	13:00	1.8	WSW
3-Sep-2005	14:00	0.9	W
3-Sep-2005	15:00	3.6	WSW
3-Sep-2005	16:00	2.2	W
3-Sep-2005	17:00	0.4	WSW
3-Sep-2005	18:00	0.9	WSW
3-Sep-2005	19:00	0.9	W
3-Sep-2005	20:00	0.9	WSW
3-Sep-2005	21:00	0.9	WSW
3-Sep-2005	22:00	1.3	WSW
3-Sep-2005	23:00	0.4	S
4-Sep-2005	0:00	0.4	SSW
4-Sep-2005	1:00	0.9	WSW
4-Sep-2005	2:00	0.4	WNW
4-Sep-2005	3:00	0.4	WNW
4-Sep-2005	4:00	1.8	W
4-Sep-2005	5:00	0.9	S
4-Sep-2005	6:00	2.2	SSW
4-Sep-2005	7:00	1.8	S
4-Sep-2005	8:00	0.9	SSW
4-Sep-2005	9:00	1.8	S
4-Sep-2005	10:00	0.9	Ŵ
4-Sep-2005	11:00	1.3	WSW
4-Sep-2005	12:00	2.2	WSW
4-Sep-2005	13:00	2.2	W
4-Sep-2005	14:00	1.8	W
4-Sep-2005	15:00	2.7	W
4-Sep-2005	16:00	2.7	W
4-Sep-2005	17:00	3.1	W
4-Sep-2005	18:00	2.7	WSW
4-Sep-2005	19:00	2.7	W
4-Sep-2005	20:00	2.2	W
4-Sep-2005	21:00	0.9	W
4-Sep-2005	22:00	1.8	W
4-Sep-2005	23:00	1.8	W
5-Sep-2005	0:00	1.8	W
5-Sep-2005	1:00	1.8	WSW
5-Sep-2005	2:00	0.9	W
5-Sep-2005	3:00	0.4	SSW
5-Sep-2005	4:00	0	SSW
5-Sep-2005	5:00	0.9	SW
5-Sep-2005	6:00	0.4	SW
5-Sep-2005	7:00	0	W
5-Sep-2005	8:00	0.4	W
5-Sep-2005	9:00	2.7	W
5-Sep-2005	10:00	2.2	W
5-Sep-2005	11:00	1.8	W

5-Sep-2005 5-Sep-2005	40.00	Wind Speed m/s	
	12:00	1.8	WNW
	13:00	3.1	W
5-Sep-2005	14:00	4	W
5-Sep-2005	15:00	2.7	W
5-Sep-2005	16:00	2.2	W
5-Sep-2005	17:00	2.2	W
5-Sep-2005	18:00	1.3	WSW
5-Sep-2005	19:00	0.4	Wen
5-Sep-2005	20:00	0	SSW
5-Sep-2005	21:00	0	0011
5-Sep-2005	22:00	0	
5-Sep-2005	23:00	0	
· · · · · · · · · · · · · · · · · · ·	0:00	0	SSE
6-Sep-2005		0	
6-Sep-2005	1:00	0	
6-Sep-2005	2:00	I I	SSE
6-Sep-2005	3:00	0	
6-Sep-2005	4:00	0	
6-Sep-2005	5:00	0	SSE
6-Sep-2005	6:00	0	SSE
6-Sep-2005	7:00	0	
6-Sep-2005	8:00	0	E
6-Sep-2005	9:00	0	W
6-Sep-2005	10:00	0.9	SW
6-Sep-2005	11:00	1.8	WSW
6-Sep-2005	12:00	3.1	W
6-Sep-2005	13:00	2.2	W
6-Sep-2005	14:00	1.8	W
6-Sep-2005	15:00	1.3	ENE
6-Sep-2005	16:00	1.3	ENE
6-Sep-2005	17:00	0.9	NE
6-Sep-2005	18:00	1.3	ENE
6-Sep-2005	19:00	0	ENE
6-Sep-2005	20:00	0	
6-Sep-2005	21:00	0	
6-Sep-2005	22:00	0	
6-Sep-2005	23:00	0	
7-Sep-2005	0:00	0	
7-Sep-2005	1:00	0	
7-Sep-2005	2:00	0	
7-Sep-2005	3:00	0	
7-Sep-2005	4:00	0	
7-Sep-2005	5:00	0	
7-Sep-2005	6:00	0	
7-Sep-2005	7:00	0	
7-Sep-2005	8:00	0	E
7-Sep-2005	9:00	0.9	
7-Sep-2005	10:00	2.2	WNW
7-Sep-2005	11:00	3.1	W
7-Sep-2005	12:00	2.7	W
7-Sep-2005	13:00	0.9	W
7-Sep-2005	14:00	0.9	N
7-Sep-2005	15:00	1.3	N
7-Sep-2005	16:00	0.9	NNE
1-00p-2000	17:00	0.9	NNE

Date	Time	Wind Speed m/s	Direction
7-Sep-2005	18:00	0	ESE
7-Sep-2005	19:00	0.9	SSE
7-Sep-2005	20:00	1.8	WSW
7-Sep-2005	21:00	0.9	WSW
7-Sep-2005	22:00	0	NW
7-Sep-2005	23:00	0.4	WSW
8-Sep-2005	0:00	0.4	N
8-Sep-2005	1:00	0.9	WSW
8-Sep-2005	2:00	1.3	SSW
8-Sep-2005	3:00	0.4	WSW
8-Sep-2005	4:00	0	WSW
8-Sep-2005	5:00	0.4	WSW
8-Sep-2005	6:00	0.4	SSW
8-Sep-2005	7:00	0.4	SSW
8-Sep-2005	8:00	0.4	S
			SSW
8-Sep-2005 8-Sep-2005	9:00 10:00	1.8	<u>55w</u>
	11:00	2.2	WNW
8-Sep-2005		· · · · · · · · · · · · · · · · · · ·	
8-Sep-2005	12:00	2.7	WNW
8-Sep-2005	13:00	2.7	WSW
8-Sep-2005	14:00	1.3	WSW
8-Sep-2005	15:00	1.8	W
8-Sep-2005	16:00	2.2	W
8-Sep-2005	17:00	2.2	W
8-Sep-2005	18:00	2.2	WSW
8-Sep-2005	19:00	2.2	W
8-Sep-2005	20:00	1.3	WSW
8-Sep-2005	21:00	1.3	WSW
8-Sep-2005	22:00	1.8	WSW
8-Sep-2005	23:00	1.8	SW
9-Sep-2005	0:00	1.8	WSW
9-Sep-2005	1:00	1.8	WSW
9-Sep-2005	2:00	1.3	SW
9-Sep-2005	3:00	1.8	WSW
9-Sep-2005	4:00	1.3	W
9-Sep-2005	5:00	0.4	W
9-Sep-2005	6:00	0	SW
9-Sep-2005	7:00	0.4	W
9-Sep-2005	8:00	0.9	SSW
9-Sep-2005	9:00	1.3	W
9-Sep-2005	10:00	1.8	W
9-Sep-2005	11:00	1.8	W
9-Sep-2005	12:00	2.7	W
9-Sep-2005	13:00	3.1	WSW
9-Sep-2005	14:00	2.2	W
9-Sep-2005	15:00	2.2	W
9-Sep-2005	16:00	1.8	WSW
9-Sep-2005	17:00	1.8	W
9-Sep-2005	18:00	0.9	W
9-Sep-2005	19:00	0	ESE
9-Sep-2005	20:00	0	ESE
9-Sep-2005	21:00	0	ESE
9-Sep-2005	22:00	0.4	SSW
	23:00	0	SSW

Date	Time	Wind Speed m/s	Direction
10-Sep-2005	0:00	0.4	SSW
10-Sep-2005	1:00	1.3	SSW
10-Sep-2005	2:00	0.4	SSW
10-Sep-2005	3:00	0.4	SSW
10-Sep-2005	4:00	0	SSW
10-Sep-2005	5:00	0	SSW
10-Sep-2005	6:00	0	
10-Sep-2005	7:00	0	
10-Sep-2005	8:00	0	SSW
10-Sep-2005	9:00	0.9	W
10-Sep-2005	10:00	2.2	W
10-Sep-2005	11:00	2.2	W
10-Sep-2005	12:00	1.8	W
10-Sep-2005	13:00	2.2	W
10-Sep-2005	14:00	1.3	W
10-Sep-2005	15:00	0.9	SSW
10-Sep-2005	16:00	2.7	N
10-Sep-2005	17:00	2.7	NNE
10-Sep-2005	18:00	0.9	ENE
10-Sep-2005	19:00	0	ENE
10-Sep-2005	20:00	0.4	S
10-Sep-2005	21:00	2.7	S
10-Sep-2005	22:00	0.4	E
10-Sep-2005	23:00	0	E
11-Sep-2005	0:00	0	
11-Sep-2005	1:00	0	
11-Sep-2005	2:00	0	
11-Sep-2005	3:00	0	
11-Sep-2005	4:00	0	
11-Sep-2005	5:00	0	
11-Sep-2005	6:00	0	
11-Sep-2005	7:00	0	
11-Sep-2005	8:00	0	
11-Sep-2005	9:00	0	E
11-Sep-2005	10:00	1.8	W
11-Sep-2005	11:00	2.2	W
11-Sep-2005	12:00	2.2	W
11-Sep-2005	13:00	1.3	W
11-Sep-2005	14:00	0.9	N
11-Sep-2005	15:00	2.2	N
11-Sep-2005	16:00	1.3	N
11-Sep-2005	17:00	0.4	E
11-Sep-2005	18:00	0.4	E
11-Sep-2005	19:00	0.4	ESE
11-Sep-2005	20:00	0.4	E
11-Sep-2005	21:00	0.4	E
11-Sep-2005	22:00	0	
11-Sep-2005	23:00	0	
12-Sep-2005	0:00	0	
12-Sep-2005	1:00	0	
12-Sep-2005	2:00	0	
12-Sep-2005	3:00	0	
12-Sep-2005	4:00	0	
12-Sep-2005	5:00	0	

Date	Time	Wind Speed m/s	Direction
12-Sep-2005	6:00	0	
12-Sep-2005	7:00	0	
12-Sep-2005	8:00	0	E
12-Sep-2005	9:00	1.3	W
12-Sep-2005	10:00	2.2	W
12-Sep-2005	11:00	2.2	W
12-Sep-2005	12:00	2.7	WNW
12-Sep-2005	13:00	3.1	W
12-Sep-2005	14:00	3.6	W
12-Sep-2005	15:00	4	W
12-Sep-2005	16:00	4	W
	17:00	4	W
12-Sep-2005			
12-Sep-2005	18:00	3.6	W
12-Sep-2005	19:00	3.6	WSW
12-Sep-2005	20:00	2.7	W
12-Sep-2005	21:00	3.6	W
12-Sep-2005	22:00	4.5	W
12-Sep-2005	23:00	4.9	W
13-Sep-2005	0:00	3.6	W
13-Sep-2005	1:00	4	W
13-Sep-2005	2:00	3.6	WNW
13-Sep-2005	3:00	3.1	W
13-Sep-2005	4:00	3.1	W
13-Sep-2005	5:00	2.7	WNW
13-Sep-2005	6:00	2.7	W
13-Sep-2005	7:00	1.8	W
13-Sep-2005	8:00	1.3	WSW
13-Sep-2005	9:00	2.7	WSW
13-Sep-2005	10:00	2.7	W
13-Sep-2005	11:00	2.7	WNW
13-Sep-2005	12:00	4	W
13-Sep-2005	13:00	4	WNW
13-Sep-2005	14:00	4.5	W
13-Sep-2005	15:00	4	W
13-Sep-2005	16:00	4	W
13-Sep-2005	17:00	3.1	SW
13-Sep-2005	18:00	3.6	W
13-Sep-2005	19:00	3.6	W
	20:00	3.6	WSW
13-Sep-2005	20.00	3.0	W
13-Sep-2005	21:00	2.2	
13-Sep-2005			
13-Sep-2005	23:00	2.7	
14-Sep-2005	0:00	1.3	NNE
14-Sep-2005	1:00	0.9	WSW
14-Sep-2005	2:00	0.9	S
14-Sep-2005	3:00	0.4	S
14-Sep-2005	4:00	0	S
14-Sep-2005	5:00	0	S
14-Sep-2005	6:00	0	S
14-Sep-2005	7:00	0	
14-Sep-2005	8:00	0.9	SW
14-Sep-2005	9:00	2.2	SSW
14-Sep-2005	10:00	1.8	W
14-Sep-2005	11:00	3.1	W

Date	Time	Wind Speed m/s	Direction
14-Sep-2005	12:00	4.5	SW
14-Sep-2005	13:00	4.5	SSW
14-Sep-2005	14:00	3.6	SSW
14-Sep-2005	15:00	3.1	W
14-Sep-2005	16:00	3.1	WNW
14-Sep-2005	17:00	2.2	W
14-Sep-2005	18:00	2.2	W
14-Sep-2005	19:00	2.2	WSW
14-Sep-2005	20:00	1.8	W
14-Sep-2005	21:00	2.2	WSW
14-Sep-2005	22:00	2.2	SSW
14-Sep-2005	23:00	1.8	SSW
15-Sep-2005	0:00	2.7	SSW
15-Sep-2005	1:00	1.8	WSW
15-Sep-2005	2:00	3.1	WSW
15-Sep-2005	3:00	2.7	W
15-Sep-2005	4:00	2.7	WSW
15-Sep-2005	5:00	2.7	WSW
15-Sep-2005	6:00	3.1	W
15-Sep-2005	7:00	2.7	W
15-Sep-2005	8:00	2.2	W
15-Sep-2005	9:00	2.7	WSW
15-Sep-2005	10:00	3.1	W
15-Sep-2005	11:00	2.7	W
15-Sep-2005	12:00	3.1	W
15-Sep-2005	13:00	2.7	WSW
15-Sep-2005	14:00	2.7	WSW
15-Sep-2005	15:00	1.8	W
15-Sep-2005	16:00	1.3	SSE
15-Sep-2005	17:00	1.3	SSE
15-Sep-2005	18:00	0.9	ENE
15-Sep-2005	19:00	0.4	NE
15-Sep-2005	20:00	0	E
15-Sep-2005	21:00	0.4	S
15-Sep-2005	22:00	0.4	S
15-Sep-2005	23:00	1.8	WSW
16-Sep-2005	0:00	1.8	WSW
16-Sep-2005	1:00	1.3	SW
16-Sep-2005	2:00	1.8	WSW
16-Sep-2005	3:00	2.7	W
16-Sep-2005	4:00	2.7	W
16-Sep-2005	5:00	3.1	W
16-Sep-2005	6:00	2.2	SW
16-Sep-2005	7:00	3.1	W
16-Sep-2005	8:00	2.7	WSW
16-Sep-2005	9:00	4	WSW
16-Sep-2005	10:00	3.6	W
16-Sep-2005	11:00	3.6	WSW
16-Sep-2005	12:00	4	WSW
16-Sep-2005	13:00	3.1	W
16-Sep-2005	14:00	2.7	W
16-Sep-2005	15:00	3.1	WNW
16-Sep-2005	16:00	3.6	W
16-Sep-2005	17:00	2.7	WSW

Date	Time	Wind Speed m/s	Direction
16-Sep-2005	18:00	2.2	WSW
16-Sep-2005	19:00	2.7	S
16-Sep-2005	20:00	1.3	WSW
16-Sep-2005	21:00	1.3	SSW
16-Sep-2005	22:00	2.2	W
16-Sep-2005	23:00	1.8	S
17-Sep-2005	0:00	1.8	S
17-Sep-2005	1:00	3.1	W
17-Sep-2005	2:00	3.6	WSW
17-Sep-2005	3:00	3.6	WSW
17-Sep-2005	4:00	3.1	SW
17-Sep-2005	5:00	3.1	SW
17-Sep-2005	6:00	3.1	SSW
	7:00	4	SW
17-Sep-2005		4 4	WSW
17-Sep-2005	8:00	· ·	
17-Sep-2005	9:00	5.4	W
17-Sep-2005	10:00	5.4	W
17-Sep-2005	11:00	7.2	WSW
17-Sep-2005	12:00	8.5	W
17-Sep-2005	13:00	8	WSW
17-Sep-2005	14:00	7.2	W
17-Sep-2005	15:00	5.4	W
17-Sep-2005	16:00	6.7	W
17-Sep-2005	17:00	5.4	WNW
17-Sep-2005	18:00	4.5	WNW
17-Sep-2005	19:00	4.9	W
17-Sep-2005	20:00	4.9	W
17-Sep-2005	21:00	4	W
17-Sep-2005	22:00	5.4	W
17-Sep-2005	23:00	4.5	WNW
18-Sep-2005	0:00	4	W
18-Sep-2005	1:00	4.5	W
18-Sep-2005	2:00	3.6	W
18-Sep-2005	3:00	4.5	W
18-Sep-2005	4:00	6.3	WNW
18-Sep-2005	5:00	6.3	W
18-Sep-2005	6:00	6.3	W
18-Sep-2005	7:00	4.9	W
18-Sep-2005	8:00	5.8	W
18-Sep-2005	9:00	5.4	WNW
18-Sep-2005	10:00	6.7	W
18-Sep-2005	11:00	7.2	WNW
18-Sep-2005	12:00	5.8	W
18-Sep-2005	13:00	5.8	WNW
18-Sep-2005	14:00	4.5	WNW
18-Sep-2005	15:00	5.4	W
18-Sep-2005	16:00	4.9	WNW
	17:00	4.5	WNW
18-Sep-2005			S
18-Sep-2005	18:00	2.7	
18-Sep-2005	19:00	2.2	SSW
18-Sep-2005	20:00	2.2	SSW
18-Sep-2005	21:00	3.1	WNW
18-Sep-2005	22:00	1.8	SW
18-Sep-2005	23:00	3.6	W

Date	Time	Wind Speed m/s	Direction
19-Sep-2005	0:00	4	W
19-Sep-2005	1:00	4.9	WNW
19-Sep-2005	2:00	3.6	W
19-Sep-2005	3:00	2.7	W
19-Sep-2005	4:00	3.1	WNW
19-Sep-2005	5:00	2.2	W
19-Sep-2005	6:00	0.4	S
19-Sep-2005	7:00	0.9	SW
19-Sep-2005	8:00	0.9	SSE
19-Sep-2005	9:00	0.4	S
19-Sep-2005	10:00	2.2	W
19-Sep-2005	11:00	3.1	Ŵ
19-Sep-2005	12:00	3.1	W
19-Sep-2005	13:00	3.1	W
19-Sep-2005	14:00	3.6	W
19-Sep-2005	15:00	4.5	W
19-Sep-2005	16:00	4.5	W
19-Sep-2005	17:00	3.6	W
19-Sep-2005	18:00	2.2	W
19-Sep-2005	19:00	1.8	W
19-Sep-2005	20:00	0.4	W
	21:00	0.4	W
19-Sep-2005 19-Sep-2005	21:00	1.8	W
· · · ·			
19-Sep-2005	23:00	0.4	ENE
20-Sep-2005	0:00	0	
20-Sep-2005	1:00	0	
20-Sep-2005	2:00	0	
20-Sep-2005	3:00	0	
20-Sep-2005	4:00	0	
20-Sep-2005	5:00	0	ENE
20-Sep-2005	6:00	0	
20-Sep-2005	7:00	0	ENE
20-Sep-2005	8:00	0	
20-Sep-2005	9:00	0.4	NNE
20-Sep-2005	10:00	0.4	NW
20-Sep-2005	11:00	0.4	NW
20-Sep-2005	12:00	0.9	E
20-Sep-2005	13:00	0.9	NNE
20-Sep-2005	14:00	0.4	NE
20-Sep-2005	15:00	0.4	ENE
20-Sep-2005	16:00	0.4	ENE
20-Sep-2005	17:00	0	N
20-Sep-2005	18:00	0	ENE
20-Sep-2005	19:00	0	ENE
20-Sep-2005	20:00	0	
20-Sep-2005	21:00	0	ENE
20-Sep-2005	22:00	0	ENE
20-Sep-2005	23:00	0.4	E
21-Sep-2005	0:00	0	
21-Sep-2005	1:00	0	E
21-Sep-2005	2:00	0	
21-Sep-2005	3:00	0	
21-Sep-2005	4:00	0	
21-Sep-2005	5:00	0	

Date	Time	Wind Speed m/s	Direction
21-Sep-2005	6:00	0	
21-Sep-2005	7:00	0	
21-Sep-2005	8:00	0	E
21-Sep-2005	9:00	0	
21-Sep-2005	10:00	0.9	NE
21-Sep-2005	11:00	0.4	NE
21-Sep-2005	12:00	1.3	ENE
21-Sep-2005	13:00	0.9	N
21-Sep-2005	14:00	0.9	ENE
21-Sep-2005	15:00	1.3	ENE
21-Sep-2005	16:00	0.4	NE
21-Sep-2005	17:00	0.4	ENE
21-Sep-2005	18:00	0.4	E
21-Sep-2005	19:00	0	NE
	20:00	0	
21-Sep-2005		0	
21-Sep-2005	21:00 22:00	0	ENE ENE
21-Sep-2005			
21-Sep-2005	23:00	0	ENE
22-Sep-2005	0:00	0	
22-Sep-2005	1:00	0	
22-Sep-2005	2:00	0	
22-Sep-2005	3:00	0	ENE
22-Sep-2005	4:00	0	
22-Sep-2005	5:00	0	
22-Sep-2005	6:00	0	
22-Sep-2005	7:00	0	
22-Sep-2005	8:00	0	
22-Sep-2005	9:00	0	ENE
22-Sep-2005	10:00	0.9	W
22-Sep-2005	11:00	1.8	SW
22-Sep-2005	12:00	1.8	WSW
22-Sep-2005	13:00	2.2	WSW
22-Sep-2005	14:00	2.2	SW
22-Sep-2005	15:00	2.2	SW
22-Sep-2005	16:00	1.8	WSW
22-Sep-2005	17:00	1.8	S
22-Sep-2005	18:00	0.9	S
22-Sep-2005	19:00	1.3	SSW
22-Sep-2005	20:00	1.8	SSW
22-Sep-2005	21:00	1.8	SSW
22-Sep-2005	22:00	1.8	SW
22-Sep-2005	23:00	3.6	SW
23-Sep-2005	0:00	2.7	SW
23-Sep-2005	1:00	2.2	WSW
23-Sep-2005	2:00	1.8	SW
23-Sep-2005	3:00	2.7	SW
23-Sep-2005	4:00	4	SW
23-Sep-2005	5:00	4.5	SW
23-Sep-2005	6:00	4.5	WSW
23-Sep-2005	7:00	4.5	SW
23-Sep-2005	8:00	4	SW
23-Sep-2005	9:00	4.5	WSW
23-Sep-2005	10:00	4.9	SW
23-Sep-2005	11:00	4.5	SW

Date	Time	Wind Speed m/s	Direction
23-Sep-2005	12:00	4	SW
23-Sep-2005	13:00	4	W
23-Sep-2005	14:00	2.7	SW
23-Sep-2005	15:00	2.7	SSW
23-Sep-2005	16:00	3.1	SW
23-Sep-2005	17:00	4	SW
23-Sep-2005	18:00	4.5	WSW
23-Sep-2005	19:00	4.5	SW
23-Sep-2005	20:00	4	SW
23-Sep-2005	21:00	3.1	SW
		2.7	SSW
23-Sep-2005	22:00		
23-Sep-2005	23:00	3.6	SW
24-Sep-2005	0:00	4	SW
24-Sep-2005	1:00	3.6	WSW
24-Sep-2005	2:00	4.5	SW
24-Sep-2005	3:00	4.5	SW
24-Sep-2005	4:00	4	WSW
24-Sep-2005	5:00	4.5	WSW
24-Sep-2005	6:00	4.5	SW
24-Sep-2005	7:00	4	SW
24-Sep-2005	8:00	4	SW
24-Sep-2005	9:00	4.5	SW
24-Sep-2005	10:00	4.9	SW
24-Sep-2005	11:00	6.3	SSW
24-Sep-2005	12:00	6.7	SW
24-Sep-2005	13:00	6.7	SW
24-Sep-2005	14:00	7.2	SW
24-Sep-2005	15:00	6.3	SW
24-Sep-2005	16:00	6.3	SW
24-Sep-2005	17:00	6.7	SW
24-Sep-2005	18:00	7.2	W
24-Sep-2005	19:00	8	Ŵ
24-Sep-2005	20:00	8.5	W
24-Sep-2005	21:00	8.5	W
24-Sep-2005	22:00	9.8	W
	22:00	9.0	W
24-Sep-2005			W
25-Sep-2005	0:00	8.5	
25-Sep-2005	1:00	7.6	W
25-Sep-2005	2:00	7.2	WSW
25-Sep-2005	3:00	5.8	W
25-Sep-2005	4:00	5.8	WNW
25-Sep-2005	5:00	6.7	W
25-Sep-2005	6:00	6.7	W
25-Sep-2005	7:00	5.4	WNW
25-Sep-2005	8:00	6.3	WNW
25-Sep-2005	9:00	7.2	W
25-Sep-2005	10:00	7.2	WNW
25-Sep-2005	11:00	6.3	W
25-Sep-2005	12:00	4.5	W
25-Sep-2005	13:00	5.4	WNW
25-Sep-2005	14:00	7.2	WNW
25-Sep-2005	15:00	6.7	WNW
25-Sep-2005	16:00	5.8	WNW
25-Sep-2005	17:00	6.7	W

Date	Time	Wind Speed m/s	Direction
25-Sep-2005	18:00	5.4	W
25-Sep-2005	19:00	6.7	WNW
25-Sep-2005	20:00	6.3	WNW
25-Sep-2005	21:00	6.3	W
25-Sep-2005	22:00	6.3	WNW
25-Sep-2005	23:00	6.3	W
26-Sep-2005	0:00	6.7	WNW
26-Sep-2005	1:00	6.7	WNW
26-Sep-2005	2:00	6.3	WNW
26-Sep-2005	3:00	5.8	WNW
26-Sep-2005	4:00	5.8	W
26-Sep-2005	5:00	4	WNW
26-Sep-2005	6:00	3.1	WNW
26-Sep-2005	7:00	4.9	WNW
26-Sep-2005	8:00	2.2	WNW
26-Sep-2005	9:00	4	WNW
26-Sep-2005	10:00	2.2	W
26-Sep-2005	11:00	4	W
			W
26-Sep-2005	12:00	3.1	W
26-Sep-2005	13:00	4	
26-Sep-2005	14:00	3.6	W
26-Sep-2005	15:00	3.6	W
26-Sep-2005	16:00	3.6	WNW
26-Sep-2005	17:00	4	WNW
26-Sep-2005	18:00	3.6	WNW
26-Sep-2005	19:00	3.6	WNW
26-Sep-2005	20:00	4	WNW
26-Sep-2005	21:00	4.5	WNW
26-Sep-2005	22:00	3.1	WNW
26-Sep-2005	23:00	3.1	WNW
27-Sep-2005	0:00	3.6	W
27-Sep-2005	1:00	3.1	WNW
27-Sep-2005	2:00	2.7	W
27-Sep-2005	3:00	3.1	W
27-Sep-2005	4:00	3.1	W
27-Sep-2005	5:00	3.1	W
27-Sep-2005	6:00	2.2	WNW
27-Sep-2005	7:00	3.6	W
27-Sep-2005	8:00	3.6	W
27-Sep-2005	9:00	2.7	NW
27-Sep-2005	10:00	3.1	WNW
27-Sep-2005	11:00	2.7	WNW
27-Sep-2005	12:00	4	WNW
27-Sep-2005	13:00	3.1	W
27-Sep-2005	14:00	3.6	WNW
27-Sep-2005	15:00	3.6	WNW
27-Sep-2005	16:00	2.2	WNW
27-Sep-2005	17:00	1.8	WNW
27-Sep-2005	18:00	2.2	W
27-Sep-2005	19:00	2.2	W
27-Sep-2005	20:00	2.2	W
			WSW
27-Sep-2005	21:00	1.8	
27-Sep-2005	22:00	1.8	WSW
27-Sep-2005	23:00	1.3	SW

Date	Time	Wind Speed m/s	Direction
28-Sep-2005	0:00	0.9	SW
28-Sep-2005	1:00	1.3	WSW
28-Sep-2005	2:00	1.3	SSW
28-Sep-2005	3:00	1.8	WSW
28-Sep-2005	4:00	2.2	W
28-Sep-2005	5:00	2.2	W
28-Sep-2005	6:00	0.9	SSW
28-Sep-2005	7:00	1.8	W
28-Sep-2005	8:00	1.8	W
28-Sep-2005	9:00	2.7	WSW
28-Sep-2005	10:00	3.1	WNW
28-Sep-2005	11:00	3.1	WNW
28-Sep-2005	12:00	3.6	WNW
28-Sep-2005	13:00	3.6	WNW
28-Sep-2005	14:00	3.1	NW
28-Sep-2005	15:00	4	WNW
28-Sep-2005	16:00	1.3	W
28-Sep-2005	17:00	1.3	W
28-Sep-2005	18:00	0.9	W
28-Sep-2005	19:00	0.4	W
28-Sep-2005	20:00	0.4	ESE
28-Sep-2005	21:00	0.4	<u> </u>
28-Sep-2005	22:00	0	
28-Sep-2005	23:00	0	
29-Sep-2005	0:00	0	SSW
29-Sep-2005	1:00	0	
29-Sep-2005	2:00	0	
29-Sep-2005	3:00	0	
29-Sep-2005	4:00	0	
29-Sep-2005	5:00	0	
29-Sep-2005	6:00	0	
29-Sep-2005	7:00	0	
29-Sep-2005	8:00	0	
29-Sep-2005	9:00	0	W
29-Sep-2005	10:00	1.3	W
29-Sep-2005	11:00	1.8	WNW
29-Sep-2005	12:00	2.2	W
29-Sep-2005	13:00	2.7	WNW
29-Sep-2005	14:00	1.8	W
29-Sep-2005	15:00	2.2	W
29-Sep-2005	16:00	1.8	W
29-Sep-2005	17:00	0.9	W
29-Sep-2005	18:00	0.4	W
29-Sep-2005	19:00	0	SSW
29-Sep-2005	20:00	0	
29-Sep-2005	21:00	0	SSW
29-Sep-2005	22:00	0	
29-Sep-2005	23:00	0	
30-Sep-2005	0:00	0	
30-Sep-2005	1:00	0	
30-Sep-2005	2:00	0	SSW
30-Sep-2005	3:00	0	
30-Sep-2005	4:00	0	
JU-JCD-2003	4.00	U	

Date	Time	Wind Speed m/s	Direction
30-Sep-2005	6:00	0	
30-Sep-2005	7:00	0	
30-Sep-2005	8:00	0	SSW
30-Sep-2005	9:00	0	WNW
30-Sep-2005	10:00	0.4	W
30-Sep-2005	11:00	0.4	W
30-Sep-2005	12:00	0.4	WNW
30-Sep-2005	13:00	1.3	WNW
30-Sep-2005	14:00	0.9	NE
30-Sep-2005	15:00	1.8	NE
30-Sep-2005	16:00	1.8	NE
30-Sep-2005	17:00	0.9	NE
30-Sep-2005	18:00	1.8	ENE
30-Sep-2005	19:00	0.4	NE
30-Sep-2005	20:00	0.4	ESE
30-Sep-2005	21:00	0	E
30-Sep-2005	22:00	0	
30-Sep-2005	23:00	0	E

APPENDIX E 1-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix E - 1-hour TSP Monitoring Results

Location AM1 - Po Leung Kuk Choi Kai Yau School

Date	Weather	Filter W	eight (g)	Flow Rate	e (m ³ /min.)	Elaps	se Time	Air	Atmospheric	Particulate	Av. flow	Total vol.	Sampling	Conc.
	Condition	Initial	Final	Initial	Final	Initial	Final	Temp. (K)	Pressure(Pa)	weight(g)	(m ³ /min)	(m ³)	Time(hrs.)	(µg/m ³)
1-Sep-05	Sunny	2.8381	2.8547	1.21	1.21	3105.0	3106.0	305.6	750.9	0.0166	1.21	72.8	1.0	228.0
6-Sep-05	Cloudy	2.8614	2.8728	1.23	1.23	3106.0	3107.0	302.0	758.1	0.0114	1.23	73.7	1.0	154.7
7-Sep-05	Sunny	2.8638	2.8669	1.23	1.23	3131.0	3132.0	302.5	758.5	0.0031	1.23	73.7	1.0	42.1
8-Sep-05	Sunny	2.8774	2.8824	1.23	1.23	3132.0	3133.0	301.4	759.6	0.0050	1.23	73.9	1.0	67.7
12-Sep-05	Sunny	2.8621	2.8808	1.23	1.23	3133.0	3134.0	302.3	758.7	0.0187	1.23	73.7	1.0	253.8
13-Sep-05	Sunny	2.8340	2.8370	1.22	1.22	3158.0	3159.0	306.7	760.3	0.0030	1.22	73.2	1.0	41.0
15-Sep-05	Sunny	2.8237	2.8279	1.23	1.23	3159.0	3160.0	303.5	761.8	0.0042	1.23	73.7	1.0	57.0
20-Sep-05	Sunny	2.8446	2.8505	1.23	1.23	3184.0	3185.0	301.6	761.7	0.0059	1.23	74.0	1.0	79.8
21-Sep-05	Sunny	2.8644	2.8785	1.23	1.23	3185.0	3186.0	302.1	759.8	0.0141	1.23	73.8	1.0	191.1
22-Sep-05	Sunny	2.8638	2.8722	1.23	1.23	3186.0	3187.0	302.9	760.2	0.0084	1.23	73.7	1.0	114.0
26-Sep-05	Cloudy	2.8412	2.8432	1.23	1.23	3211.0	3212.0	299.7	758.6	0.0020	1.23	74.0	1.0	27.0
29-Sep-05	Sunny	2.8282	2.8363	1.23	1.23	3212.0	3213.0	301.4	762.7	0.0081	1.23	74.0	1.0	109.4
30-Sep-05	Sunny	2.8618	2.8652	1.21	1.21	3237.0	3238.0	303.5	761.2	0.0034	1.21	72.9	1.0	46.7
													Min	27.0
													Max	253.8

Location AM 3 - Garden Villa

Date	Weather	Filter W	eight (g)	Flow Rate	e (m ³ /min.)	Elaps	se Time	Air	Atmospheric	Particulate	Av. flow	Total vol.	Sampling	Conc.
	Condition	Initial	Final	Initial	Final	Initial	Final	Temp. (K)	Pressure(Pa)	weight(g)	(m³/min)	(m ³)	Time(hrs.)	(µg/m³)
1-Sep-05	Sunny	2.8239	2.8455	1.21	1.21	3467.2	3468.2	305.4	751.1	0.0216	1.21	72.5	1.0	298.1
6-Sep-05	Sunny	2.8148	2.8400	1.22	1.22	3468.2	3469.2	302.0	758.1	0.0252	1.22	73.2	1.0	344.2
7-Sep-05	Sunny	2.8549	2.8661	1.21	1.21	3493.2	3494.2	304.7	757.6	0.0112	1.21	72.9	1.0	153.7
8-Sep-05	Cloudy	2.8536	2.8641	1.23	1.23	3494.2	3495.2	296.6	758.7	0.0105	1.23	73.9	1.0	142.1
12-Sep-05	Cloudy	2.8442	2.8788	1.22	1.22	3495.2	3496.2	302.3	758.7	0.0346	1.22	73.2	1.0	472.7
13-Sep-05	Sunny	2.8286	2.8372	1.21	1.21	3520.3	3521.3	306.1	760.9	0.0086	1.21	72.9	1.0	118.1
15-Sep-05	Sunny	2.8463	2.8705	1.22	1.22	3521.2	3522.2	303.5	761.8	0.0242	1.22	73.2	1.0	330.6
20-Sep-05	Sunny	2.8816	2.8958	1.22	1.22	3534.1	3535.1	304.7	760.0	0.0142	1.22	73.0	1.0	194.6
21-Sep-05	Sunny	2.8605	2.8803	1.21	1.21	3559.1	3560.1	305.8	756.9	0.0198	1.21	72.7	1.0	272.4
22-Sep-05	Sunny	2.8323	2.8489	1.22	1.22	3560.1	3561.1	302.9	760.2	0.0166	1.22	73.2	1.0	226.8
29-Sep-05	Sunny	2.8756	2.8891	1.23	1.23	3561.1	3562.1	301.4	762.7	0.0135	1.23	73.5	1.0	183.6
30-Sep-05	Sunny	2.8288	2.8391	1.22	1.22	3586.1	3587.1	303.7	761.1	0.0103	1.22	73.2	1.0	140.8
													Min	118.1

140.8
118.1
472.7
239.8

108.6

Average

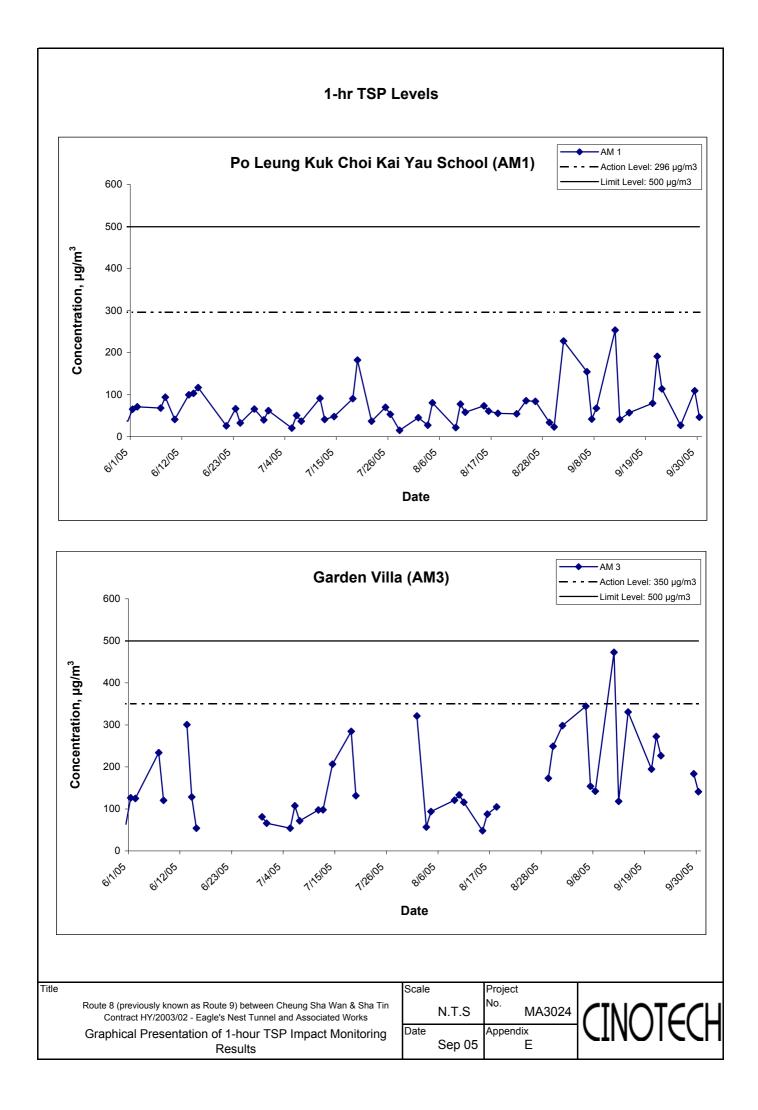
Appendix E - 1-hour TSP Monitoring Results

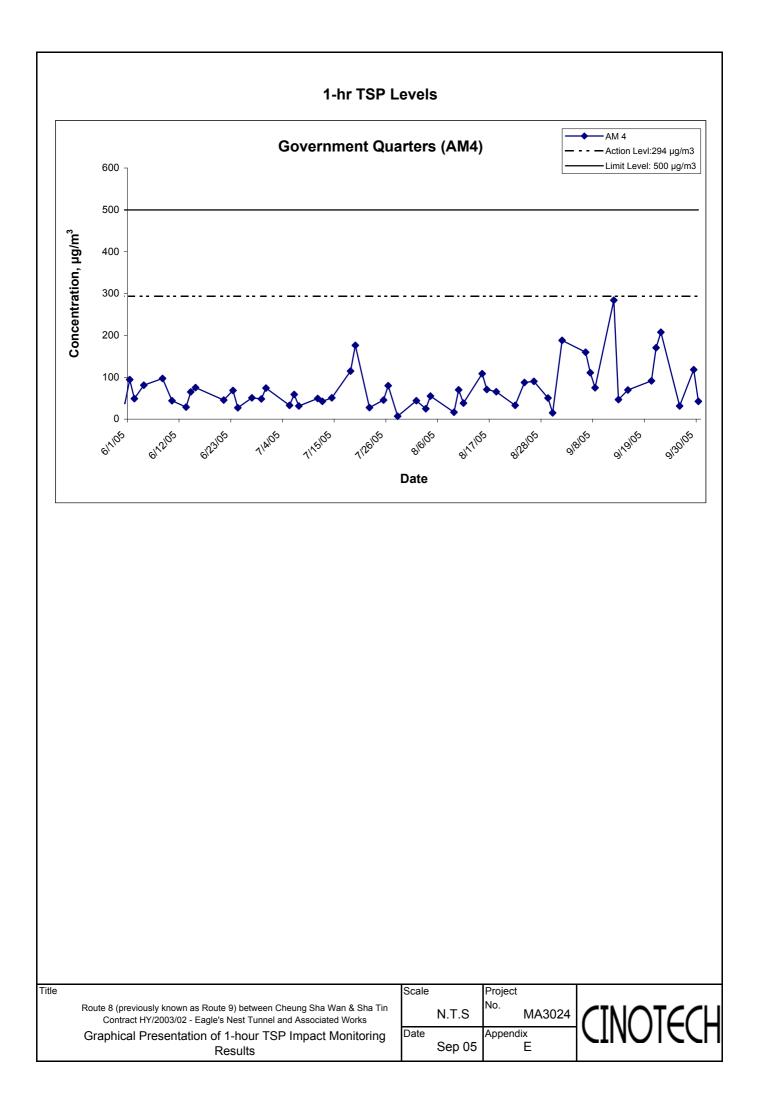
Location AM 4 - Government Quarters

Date	Weather	Filter W	eight (g)	Flow Rate	e (m ³ /min.)	Elaps	e Time	Air	Atmospheric	Particulate	Av. flow	Total vol.	Sampling	Conc.
	Condition	Initial	Final	Initial	Final	Initial	Final	Temp. (K)	Pressure(Pa)	weight(g)	(m ³ /min)	(m ³)	Time(hrs.)	(µg/m ³)
1-Sep-05	Sunny	2.8661	2.8797	1.21	1.21	3064.7	3065.7	305.6	750.9	0.0136	1.21	72.3	1.0	188.0
6-Sep-05	Cloudy	2.8685	2.8802	1.22	1.22	3065.7	3066.7	302.0	758.1	0.0117	1.22	73.2	1.0	159.9
7-Sep-05	Sunny	2.8660	2.8741	1.22	1.22	3090.7	3091.7	302.5	758.5	0.0081	1.22	73.2	1.0	110.7
8-Sep-05	Sunny	2.8654	2.8709	1.22	1.22	3091.7	3092.7	301.4	759.6	0.0055	1.22	73.4	1.0	75.0
12-Sep-05	Sunny	2.8503	2.8711	1.22	1.22	3092.7	3093.7	302.3	758.7	0.0208	1.22	73.2	1.0	284.2
13-Sep-05	Sunny	2.8539	2.8573	1.21	1.21	3117.7	3118.7	306.7	760.3	0.0034	1.21	72.7	1.0	46.8
15-Sep-05	Sunny	2.8541	2.8592	1.22	1.22	3118.7	3119.7	303.5	761.8	0.0051	1.22	73.2	1.0	69.7
20-Sep-05	Sunny	2.8483	2.8550	1.22	1.22	3143.7	3144.7	301.6	761.7	0.0067	1.22	73.4	1.0	91.2
21-Sep-05	Sunny	2.8496	2.8621	1.22	1.22	3144.7	3145.7	302.1	759.8	0.0125	1.22	73.3	1.0	170.6
22-Sep-05	Sunny	2.8342	2.8494	1.22	1.22	3145.7	3146.7	302.9	760.2	0.0152	1.22	73.2	1.0	207.7
26-Sep-05	Cloudy	2.8339	2.8362	1.23	1.23	3170.7	3171.7	299.7	758.6	0.0023	1.23	73.5	1.0	31.3
29-Sep-05	Sunny	2.8203	2.8290	1.22	1.22	3171.7	3172.7	301.4	762.7	0.0087	1.22	73.5	1.0	118.3
30-Sep-05	Sunny	2.8296	2.8327	1.22	1.22	3196.7	3197.7	303.7	761.1	0.0031	1.22	73.1	1.0	42.4
													Min	31.3

 Max
 284.2

 Average
 122.8





APPENDIX F 24-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix F - 24-hour TSP Monitoring Results

Location AM1 - Po Leung Kuk Choi Kai Yau School

Date	Weather	Filter W	eight (g)	Flow Rate	e (m ³ /min.)	Elaps	e Time	Air	Atmospheric	Particulate	Av. flow	Total vol.	Sampling	Conc.
	Condition	Initial	Final	Initial	Final	Initial	Final	Temp. (K)	Pressure(Pa)	weight(g)	(m ³ /min)	(m ³)	Time(hrs.)	(µg/m ³)
6-Sep-05	Sunny	2.8279	2.9818	1.23	1.23	3107.0	3131.0	302.2	757.9	0.1539	1.23	1768.5	24.0	87.0
12-Sep-05	Sunny	2.8656	2.9530	1.23	1.23	3134.0	3158.0	302.3	758.7	0.0874	1.23	1768.5	24.0	49.4
17-Sep-05	Sunny	2.8455	2.8986	1.23	1.23	3160.0	3184.0	302.9	759.6	0.0531	1.23	1767.7	24.0	30.0
23-Sep-05	Cloudy	2.8356	2.9151	1.23	1.23	3187.0	3211.0	301.1	756.9	0.0795	1.23	1770.3	24.0	44.9
29-Sep-05	Sunny	2.8338	2.9242	1.22	1.22	3213.0	3237.0	301.9	760.9	0.0904	1.22	1753.0	24.0	51.6
													Min	30.0
													Max	87.0
													Average	52.6

Location AM 3 - Garden Villa

Date	Weather	Filter W	eight (g)	Flow Rate	e (m ³ /min.)	Elaps	se Time	Air	Atmospheric	Particulate	Av. flow	Total vol.	Sampling	Conc.
	Condition	Initial	Final	Initial	Final	Initial	Final	Temp. (K)	Pressure(Pa)	weight(g)	(m ³ /min)	(m ³)	Time(hrs.)	(µg/m ³)
6-Sep-05	Sunny	2.8579	3.1404	1.21	1.21	3469.2	3493.2	305.5	756.9	0.2825	1.21	1745.4	24.0	161.9
12-Sep-05	Sunny	2.8271	3.0386	1.22	1.22	3496.2	3520.2	302.3	758.7	0.2115	1.22	1756.0	24.0	120.4
20-Sep-05	Sunny	2.8686	3.1298	1.22	1.22	3535.1	3559.1	305.0	759.7	0.2612	1.22	1750.2	24.0	149.2
29-Sep-05	Sunny	2.8333	2.9925	1.22	1.22	3562.1	3586.1	301.9	760.9	0.1592	1.22	1760.6	24.0	90.4
				_		-		-				-	Min	90.4
													Max	161.9
													Average	130.5

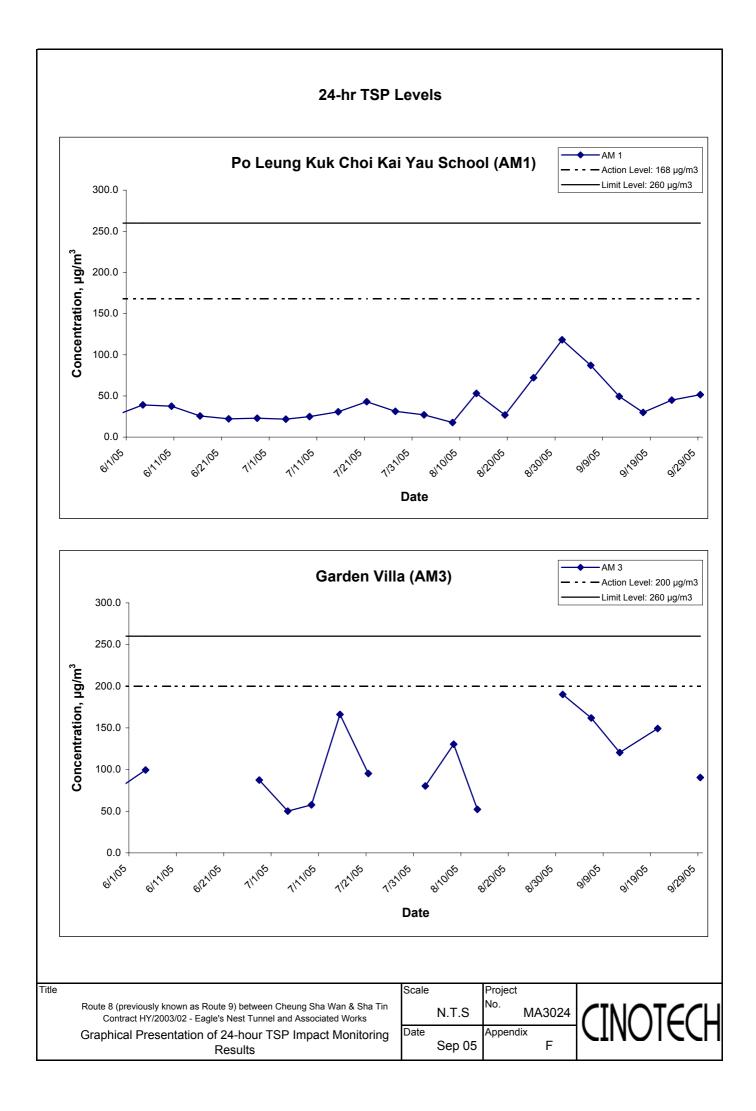
Location AM 4 - Government Quarters

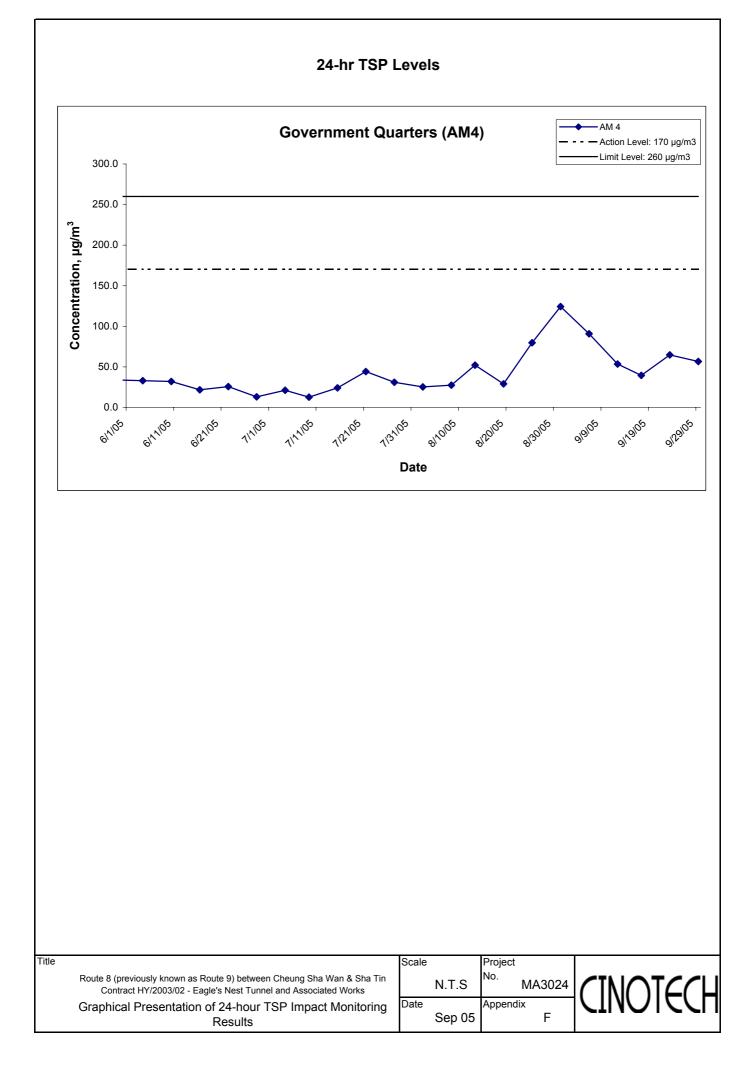
Date	Weather	Filter Weight (g)		Flow Rate (m ³ /min.)		Elaps	Elapse Time		Atmospheric	Particulate	Av. flow	Total vol.	Sampling	Conc.
	Condition	Initial	Final	Initial	Final	Initial	Final	Temp. (K)	Pressure(Pa)	weight(g)	(m ³ /min)	(m ³)	Time(hrs.)	(µg/m ³)
6-Sep-05	Sunny	2.8652	3.0246	1.22	1.22	3066.7	3090.7	302.2	757.9	0.1594	1.22	1755.7	24.0	90.8
12-Sep-05	Sunny	2.8675	2.9614	1.22	1.22	3093.7	3117.7	302.3	758.7	0.0939	1.22	1756.4	24.0	53.5
17-Sep-05	Sunny	2.8481	2.9175	1.22	1.22	3119.7	3143.7	302.9	759.6	0.0694	1.22	1755.7	24.0	39.5
23-Sep-05	Cloudy	2.8659	2.9797	1.22	1.22	3146.7	3170.7	301.1	756.9	0.1138	1.22	1758.1	24.0	64.7
29-Sep-05	Sunny	2.8505	2.9500	1.22	1.22	3172.7	3196.7	301.9	760.9	0.0995	1.22	1759.1	24.0	56.6
													Min	39.5

 Min
 39.5

 Max
 90.8

 Average
 61.0





APPENDIX G NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix G - Noise Monitoring Results

Location NM1 - Po Leung Kuk Choi Kai Yau School										
Date	Time	Weather		(A) (30- red Nois		Remarks				
			L _{eq}	L ₁₀	L ₉₀					
1-Sep-05	13:50	Sunny	70.2	71.5	68.5					
8-Sep-05	10:40	Sunny	67.3	69.5	64.0					
15-Sep-05	14:30	Sunny	67.2	69.0	64.0	-				
22-Sep-05	13:55	Sunny	69.5	71.0	67.0					
30-Sep-05	14:45	Sunny	68.8	71.0	64.0					

Location NM	Location NM5 - Villa Carlton											
Date	Time Weather		Measured Noise Level			Baseline Level	Construction Noise Level	Remarks				
		L _{eq} L ₁₀ L ₉₀		L _{eq}	L _{eq}]						
1-Sep-05	15:15	Sunny	78.1	81.0	74.5		71.2					
8-Sep-05	13:05	Sunny	76.8	79.5	74.0		76.8, Measured \leq Baseline	The major noise source				
15-Sep-05	16:00	Sunny	78.9	82.0	69.0	77.1	74.2	was identified as traffic				
22-Sep-05	14:45	Sunny	76.2 77.5 70.5			76.2, Measured \leq Baseline	noise from Tai Po Road.					
30-Sep-05	15:40	Sunny	78.1	81.0	74.0		71.2					

Location NM	Location NM6 - Government Quarters											
Date	Time	Weather		(A) (30- red Nois	/	Remarks						
Date	Date Time		L eq	L ₁₀	L 90	i cindika						
1-Sep-05	14:30	Sunny	66.8	69.5	62.5							
8-Sep-05	11:30	Sunny	67.5	70.0	64.0							
15-Sep-05	15:15	Sunny	63.1	64.5	61.0	-						
22-Sep-05	13:10	Sunny	70.5	71.5	69.0							
30-Sep-05	13:30	Sunny	62.6	64.0	61.0							

Location NM7 - Garden Vilia											
		Weather									
Date Tim	Time		Measured Noise Level			Baseline Level	Construction Noise Level	Remarks			
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}				
1-Sep-05	13:00	Sunny	70.9	74.0	64.0		70.6				
8-Sep-05	13:05	Cloudy	69.7	73.0	62.5		69.3				
15-Sep-05	13:00	Sunny	70.3	70.3 74.0 67.5		59.0	70.0	-			
22-Sep-05	14:20	Sunny	69.3	69.3 71.5 61.5			68.9				
30-Sep-05	13:15	Sunny	69.4	72.5	62.5		69.0				

Construction Noise Level (Leq) = Measured Noise Level (Leq) - Baseline Noise Level (Leq)

Restricted Hours - 19:00 to 23:00 on normal weekdays

Location NM	Location NM5 - Villa Carlton											
Data	Time	M/a ath a r		dB	5 (A) (5-m	nin)	Baseline Level	Construction Noise Level				
Date	Time	Weather	L _{eq}	L ₁₀	L ₉₀	Average L _{eq}	L _{eq}	L _{eq}	Remarks			
	19:05		74.9	77.0	69.0							
1-Sep-05	19:10	Fine	75.0	77.5	69.5	75.1		75.1, Measured \leq Baseline				
	19:15		75.3	77.5	69.5							
	19:10		73.5	76.5	68.0							
8-Sep-05 <u>19:15</u> Fine	Fine	74.7	77.0	68.5	74.5		74.5, Measured \leq Baseline	3				
	19:20		75.1	77.0	69.0		75.8 75		The major noise source was identified as traffic			
	19:35		74.9	78.0	67.5	75.1		75.1, Measured \leq Baseline				
15-Sep-05	19:40	Cloudy	75.0	78.0	67.5							
	19:45		75.3	78.0	68.0				noise from Tai Po Road.			
	19:25		74.5	78.5	69.5							
22-Sep-05	19:30	Cloudy	74.7	78.5	69.5	74.8		74.8, Measured \leq Baseline				
	19:35		75.1	79.0	69.5							
19	19:15		75.3	77.5	70.0	75.1						
30-Sep-05	19:20	9:20 Cloudy	74.9	77.5	69.5			75.1, Measured \leq Baseline				
	19:25		75.1	77.5	69.5							

Location NM	6 - Gove	rnment Quar	ters						
Dete	Time	Weether		dB	(A) (5-m	iin)	Baseline Level	Construction Noise Level	
Date	Time	Weather	L _{eq}	L ₁₀	L ₉₀	Average L _{eq}	L _{eq}	L _{eq}	Remarks
	19:40		54.7	58.0	51.0				
1-Sep-05	19:45	Fine	55.7	58.5	51.5	55.5		55.5, Measured \leq Baseline	
	19:50		55.9	59.0	52.0				
	19:42		55.3	58.0	52.0				
8-Sep-05 19:47	Fine	55.6	58.0	52.0	55.3		55.3, Measured \leq Baseline		
	19:52		54.9	57.0	51.5				
	20:05		55.7	58.0	50.0				
15-Sep-05	20:10	Cloudy	55.8	58.0	50.5	55.8	56.1	55.8, Measured \leq Baseline	-
	20:15		56.0	58.5	50.5				
	20:00		54.8	57.5	51.0				
22-Sep-05	20:05	Cloudy	55.3	58.0	51.0	55.3		55.3, Measured \leq Baseline	
	20:10		55.7	58.5	51.5				
	20:00		54.3	57.0	51.0				
30-Sep-05	20:05		54.7	57.5	51.5	54.6		54.6, Measured \leq Baseline	
	20:10		54.8	57.5	51.5				

Location NM	7 - Gard	en Villa							
Data	Time			dB	5 (A) (5-m	nin)	Baseline Level	Construction Noise Level	
Date	Time	Weather	L _{eq}	L ₁₀	L 90	Average L _{eq}	L _{eq}	L _{eq}	Remarks
	19:15		58.4	61.0	56.0	58.4			
1-Sep-05	19:20	Cloudy	58.4	61.5	56.0			42.0	
19:25		58.5	61.5	56.5					
	19:15		57.7	63.0	55.5				
8-Sep-05	8-Sep-05 <u>19:20</u> Cloudy 19:25	Cloudy	57.6	63.0	55.5	57.7		57.7, Measured \leq Baseline	
			57.7	63.0	55.0				
	19:10		58.6	59.5	53.0	58.6			The major noise source
15-Sep-05	19:15	Cloudy	58.6	60.5	53.5		58.3		was identified as traffic noise from Tai Po Road.
	19:20		58.5	60.5	53.0				
	19:00		59.4	61.0	55.5				
22-Sep-05	19:05	Cloudy	59.6	61.0	56.0	59.4		52.9	
	19:10		59.3	60.5	55.0				
1	19:15		58.7	61.0	54.5			50.0	
30-Sep-05	19:20	9:20 Cloudy	58.7	61.5	54.5	58.9			
	19:25		59.2	60.0	54.5				

Construction Noise Level (Leq) = Measured Noise Level (Leq) - Baseline Noise Level (Leq)

*Bolded value indicated limit level exceedance

Restricted Hours - 23:00 to 07:00 on normal weekdays

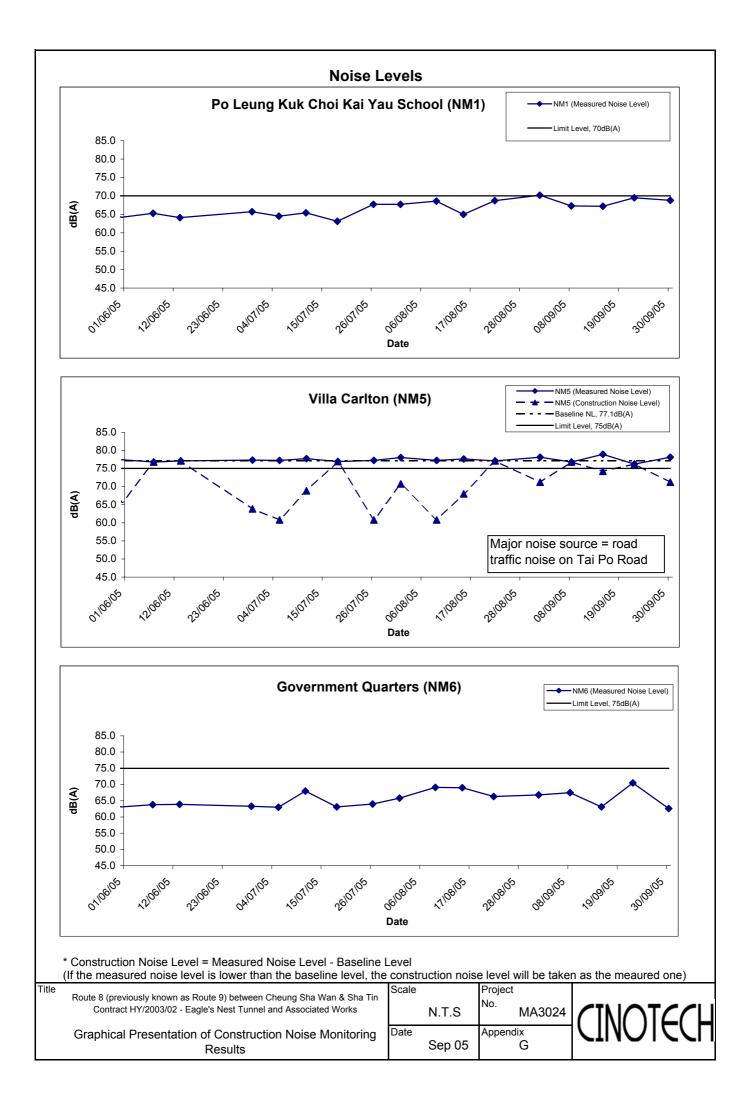
Location NM	Location NM5 - Villa Carlton											
Dete	Time	Weather		dB	5 (A) (5-m	nin)	Baseline Level	Construction Noise Level				
Date	Time	Weather	L _{eq}	L ₁₀	L ₉₀	Average L _{eq}	L _{eq}	L _{eq}	Remarks			
	23:05		73.2	76.5	67.0							
1-Sep-05	23:10	Fine	73.7	76.5	67.5	73.7		73.7, Measured \leq Baseline				
	23:15		74.1	77.0	67.5							
	23:02		72.8	76.5	66.0							
8-Sep-05	8-Sep-05 23:07 Fine	Fine	73.1	76.5	66.0	73.2		73.2, Measured \leq Baseline	e			
23:12		73.7	77.0	66.5								
	23:00		73.7	77.0	67.5				The major noise source			
15-Sep-05	23:05	Cloudy	73.8	77.5	67.5	73.9	74.3 73.9, Measured ≤	73.9, Measured \leq Baseline	was identified as traffic			
	23:10		74.1	77.5	67.5				noise from Tai Po Road.			
	23:02		72.1	76.0	67.0							
22-Sep-05	23:07	Cloudy	72.5	76.5	67.0	72.4		72.4, Measured \leq Baseline				
	23:12		72.7	76.5	67.0							
	23:35		73.8	78.0	68.5							
30-Sep-05	23:40	23:40 Cloudy	74.1	78.0	69.0	74.0		74.0, Measured \leq Baseline				
	23:45		74.1	78.0	69.0							

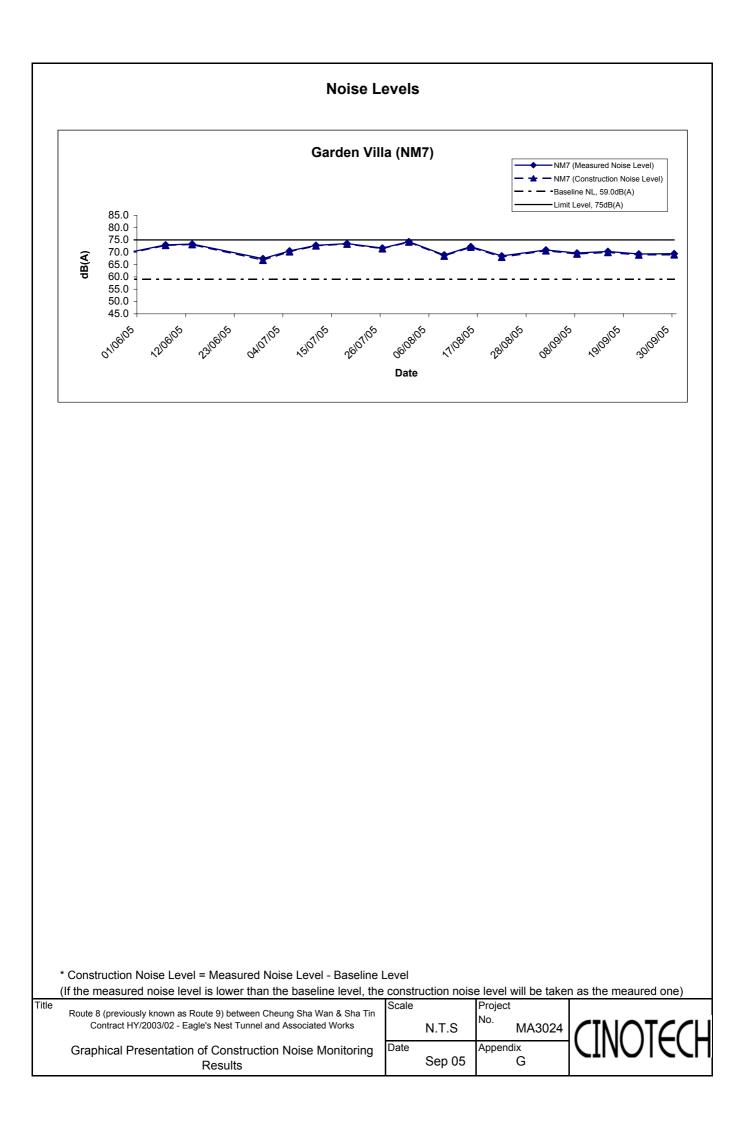
Location NM6 - Government Quarters											
Dete	Time	\//aathar		dB	(A) (5-m	iin)	Baseline Level	Construction Noise Level			
Date	Time	Weather	L _{eq}	L ₁₀	L ₉₀	Average L _{eq}	L _{eq}	L _{eq}	Remarks		
	23:38		51.9	55.5	50.0						
1-Sep-05	23:43	Fine	52.3	55.5	50.0	52.3		52.3, Measured \leq Baseline			
23:48		52.7	56.0	50.5							
	23:32		52.0	56.0	50.5						
8-Sep-05 23:37	Fine	52.4	56.5	50.5	52.1		52.1, Measured \leq Baseline				
	23:42		51.8	55.5	50.5						
	23:26		52.0	55.5	49.0						
15-Sep-05	23:31	Cloudy	52.3	55.5	49.0	52.3	52.8	52.3, Measured \leq Baseline	-		
	23:36		52.7	56.0	49.5						
	23:26		51.7	55.0	49.0						
22-Sep-05	23:31	Cloudy	51.9	55.0	49.0	52.0		52.0, Measured \leq Baseline			
	23:36		52.4	55.5	49.5						
	23:55		51.2	55.5	49.0						
30-Sep-05	0:00		51.2	55.5	49.5	51.3		51.3, Measured \leq Baseline			
0:05		51.5	55.5	49.5							

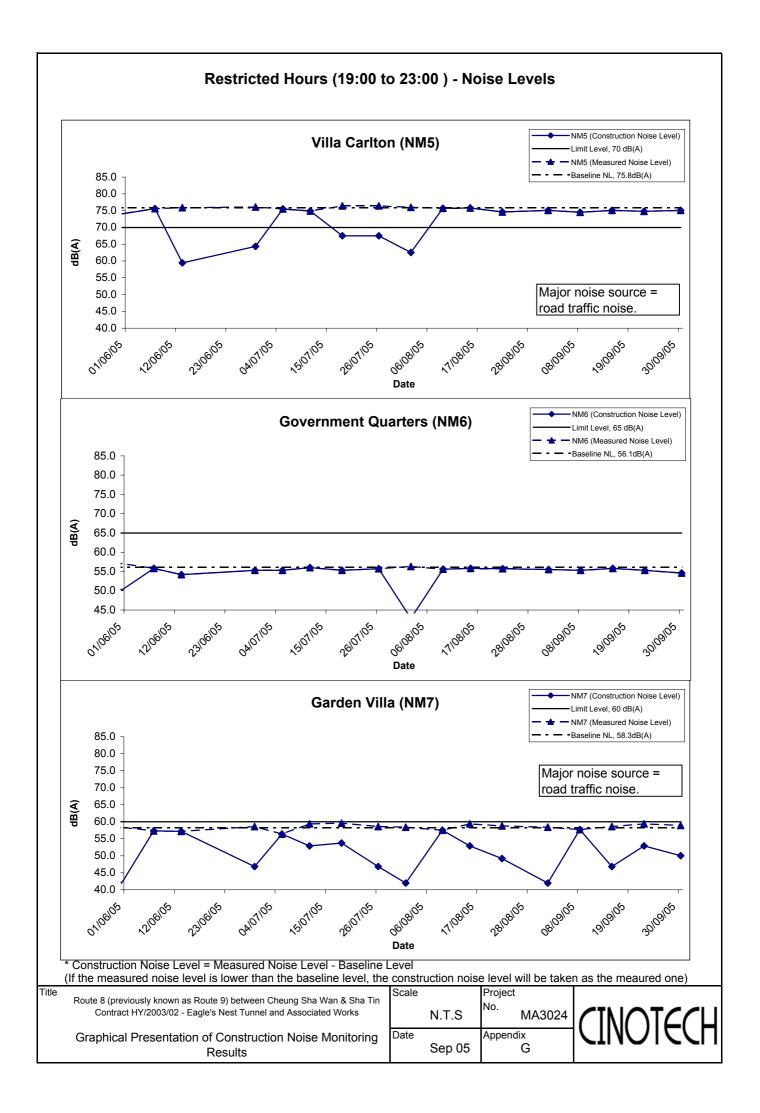
Location NM	7 - Gard	en Villa								
Dete	Time			dB	5 (A) (5-m	nin)	Baseline Level	Construction Noise Level		
Date	Time	Weather	L _{eq}	L ₁₀	L 90	Average L _{eq}	L _{eq}	L _{eq}	Remarks	
	23:59		54.5	56.5	51.5					
1-Sep-05	0:04	Fine	54.7	57.0	51.5	54.8		54.8, Measured \leq Baseline		
	0:09		55.1	57.0	51.5					
	23:56		55.3	59.0	52.0					
8-Sep-05 0:01	Fine	55.8	59.0	52.0	55.8		55.8, Measured \leq Baseline	1		
	0:06		56.3	59.5	53.5					
	23:54		54.5	57.0	51.0	54.4	56.5	54.4, Measured \leq Baseline v	The major noise source	
15-Sep-05	23:59	Cloudy	54.4	57.0	51.0				was identified as traffic noise from Tai Po Road.	
	0:04		54.4	57.0	51.5					
	23:55		55.4	58.0	52.5					
22-Sep-05	0:00	Cloudy	55.9	58.0	53.0	55.8		55.8, Measured \leq Baseline		
	0:05		56.0	58.5	53.5					
	23:05		54.1	57.0	51.0	54.4		54.4, Measured ≤ Baseline		
30-Sep-05	23:10		54.3	57.0	51.5					
	23:15			57.0	51.5					

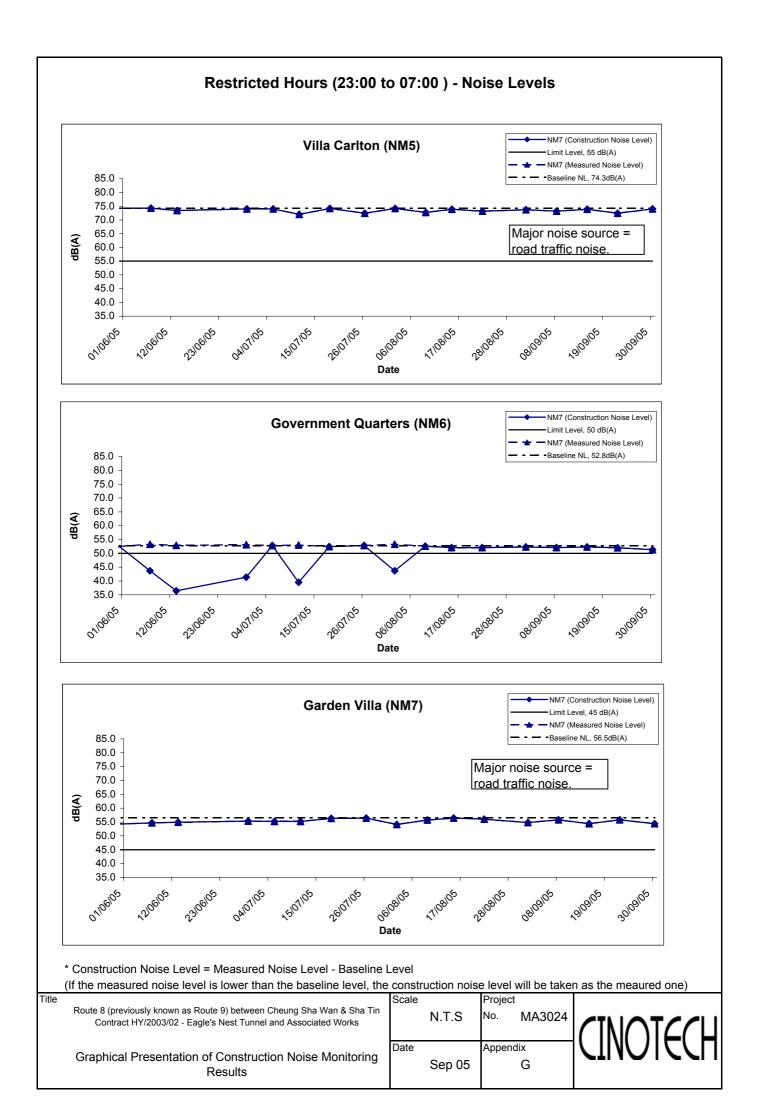
Construction Noise Level (Leq) = Measured Noise Level (Leq) - Baseline Noise Level (Leq)

*Bolded value indicated limit level exceedance









APPENDIX H SUMMARY OF EXCEEDANCE

Summary of Exceedance Recorded in the Reporting Month

a) Exceedance Reports for 1-hr TSP

Exceedance(s) on <u>12 September 2005</u>

Station No.	Parameter	Particulate Concentration (μ g/m ³)	Action Level (µg/m ³)	Limit Level (µg/m ³)	Level exceeded
AM3 (Garden Villa)	1-hr TSP	472.7	350	500	Action
(a) Statement of ex	cceedance(s)				
1-hr TSP level a	tt Station AM3 (Gar	den Villa) exceeded the	e Action level.		
(b) Cause of exceed	ance(s)				
It was considered observations:	I that the exceedance	e was not related to the	R8-ENT construction	on works based on the	ne following
was ranked a	as high to very high.	ata, the hourly Air Pollu The API recorded at the period (0900 to 1000 h	he EPD's Sha Tin S		
		ned in our other EM&A of air quality were also			
		een implemented by the source was identified in			
	ne recorded exceeda pollution over Hong	nce of air quality may b Kong.	be due to the high an	bient TSP level as	a consequence of
(c) Action required	under the action pla	n			
N/A					
(d) Action taken une	der the action plan				
N/A					
(e) ET's conclusion	s and recommendati	ions for mitigation			

b) Exceedance Reports for 24-hr TSP (NIL)

c) Exceedance Reports for Construction Noise

- One action level exceedances were recorded due to public noise complaints received by the ET Leader on 28 September 2005. The details can refer to Appendix M.
- No noise limit level exceedance was recorded in the reporting month.

APPENDIX I SITE AUDIT SUMMARY

Inspection Information

Checklist Reference Number	50908-ENT	· · · ·
Date	8 September 2005 (Thu)	
Time	1400 - 1630	

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	 A. Water Quality Refer to Item no. 50831E-01 about overflow of water at Portion D4 into other's construction site. The water quality of the outfall was found satisfactory. It was also noted that the Contractor had diverted most of the clear stream water to the outlet to avoid overloading the treatment facility. Nevertheless, the Contractor was recommended to review the situation regularly to avoid any discharge of sub-standard water. 	B1
50908E-01	 B. Air Quality The stockpile at the loading and unloading area at Portion H3 was observed dry. The Contractor was reminded to maintain the stockpile wet to avoid dust emission. 	C8
50908E-02	• Uncovered cement bags (more than 20 bags) were observed at Portion D3. The Contractor was reminded to provide proper covers for the cement bags.	C17
	 <i>C. Noise</i>, No environmental deficiency was identified during the site inspection. <i>D. Waste / Chemical Management</i>, 	
	 No environmental deficiency was identified during the site inspection. <i>E. Permit / Licenses</i> No environmental deficiency was identified during the site inspection. 	
	<i>F. Others</i>The deficiencies identified during last audit (ref. 50831-ENT) on 31 August 2005 were rectified by the Contractor.	

	Name	Signature	Date
Recorded by	KK Chan	1th	8 September 2005
Checked by	Winniss Kong	6.5	8 September 2005

CINOTECH MA3024

Inspection Information

Checklist Reference Number	50914-ENT
Date	14 September 2005 (Wed)
Time	1330 - 15500

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
50914E-02	 A. Water Quality Stagnant water was observed near the chemical storage area at North Portal. The contractor was reminded to remove the standing water. 	G5
50914E-01	 B. Air Quality The stockpile at the loading and unloading area at Portion H3 was observed dry. The Contractor was reminded to prevent the dust emission from stockpile. 	C8
	<i>C. Noise</i>,No environmental deficiency was identified during the site inspection.	
	 D. Waste / Chemical Management, No environmental deficiency was identified during the site inspection. 	
	<i>E. Permit / Licenses</i>No environmental deficiency was identified during the site inspection.	
	 F. Others The deficiencies identified during last audit (ref. 50908-ENT) on 8 September 2005 were rectified by the Contractor, except for the Item no. 50908E-01, regarding the dry stockpile at Portion H3. 	

	Name	Signature	Date
Recorded by	Keith Chau	Seith	14 September 2005
Checked by	KK Chan	NE.	14 September 2005

Inspection Information

Checklist Reference Number	50921-ENT
Date	21 September 2005 (Wed)
Time	1330 - 1550

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

A. Water Quality • No environmental deficiency was identified during the site inspection.C1050921E-02Dust emission was observed from the loading and unloading area at BV portion H3.C1050921E-03• Spot check was conducted at Garden Villa to inspect the condition of dump trucks leaving the site via TAR1. Two dump trucks, which were working for ENT Contract, were found inadequately covered and 1 truck was found uncovered. The other 4 trucks were found covered properlyC1150921E-01 D. Waste / Chemical Management, • No environmental deficiency was identified during the site inspection.E1250921E-01 D. Waste / Chemical Management, • Oil stained soil was observed under the air-compressor at Mui Kong Tsuen. The contractor was reminded to removed the oil stained soil properly.E12 E. Permit / Licenses • No environmental deficiency was identified during the site inspection.E12 F. Others • The deficiencies identified during last audit (ref. 50914-ENT) on 14 September 2005 were rectified by the Contractor, except for the Item no. 50914E-01, regarding the dry stockpile at Portion H3.	Ref. No.	Remarks/Observations	Related Item No.
50921E-02B. Air QualityC1050921E-03• Dust emission was observed from the loading and unloading area at BV portion H3.C1050921E-03• Spot check was conducted at Garden Villa to inspect the condition of dump trucks leaving the site via TAR1. Two dump trucks, which were working for ENT Contract, were found inadequately covered and 1 truck was found uncovered. The other 4 trucks were found covered properlyC1150921E-01C. Noise, • No environmental deficiency was identified during the site inspection.E1250921E-01D. Waste / Chemical Management, • Oil stained soil was observed under the air-compressor at Mui Kong Tsuen. The contractor was reminded to removed the oil stained soil properly.E12E. Permit / Licenses • No environmental deficiency was identified during the site inspection.E12F. Others • The deficiencies identified during last audit (ref. 50914-ENT) on 14 September 2005 were rectified by the Contractor, except for the Item no. 50914E-01,		A. Water Quality	
50921E-02Dust emission was observed from the loading and unloading area at BV portion H3.C1050921E-03Spot check was conducted at Garden Villa to inspect the condition of dump trucks leaving the site via TAR1. Two dump trucks, which were working for ENT Contract, were found inadequately covered and 1 truck was found uncovered. The other 4 trucks were found covered properlyC1150921E-01C. Noise, No environmental deficiency was identified during the site inspection.E1250921E-01D. Waste / Chemical Management, The contract or was reminded to removed the oil stained soil properly.E1250921E-01F. Permit / Licenses No environmental deficiency was identified during the site inspection.E12F. Others 2005 were rectified by the Contractor, except for the Item no. 50914E-01,S0914E-01		• No environmental deficiency was identified during the site inspection.	
50921E-02Dust emission was observed from the loading and unloading area at BV portion H3.C1050921E-03Spot check was conducted at Garden Villa to inspect the condition of dump trucks leaving the site via TAR1. Two dump trucks, which were working for ENT Contract, were found inadequately covered and 1 truck was found uncovered. The other 4 trucks were found covered properlyC1150921E-01C. Noise, No environmental deficiency was identified during the site inspection.E1250921E-01D. Waste / Chemical Management, The contract or was reminded to removed the oil stained soil properly.E1250921E-01F. Permit / Licenses No environmental deficiency was identified during the site inspection.E12F. Others 2005 were rectified by the Contractor, except for the Item no. 50914E-01,S0914E-01			
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 <i>E. Permit / Licenses</i> No environmental deficiency was identified during the site inspection. <i>F. Others</i> The deficiencies identified during last audit (ref. 50914-ENT) on 14 September 2005 were rectified by the Contractor, except for the Item no. 50914E-01, 	50921E-01	• Oil stained soil was observed under the air-compressor at Mui Kong Tsuen.	E12
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2005 were rectified by the Contractor, except for the Item no. 50914E-01,			
regarding the dry stockpile at rolation res.			
		regulang the dry stockpile at 1 ortion 115.	

		Name	Signature	Date
Recor	ded by	Keith Chau	tietto	22 September 2005
Checl	ked by	KK Chan	In	22 September 2005

Inspection Information

Checklist Reference Number	50928-ENT	
Date	28 September 2005 (Wed)	
Time	0905 - 1120	

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
	• No environmental deficiency was identified during the site inspection.	
	 B. Air Quality A water spay system was installed at loading and unloading area of BV portion H3 to prevent dust emission. 	
	• TAR1 had been closed since 26 th September 2005, there was no dump truck leaving the site via this access road.	
	<i>C. Noise,</i>No environmental deficiency was identified during the site inspection.	
50928E-01	 D. Waste / Chemical Management, The fuel was observed placed on bare ground without the drip tray at Mui Kong Tsuen. The contractor was reminded to store the fuel properly. 	E3
	<i>E. Permit / Licenses</i>No environmental deficiency was identified during the site inspection.	
	 <i>F. Others</i> The deficiencies identified during last audit (ref. 50921-ENT) on 21 September 2005 were rectified by the Contractor. 	

	Name	Signature	Date
Recorded by	Keith Chau	feith	28 September 2005
Checked by	KK Chan	1/~	28 September 2005

APPENDIX J EVENT ACTION PLANS

Appendix J - Event Action Plans

Event/Action Plan for Air Quality

EVENT	ACTION				
EVENI	ET	IEC	ER	Contractor	
ACTION LEVEL					
1. Exceedance for one	1. Identify source	1. Check monitoring data submitted by ET	1. Notify Contractor	1. Rectify any unacceptable practice	
sample	2. Inform ER & IEC	2. Check Contractor's working methods	2. Check monitoring data and Contractor's	2. Amend working methods if	
	3. Repeat measurement to confirm finding		working methods	appropriate	
	4. Increase monitoring frequency to daily				
2. Exceedance for two or	1. Identify source	1. Checking monitoring data submitted by	1. Confirm receipt of notification of failure	1. Submit proposals for remedial	
more consecutive samples	2. Inform ER & IEC	ET	in writing	actions to ER within 3 working days	
	3. Repeat measurement to confirm findings	2. Check Contractor's working methods	2. Notify Contractor	of notification	
	4. Increase monitoring frequency to daily	3. Discuss with ET and Contractor on	3. Check Contractor's working methods	2. Implement the agreed proposals	
	5. Discuss with ER & for remedial actions	possible remedial measure	4. Discuss with ET, IEC and Contractor on	3. Amend proposal if appropriate	
	required	4. Advise the ER & ET on the	proposed remedial actions		
	6. If exceedance continues, arrange	effectiveness of the proposed remedial	5. Ensure remedial actions properly		
	meeting with ER & IEC	measures	implemented		
	7. If exceedance stops, cease additional	5. Supervise the implementation of the			
	monitoring	remedial measures			
LIMIT LEVEL					
1. Exceedance for one	1. Identify source	1. Checking monitoring data submitted by	1. Confirm receipt of notification of failure	1. Take immediate action to avoid	
sample	2. Inform ER & IEC and EPD	ET	in writing	further exceedance	
	3. Repeat measurement to confirm finding	2. Check Contractor's working methods	2. Notify Contractor	2. Submit proposals for remedial	
	4. Increase monitoring frequency to daily	3. Discuss with ET and Contractor on	3. Check Contractor's working methods	actions to ER within 3 working days	
	5. Assess effectiveness of Contractor's	possible remedial measure	4. Discuss with ET, IEC and Contractor on	of notification	

EVENT	ACTION					
EVENI	ET	IEC	ER	Contractor		
	remedial actions and keep EPD and ER &	4. Advise the ER & ET on the	proposed remedial actions	3. Implement the agreed proposals		
	IEC informed of the results	effectiveness of the proposed remedial	5. Ensure remedial actions properly	4. Amend proposal if appropriate		
		measures	implemented			
		5. Supervise the implementation of the				
		remedial measures				
2. Exceedance for two or	1. Identify source	1. Checking monitoring data submitted by	1. Confirm receipt of notification of failure	1. Take immediate action to avoid		
more consecutive samples	2. Inform ER, IEC, Contractor and EPD	ET	in writing	further exceedance		
	the cause & actions taken for the	2. Discuss amongst ER, ET and Contractor	2. Notify Contractor	2. Submit proposals for remedial		
	exceedances	on possible remedial measures	3. Carry out analysis of Contractor's	actions to IEC, ER within 3 working		
	3. Repeat measurement to confirm findings	3. Review Contractor's remedial measures	working procedures to determine possible	days of notification		
	4. Increase monitoring frequency to daily	whenever necessary to ensure their	mitigation to be implemented	3. Implement the agreed proposals		
	5. Investigate the causes of exceedance	effectiveness and advise the ER	4. Discuss amongst ET, IEC and the	4. Resubmit proposals if problem		
	6. Carry out analysis of contractor's	accordingly	Contractor on proposed remedial actions	still not under control		
	working procedures to determine possible	4. Supervise the implementation of the	5. In consultation with IEC, agree with the	5. Stop the relevant portion of works		
	mitigation to be implemented.	remedial measures	contractor remedial measures to be	as determined by the ER until the		
	7. Arrange meeting with EPD, IEC and ER		implemented	exceedance is abated		
	to discuss the remedial actions to be taken		6. Ensure remedial measure are properly			
	8. Assess effectiveness of Contractor's		implemented			
	remedial actions and keep EPD and ER &		7. If exceedance continues, consider what			
	IEC informed of the results		portion of the work is responsible and			
	9. If exceedance stops, cease additional		instruct the Contractor to stop that portion			
	monitoring		of work until the exceedance is abated			

Event/Action Plan for Construction Noise

Exceedance		ACTIO	N	
Exceedance	ET	.IEC	ER	Contractor
Action Level	1. Discuss with the IEC and ER and seek to	1. Review the analyzed results submitted	1. Confirm receipt of notification of	1. Submit proposals for remedial
	identify potential noise source	by the ET	complaint and notify Contractor	actions to ER within three working
			immediately	days of notification
	2. Undertake noise measurement to	2. Review the proposed remedial measures	2. Check monitoring data trends and	2. Amend proposals if required by
	confirm the validity of complaint	by the Contractor and advise the ER & ET	Contractor's working methods	the Engineer
		accordingly		
	3. Inform ER&IEC in writing	3. Supervise the implementation of	3. Remind the Contractor of his contractual	3. Implement the remedial actions
	Discuss remedial actions required with	remedial measures	obligations and discuss with ET, IEC and	immediately upon instruction
	ER&IEC if an exceedance is recorded		Contractor on proposed remedial actions	
	4. Increase monitoring frequency to		4. Assess the efficacy of remedial actions	4. Liaise with the ER to optimize the
	demonstrate efficacy of remedial measures		and keep the Contractor informed	effectiveness of the agreed
				mitigation
	5. If exceedance continues, meet with		5. Inform complainant of actions taken	5. Amend proposal if appropriate
	ER&IEC to review implementation of			
	appropriate mitigation measures.			
	6. If exceedance stops, cease additional			
	monitoring			

Exceedance		ACTIO	N	
Exceedance	ET	IEC	ER	Contractor
Limit Level	1. Repeat measurement to confirm findings	1. Check monitoring data submitted by ET	1. Confirm receipt of notification of	1. Take immediate action to avoid
			exceedance and notify Contractor	further exceedance
	2. Investigate the cause of the exceedance	2. Review Contractor's remedial actions to	2. Check monitoring data trends and	2. Submit proposals for remedial
	and identify the main source(s) of impact	assure their effectiveness and advise the	Contractor's working methods	actions to ER immediately not more
		ER &ET accordingly		than 3 working days of notification
	3. Inform ER&IEC and EPD in writing	3. Supervise the implementation of the	3. Discuss with ET, IEC and Contractor on	3. Amend proposals if required by
		remedial measures	proposed remedial actions to be	the ER
			implemented	
	4. Discuss remedial actions required with		4. Assess the efficacy of remedial actions	4. Implement remedial actions
	ER&IEC		and keep the Contractor informed	immediately upon instruction
	5. Increase monitoring frequency to		5. If exceedance continuous, consider what	5. Liaise with the ER to optimize the
	demonstrate efficacy of remedial measures		portion of the work is responsible and	effectiveness of the agreed
			instruct the Contractor to stop that portion	mitigation
			of work until the exceedance is aborted	
	6. Assess efficacy of remedial actions and			6. Resubmit proposals if problem
	keep ER & IEC informed of the results			still not under control
	7. If exceedance continues, meet with			7. Stop the relevant portion of works
	ER&IEC to identify appropriate mitigation			as determined by the ER until the
	measures			exceedance is aborted
	8. If exceedance stops, cease additional			
	monitoring			

APPENDIX K ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

Types of Impacts	Mitigation Measures	Status
	• Any stockpile of dusty materials or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet.	^
	• A stockpile of dusty materials should not extend beyond the pedestrian barriers, fencing or traffic cones.	^
	• Vehicle washing facilities should be provided at every exit point.	^
	• 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.	^
	• Where a site boundary adjoins a road, street, service lane 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 of that portion of the site boundary except for a site entrance or exit.	^
Construction Dust	• Every main haul road should be sprayed with water or a dust suppression chemical so as to maintain the entire road surface wet.	^
Dust	• The portion of any road leading only to a construction site that is within 30m of a discernible or designated vehicle entrance or exit should be kept clear of dusty materials.	^
	• Any stockpile of dusty materials should be either covered entirely be impervious sheeting, placed in an area sheltered on the top and the 3 sides or sprayed with water or a dust suppression chemical so as to maintain the entire surface wet.	^
	• All dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.	^
	• Every vehicle should be washed to remove any dusty materials from its body and wheels immediately before leaving a construction site.	^
	• The working area of any excavation should be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet.	^
Construction Noise	Only well-maintained plant should be operated on –site and plant should be serviced regularly during the construction works.	^
	• Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	^
	• Plant know to emit noise strongly in one direction, should where possible, be orientated to direct noise away from the NSRS.	^
	• Mobile plant should be sited as far away from NSRs as possible.	^
	• Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	^
	• Use quite plant and Working Method	^
	Reduce the number of plant operating in critical areas close NSRs.	^

Appendix K - Summary of Environmental Mitigation Implementation Schedule

Types of Impacts	Mitigation Measures	Status
	Construct temporary and movable noise barriers	^
Water Quality	Construction Runoff and Drainage	
	• Use of sediment traps and the adequate maintenance of drainage systems to prevent flooding and overflow.	^
	• Boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilities runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates.	^
	• All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment traps should be regularly cleaned and maintained. The temporarily diverted drainage should be reinstated to its original condition when the construction works has finished or the temporary diversion is no longer required	^
	• Sand silt in the wash water from the wheel washing facilities, which ensure no earth, mud and debris is deposited on roads, should be settled out the removed before discharging into storm drains. A section of the road between the wheel washing bay and the public road should be paved with backfill to prevent wash water or other site runoff form entering public road drains.	^
	• Oil interceptors should be provided in the drainage system and regularly emptied to prevent the release of oils and grease into the storm water drainage system after accidental spillage. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	^
	• Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks.	^
	• Silt removal facilities, channels and manholes shall be suitably maintained with the deposited silt and grit being removed at least once a week, and at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.	^
	• Earthworks final surfaces shall be well compacted and the subsequent permanent work or surface protection shall be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate intercepting channels shall be provided along the site boundary or at the locations agreed with the ET Leader. Rainwater pumped out from trenches or foundation excavations shall be discharged into silt removal facilities before discharge into storm drains.	^
	• All generators, fuel and oil storage shall be within bunded areas. Drainage from the areas shall be connected to storm drains via a petrol interceptor.	^
	Tunnelling Work	
	• Temporary open storage of excavated materials should be covered with tarpaulin or similar fabric during rainstorms. Any washout of construction or excavated materials form the drill and blast tunnelling work should be diverted to the drainage system via appropriate sediment traps.	^
	• Ground water pumped out of tunnels should be discharged into the drainage channels which incorporated sediment traps to enhance deposition rates and to remove silt.	^

Types of Impacts	Mitigation Measures	Status
	• Spend grouts used in diaphragm wall construction should be collected in a separate slurry collection system, reconditioned and reused wherever practicable. The disposal of used grouting materials will only be permitted if it is treated to the TM standards before discharge to the storm drains or disposal to landfill.	N/A
	General Construction Activities	
	• Debris and rubbish on site should be collected, handled and disposed of properly to avoid entering the water column and cause water quality impacts.	^
	• All fuel tanks and storage areas will be provided with locks and be located on sealed areas (within bunds of a capacity equal to 110% of the storage capacity of the largest tank or 20% by volume of the fuel stored in that areas, whichever in the greatest).	^
	Sewage Effluent	
	• Construction work force sewage discharges form fixed toilet facilities on-site should be connected to the nearby existing trunk sewer wherever feasible. However, for areas where existing trunk sewer is not available, it is recommended that appropriate and adequate on site portable chemical toilets should be provided by a licensed contractor who will be responsible for appropriate disposal and maintenance of these facilities.	^
	• It is considered that sewage discharges could also be treated by on-site septic tanks and soakaway. Minimum clearance away form streams and catchments and other requirements for the proposed septic tank and soakaway should be referred to EPD's Practice Note for Professional Persons, Drainage Plans.	N/A
Waste	General	
	• Training and instruction shall be given at a site to construction staff to increase awareness and draw attention to waste management issues and the need to minimise waste generation. The training requirement shall be included in the site waste management plan.	۸
	Storage, Collection and Transportation of Waste	
	• Wastes shall be handled and stored in a manner to ensure that they are held securely without loss or leakage.	^
	 Authorised or licensed waste hauliers shall be used and they shall only collect wastes prescribed by their permits. 	^
	• Waste shall be removed on a daily basis.	^
	 Waste storage area shall be maintained and cleaned on a daily basis. 	^
	• Windblown litter and dust during transportation shall be minimised by either covering trucks or transporting wastes in enclosed containers.	^
	 Obtain necessary waste disposal permits from the appropriate authorities if they are required. 	^
	• Wastes shall be disposed of at licensed waste disposal facilities.	^
	• Develop procedure such as ticketing system to facilitate tracking of loads, particularly for chemical waste, and to ensure that illegal disposal of wastes does not occur.	۸
	 Maintain records of the quantities of wastes generated, recycled and disposed. 	~

Types of Impacts	Mitigation Measures	Status
	Surplus Excavated Materials	
	• Due to the high risk of loose material being washed into the existing nullah, stockpile materials should be properly compacted and covered from water erosion and located at least 10m away from the nullah wall.	^
	Construction and Demolition (C&D) Waste	
	• Careful design, planning and good site management shall be adopted to minimise over-ordering and generation of waste materials such as concrete grouts.	^
	 The handling and disposal of bentonite slurries shall be undertaken in accordance with Practice Note for Professional Persons – Construction Site Drainage (ProPECC PN 1/94) on construction site drainage. 	N/A
	• Construction and demolition (C&D) material shall be segregated to inert and non-inert parts. The inert portion shall re-used at areas of reclamation or land formation, or to public filling area shall such allocation is deemed necessary. The non-inert portion shall be disposed of to landfill.	^
	Chemical Waste	
	• Chemical waste that is produce during construction shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes.	^
	 Containers used for the storage of chemical wastes should: a. Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; b. Have a capacity of less than 450 litres unless the specifications have been approved by the EPD; 	٨
	c. Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Chemical Waste Regulations.	
	 The storage area for chemical wastes should: a. Be clearly labelled and used solely for the storage of chemical waste; b. Be enclosed on at least 3 sides; 	
	 c. Have an impermeable floor and bunding of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in the area, whichever is largest; d. Have adequate ventilation; 	^
	e. Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary);f. Be arranged so that incompatible materials are adequately separated.	
	 Disposal of chemical waste shall be via a licensed waste collector; and to a facility licensed to receive chemical waste; or a reuser of the waste (under approval from EPD). 	^

Types of Impacts	Mitigation Measures	Status
	General Refuse	-
	• General refuse generated on-site shall be stored in enclosed bins or compaction unit separate from C&D and chemical wastes. A reputable waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&D and chemical wastes, on a daily for every second day basis to minimise odour, pest and litter impacts. The burning of refuse on construction sites is prohibited by law.	^
	• Reusable rather than disposable dishware shall be used if feasible.	^
	A sediment barrier shall be erected to minimize stream sedimentation at downstream of the project boundary of the Toll Plaza.	N/A
	• Conduct a tree survey before commencement of the construction work.	^
Ecology	• All measures recommended in the approved landscape proposals under Condition 2.4 in EP above shall be fully implemented in accordance with the details and time schedule set out in the submission.	N/A
	• Loss of the adjacent woodland due to temporary land take shall be returned to the original status immediately.	N/A
	• Wild and uncontrolled fire shall be strictly prohibited	^
	• Fences shall be erected along the boundary of the construction sites at the Toll Plaza before commencement of works, to prevent tipping, vehicle movements, and encroachment of personnel onto adjacent wooded areas.	N/A
	• Landscape mitigation measure 1 (LMM1) – Construction programming and management. The periphery of the works areas at street level shall be managed so that they do not appear cluttered, untidy and unattractive and inconvenient to pedestrians. For example, all hoarding shall be colorfully designed with interesting motifs demonstrating the work of Highways Department. Hoardings with bland colours shall be avoided.	^
Landscape and Visual Impact	• Landscape mitigation measure 2 (LMM2) – Advanced planting and erosion control works. Where possible, the transplantation of existing valuable trees, the stockpiling of topsoil, new planting and erosion control works shall be carried out as early as possible in the construction period instead of at the end. This will assist in maximizing the time for carrying out transplantation and new planting, resulting in a higher success rate for the survival of transplantation and new planting, resulting in a higher success rate for the survival of transplanted trees and the establishment of new screen trees. The stockpiling of topsoil will provide an abundant use of on-site material for growing media. During detailed design, the issue of stockpiling of topsoil in a manner that would avoid washing into the drainage scheme should be examined comprehensively.	۸
	 Measurement of vibration would also be carried out on a need basis during the piling work 	^

Remarks:	^	Compliance of mitigation measure;	Х	Non-compliance of mitigation measure;
	N/A	Not Applicable;	•	Non-compliance but rectified by the contractor

APPENDIX L CONSTRUCTION PROGRAMME

Data Date Run Date	20SEP05 27SEP05 17:35			3 MON	TH R	OLLIN	g Pi	ROG	RAM	ΛE			Monthl Detaile Progre Critical	ed Wor ss Bar	ks Pro	gr.(DWF	') r						
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8014	Prep. & Sub. Combined Services Dwgs for ENT	48	20MAR04A	05SEP05A	100	100	0		-446														
8023	Prep. & Sub. Independ't Services Dwgs for ENT	48	24JUN04A	05SEP05A	100	100	0		-362														
8031	Prep. & Sub. Comb. Services Dwgs for SHT&T3&LCK	48	20JUL04A	05SEP05A	100	100	0		-314														
8034	Prep.& Sub. Independ't Serv. Dwgs for SHT&T3&LCK	48	04AUG04A	16NOV05	98	100	48	-8	-283														
	Engineer Comment / Approve ENT ISD Submissions		06AUG04A	12OCT05	75	100	18	-68	-373														
	Res-sub. & Approv of ENT ISD	24	06SEP04A	19OCT05	50	100	24	-68	-355														
8035	Engineer Comment / Approve SHT&T3LCK ISD Sub.	24	13SEP04A	30DEC05	70	100	84	-8	-295						T								
8032	Engineer Comment / Approve SHT&T3&LCK CSD Sub.	18	250CT04A	16NOV05	70	100	48	40	-355						İ.								
8033	Re-sub. & Approv. of SHT & T3 & LCK CSD	24	28JUN05A	14DEC05	50	100	24	-8	-355						1								
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2458	Apprv.for Det.Engineering of Tnnl.Vent.Fans	24	08JUL04A	19OCT05	95	100	24	122	-482						Ť								
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2473	Apprv.for Det.Engineering of Encl.Vent.Fans	12	07JUL04A	04OCT05	95	100	12	142	-533						İ								
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2481	Apprv.for Det.Engineering of T3 Underpass	12	07JUL04A	04OCT05	95	100	12	142	-533														
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Leighton – Kumagai Joint Venture	DETAILED WORKS PROGRAMME RE	Current Proj: W11C Target 1 Proj: BLBC	27SEP0	Prog update September	IT	RB
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1110 SP-S2/S3 Inst.Soil Nails & Test (97nr.w/3rig) 18 08SEP05A 02NOV05 0 100 36 249 -379 3798 SP-S2/S3 hydro-seeding & tensar mat 24 03NOV05 0 100 24 288 -379 SLOPE BV-S2 EXCAVATION (SOFT & ROCK) 56 27APR05A 29AUG05A 100 100 0 -222 2683 BV-S2/8 Slope excavation (rock & soft) 82 29AUG05A 120CT05 70 100 18 -100 -168 2692 BV-S2/9 Slope excavation (rock & some soft) 83 05SEP05A 09NOV05 20 100 36 -70 -155 2695 BV-S2/10 Slope excavation (rock & some soft) 22 08DEC05 05JAN06 0 100 22 -100 -168 SLOPE STABILISATION (SOIL NAILS,ROCK BOLTS ETC)																							
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SLOPE BV-S2 2683 BV-S2/7 Slope excavation (soft & rock) 56 27APR05A 29AUG05A 100 100 0 -222 2683 BV-S2/8 Slope excavation (rock & soft) 82 29AUG05A 12OCT05 70 100 18 -100 -168 2692 BV-S2/9 Slope excavation (rock & some soft) 83 05SEP05A 09NOV05 20 100 36 -70 -155 2695 BV-S2/10 Slope excavation (rock & some soft) 22 08DEC05 05JAN06 0 100 22 -100 -168 SLOPE STABILISATION (SOIL NAILS, ROCK BOLTS ETC)	1110	SP-S2/S3 Inst.Soil Nails & Test (97nr.w/3rig)	18	08SEP05A	02NOV05	0	100	36	249	-379													
EXCAVATION (SOFT & ROCK) 2683 BV-S2/7 Slope excavation (soft & rock) 56 27APR05A 29AUG05A 100 100 0 -222 2689 BV-S2/8 Slope excavation (rock & soft) 82 29AUG05A 12OCT05 70 100 18 -100 -168 2692 BV-S2/9 Slope excavation (rock & some soft) 83 05SEP05A 09NOV05 20 100 36 -70 -155 2695 BV-S2/10 Slope excavation (rock & some soft) 22 08DEC05 05JAN06 0 100 22 -100 -168 SLOPE STABILISATION (SOIL NAILS,ROCK BOLTS ETC)	3798	SP-S2/S3 hydro-seeding & tensar mat	24	03NOV05	30NOV05	0	100	24	288	-379													
2683 BV-S2/7 Slope excavation (soft & rock) 56 27APR05A 29AUG05A 100 100 0 -222 2689 BV-S2/8 Slope excavation (rock & soft) 82 29AUG05A 12OCT05 70 100 18 -100 -168 2692 BV-S2/9 Slope excavation (rock & some soft) 83 05SEP05A 09NOV05 20 100 36 -70 -155 2695 BV-S2/10 Slope excavation (rock & some soft) 22 08DEC05 05JAN06 0 100 22 -100 -168 SLOPE STABILISATION (SOIL NAILS,ROCK BOLTS ETC) 56 27APR05A 09NOV05 20 100 22 -100 -168	SLOPE E	3V-S2	1	I		1	1	1															
2689 BV-S2/8 Slope excavation (rock & soft) 82 29AUG05A 12OCT05 70 100 18 -100 -168 2692 BV-S2/9 Slope excavation (rock & some soft) 83 05SEP05A 09NOV05 20 100 36 -70 -155 2695 BV-S2/10 Slope excavation (rock & some soft) 22 08DEC05 05JAN06 0 100 22 -100 -168 SLOPE STABILISATION (SOIL NAILS, ROCK BOLTS ETC) 5						1	1																
2692 BV-S2/9 Slope excavation (rock & some soft) 83 05SEP05A 09NOV05 20 100 36 -70 -155 2695 BV-S2/10 Slope excavation (rock & some soft) 22 08DEC05 05JAN06 0 100 22 -100 -168 SLOPE STABILISATION (SOIL NAILS, ROCK BOLTS ETC) 5	2683	BV-S2/7 Slope excavation (soft & rock)	56	27APR05A	29AUG05A	100	100	0		-222													
2695 BV-S2/10 Slope excavation (rock & some soft) 22 08DEC05 05JAN06 0 100 22 -108 -168 Image: Constraint of the source of the so	2689	BV-S2/8 Slope excavation (rock & soft)	82	29AUG05A	12OCT05	70	100	18	-100	-168													
SLOPE STABILISATION (SOIL NAILS,ROCK BOLTS ETC)	2692	BV-S2/9 Slope excavation (rock & some soft)	83	05SEP05A	09NOV05	20	100	36	-70	-155													
	2695	BV-S2/10 Slope excavation (rock & some soft)	22	08DEC05	05JAN06	0	100	22	-100	-168													
2691 BV-S2/8 lpst Bock holts & Test (60pr w/3 rig) 22 20SEP05 02NO/05 0 100 22 -73 -228	SLOPE ST.	ABILISATION (SOIL NAILS, ROCK BOLTS ETC)				1	I		· · ·														
	2691	BV-S2/8 Inst.Rock bolts & Test (60nr.w/3.rig)	22	20SEP05	02NOV05	0	100	22	-73	-228													
2690 BV-S2/8 Row B1 Soil Nails & Test 21nr.w/1.rig 12 27SEP05 26OCT05 0 100 12 -100 -168	2690	BV-S2/8 Row B1 Soil Nails & Test 21nr.w/1.rig	12	27SEP05	26OCT05	0	100	12	-100	-168													

Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL	AUG	SE		ОСТ	NOV	DEC	JAN
ID	Description	Dur		Finish	Compl.	Compl.					23	24	19 26	25 3 10 17 24	26 31 7 14 21 2	27 28 5 12 19 26	2 9 1
SLOPE STA	BILISATION (SOIL NAILS, ROCK BOLTS ETC)																
2693 I	BV-S2/8 RowD5/D6 Soil Nails & Test 64nr.w/2.rig	18	27OCT05	16NOV05	0	100	18	-100	-168								
2694	BV-S2/9 Inst.Rock bolts & Test (4nr.w/1.rig)	5	17NOV05	22NOV05	0	100	5	-100	-168								
3664 I	3V-S2/9 Row B2 Soil Nails & Test 38nr.w/1.rig	21	17NOV05	10DEC05	0	100	21	-100	-168								
2696	3V-S2/10 Row B3 Soil Nails & Test 39nr.w/2.rig	11	22DEC05	06JAN06	0	100	11	-100	-168								
HYDRO-SE	EDING & TENSAR MAT	1			1		1	1									
3803 I	3V-S2 Berm 6 hydro-seeding & tensar mat	12	25MAR05A	04OCT05	50	100	12	312	-233								
3804 1	BV-S2 Berm 7 hydro-seeding & tensar mat	12	07OCT05	21OCT05	0	100	12	310	-217								
3805 I	3V-S2 Berm 8 hydro-seeding & tensar mat	12	03DEC05	16DEC05	0	100	12	274	-168								
3811	3V-S2 Berm 9 hydro-seeding & tensar mat	12	20DEC05	05JAN06	0	100	12	248	-168								
SURFACE I	DRAINAGE																
3694 1	3V-S2 Berm 7 Surface drainage	14	20SEP05	06OCT05	0	100	14	280	-217								
3695 I	3V-S2 Berm 8 Surface drainage	14	17NOV05	02DEC05	0	100	14	246	-168								
3696	3V-S2 Berm 9 Surface drainage	14	03DEC05	19DEC05	0	100	14	246	-168								
SLOPE B	V-S3																
	ED FILLING																
1987	BV-S3 Compact Fill to +56.0mPD ch.1+740 to 1+860	36	20JUN05A	12OCT05	80	100	18	-141	-252								
HYDRO-SE	EDING & TENSAR MAT				1												
3806 I	3V-S3 hydro-seeding & tensarmat to +41.0mPD	60	13OCT05	21DEC05	0	100	60	652	-252								
SURFACE [1												
1981	3V-S3 Slope Surface Drainage +33.5mPD	12	20SEP05	04OCT05	0	100	12	-141	-282								
1982 I	3V-S3 Slope Surface Drainage +41.0mPD	37	05OCT05	17NOV05	0	100	37	-141	-271								
1983	3V-S3 Slope Surface Drainage +48.5mPD	50	18NOV05	18JAN06	0	100	50	-141	-271								
SLOPE B	V-S4																
1	BILISATION (SOIL NAILS, ROCK BOLTS ETC)																
2358	3V-S4/4a Row A2/A3 Soil Nail & Test 67nr.w/2rig	19	11AUG05A	07OCT05	30	100	15	115	-310								
2352	3V-S4/4b Row A2/A3 Soil Nail & Test 28nr.w/2rig	13	20SEP05	05OCT05	0	100	13	120	-406								
SLOPE FINI	SHES	1			1	I	I									1	
1139	11NW&434 BV-S4/1-2-3bcd-4b Hydro-seed/Tensarmat	18	29SEP05	210CT05	0	100	18	119	-326								

Act.	Activity	Orig		Early					Variance		AUG 23		SEP 24	OCT 25	NOV 26	DEC 27	JAN 28
ID	Description	Dur	Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	 11 18 25	1 8 15 22	29 5 1	2 19 26	3 10 17 24	31 7 14 21	28 5 12 19 26	2 9 1
SLOPE FINISHES																	
2380 BV-S4/3	a-4a & 5 hydro-seeding & tensarmat	12	27OCT05	09NOV05	0	100	12	115	-302								
SURFACE DRAINAGE	-												_				
	surface Drainage	8	17MAR05A	28SEP05	25	100	8	119	-412					1			
3703 0 -04/3	Sundee Drainage	0	TIMAROSA	20021 05	25	100		113	-412								
3706 BV-S4/4	Surface Drainage	12	13OCT05	26OCT05	0	100	12	115	-322								
SLOPE SP-S1													_				
SURFACE DRAINAGE	=																
	Surface Drainage	7	06JUL04A	27SEP05	40	100	7	341	-343								
							-										
RC STRUCTUR	ES																
RETAINING WAL	L BV-R1																
PILING WORKS																	
1140 BV-R1(0	C) Pre-Bore & Report	14	20SEP05	06OCT05	0	100	14	-53	-231								
1141 BV-R1(0	C) Bored Pile 22nr	61	08NOV05	20JAN06	0	100	61	-73	-172								
CONCRETE WORKS			0010100			100		0-	170								
1145 BV-R1(A	A) RC Base Slab ch.2+060	4	08NOV05	24DEC05	0	100	4	-35	-176								
EXCAVATION (SOFT	& ROCK)	I	1	1	1		1						_				
	Excavation (BV-S2/8 rock)	61	23JUL05A	07NOV05	0	100	18	-73	-172								
			20002007	01110100	Ũ												
RETAINING WAL	L BV-R2		n.	n	1	1											
CONCRETE WORKS																	
1116 BV-R2(0	C) Pile Capping Beam	12	20SEP05	04OCT05	0	100	12	171	-204								
1117 BV-R2(0	C) RC Wall	30	05OCT05	09NOV05	0	100	30	171	-204								
													_				
FINISHES	A7 11 7 1 1	00	0.000/05	4055000	0	100	00	474	474								
1123 BV-R2 V	vall finisnes	60	24NOV05	13FEB06	0	100	60	171	-174								
BACKFILLING		I	l	1	1		1						_				
	A&B) Granular Drain & Compacted Backfill	36	07APR05A	23NOV05	5	100	36	179	-144								
					Ĩ												
1126 BV-R2(0	C) Granular Drain & Compacted Backfill	6	10NOV05	16NOV05	0	100	6	221	0								
	•																
STEPPED CHAN	NEL & BOX CULVERT																
CONCRETE WORKS			1	1													
1911 Box culv	rert bays 5-15 ch.2+010 to 2+110	55	20SEP05	17DEC05	0	100	75	-166	-176				•	·			
1161 Box culv	rert bays 16 & 17 ch.2+110 to 2+140	18	19DEC05	25JAN06	0	100	18	-71	-180								
													_				
EXCAVATION (SOFT		60	20 11 11 05 1	2010/05	0	100	60	166	190								
	rert rock exc.bay 5-15 Ch.2+010 to 2+110	60	20JUL05A	30NOV05	0	100	60	-166	-180								
			1	1	1	1	1				1			1	I		1

Act.	Activity	Orig Early	Early	%	DWP %	Rem	Total	Variance	JUL 22	AUG 23		SEP 24	OCT 25	NOV 26	DEC 27	JAN 2
ID	Description	Dur Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	11 18 25	1 <u>8</u> 15 2	2 29 5	12 19	25 26 3 10 17 24	31 7 14 21		26 2 9
INLET H	IEADWALLS															
	Inlet headwall @SP-S2/3	30 20SEP05	02NOV05	0	100	30	312	-361				¢.		-		
3796	Inlet headwall ch.1+810	66 13OCT05	30DEC05	0	100	66	264	-252								
3797	Inlet headwall ch.1+830	66 13OCT05	30DEC05	0	100	66	264	-252								
WSD WO	DRKS							•								
WSD 900) MAIN DIVERSION															
1929	Inst.900.dia pipe (incl.thrust blocks) westside	90 19JUL05A	03NOV05	40	100	37	10	-271								
1928	Pipe bridge 'A' (DN900) - Bridge section	90 26JUL05A	03NOV05	50	100	37	10	-271								
	Inst.DN900 pipe (incl.thrust blocks) to BV-S4	66 01AUG05A	03NOV05	50	100	37	10	-289								
	DN900 main clean/pressure test & WSD approve	54 04NOV05	27NOV05	0	100	24	12	-297								
1175	DN900 connection by WSD	12 28NOV05	09DEC05	0	100	12	12	-363								
1176	DN900 WSD Diversion Implemented	0	09DEC05	0	100	0	12	-309							•	
	00 MAIN DIVERSION		T	1	T	1	1	I								
1166	Construct DN600 Pipe Bridge 'D'	18 15JUL05A	04OCT05	20	100	12	74	-213								
1169	Inst.2xDN600 WSD Pipe down BV-S2/6-7	90 21JUL05A	08NOV05	0	100	41	98	-218								
1168	DN600 connection by WSD	6 20SEP05	20FEB06	0	100	6	67	-86				Ċ		-		
1164	Inst.DN600 WSD Pipe in Pipe Tunnel & valley	36 07OCT05*	16JAN06	0	100	83	-128	-229								
1167	Inst.DN600 WSD Pipe along BV-S2/8 (south)	60 07OCT05*	03NOV05	0	100	23	72	-9				,				
1163	Inst.DN600 WSD Pipe along BV-S2/8 (north)	90 20DEC05*	26JAN06	0	100	30	63	-166								
WSD 200				-		1	-	1								
2338	Inst.DN200 pipe (incl.thrust blocks) to BV-S4	60 20SEP05	30NOV05	0	100	60	-19	-318				f			-	
2340	DN200 connection by WSD	12 24NOV05	05DEC05	0	100	12	-22	-394								
3164	DN200 main clean/pressure test & WSD approve	54 06DEC05	28JAN06	0	100	54	-22	-394								
TERRAI	N MITIGATION															
NTMM -			I	_	1	1	1	1								
2392	NTMM - Constr.Peforated Drain Channel	24 11JUL05A	26SEP05	80	100	6	-100	-198								
		· ·										•				

Act. Activity Org Enty St. Diversity St. Diversity Diversity <thdiversity< th=""> <thdiversity< th=""> <thdiv< th=""><th>Act.</th><th>Activity</th><th>Orig</th><th>Early</th><th>Early</th><th>%</th><th>DWP %</th><th>Rem</th><th>Total</th><th>Variance</th><th>JUL</th><th>AUG</th><th></th><th>SEP</th><th></th><th>ост</th><th>NOV</th><th>DEC</th><th>JAN</th></thdiv<></thdiversity<></thdiversity<>	Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL	AUG		SEP		ост	NOV	DEC	JAN				
NIME Output Outpu Outpu Outpu												23	20	24 5 12 1	9.26	25	26	27	2 9 1				
Image: Serie Conder and All And All Conder and All All All All All All All All All Al		-	=			1			1	,			<u> 23</u>	J <u> 12 </u> 1	5 <u>2</u> 0								
IDDE Statusardow latter series IDDE			60	27SEP05	07DEC05	0	100	60	282	-198													
IDDE Statusardow latter series IDDE	NTMM -	CUI VERT 'A'	1 1			1	1	1	1 1														
Lucer A-Sol Nails & Test ch. 2+140 Dirac on the set on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on the set on 2+140 Dirac on 2+100 Dirac on 2+100 <thdirac 2+100<="" on="" th=""> Dirac on 2+100</thdirac>																							
2336 Culvert A' - excavate gabion benches Ch.2+140 4 230EC05 0 100 4 71 180 RECREATED STREAM 3008 Recreated stream DNG25 pipe (east) ch.1+740 18 205EPos 120CT05 0 100 18 64 -301 FXCEIGN WORKS - NOISE BARRIERS & ENCLOSURES 100 18 0100 100 18 64 -301 FXCEIGN WORKS - NOISE BARRIERS & ENCLOSURES 100 18 0100 58 -1168 2740 SB Barrier, FndsPiling (C2) 18 0110V/05 2110V/05 0 100 58 -1168 2741 SB Barrier, End, FndsPiling (C2) 18 0110V/05 2110V/05 0 100 58 -214 2738 SB Barrier, End, FndsPiling (C3) 17 720CT06 280V/05 0 100 24 -234 2738 SB Barrier, End, FndsPiling (C3) 17 720CT06 280V/05 0 100 24 -234 2738 SB Barrie, En	2384	Culvert 'A' Prep.access for Soil Nails Ch.2+140	8	01DEC05	09DEC05	0	100	8	-71	-180							I						
RecReated stream DN525 pipe (east) ch.1+740 18 20SE POR 12OCTOS 0 100 18 64 -391 SUBM Recreated stream DN525 pipe (east) ch.1+740 18 20SEPOS 12OCTOS 0 100 18 64 -391 COLSPAN= Colspan="4">Colspan="4" Colspan="4">Colspan="4">Colspan="4">Colspan="4" Colspan="4">Colspan="4" Colspan="4" Colspan="4" <td <="" colspan="4" td=""><td>2385</td><td>Culvert A-Soil Nails & Test ch.2+140 19nr.w/1rig</td><td>11</td><td>10DEC05</td><td>22DEC05</td><td>0</td><td>100</td><td>11</td><td>-71</td><td>-180</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td>	<td>2385</td> <td>Culvert A-Soil Nails & Test ch.2+140 19nr.w/1rig</td> <td>11</td> <td>10DEC05</td> <td>22DEC05</td> <td>0</td> <td>100</td> <td>11</td> <td>-71</td> <td>-180</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>				2385	Culvert A-Soil Nails & Test ch.2+140 19nr.w/1rig	11	10DEC05	22DEC05	0	100	11	-71	-180									
3808 Recreated stream DN525 pipe (east) ch.1+740 18 205EP05 120C105 0 100 18 64 -391 EXCISION WORKS - NOISE BARRIERS & ENCLOSURES NOISE BARRIER (58) 2740 58 2210V05 08FEB06 0 100 18 -51 -168 2740 58 22NOV05 08FEB06 0 100 18 -51 -168 1177 58 Semi-End.FndsRCB.ase (C2) 58 22NOV05 08FEB06 0 100 12 -234 2733 SB semi-End.FndsNing (C3, C4.12) 24 270CT05 15NOV05 0 100 21 -234 2733 SB semi-End.Fnds RCB.ase (C3) 20 18NOV05 08BEC05 0 100 21 -234 2733 SB semi-End.Fnds RCB.ase (C3) 20 18NOV05 25.NN66 0 100 21 -234 2734 SB semi-End.Fnds RCB.ase (C3) 21 24NOV05 25.NN66 0 100 21 -234 2735 SB semi-End.Fnds RCB.ase (C4) 23	2386	Culvert 'A' - excavate gabion benches Ch.2+140	4	23DEC05	29DEC05	0	100	4	-71	-180													
Construction Construction <th< td=""><td>RECRE</td><td>ATED STREAM</td><td></td><td></td><td>ļ</td><td>1</td><td>1</td><td>1</td><td>1 1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	RECRE	ATED STREAM			ļ	1	1	1	1 1														
NOISE BARRIER (SB) 2740 SB Barrier.FndsPliing (C2) 18 01NOV05 21NOV05 0 100 18 -51 -168 2741 SB Barrier.FndsRC Base (C2) 58 22NOV05 08FEB06 0 100 58 -51 -129 NOISE SEMI-ENCLOSURE [SS) 1177 SB Semi-Encl.Fnds Pliing (C3) 17 27OC15 15NOV05 0 100 17 -196 -234 2738 SB Semi-Encl.Fnds RC Base (C3) 20 16NOV05 08EC05 0 100 24 -203 -234 2738 SB Semi-Encl.Fnds RC Base (C3) 20 16NOV05 08EC05 0 100 24 -203 -244 2739 SB Semi-Encl.Fnds RC Base (C3, C4, I2) 51 24NOV05 25, JANO6 0 100 21 -203 -241 2739 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 17, JANO6 0 100 13 -193 -241 2736 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 0, 100 13 <td< td=""><td>3808</td><td>Recreated stream DN525 pipe (east) ch.1+740</td><td>18</td><td>20SEP05</td><td>12OCT05</td><td>0</td><td>100</td><td>18</td><td>64</td><td>-391</td><td></td><td></td><td></td><td>C</td><td></td><td></td><td></td><td></td><td></td></td<>	3808	Recreated stream DN525 pipe (east) ch.1+740	18	20SEP05	12OCT05	0	100	18	64	-391				C									
2740 SB Barrier, FndsPiling (C2) 18 01NOV05 21NOV05 0 100 18 -51 -168 2741 SB Barrier, FndsRC Base (C2) 58 22NOV05 06FEB06 0 100 58 -51 -129 NOISE SEMI-ENCLOSURE [SB) 17 270CT05 15NOV05 0 100 17 196 -234 2738 SB Semi-Encl.Fnds RC Base (C3) 20 16NOV05 0 100 21 -203 -234 2733 SB Semi-Encl.Fnds RC Base (C3) 20 16NOV05 0 100 21 -203 -241 2739 SB Semi-Encl.Fnds RC Base (C3, C4, I2) 51 24NOV05 25JAN06 0 100 21 -203 -241 2735 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 17JAN06 0 100 13 -118 -241 2736 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 05JAN06 0 100 13 -324 2736 SB Semi-Encl.Fnds Piling (I2) 13 19DEC05 05JAN06 0	EXCISIO	N WORKS - NOISE BARRIERS & ENCLOSURES	1 1		I 		I	1															
2741 SB Barrier.FndsRC Base (C2) 58 22NOV05 08FEB06 0 100 58 -51 -129 NOISE SEMI-ENCLOSURE [SB) 1177 SB Semi-Encl.Fnds Piling (C3, C4, I2) 24 27OCT05 15NOV05 0 100 24 -203 -234 2733 SB Semi-Encl.Fnds RC Base (C3) 20 16NOV05 08DEC05 0 100 24 -203 -234 2734 SB Semi-Encl.Fnds RC Base (C3, C4, I2) 21 24NOV05 17DEC05 0 100 24 -203 -234 2739 SB Semi-Encl.Fnds RC Base (C3, C4, I2) 51 24NOV05 25JAN06 0 100 25 -234 2739 SB Semi-Encl.Fnds RC Base (C3, C4, I2) 51 24NOV05 25JAN06 0 100 23 -203 -241 2736 SB Semi-Encl.Fnds RC Base (C3, C4, I2) 13 19DEC05 05JAN06 0 100 13 -234 -241 -241 -241 -241 -241 -241 -241 -241 -241 -241 -241 -241 -241 </td <td>NOISE E</td> <td>ARRIER (SB)</td> <td></td>	NOISE E	ARRIER (SB)																					
NOISE SEMI-ENCLOSURE [SB) Intr Z700 (S3, C4, 12) 17 Z700 (S3, C4, 12) 14 Z700 (S3, C4, 12) 24 Z700 (S3, C4, 12) 21 Z4NOV05 0 100 21 203 224 2734 SB Semi-Encl.Fnds Piling (C4) 21 Z4NOV05 17DEC05 0 100 21 203 -234 2739 SB Semi-Encl.Fnds RC Base (C3, C4, 12) 51 Z4NOV05 25JAN06 0 100 23 -203 -241 2735 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 05JAN06 0 100 13 -196 -234 2736 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 05JAN06 0 100 13 -196 -234 2736 SB Semi-Encl.Fnds Piling (I2) 13 19DEC05 0,5JAN06 0 100 <t< td=""><td>2740</td><td>SB Barrier.FndsPiling (C2)</td><td>18</td><td>01NOV05</td><td>21NOV05</td><td>0</td><td>100</td><td>18</td><td>-51</td><td>-168</td><td></td><td></td><td></td><td></td><td></td><td>I</td><td>dwę</td><td>g. 6680B</td><td></td></t<>	2740	SB Barrier.FndsPiling (C2)	18	01NOV05	21NOV05	0	100	18	-51	-168						I	dwę	g. 6680B					
1177 SB Semi-Encl.Fnds Piling (C3) 17 270CT05 15N0V05 0 100 17 -196 -234 2738 SB Semi-Encl.Fnds RC Base (C3) 20 16N0V05 08DEC05 0 100 24 -203 -234 2733 SB Semi-Encl.Fnds RC Base (C3) 20 16N0V05 08DEC05 0 100 21 -204 -204 2734 SB Semi-Encl.Fnds Piling (C4) 21 24N0V05 17DEC05 0 100 21 -204 -241 2735 SB Semi-Encl.Fnds RC Base (C3, C4, I2) 51 24N0V05 25JAN06 0 100 23 -204 -204 2735 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 17JAN06 0 100 23 -204 -241 2736 SB Semi-Encl.Fnds Piling (I2) 13 19DEC05 05JAN06 0 100 13 -198 -241 -241 -241 -241 -241 -241 -241 -241 -241 -241 -241 -241 -241 -241 -241 -241 -241 <td>2741</td> <td>SB Barrier.FndsRC Base (C2)</td> <td>58</td> <td>22NOV05</td> <td>08FEB06</td> <td>0</td> <td>100</td> <td>58</td> <td>-51</td> <td>-129</td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	2741	SB Barrier.FndsRC Base (C2)	58	22NOV05	08FEB06	0	100	58	-51	-129			•										
2738 SB Semi-Encl.Fnds Piling (C3,C4,I2) 24 270CT06 23N0V05 0 100 24 -203 -234 2738 SB Semi-Encl.Fnds RC Base (C3) 20 16N0V05 08DEC05 0 100 20 -195 -234 2739 SB Semi-Encl.Fnds RC Base (C3, C4, I2) 21 24N0V05 17DEC05 0 100 21 -203 -241 2739 SB Semi-Encl.Fnds RC Base (C3, C4, I2) 51 24N0V05 25JAN06 0 100 51 -196 -234 2739 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 05JAN06 0 100 23 -203 -241 2738 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 05JAN06 0 100 13 -196 -234 2738 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 05JAN06 0 100 13 -193 -241 58/NB ROADWORKS & FINISHES 24 24 100 34 -203 -202 -204 -204 -204 -204 -204 -204 <td< td=""><td>NOISE S</td><td>EMI-ENCLOSURE [SB)</td><td></td><td></td><td>I</td><td>1</td><td>1</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	NOISE S	EMI-ENCLOSURE [SB)			I	1	1	1															
2733 SB Semi-Encl.Fnds RC Base (C3) 20 16NOV05 08DEC05 0 100 20 -195 -234 2733 SB Semi-Encl.Fnds Piling (C4) 21 24NOV05 17DEC05 0 100 21 -203 -241 2739 SB Semi-Encl.Fnds RC Base (C3, C4, I2) 51 24NOV05 25JAN06 0 100 21 -203 -241 2735 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 17JAN06 0 100 23 -203 -241 2736 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 05JAN06 0 100 13 -196 -234 2736 SB Semi-Encl.Fnds Piling (I2) 13 19DEC05 05JAN06 0 100 13 -234 - <	1177	SB Semi-Encl.Fnds Piling (C3)	17	27OCT05	15NOV05	0	100	17	-196	-234													
2734 SB Semi-Encl.Fnds Piling (C4) 21 24NOV05 17DEC05 0 100 21 -203 -241 2739 SB Semi-Encl.Fnds RC Base (C3,C4,I2) 51 24NOV05 25JAN06 0 100 51 -196 -234 2735 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 17JAN06 0 100 23 -203 -241 2736 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 17JAN06 0 100 13 -203 -241 2736 SB Semi-Encl.Fnds Piling (I2) 13 19DEC05 05JAN06 0 100 13 -203 -241 SENNE ROADWORKS & FINISHES FILING 1103 BV Compact.Fill to Form.ch. 1+920 to 2+020 84 14JUN04A 210C15 70 100 34 -203 -202 1102 BV Compact.Fill to Form.ch. 1+860 to 1+920 78 20SEP05 21DEC05 0 100 72 -204 DRAINAGE	2738	SB Semi-Encl.Fnds Piling (C3,C4,I2)	24	27OCT05	23NOV05	0	100	24	-203	-234													
2739 SB Semi-Encl.Fnds RC Base (C3, C4, I2) 51 24NOV05 25JAN06 0 100 51 196 -234 2735 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 17JAN06 0 100 23 -203 -241 2736 SB Semi-Encl.Fnds Piling (I2) 13 19DEC05 05JAN06 0 100 13 193 -241 SHORE SET TO ADWORKS & FINISHES ROADS - FORMATION PILLING 1103 BV Compact.Fill to Form.ch.1+920 to 2+020 84 1AUG04A 260CT05 65 100 30 -203 -234 1102 BV Compact.Fill to Form.ch.1+860 to 1+820 78 20SEP05 21DEC05 0 100 30 -203 -204 1102 BV Compact.Fill to Form.ch.1+860 to 1+820 78 20SEP05 21DEC05 0 100 78 -204	2733	SB Semi-Encl.Fnds RC Base (C3)	20	16NOV05	08DEC05	0	100	20	-195	-234													
2735 SB Semi-Encl.Fnds RC Base (C4) 23 19DEC05 17JAN06 0 100 23 -203 -241 2736 SB Semi-Encl.Fnds Piling (I2) 13 19DEC05 05JAN06 0 100 13 -193 -241 SE/NB ROADWORKS & FINISHES ROADS - FORMATION FILLING 1103 BV Compact.Fill to Form.ch. 1+920 to 2+020 84 14JUN04A 310CT05 70 100 34 -203 -234 Image: Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4"Colspan="4">Colspan="4"Colspa="4"Colspa="4"Colspan="4"Colspa="4"Colspan="4"Colspa=	2734	SB Semi-Encl.Fnds Piling (C4)	21	24NOV05	17DEC05	0	100	21	-203	-241													
2736 SB Semi-Encl.Fnds Piling (I2) 13 19DEC05 05JAN06 0 100 13 -193 -241 SB/NB ROADWORKS & FINISHES SB/NB ROADWORKS & FINISHES PILLING FILLING OCTOP 1102 BV Compact.Fill to Form.ch.1+920 to 2+020 84 14JUN04A 310CT05 70 100 34 -203 -202 1102 BV Compact.Fill to Form.ch.1+860 to 1+920 78 100 30 -203 -234	2739	SB Semi-Encl.Fnds RC Base (C3,C4,I2)	51	24NOV05	25JAN06	0	100	51	-196	-234													
SB/NB ROADWORKS & FINISHES ROADS - FORMATION FILLING 1103 BV Compact.Fill to Form.ch.1+920 to 2+020 84 14JUN04A 310CT05 70 100 34 -203 -202 1102 BV Compact.Fill to Form.ch.1+920 to 2+200 48 11AUG04A 260CT05 65 100 30 -203 -204 2732 BV Compact.Fill to Form.ch.1+860 to 1+920 78 20SEP05 21DEC05 0 100 78 -147 -204	2735	SB Semi-Encl.Fnds RC Base (C4)	23	19DEC05	17JAN06	0	100	23	-203	-241													
ROADS - FORMATION FILLING FILLING Set of the se	2736	SB Semi-Encl.Fnds Piling (I2)	13	19DEC05	05JAN06	0	100	13	-193	-241													
FILLING Image: Second seco	SB/NB F	ROADWORKS & FINISHES	1		I			1	1 1														
1103 BV Compact.Fill to Form.ch.1+920 to 2+020 84 14JUN04A 310CT05 70 100 34 -203 -202	ROADS	- FORMATION																					
1102 BV Compact.Fill to Form.ch.2+020 - 2+200 48 11AUG04A 260CT05 65 100 30 -203 -234 2732 BV Compact.Fill to Form.ch.1+860 to 1+920 78 20SEP05 21DEC05 0 100 78 -147 -204 Image: Compact Compac																	L						
2732 BV Compact.Fill to Form.ch.1+860 to 1+920 78 20SEP05 21DEC05 0 100 78 -204 DRAINAGE						70	100																
DRAINAGE	1102	BV Compact.Fill to Form.ch.2+020 - 2+200	48	11AUG04A	26OCT05	65	100	30	-203	-234													
	2732	BV Compact.Fill to Form.ch.1+860 to 1+920	78	20SEP05	21DEC05	0	100	78	-147	-204				•									
2381 SB/NB Sth.Appr.Rd.Drainage ch.2+030 - 2+200 114 27OCT05 20MAR06 0 100 114 -173 -234						1	•	1															
	2381	SB/NB Sth.Appr.Rd.Drainage ch.2+030 - 2+200	114	27OCT05	20MAR06	0	100	114	-173	-234													

Act.	Activity	Orig	Early	Early	%	DWP %			Variance		AUG	SEF		NOV	DEC	JAN
ID	Description	Dur	-	Finish	Compl.						23 1 /8 /15 /22 /	24 29 5 12	25 19 26 3 10 17 24	26 31 7 14 21 28	27 3 5 12 19 26	2 9 1
DRAINAG			1			1	1			-						
1178	BV.Appr.Rd.Drainage ch.1+920 to 1+960	44	01NOV05	21DEC05	0	100	44	-109	-202							
2726	SB/NB Sth.Appr.Rd.Drain Testing ch.2+030 - 2+200	42	13DEC05	11APR06	0	100	42	-173	-234							
2721	BV.Appr.Rd.Drain Testing ch.1+920 to 1+960	30	22DEC05	06FEB06	0	100	30	125	-202							
2727	BV.Appr.Rd.Drainage ch.1+780 to 1+920	62	22DEC05	15MAR06	0	100	62	-147	-204	-						
EVA RO	ADWORKS & FINISHES		I		1	1		1	I							
SB (EAS	T SIDE) EVA ROADWORKS															
DRAINAGE			1			1	1	1	1							
1979	SB EVA rd.drainage (east) ch.2+000 to 2+200	31	11APR05A	04OCT05	75	100	12	179	-71							
1978	SB EVA rd.drain testing (east) ch.2+000 to 2+200	18	05OCT05	26OCT05	0	100	18	179	-71	-	-					
EXCISIO	N WORK-SHEK LEI PUI WATER TREATMENT PL	ANT														
2747	Soilid Barrier Type II - Structural Steelwork	30	14SEP05A	17OCT05	20	100	22	-172	-200							
2749	Soilid Barrier Type III - Structural Steelwork	24	14SEP05A	14OCT05	80	100	20	-122	-155							
2748	Soilid Barrier Type I - Structural Steelwork	18	15SEP05A	17OCT05	80	100	20	-142	-182							
2750	Soilid Barrier Type IV - Structural Steelwork	18	16SEP05A	14OCT05	80	100	18	-98	-137							
2751	Soilid Barrier Type II - Cladding	30	18OCT05	21NOV05	0	100	30	-172	-200							
2752	Soilid Barrier Type I - Cladding	18	22NOV05	12DEC05	0	100	18	-172	-200							
2753	Soilid Barrier Type III - Cladding	24	13DEC05	12JAN06	0	100	24	-172	-200							
	APING & ESTABLISHMENT	1			1	1	1	1	I							
	Sth.Appr.Hard Landscaping	150	22DEC05	14MAR07	0	0	150	-83	-201							
1103	Str.Appl. naru Lanuscaping	150	2202000		0	0	150	-05	-201							
ENT SO	UTH PORTAL VENTILATION BUILDING					1	1		'							
SUBMIT	TALS & APPROVALS															
E&M EQ	PT.& MATERIAL.SUBMITTALS															
8201	EntSpBldg-Sub.MVAC MCC, power & control sys	54	02JUL04A	23NOV05	95	100	54	-80	-214							
8204	EntSpBldg-Sub.TVF, Ductworks & Control sys	78	02JUL04A	21DEC05	95	100	78	-80	-217					(
8209	EntSpBldg-Sub.HV/`LV main & submain cable sys	54	02JUL04A	23NOV05	95	100	54	-122	-181							
8212	EntSpBldg-Sub.FS AFA & FM200 sys	54	05JUL04A	23NOV05	95	100	54	46	-80							

Act.	Activity	Orig	-	Early	%	DWP %	Rem	Total	Variance	JUL AUG 23 18 18 25 1 8 15 22 29 5	SEP 24	OCT 25	NOV 26	DEC 27	JAN
ID	Description	Dur	Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	18 25 1 8 15 22 29 5	12 19 26	,3 ₁ 10 17 24		5 12 19 26	29
	PT.& MATERIAL.SUBMITTALS			001101/05		100									
8210	EntSpBldg-Sub.MVAC mech.vent. sys	54	03AUG04A	23NOV05	95	100	54	-8	-166						
8207	EntSpBldg-Sub.FS wet sys	54	05AUG04A	23NOV05	95	100	54	22	-203						
8208	EntSpBldg-Sub.MVAC / TVF pneumatic sys	54	14AUG04A	16NOV05	95	50	48	-2	-19						
0200		54	14400044	10100000	30	50	-0	-2	-15						
8200	EntSpBldg-Sub.CMCS & ELV sys	78	26AUG04A	21DEC05	98	100	78	-56	-193						
8205	EntSpBldg-Sub.PD irrig. sys	54	04FEB05A	23NOV05	85	100	54	22	-209						
1918	SP.Bldg Prep & submit door & window detail	24	20SEP05	19OCT05	0		24	-20	-115		•				
1940	SP.Bldg Prep & sub balustrade & metal wks	24	20SEP05	19OCT05	0	100	24	-56	-173		•				
1942	SP.Bldg Prep & sub aluminium cladding	24	20SEP05	19OCT05	0	100	24	-20	-175		•				
1944	SP.Bldg Prep & sub fall arrest system	24	20SEP05	19OCT05	0		24	34	-61						
E&M EQ	PT.& MATERIAL APPROVALS		I		1	1	1								
	EntSpBldg-App. HV power dist. sys	18	14JUL04A	12OCT05	95	100	18	-134	-175						
6002	EntSpBldg-App. LV power dist. sys	18	13AUG04A	12OCT05	90	100	18	-140	-151						
8491	EntSpBldg-App. building related luminaires	18	18AUG04A	12OCT05	80	100	18	-74	-116						
6006	EntSpBldg-App. FS wet sys	18	04SEP04A	12OCT05	60	100	18	22	-149						
6036	EntSpBldg-App. FS AFA & FM200 sys	18	14SEP04A	12OCT05	70	100	18	46	-26))				
6192	EntSpBldg-App. of CMCS & ELV sys	18	20SEP04A	12OCT05	88	100	18	-56	-115						
6005	EntSpBldg-App. MVAC mech.vent. sys	18	23SEP04A	12OCT05	60	100	18	-8	-112						
6003	EntSpBldg-App. PD cleans. & flush water sys	18	04NOV04A	12OCT05	75	100	18	22	-155						
6742	EntSpBldg-App. MVAC MCC, power & control sys	18	12NOV04A	12OCT05	75	100	18	-80	-160						
6760	EntSpBldg-App. TVF, Ductworks & Control sys	18	12NOV04A	12OCT05	70	100	18	-80	-139						
7615	EntSpBldg-App. HV/LV main & submain cable sys	18	07DEC04A	12OCT05	65	100	18	-122	-127						
6013	EntSpBldg-App. MVAC Package AC Unit sys	18	01FEB05A	12OCT05	90	0	18	58	17				_		
6004	EntSpBldg-App. PD irrig. sys	18	05MAY05A	12OCT05	30	100	18	22	-155						

Act. ID	Activity Description	Orig Dur		Early Finish	% Compl	DWP % Compl.					AUG 23	SEF 24		OCT 25	NOV 26	DEC 27	JAN
1 1	PT.& MATERIAL APPROVALS	Dur	Start	Finish	Compi.	. Compi.	Dur	Float	any Finis	11 18 25	1 <u>8</u> 15 22 2	9 <mark>5 12</mark>	19 <mark> </mark> 26	3 10 17 24	31 7 14 21 2	8 <mark>5 12 19 26</mark>	29
	SP.Bldg Approve louvre details	24	20SEP05	19OCT05	0		24	4	-151								
1947	SP.Bldg Approve slate cladding design	24	20SEP05	19OCT05	0		24	4	-151								
1919	SP.Bldg Approve door & window details	24	20OCT05	16NOV05	0		24	-20	-115								
1941	SP.Bldg Approve balustrade & metal works	24	20OCT05	16NOV05	0	100	24	-56	-173								
1943	SP.Bldg Approve aluminium cladding	24	20OCT05	16NOV05	0		24	-20	-175								
1945	SP.Bldg Approve fall arrest system	24	20OCT05	16NOV05	0		24	34	-61			-					
PROCU	REMENT - MATERIAL																
6007	EntSpBldg-Proc. & Manuf. of HV dist. equip't	180	25MAR05A	20JUN06	15	90	180	-170	-193								
6193	EntSpBldg-Proc. & Manuf. of CMCS & ELV sys	180	25MAR05A	19MAY06	15	60	180	-66	-107								<u> </u>
6743	EntSpBldg-Proc & Manuf. MCC, power & control sys	180	25MAR05A	08MAY06	8	80	180	-80	-142								<u> </u>
6012	EntSpBldg-Proc & Manuf. FS wet sys	120	06JUN05A	20FEB06	20	100	120	22	-131								
6761	EntSpBldg-Proc & Manuf. TVF,Ductwks & Cont'l sys	180	09JUN05A	08MAY06	20	70	180	-44	-109								<u> </u>
6009	EntSpBldg-Proc & Manuf. MVAC mech.vent. sys	120	130CT05	13MAR06	0	80	120	-8	-112								<u> </u>
6010	EntSpBldg-Proc & Manuf. Cleans & flush water sys	120	130CT05	13MAR06	0	100	120	22	-155								
6011	EntSpBldg-Proc & Manuf. PD irrig. sys	120	130CT05	13MAR06	0	100	120	22	-155								
7616	EntSpBldg-Proc & Manuf. HV/LV cable	180	130CT05	29MAY06	0	70	180	-122	-127								<u> </u>
8492	EntSpBldg-Proc & Manf bldg related luminaires	180	13OCT05	29MAY06	0	60	180	-74	-116								
6008	EntSpBldg-Proc & Manuf. LV power dist. equip't	180	06DEC05	24JUL06	0	80	180	-186	-197								<u> </u>
6079	EntSpBldg-Proc & Manuf. FS AFA & FM200 sys	120	15DEC05	22MAY06	0	10	120	-8	-80								
	NORKS SP.Bldg Procure aluminium cladding	100	19APR05A	04OCT05	80	80	12	-14	41								
1950	SP.Bldg Procure balustrade & metal works	60	21APR05A	04OCT05	80	100	12	-50	-17								
2030	SP.Bldg Initial deliver balust & metal works	0	22DEC05		0		0	-56	0							•	

No. Description Dir Early Early Compl. Doin / 30 Total relation 22 23 24 25 26 Description Dur Start Finish Compl. Compl. Dur Float and relation 22 23 24 25 26 26 CONSTRUCTION Substructure Finish Compl. Dur Float and relation 27 8 10 17 24 31 7 14 21 1188 SP.Bidg RC Find & Drainage GL.H-S/10-12 24 14MAY05A 08OCT05 80 100 16 -102 -109 Image: and the	
SUBSTRUCTURE 1188 SP.Bldg RC Fnd & Drainage GL.H-S/10-12 24 14MAY05A 080CT05 80 100 16 -102 -109 SUBERSTRUCTURE RC WORKS MB CARRIAGEWAY & CENTRAL RESERVE 1194 SP.Bldg Nth Bound C/Way RC Base Slab 18 14MAY05A 120CT05 50 100 18 -74 -103 1195 SP.Bldg Nth Bound C/Way RC Ret. Wall W1 24 07SEP05A 290CT05 25 100 33 -89 -94 1189 SP.Bldg RC Cols. & Walls to 1FL.GL.H-S/10-12 18 20SEP05 240CT05 0 100 18 -96 -109 1190 SP.Bldg RC Walls to Tanks/Pits GL.H-S/10-12 18 100CT05 310CT05 0 100 18 -102 -109	
1188 SP.Bldg RC Fnd & Drainage GL.H-S/10-12 24 14MAY05A 08OCT05 80 100 16 -102 -109 SUPERSTRUCTURE RC WORKS NB CARRIAGEWAY & CENTRAL RESERVE 1194 SP.Bldg Nth Bound C/Way RC Base Slab 18 14MAY05A 12OCT05 50 100 18 -74 -103 1195 SP.Bldg Nth Bound C/Way RC Ret. Wall W1 24 07SEP05A 29OCT05 25 100 33 -89 -94 1189 SP.Bldg RC Cols. & Walls to 1FL.GL.H-S/10-12 18 20SEP05 240CT05 0 100 18 -96 -109 1190 SP.Bldg RC Walls to Tanks/Pits GL.H-S/10-12 18 100CT05 310CT05 0 100 18 -109	
SUPERSTRUCTURE RC WORKS NB CARRIAGEWAY & CENTRAL RESERVE 1194 SP.Bidg Nth Bound C/Way RC Base Slab 18 14MAY05A 12OCT05 50 100 18 -74 -103 1195 SP.Bidg Nth Bound C/Way RC Ret. Wall W1 24 07SEP05A 29OCT05 25 100 33 -89 -94 1189 SP.Bidg RC Cols. & Walls to 1FL.GL.H-S/10-12 18 20SEP05 24OCT05 0 100 18 -96 -109 1190 SP.Bidg RC Walls to Tanks/Pits GL.H-S/10-12 18 10OCT05 31OCT05 0 100 18 -102 -109	
RC WORKS NB CARRIAGEWAY & CENTRAL RESERVE 1194 SP.Bldg Nth Bound C/Way RC Base Slab 18 14MAY05A 12OCT05 50 100 18 -74 -103 1195 SP.Bldg Nth Bound C/Way RC Ret. Wall W1 24 07SEP05A 29OCT05 25 100 33 -89 -94 1189 SP.Bldg RC Cols. & Walls to 1FL.GL.H-S/10-12 18 20SEP05 24OCT05 0 100 18 -96 -109 1190 SP.Bldg RC Walls to Tanks/Pits GL.H-S/10-12 18 10OCT05 31OCT05 0 100 18 -102 -109	
RC WORKS NB CARRIAGEWAY & CENTRAL RESERVE 1194 SP.Bldg Nth Bound C/Way RC Base Slab 18 14MAY05A 12OCT05 50 100 18 -74 -103 1195 SP.Bldg Nth Bound C/Way RC Ret. Wall W1 24 07SEP05A 29OCT05 25 100 33 -89 -94 1189 SP.Bldg RC Cols. & Walls to 1FL.GL.H-S/10-12 18 20SEP05 24OCT05 0 100 18 -96 -109 1190 SP.Bldg RC Walls to Tanks/Pits GL.H-S/10-12 18 10OCT05 31OCT05 0 100 18 -102 -109	
NB CARRIAGEWAY & CENTRAL RESERVE 1194 SP.Bldg Nth Bound C/Way RC Base Slab 18 14MAY05A 12OCT05 50 100 18 -74 -103 1195 SP.Bldg Nth Bound C/Way RC Ret. Wall W1 24 07SEP05A 29OCT05 25 100 33 -89 -94 1189 SP.Bldg RC Cols. & Walls to 1FL.GL.H-S/10-12 18 20SEP05 24OCT05 0 100 18 -96 -109 1190 SP.Bldg RC Walls to Tanks/Pits GL.H-S/10-12 18 100CT05 310CT05 0 100 18 -102 -109	
1194 SP.Bldg Nth Bound C/Way RC Base Slab 18 14MAY05A 12OCT05 50 100 18 -74 -103 1195 SP.Bldg Nth Bound C/Way RC Ret. Wall W1 24 07SEP05A 29OCT05 25 100 33 -89 -94 1189 SP.Bldg RC Cols. & Walls to 1FL.GL.H-S/10-12 18 20SEP05 24OCT05 0 100 18 -96 -109 1190 SP.Bldg RC Walls to Tanks/Pits GL.H-S/10-12 18 10OCT05 31OCT05 0 100 18 -102 -109	
1195 SP.Bldg Nth Bound C/Way RC Ret. Wall W1 24 07SEP05A 29OCT05 25 100 33 -89 -94 1189 SP.Bldg RC Cols. & Walls to 1FL.GL.H-S/10-12 18 20SEP05 24OCT05 0 100 18 -96 -109 1190 SP.Bldg RC Walls to Tanks/Pits GL.H-S/10-12 18 100CT05 310CT05 0 100 18 -102 -109	
1189 SP.Bldg RC Cols. & Walls to 1FL.GL.H-S/10-12 18 20SEP05 24OCT05 0 100 18 -96 -109 1190 SP.Bldg RC Walls to Tanks/Pits GL.H-S/10-12 18 10OCT05 31OCT05 0 100 18 -109	
1190 SP.Bldg RC Walls to Tanks/Pits GL.H-S/10-12 18 10OCT05 31OCT05 0 100 18 -102 -109	
1190 SP.Bldg RC Walls to Tanks/Pits GL.H-S/10-12 18 10OCT05 31OCT05 0 100 18 -102 -109	
1191 SP Bldg - BC S/Slab 1EL +72 50mPD GL H-S/10-12 18 01NOV05 21NOV05 0 100 18 -102 -109	
1192 SP.Bldg RC Cols.& Walls to 2FL.GL.H-S/10-12 18 15NOV05 05DEC05 0 100 18 -102 -107	
1193 SP.Bldg RC S/Slab LPL.+75.80mPD GL.H-S/10-12 12 29NOV05 12DEC05 0 100 12 -102 -107	
1196 SP.Bldg - RC Trans Slab 2FL.+80.45mPD GL.H-S/2-7 20 13DEC05 07JAN06 0 100 20 -102 -107	
SB CARRIAGEWAY	
1206 SP.Bldg Sth Bound C/Way RC Base Slab 18 28JUL05A 03NOV05 0 100 37 -81 -140	
1207 SP.Bldg Sth Bound C/Way RC Ret Wall W2 24 20SEP05 24NOV05 0 100 24 -81 -134	
1208 SP.Bldg - RC Trans Slab 2FL.+80.45mPD GL.H-S/1-2 15 13DEC05 0 100 15 -96 -107	
EAGLES NEST TUNNEL	
SUBMITTALS & APPROVALS	
E&M EQPT./ MTRL.DETAIL SUBMITTAL	
8214 EntRtNb-Sub.Tunnel Lgt sys 78 02JUL04A 21DEC05 90 100 78 -325	
8216 EntRtNb-Sub.LV main & submain dist sys 54 02JUL04A 23NOV05 95 100 54 -158 -309	
8217 EntRtNb-Sub.TVS control sys 54 02JUL04A 23NOV05 95 100 54 -56 -175	
8220 EntRtSb&VA-Sub.TVS control sys 54 02JUL04A 23NOV05 95 100 54 -56 -187	
8222 EntRtSb&VA-Sub.LV main & submain dist. sys 54 02JUL04A 23NOV05 95 100 54 -170 -319	
8223 EntRtSb&VA-Sub.Tunnel Lgt sys 78 02JUL04A 21DEC05 90 100 78 -191 -328	

Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL AUG SEP OCT NOV DEC JAN
ID	Description	Dur		Finish		Compl.				22 23 24 25 26 27 11 18 25 1 8 15 22 29 5 12 19 26 3 10 17 24 31 7 14 21 28 5 12 19 26 2 9
E&M EC	QPT./ MTRL.DETAIL SUBMITTAL									
8215	EntRtNb-Sub.FS AFA & Linear sys	54	05JUL04A	18NOV05	95	100	50	-188	-387	
8219	EntRtSb&VA-Sub.FS AFA & Linear sys	54	05JUL04A	18NOV05	95	100	50	-188	-396	
8218	EntRtNb-Sub.TVS in Tunnel	54	07JUL04A	23NOV05	95	100	54	-182	-319	
8224	EntRtSb&VA-Sub.TVS in Tunnel	54	07JUL04A	12OCT05	95	100	18	-182	-295	
8213	EntRtNb-Sub.CMCS & ELV sys	78		21DEC05	98	100	78	-86	-271	
	EntRtSb&VA-Sub.CMCS & ELV sys	78	26AUG04A	21DEC05	98	100	78	-86	-277	
	QPT./MTRL.APPROVAL BY ENGINEER					1		1		
	EntRtSb&VA-App. TVS in Tunnel	18		12OCT05	70	100	18	-182	-277	
7621	EntRtNb-App. TVS in Tunnel	18	29JUL04A	12OCT05	70	100	18	-182	-265	
6808	EntRtSb&VA-App. Tunnel Lgt sys	18	05AUG04A	07OCT05	80	100	15	-191	-247	
6878	EntRtNb-App. Tunnel Lgt sys	18	05AUG04A	12OCT05	80	100	18	-188	-247	
	EntRtSb&VA-App. LV main & submain dist. sys		13AUG04A	12OCT05	65	100	18	-170	-265	
	EntRtNb-App. LV main & submain dist. sys	18		12OCT05	65	100	18	-158	-255	
	EntRtSb&VA-App. FS AFA & Linear sys	18		12OCT05	70	100	18	-188	-346	
	EntRtNb-App. FS AFA & Linear sys	18		12OCT05	70	100	18	-188	-337	
6798	EntRtSb&VA-App. CMCS & ELV sys	18	20SEP04A	12OCT05	88	100	18	-86	-199	
6877	EntRtNb-App. CMCS & ELV sys	18	20SEP04A	12OCT05	88	100	18	-86	-193	
6795	EntRtSb&VA-App. TVS control sys	18	12NOV04A	12OCT05	70	100	18	-56	-133	
6884	EntRtNb-App. TVS control sys	18	12NOV04A	12OCT05	70	100	18	-56	-121	
DESIGN	I & ENGINEERING									
PERMA	NENT WORKS									
TUNNEL		1.1.				I				
1657	Design/ICE Check Tunnel Clading	48	20SEP05	16NOV05	0	100	48	-72	-140	
1667	Design/ICE Check X-passage/Adit Fire Doors	12	20SEP05	04OCT05	0	100	12	-175	-304	
1668	Eng Approve Dsg X-passage/Adit Fire Doors	12	05OCT05	19OCT05	0	100	12	-175	-304	

Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL	AUG	SEP		ОСТ	NOV	DEC	JAN
ID	Description	Dur		Finish	Compl.	Compl.	Dur	Float	arly Finis	22 11 18 25	23 1 8 15 22 29	24) .26	25 3 10 17 24 3	26 31 ₁ 7 ₁ 14 21 28	27 3 5 12 19 26	2 9 1
TUNNEL																	
1669	Issue Constr Dwgs X-passage/Adit Fire Doors	0		27OCT05	0	100	0	-175	-304					•			
1659	Eng Approve Dsg Tunnel Clading	12	17NOV05	30NOV05	0	100	12	-72	-140								
1658	Issue Constr Dwgs Tunnel Clading	0		08DEC05	0	100	0	-72	-140							•	
PROCU	REMENT - MATERIAL																
TUNNEL																	
1685	Order/Manufact/Del Fire Doors	100	28OCT05	04MAR06	0	100	100	-175	-254								
1660	Order/Manufact/Del Tunnel Cladding	200	09DEC05	19AUG06	0	30	200	-72	-140								
NORTH	BOUND TUNNEL																
	EntRtNb-Proc & Manuf. CMCS & ELV sys	180	25MAR05A	06JUL06	15	95	180	-135	-224						1		
	EntRtNb-Proc & Manuf. FS AFA & Linear sys	180	25MAR05A	08MAY06	15	100	180	-188	-319								
	EntRtNb-Proc & Manuf. ES Cabling	180	20MAY05A	08MAY06	30	100	180	-158	-237								
0000		100	2011/11/00/1	00111/11/00	00	100	100	100	201	•							
7622	EntRtNb-Proc & Manuf. TVS in Tunnel	180	09JUN05A	08MAY06	20	100	180	-182	-247								
6881	EntRtNb-Proc & Manuf. Tunnel Lgt sys	180	13OCT05	29MAY06	0	100	180	-188	-247								
SOUTH	BOUND TUNNEL & V.A TUNNEL																
6786	EntRtSb&VA-Proc & Manuf. FS AFA & Linear sys	180	25MAR05A	08MAY06	15	100	180	-188	-328								
6799	EntRtSb&VA-Proc & Manuf. CMCS & ELV sys	180	25MAR05A	28JUN06	15	100	180	-129	-224								
6803	EntRtSb&VA-Proc & Manuf. ES Cabling	180	20MAY05A	08MAY06	30	100	180	-170	-247								
7619	EntRtSb&VA-Proc & Manuf. TVS in Tunnel	180	09JUN05A	08MAY06	20	100	180	-182	-259								
6809	EntRtSb&VA-Proc & Manuf. Tunnel Lgt sys	180	08OCT05	25MAY06	0	100	180	-191	-247								
	RUCTION WORKS																
TUNNEL																	
SOUTH PC																	
	Erect OHVD form NB at SP	24	25JUL05A	04OCT05	50	100	12	-148	-172								
1279	Erect Lining Form SB at SP	24	25AUG05A	21SEP05	90	100	2	-132	-163								
3178	Erect OHVD Form SB at SP	24	12SEP05A	04OCT05	50	100	12	-127	-149								
						1									<u> </u>		

Act.	Activity	Orig	-	Early	%				Variance		AUG 23	SEP 24	05	NOV 26	DEC 27	JAN 28
ID	Description	Dur	Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	11 18 25	1 8 15 22	29 5 12	25 19 26 3 10 17 24	31 7 14 21 2	3 5 12 19 j	26 2 9 1
	BOUND TUNNEL DRIVE															
	NB Kicker/form part Service Trough (fr.NP) 139m	22	29JUL05A	23AUG05A	100	100	0	T	-151							
									-							
3205	NB Kicker/form part Service Trough (fr.NP) 150m	17	24AUG05A	20SEP05	90	100	1	-110	-145							
3206	NB Kicker/form part Service Trough (fr.NP) 148m	22	21SEP05	18OCT05	0	100	22	-110	-143							
3207	NB Kicker/form part Service Trough (fr.NP) 129m	19	19OCT05	09NOV05	0	100	19	-110	-140							
3208	NB Kicker/form part Service Trough (fr.NP) 118m	30	10NOV05	14DEC05	0	100	30	-110	-125							
3181	NB exc.grnd/foul water drain trough 116m(fr.NP)	21	20SEP05	15OCT05	0	100	21	110	-278			[
3182	NB exc.grnd/foul water drain trough 149m (fr.NP)	28	20SEP05	24OCT05	0	100	28	110	-255			[
3183	NB exc.grnd/foul water drain trough 128m(fr.NP)	24	25OCT05	21NOV05	0	100	24	110	-260							
3184	NB exc.grnd/foul water drain trough 139m(fr.NP)	27	22NOV05	22DEC05	0	100	27	110	-262							
3185	NB exc.grnd/foul water drain trough 150m(fr.NP)	28	23DEC05	27JAN06	0	100	28	110	-260							
3191	NB Invert Cleaning (fr.NP 116m)	20	23SEP05	19OCT05	0	100	20	112	-278							
3192	NB Invert Cleaning (fr.NP 149m)	24	20OCT05	16NOV05	0	100	24	112	-272							
3193	NB Invert Cleaning (fr.NP 128m)	22	17NOV05	12DEC05	0	100	22	112	-272							
3194	NB Invert Cleaning (fr.NP 139m)	23	13DEC05	11JAN06	0	100	23	112	-272							
3365	NB Foulwater Gulley ENF-40 to ENF-41 [55m]	12	18AUG05A	22AUG05A	100	100	0		-196							
3364	NB Foulwater Gulley ENF-39 to ENF-40 [50m]	14	27AUG05A	28AUG05A	100	100	0		-187							
3363	NB Foulwater Gulley ENF-38 to ENF-39 [50m]	11	08OCT05	21OCT05	0	100	11	484	-220							
3362	NB Foulwater Gulley ENF-37 to ENF-38 [50m]	11	22OCT05	03NOV05	0	100	11	484	-220							
3361	NB Foulwater Gulley ENF-36 to ENF-37 [49m]	11	04NOV05	16NOV05	0	100	11	484	-220							
3360	NB Foulwater Gulley ENF-35 to ENF-36 [50m]	11	17NOV05	29NOV05	0	100	11	484	-220							
3359	NB Foulwater Gulley ENF-34 to ENF-35 [50m]	11	30NOV05	12DEC05	0	100	11	484	-220							
3358	NB Foulwater Gulley ENF-33 to ENF-34 [49m]	11	13DEC05	24DEC05	0	100	11	484	-220							
	1	-	I	1	1	1		1						-	1	

Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL	AUG	SEP	ост	NOV	DEC	JAN
ID	Description	Dur		Finish		Compl.				22 11 18 25	23	24 12 19	25 26 3 10 17 24 2	26 31 7 14 21 28	27 3 5 12 19 26	28 2 9 1
NORTH PO	ORTAL															
3450	NB Ground water ENG-39 to ENG-40 [50m]	11	18AUG05A	28AUG05A	100	100	0		-190							
3452	NB Ground water ENG-41B to ENG-41A	6	27AUG05A	28AUG05A	100	100	0		-195							
3449	NB Ground water ENG-38 to ENG-39 [50m]	11	20SEP05	03OCT05	0	100	11	499	-208			<u> </u>				
3448	NB Ground water ENG-37 to ENG-38 [50m]	11	04OCT05	17OCT05	0	100	11	499	-208							
3447	NB Ground water ENG-36 to ENG-37 [49m]	11	18OCT05	29OCT05	0	100	11	499	-208]		
3446	NB Ground water ENG-35 to ENG-36 [50m]	11	31OCT05	11NOV05	0	100	11	499	-208							
3445	NB Ground water ENG-34 to ENG-35 [50m]	11	12NOV05	24NOV05	0	100	11	499	-208							
3444	NB Ground water ENG-33 to ENG-34 [49m]	11	25NOV05	07DEC05	0	100	11	499	-208							
3443	NB Ground water ENG-32 to ENG-33 [49m]	11	08DEC05	20DEC05	0	100	11	499	-208							
3442	NB Ground water ENG-31 to ENG-32 [50m]	11	21DEC05	05JAN06	0	100	11	499	-208							
SOUTH PC	 DRTAI	1	I	I	1	1										
	NB Kicker/form part Service Trough (fr.SP) 253m	35	22JUL05A	22OCT05	22	100	27	-149	-176							
3227	NB Kicker/form part Service Trough (fr.SP) 90m	13	24OCT05	07NOV05	0	100	13	-92	-176							
3228	NB Kicker/form part Service Trough (fr.SP) 146m	20	08NOV05	30NOV05	0	100	20	-92	-170							
3229	NB Kicker/form part Service Trough (fr.SP) 100m	14	01DEC05	16DEC05	0	100	14	-92	-162					•		
3230	NB Kicker/form part Service Trough (fr.SP) 199m	28	17DEC05	21JAN06	0	100	28	-92	-159							
3210	NB exc.grnd/foul water drain trough 253m(fr.SP)	50	15DEC05	22FEB06	0	100	50	38	-297							
3216	NB Invert Cleaning [fr.SP] 253m	18	15DEC05	07JAN06	0	100	18	38	-262							
TUNNEL	LINING		1													
NORTH PO																
3239	NB NP Arch Lining 150m Tch.2+430 to 2+280	30	17AUG05A	12OCT05	41	100	18	-148	-153							
3240	NB NP Arch Lining 150m Tch.2+280 to 2+130	30	13OCT05	16NOV05	0	100	30	-146	-153							
3241	NB NP Arch Lining 150m Tch.2+130 to 1+980	30	17NOV05	21DEC05	0	100	30	-146	-153							
3242	NB NP Arch Lining 150m Tch.1+980 to 1+830	30	22DEC05	06FEB06	0	100	30	-146	-153							
3248	NB NP OHVD 150m Tch.2+580 to 2+430	30	20AUG05A	14SEP05A	100	100	0		-149							
											• •					

Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL 22	Al		SEP 24		OCT 25	NOV 26	DEC 27	JAN
ID	Description	Dur	Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	22 11 18 25	1 8 1	5 5 22 29	5 12 1	I9 ∣26	3 _10 _17 _24 _2		27 8 5 12 19 26	2 9 1
NORTH PC		1			-			1										
3249	NB NP OHVD 150m Tch.2+430 to 2+280	30	15SEP05A	24OCT05	8	100	28	-148	-151									
					-										_			
3250	NB NP OHVD 150m Tch.2+280 to 2+130	30	25OCT05	28NOV05	0	100	30	-148	-151									
			001101/05			100										_		┶╸┃
3251	NB NP OHVD 150m Tch.2+130 to 1+980	30	29NOV05	05JAN06	0	100	30	-148	-151							_		┯┻╴╽
SOUTH PC																		
	NB SP Arch Lining 150m Tch.1+063 to 1+213	42	19AUG05A	05OCT05	70	100	13	-149	-149						-			
5510	ND SF AIGH LINING 130H TCH. 14003 to 14213	42	ISAUGUSA	0300103	10	100	15	-143	-143									
3311	NB SP Arch Lining 150m Tch.1+213 to 1+363	42	06OCT05	24NOV05	0	100	42	-149	-149									
3311	ND OF AIGH LINING 130H TCH. 1+213 to 1+303	72	0000103	24100000	0	100	72	-143	-145									
3312	NB SP Arch Lining 150m Tch.1+363 to 1+513	42	25NOV05	16JAN06	0	100	42	-149	-149									
		74	_0.10 000	100,1100	Ĭ		12		1 10									
3314	NB NP OHVD 150m Tch.1+063 to 1+213	30	05OCT05	09NOV05	0	100	30	-148	-172									
				20.10100	Ĭ													
3315	NB NP OHVD 150m Tch.1+213 to 1+363	30	10NOV05	14DEC05	0	100	30	-148	-160									
0010					Ŭ													
3316	NB NP OHVD 150m Tch.1+363 to 1+513	30	15DEC05	23JAN06	0	100	30	-149	-149									-
								_	-									
TUNNEL	FINISHING WORKS							,										
	IROUGH & UTILITIES																	
3527	NB service trough 150m Tch.3+030 to 2+880 fr.NP	23	20SEP05	18OCT05	0	100	23	-211	-243									
	······································								-									
3528	NB service trough 150m Tch.2+880 to 2+730 fr.NP	23	19OCT05	14NOV05	0	100	23	-203	-243									
	5																	
3529	NB service trough 150m Tch.2+730 to 2+580 fr.NP	23	15NOV05	10DEC05	0	100	23	-203	-243									
	-																	
3530	NB service trough 150m Tch.2+580 to 2+430 fr.NP	23	12DEC05	10JAN06	0	100	23	-203	-236									
3537	NB service trough 150m Tch.1+063 to 1+213 fr.SP	23	20SEP05	18OCT05	0	100	23	-99	-144									
3538	NB service trough 150m Tch.1+213 to 1+363 fr.SP	23	19OCT05	14NOV05	0	100	23	-99	-125									
3539	NB service trough 150m Tch.1+363 to 1+513 fr.SP	23	15NOV05	10DEC05	0	100	23	-99	-106									
3540	NB service trough 160m Tch.1+513 to 1+673 fr.SP	24	12DEC05	11JAN06	0	100	24	-99	-91									
3511	NB NP 200 main 183m Tch.3+063 to 2+880 fr.NP	23	05OCT05	01NOV05	0	100	23	-211	-267									
3512	NB NP 200 main 150m Tch.2+880 to 2+730 fr.NP	23	02NOV05	28NOV05	0	100	23	-211	-266						I			
					_													
3513	NB NP 200 main 150m Tch.2+730 to 2+580 fr.NP	23	29NOV05	24DEC05	0	100	23	-211	-259									
															_			
3520	NB SP 200 main 150m Tch.1+063 to 1+213 fr.SP	23	20OCT05	15NOV05	0	100	23	-119	-172									
3521	NB SP 200 main 150m Tch.1+213 to 1+363 fr.SP	23	24NOV05	20DEC05	0	100	23	-126	-160									
																		1

ID Description Dui Start Priority Compt. Compt. Dui Priority	Act.	Activity	Orig	Early	Early	%	DWP %			Variance			AUG 23		EP	OCT 25	NOV 26	DEC 27	JAN
BANE VERTING ALL ATTING AND TRUCKS CONTAINT KDB 63 205 EPOS 14.U.NDB 0 90 63 -201 BASE INS AND	ID	Description	Dur	Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	22 11 18 25	1 8		9 /5 /12	4 19 26	25 5 3 10 17 24 ;	<u> </u>		26 2 9 1
Definition Description Section								1											
383 NB Invent Damage & RC.Slabightalde eSom 64 17NOVUS 21JANUB 0 100 64 -33 -153 387 NB Invent Drainage & RC.Slabightalde eSom 64 08DECG 20FEBG 0 100 64 -1 153 3001 NM Invent Support System - rightalde eSom 23 22DECGS 20JANUB 0 100 23 112 153 TUNNEL VENTLATION SYSTEM Tunnes ventual Ventual Names Ventual Names Ventual Names 6 100 72 -66 131 TUNNEL VENTUATION A SYSTEM Ventual Names Ventual Names Ventual Names - 100 - - 100 - - 100 - - 100 - - 100 - - 100 0 - 100 0 - 100 0 - 100 0 - 100 0 - 100 0 110 100 0 1110 150 160	3641	NB NP - Remain 50% TCSS Contain't KD6	63	20SEP05	14JUN06	0	90	63	-201	-201					-				
383 NB Invent Damage & RC.Slabightaide 680m \$41 17N0VUS 21JAN06 0 00 54 -33 -153 387 NB Invent Damage & RC.Slabightaide 680m 64 00E0ECG 20FEBG 0 100 54 -153 3000 NA UP Panel Support System - rightaide 680m 23 220ECGS 20JAN08 0 100 23 112 -153 TUNNEL VENTLATION SYSTEM Tunnel VentLATION SYSTEM 0 0.00 72 -66 -131 TUNNEL VENTLATION A PRIMARY SUPPORT 1 100041.4971-101 1400050 100 0 -116 3112 DAB SB 100 Trd.1-4098 to 14997 Ir.NP 3 27JAUG68. 242EPC6. 68 100 0 -116 3110 DAB SB 200 Trd.1-4988 to 14-997 Ir.NP 3 27JAUG68. 26JAUG68. 100 100 1 -116 3110 DAB SB 100 Trd.1-4988 to 14-997 Ir.NP 3 27JAUG68. 36JAUG68. 100 100 1 -116 3110 DAB SB 100 Trd.1-4988 to 14-997 I						1									-				
3387 NB Invent Drainage & RC.Slab. effailed 880m 24 0400EC03 20FEB06 0 100 54 -1 -153 3369 NB Invent Drainage & RC.Slab. effailed 800m 23 22DEC05 20JAN08 0 100 54 -1 -153 3060 NB VE Famel Support System - rightside 650m 23 22DEC05 20JAN08 0 100 23 -112 -153 - <td></td> <td></td> <td>54</td> <td>17NOV05</td> <td>21.JAN06</td> <td>0</td> <td>100</td> <td>54</td> <td>-33</td> <td>-153</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>			54	17NOV05	21.JAN06	0	100	54	-33	-153									
NULL PARTS NULL PA																			
3806 JNB VE Parell Stupport System - rightside 650m 23 22DEC05 20JAN06 0 100 23 -112 -153 - <td>3587</td> <td>NB Invert Drainage & RC.Slab - leftside 650m</td> <td>54</td> <td>08DEC05</td> <td>20FEB06</td> <td>0</td> <td>100</td> <td>54</td> <td>-1</td> <td>-153</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	3587	NB Invert Drainage & RC.Slab - leftside 650m	54	08DEC05	20FEB06	0	100	54	-1	-153									
3806 JNB VE Parell Stupport System - rightside 650m 23 22DEC05 20JAN06 0 100 23 -112 -153 - <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>																			
UNNEL VENTILATION SYSTEM UNNEL VENTILATION OBSIS							100			150									
UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE	3606	NB VE Panel Support System - rightside 650m	23	22DEC05	20JAN06	0	100	23	-112	-153									
UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE VERTIANCIAL UPUENCE						1													
B886 EmR(Nb-TVS Turnel vent. & SE 1st fix 72 08NOV05 10FEB06 0 100 72 66 131 TURKE SOUTHBOUND TUNNEL EXCAVATION & PRIMARY SUPPORT 3112 Date SB 10m Tch.2+009 to 1+999 fr.NP* 4 20AUG05A 20AUG05A 100 100 0 - 116 3113 Date SB 20m Tch.1+999 to 1+999 fr.NP 3 27AUG05A 30AUG05A 100 100 0 - 116 3114 Date SB 20m Tch.1+990 to 1+999 fr.NP 5 31AUG05A 03SEP05A 100 100 0 - 116 3115 Date SB 41 Tch.1+948 to 1+907 fr.NP 6 10SEP05A 24SEP05 66 100 0 - 110 3115 Date SB 41 Tch.1+948 to 1+907 (r.NP 6 10SEP05A 24SEP05 100 100 10 111 -150 3126 Date SB 10m UTch.1+221 to 1+302 (r.SP) 4 26AUG05A 145E 100 100 10 111 -150 3130 Date SB 20m FT Tch.1+322 to 1+332 (r.SP) 4 155P05A 12SEP05 0																			
TUNNEL EXCAVATION & PRIMARY SUPPORT MORTH-DORTAL 3112 (D8B SB 10m Tch.1+099 to 1+999 fr.NP* 4 20AUG05A 100 100 0 116 3113 (D8B SB 10m Tch.1+099 to 1+979 fr.NP 3 27AUG05A 30AUG05A 100 100 0 116 3114 (D8B SB 10m Tch.1+099 to 1+979 fr.NP 6 10SEP05A 100 100 0 111 116 3115 (D8B SB 11m Tch.1+097 to 1+948 fr.NP 6 10SEP05A 100 100 111 1150 3115 (D8B SB 11m Tch.1+197 to 1+942 fr.NP 6 10SEP05A 100 100 111 1150 3115 (D8B SB 11m Tch.1+192 to 1+302 (fs0m) 42 03AUG05A 30SEP05 71 100 10 111 150 3135 (D8B SB 10m UH Tch.1+222 to 1+302 fr.SP 2 19AUG05A 100 100 1 143 145			72	08NOV05	10FEB06	0	100	72	-66	-131									
UNDER LEXCAVATION & PRIMARY SUPPORT MORTHINGETAL 3112 DAB SB 10m Tch.1+099 to 1+999 fr.NP* 4 20AUG05A 20AUG05A 100 100 0 -116 3113 DAB SB 20m Tch.1+099 to 1+979 fr.NP 3 Z7AUG05A 30AUG05A 100 100 0 -116 3114 DAB SB 10m Tch.1+079 to 1+948 fr.NP 5 31AUG05A 09SEP05A 100 100 0 -116 3115 DAB SB 11m Tch.1+079 to 1+948 fr.NP 6 10SEP05A 24SEP05 66 100 5 42 -126 SOUTH PORTAL																			
NORTHE PORTIAL 3112 DAB SB 10m Tch.2+009 to 1+999 fr.NP* 4 20AUG05A 20AUG05A 100 100 0 -116 3113 DAB SB 20m Tch.1+999 to 1+948 fr.NP 3 27AUG05A 30AUG05A 100 100 0 -116 3114 DAB SB 31m Tch.1+979 to 1+948 fr.NP 5 31AUG05A 09SEP05A 100 100 0 -116 3115 DAB SB 41m Tch.1+979 to 1+948 fr.NP 6 10SEP05A 24SEP05 66 100 5 62 -126 SUTH PORTAL	TUNNEI	DRIVE SOUTHBOUND																	
NORTHE PORTIAL 3112 DAB SB 10m Tch.2+009 to 1+999 fr.NP* 4 20AUG05A 20AUG05A 100 100 0 -116 3113 DAB SB 20m Tch.1+999 to 1+948 fr.NP 3 27AUG05A 30AUG05A 100 100 0 -116 3114 DAB SB 31m Tch.1+979 to 1+948 fr.NP 5 31AUG05A 09SEP05A 100 100 0 -116 3115 DAB SB 41m Tch.1+979 to 1+948 fr.NP 6 10SEP05A 24SEP05 66 100 5 62 -126 SUTH PORTAL																			
3113 D&B SB 20m Tch.1+999 to 1+979 fr.NP 3 27AUG05A 30AUG05A 100 100 0 -116 3114 D&B SB 31m Tch.1+979 to 1+948 fr.NP 5 31AUG05A 09SEP05A 100 100 0 -116 3115 D&B SB 31m Tch.1+979 to 1+948 fr.NP 6 10SEP05A 24SEP05 66 100 5 -62 -126 SOUTHPORTAL																			
3114 D&B SB 31 m Tch. 1+979 to 1+948 fr.NP 5 31 AUG05A 09SEP05A 100 100 0 -119 3115 D&B SB 41m Tch. 1+979 to 1+948 fr.NP 6 10SEP05A 24SEP05 66 100 5 -62 -126 SOUTH PORTAL	3112	D&B SB 10m Tch.2+009 to 1+999 fr.NP*	4	20AUG05A	26AUG05A	100	100	0		-116									
3114 D&B SB 31 m Tch. 1+979 to 1+948 fr.NP 5 31 AUG05A 09SEP05A 100 100 0 -119 3115 D&B SB 41m Tch. 1+979 to 1+948 fr.NP 6 10SEP05A 24SEP05 66 100 5 -62 -126 SOUTH PORTAL																			
All A	3113	D&B SB 20m Tch.1+999 to 1+979 fr.NP	3	27AUG05A	30AUG05A	100	100	0		-116									
All A								-											
SOUTHOR TAL Support AL Support AL </td <td>3114</td> <td>D&B SB 31m Tch.1+979 to 1+948 fr.NP</td> <td>5</td> <td>31AUG05A</td> <td>09SEP05A</td> <td>100</td> <td>100</td> <td>0</td> <td></td> <td>-119</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	3114	D&B SB 31m Tch.1+979 to 1+948 fr.NP	5	31AUG05A	09SEP05A	100	100	0		-119									
SOUTHOR TAL Support AL Support AL </td <td>2115</td> <td>D& P SP 41m Tob 1 1048 to 1 1007 fr NP</td> <td>6</td> <td>10SED05A</td> <td>2495005</td> <td>66</td> <td>100</td> <td>5</td> <td>62</td> <td>126</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	2115	D& P SP 41m Tob 1 1048 to 1 1007 fr NP	6	10SED05A	2495005	66	100	5	62	126									
3165 D&B SB LH Tch.1+152 to 1+302 (150m) 42 03AUG05A 30SEP05 71 100 10 111 -150 3135 D&B (limit) SB 10m UH Tch.1+272 to 1+282 fr.SP 2 19AUG05A 25AUG05A 100 100 0 -130 3135 D&B (limit) SB 20m UH Tch.1+282 to 1+302 fr.SP 4 26AUG05A 14SEP05A 100 100 0 -142 3137 D&B SB 20m FF Tch.1+302 to 1+322 fr.SP 4 15SEP05A 21SEP05 50 100 2 -145 -151 3138 D&B SB 10m FF Tch.1+322 to 1+332 fr.SP->VA 2 22SEP05 23SEP05 0 100 4 -145 -151 3139 D&B SB 20m FF Tch.1+322 to 1+322 fr.SP->VA 2 22SEP05 23SEP05 0 100 4 -145 -157 3140 D&B SB 20m FF Tch.1+362 to 1+382 fr.SP->VA 3 29SEP05 0 100 3 -145 -157 3142 D&B SB 10m UH Tch.1+382 to 1+392 fr.SP->VA 3 29SEP05 0 100 8 -145 -157 3142 D&B SB 10m UH Tch.1+382 to 1+392 fr.SP->VA	5115	D&D 3D 41111101.1+948 to 1+907 11.10F	0	IUSEFUSA	243EF03	00	100	5	-02	-120									
A B B	SOUTH PO	DRTAL			1	1	I	I	1 1										
Order Date (mm) de fonder hannen feld fragen men felder halten in de fonder halten	3165	D&B SB LH Tch.1+152 to 1+302 (150m)	42	03AUG05A	30SEP05	71	100	10	111	-150				-	_	¢			
Order Date (mm) de fonder hannen feld fragen men felder halten in de fonder halten																			
Automatic Automatic Automatic Automatic Automatic Automatic 3137 D&B SB 20m FF Tch.1+302 to 1+322 fr. SP 4 15SEP05A 21SEP05 50 100 2 -145 -145 3138 D&B SB 10m FF Tch.1+322 to 1+332 fr.SP->VA 2 22SEP05 23SEP05 0 100 2 -145 -151 3139 D&B SB 20m FF Tch.1+332 to 1+352 fr.SP->VA 4 24SEP05 28SEP05 0 100 4 -145 -157 3140 D&B SB 10m FF Tch.1+352 to 1+362 fr.SP->VA 3 29SEP05 0 100 3 -145 -164 3141 D&B SB 20m FF Tch.1+362 to 1+382 fr.SP->VA 8 04OCT05 130CT05 0 100 3 -145 -164 3142 D&B SB 10m UH Tch.1+382 to 1+392 fr.SP->VA 2 14OCT05 150CT05 0 100 2 -145 -185 VENTILATION ADIT	3135	D&B (limit) SB 10m UH Tch.1+272 to 1+282 fr.SP	2	19AUG05A	25AUG05A	100	100	0		-130									
Automatic Automatic Automatic Automatic Automatic Automatic 3137 D&B SB 20m FF Tch.1+302 to 1+322 fr. SP 4 15SEP05A 21SEP05 50 100 2 -145 -145 3138 D&B SB 10m FF Tch.1+322 to 1+332 fr.SP->VA 2 22SEP05 23SEP05 0 100 2 -145 -151 3139 D&B SB 20m FF Tch.1+332 to 1+352 fr.SP->VA 4 24SEP05 28SEP05 0 100 4 -145 -157 3140 D&B SB 10m FF Tch.1+352 to 1+362 fr.SP->VA 3 29SEP05 0 100 3 -145 -164 3141 D&B SB 20m FF Tch.1+362 to 1+382 fr.SP->VA 8 04OCT05 130CT05 0 100 3 -145 -164 3142 D&B SB 10m UH Tch.1+382 to 1+392 fr.SP->VA 2 14OCT05 150CT05 0 100 2 -145 -185 VENTILATION ADIT						400	100	_											
3138 D&B SB 10m FF Tch. 1+322 to 1+332 fr.SP->VA 2 22SEP05 23SEP05 0 100 2 -145 -151 3138 D&B SB 10m FF Tch. 1+322 to 1+332 fr.SP->VA 4 24SEP05 28SEP05 0 100 4 -145 -151 3139 D&B SB 20m FF Tch. 1+352 to 1+362 fr.SP->VA 4 24SEP05 28SEP05 0 100 4 -145 -157 3140 D&B SB 10m FF Tch. 1+352 to 1+362 fr.SP->VA 3 29SEP05 03OCT05 0 100 3 -145 -164 3141 D&B SB 20m FF Tch. 1+362 to 1+382 fr.SP->VA 8 04OCT05 13OCT05 0 100 8 -145 -175 3142 D&B SB 10m UH Tch. 1+382 to 1+392 fr.SP->VA 2 14OCT05 15OCT05 0 100 2 -145 -185 VENTILATION ADIT	3136	D&B (limit) SB 20m UH Tch.1+282 to 1+302 fr.SP	4	26AUG05A	14SEP05A	100	100	0		-142					'				
3138 D&B SB 10m FF Tch. 1+322 to 1+332 fr.SP->VA 2 22SEP05 23SEP05 0 100 2 -145 -151 3138 D&B SB 10m FF Tch. 1+322 to 1+332 fr.SP->VA 4 24SEP05 28SEP05 0 100 4 -145 -151 3139 D&B SB 20m FF Tch. 1+352 to 1+362 fr.SP->VA 4 24SEP05 28SEP05 0 100 4 -145 -157 3140 D&B SB 10m FF Tch. 1+352 to 1+362 fr.SP->VA 3 29SEP05 03OCT05 0 100 3 -145 -164 3141 D&B SB 20m FF Tch. 1+362 to 1+382 fr.SP->VA 8 04OCT05 13OCT05 0 100 8 -145 -175 3142 D&B SB 10m UH Tch. 1+382 to 1+392 fr.SP->VA 2 14OCT05 15OCT05 0 100 2 -145 -185 VENTILATION ADIT	3137	D&B SB 20m EE Tch 1+302 to 1+322 fr SP	1	159ED05A	21SED05	50	100	2	-145	-145									
3139 D&B SB 20m FF Tch.1+332 to 1+352 fr.SP->VA 4 24SEP05 28SEP05 0 100 4 -145 -157 3140 D&B SB 10m FF Tch.1+352 to 1+362 fr.SP->VA 3 29SEP05 03OCT05 0 100 3 -145 -164 3141 D&B SB 20m FF Tch.1+362 to 1+382 fr.SP->VA 8 04OCT05 13OCT05 0 100 8 -145 -175 3142 D&B SB 10m UH Tch.1+382 to 1+392 fr.SP->VA 2 140CT05 15OCT05 0 100 2 -145 -185 VENTILATION ADIT VENTILATION	5157	Dad 3D 201111 101.1+302 10 1+322 11. 31	4	135LF USA	2101103	50	100	2	-145	-145				-					
3139 D&B SB 20m FF Tch.1+332 to 1+352 fr.SP->VA 4 24SEP05 28SEP05 0 100 4 -145 -157 3140 D&B SB 10m FF Tch.1+352 to 1+362 fr.SP->VA 3 29SEP05 03OCT05 0 100 3 -145 -164 3141 D&B SB 20m FF Tch.1+362 to 1+382 fr.SP->VA 8 04OCT05 13OCT05 0 100 8 -145 -175 3142 D&B SB 10m UH Tch.1+382 to 1+392 fr.SP->VA 2 140CT05 15OCT05 0 100 2 -145 -185 VENTILATION ADIT VENTILATION	3138	D&B SB 10m FF Tch.1+322 to 1+332 fr.SP->VA	2	22SEP05	23SEP05	0	100	2	-145	-151									
3140 D&B SB 10m FF Tch.1+352 to 1+362 fr.SP->VA 3 29SEP05 03OCT05 0 100 3 -145 -164 3141 D&B SB 20m FF Tch.1+362 to 1+382 fr.SP->VA 8 04OCT05 13OCT05 0 100 8 -145 -164 3142 D&B SB 10m UH Tch.1+382 to 1+392 fr.SP->VA 2 14OCT05 15OCT05 0 100 2 -145 -185																			
3141 D&B SB 20m FF Tch.1+362 to 1+382 fr.SP->VA 8 04OCT05 13OCT05 0 100 8 -145 -175 3142 D&B SB 10m UH Tch.1+382 to 1+392 fr.SP->VA 2 14OCT05 15OCT05 0 100 2 -145 -185	3139	D&B SB 20m FF Tch.1+332 to 1+352 fr.SP->VA	4	24SEP05	28SEP05	0	100	4	-145	-157									
3141 D&B SB 20m FF Tch.1+362 to 1+382 fr.SP->VA 8 04OCT05 13OCT05 0 100 8 -145 -175 3142 D&B SB 10m UH Tch.1+382 to 1+392 fr.SP->VA 2 14OCT05 15OCT05 0 100 2 -145 -185																			
3142 D&B SB 10m UH Tch.1+382 to 1+392 fr.SP->VA 2 140CT05 150CT05 0 100 2 -185 VENTILATION ADIT	3140	D&B SB 10m FF Tch.1+352 to 1+362 fr.SP->VA	3	29SEP05	03OCT05	0	100	3	-145	-164									
3142 D&B SB 10m UH Tch.1+382 to 1+392 fr.SP->VA 2 140CT05 150CT05 0 100 2 -185 VENTILATION ADIT				0400705	400070-		100		4	4									
VENTILATION ADIT	3141	D&B SB 20m FF Tch.1+362 to 1+382 tr.SP->VA	8	04OCT05	13OCT05	0	100	8	-145	-175									
VENTILATION ADIT	21/12	D&B SB 10m LIH Teb 1+382 to 1+202 fr SD >\/A	2	1400705		0	100	2	-145	_195									
	3142	Dad 55 1011 0F1 101.1+302 10 1+392 11.3F->VA	2	1400103	1500105	0	100	2	-140	-100									
	VENTILAT	ION ADIT	1 1		1	1	1	1	1										
			13	14MAR05A	24AUG05A	100	100	0		-109		1							

Act.	Activity	Orig Early	Early	%				Variance			AUG 23		SEP 24		•	CT 5		NOV 26		DEC 27	JAN
	Description	Dur Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	11 18 25	18	15 22	29 5	12 1	9 26 3	3 10	17 <mark>24</mark>	31 7	14 21	28 5	12 19	26 2 9
	D&B SB 51m UH Tch.1+574 to 1+523 fr.VA->SP	11 13AUG054	28AUG05A	100	100	0		-175													
3120 [0&B SB 10m Ch.1736 to 1746 fr.VA->NP	2 25AUG054	29AUG05A	100	100	0		-111													
3145 [D&B SB 10m UH Tch.1+523 to 1+513 fr.VA->SP	2 29AUG054	31AUG05A	100	100	0		-176			[
3121 [D&B SB 60m Ch.1746 to 1806 fr.VA->NP	10 30AUG054	13SEP05A	100	100	0		-113													
3144 [D&B SB 30m UH Tch.1+513 to 1+483 fr.VA->SP	6 01SEP05A	07SEP05A	100	100	0		-176													
3143 [0&B SB 91m UH Tch.1+483 to 1+392 fr.VA->SP	19 08SEP05A	28SEP05	46	100	8	722	-174													
3118 [0&B SB 10m Ch.1806 to 1816 fr.VA->NP	2 14SEP05A		100	100	0		-115													
	0&B SB 41m Ch.1816 to 1857 fr.VA->NP	6 18SEP05A		2	100	5	-90	-115													
	0&B SB 10m Ch.1857 to 1867 fr.VA->NP	3 26SEP05	28SEP05	0	100	3	-71	-115													
	0&B SB 40m Ch.1867 to 1907 fr.VA->NP	6 29SEP05	06OCT05	0	100	6	-71	-129													
	D&B SB Breakthrough No.2 VA-NP	0 07OCT05		0	100	0	-85	-147							•						
	D&B SB Breakthrough No.1 VA-SP	0 17OCT05		0	100	0	-145	-164								·					
NORTH POP																					
	SB Kicker/form part Service Trough (fr.NP) 150m	22 18AUG054	13SEP05A	100	100	0		-141													
1935 \$	B Kicker/form part Service Trough (fr.NP) 137m	17 14SEP05A	27SEP05	41	100	7	-105	-132													
1936 S	B Kicker/form part Service Trough (fr.NP) 152m	22 28SEP05	25OCT05	0	100	22	-97	-125													
1937 \$	B Kicker/form part Service Trough (fr.NP) 142m	19 26OCT05	16NOV05	0	100	19	-86	-124													
1913 S	B Kicker/form part Service Trough (fr.NP) 213m	30 17NOV05	21DEC05	0	100	30	-86	-121													
	SB Invert lining type 'D' 121m - Rightside	60 31AUG054		30	100	30	-116	-222													
	SB Invert lining type 'D' 121m - Leftside	60 27OCT05	07JAN06	0	100	60	-79	-222													
	SB exc.grnd/foul water drain trough 146m (fr.NP)	27 31AUG054		30	100	27	-159	-316													
	SB exc.grnd/foul water drain trough 156m (fr.NP)	28 24OCT05	24NOV05	0	100	28	-113	-311													
1569 \$	SB exc.grnd/foul water drain trough 162m (fr.NP)	30 25NOV05	31DEC05	0	100	30	492	-311													

Act.		Orig	-	Early	%				Variance		AUG 23		SEP 24		OCT 25	NOV 26		DEC 27	JAN 28
ID	•	Dur	Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	11 18 25	1 8 15 22	2 29 5	i ₁ 12 1	9 26	25 3 10 17 24	31 7 14 2	1 28 5 1	2 19 26	291
NORTH PC					1														
1593	SB Invert Cleaning (fr.NP) 146m	24	31AUG05A	19OCT05	30	100	24	624	-310										
1594	SB Invert Cleaning (fr.NP) 156m	20	20OCT05	11NOV05	0	100	20	624	-297										
1595	SB Invert Cleaning (fr.NP) 162m	22	27OCT05	21NOV05	0	100	22	624	-275]		
1596	SB Invert Cleaning (fr.NP) 152m	18	22NOV05	12DEC05	0	100	18	624	-266									٦	1
1000			22110 100	1202000	U	100	10	024	200									_	
4507	CD Invert Cleaning (in ND) 450m	18	2010/05	1005005	0	100	18	604	-241										1
1597	SB Invert Cleaning (fr.NP) 150m	10	29NOV05	19DEC05	0	100	18	624	-241										1
1598	SB Invert Cleaning (fr.NP) 137m	12	20DEC05	05JAN06	0	100	12	624	-227										┯┶┙╴╿
3408	SB Foulwater Gulley ESF-40 to ESF-41 [55m]	12	14SEP05A	21SEP05	60	100	2	-104	-230										
3407	SB Foulwater Gulley ESF-39 to ESF-40 [50m]	11	22SEP05	05OCT05	0	100	11	-104	-230										
					-														
3409	SB Foulwater Gulley ESF-41 to ESF-42 [48m]	11	22SEP05	05OCT05	0	100	11	717	-230										
5403			2201100	0000100	0	100		, , ,	-200										
0.400			0000T05	4000705	0	400		404	000										
3406	SB Foulwater Gulley ESF-38 to ESF-39 [50m]	11	06OCT05	19OCT05	0	100	11	-104	-230										
					_														
3405	SB Foulwater Gulley ESF-37 to ESF-38 [50m]	11	20OCT05	01NOV05	0	100	11	-104	-230							-			1
																			1
3404	SB Foulwater Gulley ESF-36 to ESF-37 [50m]	11	02NOV05	14NOV05	0	100	11	-104	-230										1
	,																		1
3403	SB Foulwater Gulley ESF-35 to ESF-36 [50m]	11	25NOV05	07DEC05	0	100	11	-113	-239										
0.00			20110100	0.22000	Ŭ		•••		200										1
2402	SB Foulwater Gulley ESF-34 to ESF-35 [50m]	11	08DEC05	20DEC05	0	100	11	-113	-239										
3402	36 Fourwaler Guiley ESF-34 to ESF-35 [5011]	11	UODEC05	20DEC05	0	100	11	-113	-239									_	1
					-													_	
3401	SB Foulwater Gulley ESF-33 to ESF-34 [52m]	11	21DEC05	05JAN06	0	100	11	-113	-239										┯┻╴╷
3495	SB Ground water ESG-40 to ESG-41B [55m]	12	14SEP05A	21SEP05	60	100	2	-116	-230										
3494	SB Ground water ESG-39 to ESG-40 [50m]	11	22SEP05	05OCT05	0	100	11	-104	-230										
3496	SB Ground water ESG-41B to ESG-41A	18	22SEP05	23NOV05	0	100	18	-79	-186										
0.00				20110100	Ū														
3/07	SB Ground water ESG-41B to ESG-42 [153m]	34	22SEP05	02NOV05	0	100	34	-116	-230										
3497	00 010010 Water E00-410 to E00-42 [10011]	54	2236703	02110705	U	100	34	-110	-230										
0.400	OD One washing EOO 00 to EOO 00 (50m)		0000705	4000705	0	100		404	000										
3493	SB Ground water ESG-38 to ESG-39 [50m]	11	06OCT05	19OCT05	0	100	11	-104	-230										
3492	SB Ground water ESG-37 to ESG-38 [50m]	11	03NOV05	15NOV05	0	100	11	-116	-230										
3491	SB Ground water ESG-36 to ESG-37 [50m]	11	16NOV05	28NOV05	0	100	11	-116	-230										
3490	SB Ground water ESG-35 to ESG-36 [50m]	11	29NOV05	10DEC05	0	100	11	-116	-230										
											1					1	1		

LACE. Description Dird Early Print Print Org Fourt Dird No. Print Control Print Contro Print Contro	Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL		UG	SEP		ОСТ	NOV	DEC	JAN	
Mathematic Security Audie Security Au		,	0					Dur	Float	arly Finis	22 11 18 25	1 8	23 15 22 29	24 0 5 12 1	9 26				28	
Add BS Ground water ESG-33 to ESG-34 (fS2m) 11 24DEC05 00.100 11 116 230 SUMMENDAL Strate Strate Str						-1														
BUILT PAIR. Bit Kickenform part Service Trough (fr.SP) 88m 13 205EP06 050CT06 0 100 13 -136 -136 3742 38 Kickenform part Service Trough (fr.SP) 150m 22 060CT08 0 100 12 -116 3742 38 Kickenform part Service Trough (fr.SP) 150m 22 020V005 0 100 22 -111 -160 3744 38 Kickenform part Service Trough (fr.SP) 192m 27 280V005 0 100 25 -165 -280 1583 88 excgmdfoul water drain trough 342m(fr.VA) 60 205EP06 0 100 46 -172 -191 1568 58 excgmdfoul water drain trough 342m(fr.VA) 60 205EP06 0 100 46 -172 -191 1568 58 excgmdfoul water drain trough 342m(fr.VA) 60 205EP06 0 100 10 160 -174 1578 58 INP Arch Linng 150m Tch.2+435 to 2+285 30 158F0F6 0 100 30 169 -174	3489	SB Ground water ESG-34 to ESG-35 [50m]	11	12DEC05	23DEC05	0	100	11	-116	-230										
3741 SB Kickerform part Service Trough (fr. SP) 89m 13 205EP05 6GOC 105 0 100 13 -136 -145 3742 SB Kickerform part Service Trough (fr. SP) 150m 22 6GOC 105 0 100 22 -111 -160 3743 SB Kickerform part Service Trough (fr. SP) 150m 22 02XVV05 28MV05 0 100 22 -111 -160 3744 SB Kickerform part Service Trough (fr. SP) 152m 27 28MV05 0 100 22 -111 -160 3744 SB Kickerform part Service Trough (fr. SP) 152m 27 28MV05 0 100 20 -163 -160 3166 SB kickerform part Service Trough (fr. SP) 142m 27 28MV05 0 100 20 -165 -280 VENTATIONATION 00 203EP05 30MV076 0 100 48 -172 -191 3166 SB NP Arch Lining 150m Tch.2+356 to 2+435 30 215EP05 70C T05 0 100 30 -159 -174 2191 SB NP Arch Lining 150m Tch.2+356 to 2+435 30	3488	SB Ground water ESG-33 to ESG-34 [52m]	11	24DEC05	09JAN06	0	100	11	-116	-230										
3741 SB Kickerform part Service Trough (fr. SP) 89m 13 205EP05 6GOC 105 0 100 13 -136 -145 3742 SB Kickerform part Service Trough (fr. SP) 150m 22 6GOC 105 0 100 22 -111 -160 3743 SB Kickerform part Service Trough (fr. SP) 150m 22 02XVV05 28MV05 0 100 22 -111 -160 3744 SB Kickerform part Service Trough (fr. SP) 152m 27 28MV05 0 100 22 -111 -160 3744 SB Kickerform part Service Trough (fr. SP) 152m 27 28MV05 0 100 20 -163 -160 3166 SB kickerform part Service Trough (fr. SP) 142m 27 28MV05 0 100 20 -165 -280 VENTATIONATION 00 203EP05 30MV076 0 100 48 -172 -191 3166 SB NP Arch Lining 150m Tch.2+356 to 2+435 30 215EP05 70C T05 0 100 30 -159 -174 2191 SB NP Arch Lining 150m Tch.2+356 to 2+435 30	SOUTH PC	PRTAL					1			1										
3743 SB Kicker/form part Service Trough (fr.SP) 190m 22 0.00/05 28 110 160 3744 SB Kicker/form part Service Trough (fr.SP) 192m 27 28.00/05 30.00/05 0 100 27 103 -160 1183 SB Kicker/form part Service Trough (fr.SP) 192m 25 28.00/05 29.00/05 29.00/05 29.00/05 28.00/05 29.00/05 28.00/05 29.00/05 29.00/05 29.00/05 29.00/05 29.00/05 28.00/05 29.00/05			13	20SEP05	05OCT05	0	100	13	-136	-185										
3744 SB Kicker/form part Service Trough (fr.SP) 192m 27 2800/05 30DEC05 0 100 27 -103 -100 280 1383 SB exc. grnd/foul water drain trough 98m(fr.SP) 28 2800/05 28DEC05 0 100 25 -105 280 1386 SB exc. grnd/foul water drain trough 342m(fr.VA) 60 20SEP05 0 100 48 172 -191 1386 SB Invort Cleaning (fr.SP 342m) 48 130C tos 07DEC05 0 100 48 -172 -191 COMMENTION-LINING VOMENTION-LINING VOMENTION-LINING VOMENTION-LINING 150m Tch.2+435 to 2+435 30 168L0605 0 100 30 159 -174 2190 SB NP Arch Lining 150m Tch.2+435 to 2+435 30 22EC05 0 100 30 159 -174 2190 SB NP Arch Lining 150m Tch.2+435 to 2+435 30 22EC05 0 100 30 159 -174 3156 SB NP OHVD 150m Tch.2+435 to 2+435 30 22EC05 0 <t< td=""><td>3742</td><td>SB Kicker/form part Service Trough (fr.SP) 150m</td><td>22</td><td>06OCT05</td><td>01NOV05</td><td>0</td><td>100</td><td>22</td><td>-111</td><td>-160</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	3742	SB Kicker/form part Service Trough (fr.SP) 150m	22	06OCT05	01NOV05	0	100	22	-111	-160										
1983 3B acc.gmd/oul water drain trough 99m((fr.SP) 25 28DROvo 82DECos 0 100 25 -165 -280 VENTLATION ADT 1366 SB exc.gmd/oul water drain trough 94m((fr.XP) 60 20SEP05 30 NOV05 0 100 60 -172 -191 1366 SB invert Cleaning (fr.SP 342m) 48 130CT05 07DECos 0 100 48 -172 -191 COMMENTION ADT COMMENTION COMMENTION COMMENTION COMMENTION COMMENTION COMMENTION COMMENTION COMMENTION <td colsp<="" td=""><td>3743</td><td>SB Kicker/form part Service Trough (fr.SP) 150m</td><td>22</td><td>02NOV05</td><td>26NOV05</td><td>0</td><td>100</td><td>22</td><td>-111</td><td>-160</td><td></td><td></td><td></td><td></td><td></td><td>•</td><td></td><td></td><td></td></td>	<td>3743</td> <td>SB Kicker/form part Service Trough (fr.SP) 150m</td> <td>22</td> <td>02NOV05</td> <td>26NOV05</td> <td>0</td> <td>100</td> <td>22</td> <td>-111</td> <td>-160</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td>	3743	SB Kicker/form part Service Trough (fr.SP) 150m	22	02NOV05	26NOV05	0	100	22	-111	-160						•			
VENTURATION ADIT 1586 SB exc.gmd/foul water drain trough 342m(fr.VA) 60 20SEP05 30NCV05 0 100 60 172 191 3166 SB Invert Cleaning (fr.SP 342m) 48 13OC 106 07DEC05 0 100 48 172 191 TOUNEL LINING NORTHPORTAL 2189 SB NP Arch Lining 150m Tch.2+435 to 2+435 30 18AUG05A 20SEP05 90 100 1 159 174 2190 SB NP Arch Lining 150m Tch.2+435 to 2+435 30 218EP05 27OCT05 0 100 30 159 174 2191 SB NP Arch Lining 150m Tch.2+435 to 2+435 30 28OCT05 01DEC05 0 100 30 159 174 2192 SB NP Arch Lining 150m Tch.2+35 to 2+435 30 22DEC05 01N0 100 10 171 3155 SB NP OHVD 150m Tch.2+35 to 2+435 30 22SEP05 79 100 6 157 169 3157 SB NP OHVD 150m Tch.2+435 to 2+43	3744	SB Kicker/form part Service Trough (fr.SP) 192m	27	28NOV05	30DEC05	0	100	27	-103	-160										
1586 SB exc.gmd/toul water drain trough 342m(fr. VA) 60 20SEP05 30NOV05 0 100 60 -172 -191 3168 SB Invert Cleaning (fr. SP 342m) 48 130CT05 07DEC05 0 100 48 -172 -191 TUNNEL LINING NORTH-TOOTAL- 2189 SB NP Arch Lining 150m Tch.2+358 to 2+435 30 18AUG05A 20SEP05 90 100 30 -159 -174 2190 SB NP Arch Lining 150m Tch.2+435 to 2+435 30 280CT05 01D0 30 -159 -174 2191 SB NP Arch Lining 150m Tch.2+435 to 2+435 30 280CT05 01D0 30 -159 -174 3155 SB NP OHVD 150m Tch.2+435 to 2+435 30 02DEC05 09JAN06 0 100 30 -159 -174 3155 SB NP OHVD 150m Tch.2+435 to 2+435 30 02EEC05 79 100 6 -157 -169 3157 SB NP OHVD 150m Tch.2+435 to 2+435 30 02EE005	1583	SB exc.grnd/foul water drain trough 89m(fr.SP)	25	28NOV05	28DEC05	0	100	25	-105	-280									•	
1586 SB exc.gmd/toul water drain trough 342m(fr. VA) 60 20SEP05 30NOV05 0 100 60 -172 -191 3168 SB Invert Cleaning (fr. SP 342m) 48 130CT05 07DEC05 0 100 48 -172 -191 TUNNEL LINING NORTH-TOOTAL- 2189 SB NP Arch Lining 150m Tch.2+358 to 2+435 30 18AUG05A 20SEP05 90 100 30 -159 -174 2190 SB NP Arch Lining 150m Tch.2+435 to 2+435 30 280CT05 01D0 30 -159 -174 2191 SB NP Arch Lining 150m Tch.2+435 to 2+435 30 280CT05 01D0 30 -159 -174 3155 SB NP OHVD 150m Tch.2+435 to 2+435 30 02DEC05 09JAN06 0 100 30 -159 -174 3155 SB NP OHVD 150m Tch.2+435 to 2+435 30 02EEC05 79 100 6 -157 -169 3157 SB NP OHVD 150m Tch.2+435 to 2+435 30 02EE005	VENTILATI	ON ADIT				1	1		1	1										
TUNE LINING Visite Vi	1586	SB exc.grnd/foul water drain trough 342m(fr.VA)	60	20SEP05	30NOV05	0	100	60	-172	-191				•						
NORTH PORTAL 2189 SB NP Arch Lining 150m Tch.2+585 to 2+435 30 18AUG05A 20SEP05 90 100 1 -159 -174 2190 SB NP Arch Lining 150m Tch.2+435 to 2+285 30 21SEP05 270CT05 0 100 30 -159 -174 2191 SB NP Arch Lining 150m Tch.2+435 to 2+135 30 280CT05 01DEC05 0 100 30 -159 -174 2192 SB NP Arch Lining 150m Tch.2+135 to 1+985 30 02DEC05 09JAN06 0 100 30 -159 -174 3155 SB NP OHVD 150m Tch.2+135 to 1+985 30 02DEC05 09JAN06 0 100 0 -178 3156 SB NP OHVD 150m Tch.2+135 to 2+285 30 02SEP05A 27SEP05 79 100 6 -157 -169 3157 SB NP OHVD 150m Tch.2+285 to 2+135 30 02NEP05A 10DEC05 0 100 30 -159 -171 3158 SB NP OHVD 150m Tch.2+285 to 2+135 30 07NOV05 10DEC05 0 100 30 -159 -171	3166	SB Invert Cleaning (fr.SP 342m)	48	13OCT05	07DEC05	0	100	48	-172	-191										
NORTH PORTAL 2189 SB NP Arch Lining 150m Tch.2+585 to 2+435 30 18AUG05A 20SEP05 90 100 1 -159 -174 2190 SB NP Arch Lining 150m Tch.2+435 to 2+285 30 21SEP05 270CT05 0 100 30 -159 -174 2191 SB NP Arch Lining 150m Tch.2+435 to 2+135 30 280CT05 01DEC05 0 100 30 -159 -174 2192 SB NP Arch Lining 150m Tch.2+135 to 1+985 30 02DEC05 09JAN06 0 100 30 -159 -174 3155 SB NP OHVD 150m Tch.2+135 to 1+985 30 02DEC05 09JAN06 0 100 0 -178 3156 SB NP OHVD 150m Tch.2+135 to 2+285 30 02SEP05A 27SEP05 79 100 6 -157 -169 3157 SB NP OHVD 150m Tch.2+285 to 2+135 30 02NEP05A 10DEC05 0 100 30 -159 -171 3158 SB NP OHVD 150m Tch.2+285 to 2+135 30 07NOV05 10DEC05 0 100 30 -159 -171	TUNNEL	LINING				1	1		1	1										
2189 SB NP Arch Lining 150m Tch.2+585 to 2+435 30 18AUG05A 20SEP05 90 100 1 -159 -174 2190 SB NP Arch Lining 150m Tch.2+435 to 2+285 30 21SEP05 27OCT05 0 100 30 -159 -174 2191 SB NP Arch Lining 150m Tch.2+435 to 2+135 30 28OCT05 01DEC05 0 100 30 -159 -174 2192 SB NP Arch Lining 150m Tch.2+135 to 1+985 30 02DEC05 09JAN06 0 100 30 -159 -174 3155 SB NP OHVD 150m Tch.2+735 to 2+585 30 22SEP05A 27SEP05 79 100 6 -157 -169 3156 SB NP OHVD 150m Tch.2+435 to 2+435 30 30SEP05 05NOV05 0 100 30 -159 -171 3158 SB NP OHVD 150m Tch.2+435 to 2+435 30 30SEP05 05NOV05 0 100 30 -159 -171 3159 SB NP OHVD 150m Tch.2+435 to 2+435 30 30SEP05 05NOV05 0 100 30 -159 -171 300	-																			
2191 SB NP Arch Lining 150m Tch.2+285 to 2+135 30 280CT05 01DEC05 0 100 30 -174 2192 SB NP Arch Lining 150m Tch.2+135 to 1+985 30 02DEC05 09JAN06 0 100 30 -159 -174 3155 SB NP OHVD 150m Tch.2+735 to 2+585 30 02DEC05 09JAN06 0 100 30 -178 3156 SB NP OHVD 150m Tch.2+585 to 2+435 30 02SEP05A 27SEP05 79 100 6 -157 -169 3157 SB NP OHVD 150m Tch.2+285 to 2+435 30 02SEP05A 27SEP05 0 100 30 -159 -171 3158 SB NP OHVD 150m Tch.2+285 to 2+435 30 02SEP05A 0 100 30 -159 -171 3158 SB NP OHVD 150m Tch.2+285 to 2+135 30 07NOV05 10DEC05 0 100 30 -159 -171 3159 SB NP OHVD 150m Tch.1+063 to 1+213 30 12DEC05 18JAN06 0 100 30 -159 -171 3167 SB SP Arch Lining 150m Tch.1+063 to 1+213 30			30	18AUG05A	20SEP05	90	100	1	-159	-174										
2192 SB NP Arch Lining 150m Tch.2+135 to 1+985 30 02DEC05 09JAN06 0 100 30 -159 -174 3155 SB NP OHVD 150m Tch.2+735 to 2+585 30 29JUL05A 01SEP05A 100 100 0 -178 3156 SB NP OHVD 150m Tch.2+585 to 2+435 30 02SEP05A 27SEP05 79 100 6 -157 -169 3157 SB NP OHVD 150m Tch.2+585 to 2+435 30 02SEP05A 27SEP05 79 100 6 -157 -169 3157 SB NP OHVD 150m Tch.2+285 to 2+135 30 07NOV05 10DEC05 0 100 30 -159 -171 3158 SB NP OHVD 150m Tch.2+285 to 2+135 30 07NOV05 10DEC05 0 100 30 -159 -171 3159 SB NP OHVD 150m Tch.2+135 to 1+985 30 12DEC05 18JAN06 0 100 30 -159 -171 3167 SB SP Arch Lining 150m Tch.1+213 to 1+363 30 15DEC05 21JAN06 0 100 30 -172 -191 3167 SB SP Arch Lining 15	2190	SB NP Arch Lining 150m Tch.2+435 to 2+285	30	21SEP05	27OCT05	0	100	30	-159	-174				I						
All A	2191	SB NP Arch Lining 150m Tch.2+285 to 2+135	30	280CT05	01DEC05	0	100	30	-159	-174										
A A	2192	SB NP Arch Lining 150m Tch.2+135 to 1+985	30	02DEC05	09JAN06	0	100	30	-159	-174										
3157 SB NP OHVD 150m Tch.2+435 to 2+285 30 30SEP05 05NOV05 0 100 30 -159 -171 3158 SB NP OHVD 150m Tch.2+285 to 2+135 30 07NOV05 10DEC05 0 100 30 -159 -171 3159 SB NP OHVD 150m Tch.2+135 to 1+985 30 12DEC05 18JAN06 0 100 30 -159 -171 SOUTH PORTAL 30 170CT05 14DEC05 0 100 30 -172 -191 3167 SB SP Arch Lining 150m Tch.1+213 to 1+363 30 15DEC05 21JAN06 0 100 30 -172 -191	3155	SB NP OHVD 150m Tch.2+735 to 2+585	30	29JUL05A	01SEP05A	100	100	0		-178										
3158 SB NP OHVD 150m Tch.2+285 to 2+135 30 07NOV05 10DEC05 0 100 30 -159 -171 3159 SB NP OHVD 150m Tch.2+135 to 1+985 30 12DEC05 18JAN06 0 100 30 -159 -171 South Portal 1320 SB SP Arch Lining 150m Tch.1+063 to 1+213 30 170CT05 14DEC05 0 100 30 -172 -191 3167 SB SP Arch Lining 150m Tch.1+213 to 1+363 30 15DEC05 21JAN06 0 100 30 -172 -191	3156	SB NP OHVD 150m Tch.2+585 to 2+435	30	02SEP05A	27SEP05	79	100	6	-157	-169			[
3159 SB NP OHVD 150m Tch.2+135 to 1+985 30 12DEC05 18JAN06 0 100 30 -159 -171 -171	3157	SB NP OHVD 150m Tch.2+435 to 2+285	30	30SEP05	05NOV05	0	100	30	-159	-171										
SOUTH PORTAL South and a state of the	3158	SB NP OHVD 150m Tch.2+285 to 2+135	30	07NOV05	10DEC05	0	100	30	-159	-171										
1320 SB SP Arch Lining 150m Tch.1+063 to 1+213 30 17OCT05 14DEC05 0 100 30 -172 -191 3167 SB SP Arch Lining 150m Tch.1+213 to 1+363 30 15DEC05 21JAN06 0 100 30 -172 -191	3159	SB NP OHVD 150m Tch.2+135 to 1+985	30	12DEC05	18JAN06	0	100	30	-159	-171										
1320 SB SP Arch Lining 150m Tch.1+063 to 1+213 30 17OCT05 14DEC05 0 100 30 -172 -191 3167 SB SP Arch Lining 150m Tch.1+213 to 1+363 30 15DEC05 21JAN06 0 100 30 -172 -191	SOUTH PC	PRTAI				1	1		1	1										
			30	17OCT05	14DEC05	0	100	30	-172	-191										
3172 SB SP OHVD 150m Tch.1+063 to 1+213 30 31OCT05 21DEC05 0 100 30 -163 -185	3167	SB SP Arch Lining 150m Tch.1+213 to 1+363	30	15DEC05	21JAN06	0	100	30	-172	-191										
	3172	SB SP OHVD 150m Tch.1+063 to 1+213	30	31OCT05	21DEC05	0	100	30	-163	-185										

Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL	AUG		SEP		ост		NOV		DEC	JAN
ID	Description	Dur		Finish					arly Finis		23 1 8 15 22	2 29 5	24	9 26	25 3 10 17	24 31	26	28 5	27 12 19 26	2 9 1
SOUTH PORTAL			1	I													<u>.</u> .			
3173 SB S	SP OHVD 150m Tch.1+213 to 1+363	30	22DEC05	06FEB06	0	100	30	-163	-185											
TUNNEL FINI	SHING WORKS																			
SERVICE TROUC			I	1		1		1	1											
3560 SB s	ervice trough 150m Tch.3+035 to 2+885 fr.NP	23	20SEP05	18OCT05	0	100	23	-211	-266											
					-										_					
3561 SB s	ervice trough 150m Tch.2+885 to 2+735 fr.NP	23	19OCT05	14NOV05	0	100	23	-203	-259											
2502 00 0	en iee trough 150m Tab 2, 725 to 2, 505 fr ND			1005005	0	100	22	202	050											
3002 SB S	ervice trough 150m Tch.2+735 to 2+585 fr.NP	23	15NOV05	10DEC05	0	100	23	-203	-252											
3563 SB c	ervice trough 150m Tch.2+585 to 2+435 fr.NP	23	12DEC05	10JAN06	0	100	23	-203	-245											
3303 35 35 3	ervice trough 130m 16h.2+303 to 2+433 h.M	25	1202000	IUJANUU	0	100	23	-205	-245											
3570 SB s	ervice trough 150m Tch.1+063 to 1+213 fr.SP	23	14NOV05	09DEC05	0	100	23	-133	-166											
				0022000	, i i i i i i i i i i i i i i i i i i i															
3571 SB s	ervice trough 150m Tch.1+213 to 1+363 fr.SP	23	10DEC05	09JAN06	0	100	23	-133	-159											
	0																			
3545 SB N	IP 200 main 150m Tch.3+035 to 2+885 fr.NP	23	05OCT05	01NOV05	0	100	23	-211	-282											
3546 SB N	VP 200 main 150m Tch.2+885 to 2+735 fr.NP	23	02NOV05	28NOV05	0	100	23	-211	-275							–				
3547 SB N	NP 200 main 150m Tch.2+735 to 2+585 fr.NP	23	29NOV05	24DEC05	0	100	23	-211	-268									_		
					-												_		_	
3555 SB S	SP 200 main 150m Tch.1+063 to 1+213 fr.SP	23	18NOV05	14DEC05	0	100	23	-131	-174											
2642 68 9	VA - 50% TCSS Contain't from NP KD6	66	20SEP05	07MAR06	0	100	66	-189	-190									_		
3042 30 0	A - 50% TCSS Containt from NP KD6	00	2032205	UTIVIARUO	0	100	00	-109	-190	-			1							
	ND & VENTILATION ADIT TUNNEL	I	1		1	I	1	1	I											-
	ITILATION SYSTEM																			
TUNNEL VENTIL	RtSb&VA-TVS Tunnel vent. & SE 1st fix	72	21NOV05	23FEB06	0	100	72	-77	-154											
0704 EIIIN		12	21100005	ZOFEDUU	0	100	12	-//	-154								_			
CROSS PAS	SAGES		I	I	1	I	L	I	1											<u> </u>
	EXCAVATION	40			100	100			100				,							
2583 Exca	avate Part Cross Passage CP.2 from SB	16	29JUN05A	06SEP05A	100	100	0		-193											
2550 Ever	avate Part Cross Passage CP.11 from NB	2	29JUL05A	23AUG05A	100	100	0		-123			1								
2000 200	avale Fail 01055 Fassaye 0F.11 110111 IND	2	ZEJULUDA	23AUG03A		100	0		-123			•								
2579 Eves	avate Part Cross Passage CP.11 from SB	2	29JUL05A	23AUG05A	100	100	0		-122			1								
		1	LUCCLUCA	20/ 00000		100			122			-								
2566 Exca	avate Part Cross Passage CP.3 from NB	2	12AUG05A	14SEP05A	100	100	0		-171											
		-					Ŭ													
2584 Exca	avate Part Cross Passage CP.3 from SB	2	12AUG05A	14SEP05A	100	100	0		-156											
	č																			
2560 Exca	avate Part Cross Passage CP.9 from NB	2	14AUG05A	21SEP05	80	100	2	-92	-108			1								

Lib Description Dur Start Finals Compl. Dur Pinals Compl. Dur Pinals Compl. Dur Pinals Compl. Dur Pinals Dials 2 Dials Dials 2 Dials Dials <thdials< th=""> <thdials< th=""> Dials</thdials<></thdials<>	Act.	Activity	Orig Earl	y Early	%	DWP %	Rem	Total	Variance	JUL	AL		SE		ОСТ	NOV	DEC	JAN
2581 Excavate Part Cross Passage CP-3 from S8 2 14AUG66A 224.66 -157 2565 Excavate Part Cross Passage CP-3 from S8 2 18AUG66A 224.66 -157 2565 Excavate Part Cross Passage CP-3 from S8 2 18AUG66A 224.0005A 100 0 -117 2561 Excavate Part Cross Passage CP-3 from S8 2 24AUG66A 100 0 -117 2561 Excavate Part Cross Passage CP-3 from S8 2 25AUG66A 100 0 -104 2562 Excavate Part Cross Passage CP-3 from S8 2 25AUG66A 100 0 -104 2565 Excavate Part Cross Passage CP-3 from S8 2 25AUG65A 100 0 -104 2566 Excavate Part Cross Passage CP-3 from S8 2 20C105 0 100 2 -88 -128 2564 Excavate Part Cross Passage CP-5 from S8 2 20C105 0 100 2 -88 -128 2564 Excavate Part Cross Passage CP-5 from S8 2 20C105 0 100 0 -170 2566				· · · · · · · · · · · · · · · · · · ·			Dur	Float	arly Finis	22 11 18 25	2 1 ₁ 8 ₁ 1							28 2 9 1
Long Long <thlong< th=""> Long <thlong< th=""> <thlo< td=""><td>X-PASS/</td><td>AGE EXCAVATION</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></thlo<></thlong<></thlong<>	X-PASS/	AGE EXCAVATION																
2385 Excavate Part Cross Passage CP 4 from SB 2 1 BAUGOSA 22AUGOSA 100 100 0 -117 2361 Excavate Part Cross Passage CP 3 from NB 2 21AUGOSA 42AUGOSA 100 100 0 -116 2362 Excavate Part Cross Passage CP 3 from NB 2 21AUGOSA 42AUGOSA 100 100 0 -116 2363 Excavate Part Cross Passage CP 3 from NB 2 21AUGOSA 72EPOSA 100 100 0 -100 2364 Excavate Part Cross Passage CP 3 from NB 2 200CTo5 12OCTO5 0 100 2 46 120 2364 Excavate Part Cross Passage CP 3 from NB 2 200CTo5 12OCTo5 0 100 2 46 128 2364 Excavate Part Cross Passage CP 15 from NB 2 200CTo5 100 100 0 -177 2364 Excavate Part Cross Passage CP 15 10 030CTo5 100 100 10 100 100 107 100 107 100 100 100 100 100 100	2581	Excavate Part Cross Passage CP.9 from SB	2 14AUG	05A 23AUG05A	100	100	0		-86									
2561 Excavate Part Cross Passage CP.8 from NB 2 21AUG06A 42AUG06A 100 100 0 -83 2562 Excavate Part Cross Passage CP.8 from NB 2 25AUG06A 105 FP05A 100 100 0 -101 2563 Excavate Part Cross Passage CP.8 from NB 2 2 25EP05 215EP05 0 100 2 68 128 2564 Excavate Part Cross Passage CP.5 from NB 2 200C106 210C105 0 100 2 68 128 2564 Excavate Part Cross Passage CP.5 from NB 2 200C106 210C105 0 100 2 48 190 2564 Excavate Part Cross Passage CP.5 from NB 2 200C106 210C105 0 100 0 -170 2569 Invert Clean & Lining to CP.16 10 03SEP05 0 100 10 160 184 2569 Invert Clean & Lining to CP.13 10 205C105 0 100 10 160 176 2569 Invert Clean & Lining to CP.13 10 100C105 0	2565	Excavate Part Cross Passage CP.4 from NB	2 18AUG	05A 21SEP05	50	100	2	-86	-157		[
2582 Excavate Part Cross Passage CP.8 from NB 2 254JG056. 045EP054. 100 100 0 -101 2563 Excavate Part Cross Passage CP.6 from NB 2 31AUG054. 175EP054. 100 100 0 -101 2568 Excavate Part Cross Passage CP.6 from SB 2 050EF05 21SEP05. 0 100 2 48 128 2569 Excavate Part Cross Passage CP.6 from NB 2 200CT05 21OCT05 0 100 0 -107 2569 Excavate Part Cross Passage CP.6 from NB 2 200CT05 20CT05 100 0 -170 2569 Invert Clean & Lining to CP.16 10 13AUG054. 125EP05. 100 100 0 -170 2569 Invert Clean & Lining to CP.13 10 030CT05 40CT05 0 100 10 160 160 170 2569 Invert Clean & Lining to CP.10 10 030CT05 20CT05 0 100 10 160 160 160 160 2569 Invert Clean & Lining to CP.10 10	2585	Excavate Part Cross Passage CP.4 from SB	2 18AUG	05A 22AUG05A	100	100	0		-117		[
2633 xxavate Part Cross Passage CP.6 from NB 2 31AUG05A 172EP05A 100 100 0 -101 2668 xxavate Part Cross Passage CP.5 from SB 2 20SEP05 21SEP05 0 100 2 68 -128 2674 Excavate Part Cross Passage CP.5 from SB 2 100C105 12OC105 0 100 2 68 -128 2674 Excavate Part Cross Passage CP.5 from SB 2 100C105 12OC105 0 100 0 -170 2694 Invert Clean & Lining to CP.16 10 13AUG05A 12SEP05A 100 10 -160 -177 2595 Invert Clean & Lining to CP.13 10 33SEP05 0 100 10 -160 -184 2596 Invert Clean & Lining to CP.13 10 30CT05 140CT05 0 100 10 -160 -178 2596 Invert Clean & Lining to CP.11 10 270CT05 07NOV05 0 100 10 -160 -178 2600 Invert Clean & Lining to CP.13 10 100CT05 280/t00	2561	Excavate Part Cross Passage CP.8 from NB	2 21AUG	05A 24AUG05A	100	100	0		-83									
2886 Excavate Part Cross Passage CP.5 from SB 2 205EP05 215EP05 0 100 2 68 128 2887 Excavate Part Cross Passage CP.5 from SB 2 100CT05 120CT05 0 100 2 68 128 2887 Excavate Part Cross Passage CP.5 from SB 2 100CT05 120CT05 0 100 2 68 128 2586 Excavate Part Cross Passage CP.5 from NB 2 200CT05 210CT05 0 100 10 2 68 128 2586 Invert Clean & Lining to CP.15 10 13AUG05A 20AUG05A 100 100 0 -170 2586 Invert Clean & Lining to CP.14 10 20SEP05 30SEP05 0 100 10 166 174 2589 Invert Clean & Lining to CP.11 10 20CT05 20CT05 0 100 10 166 174 2589 Invert Clean & Lining to CP.11 10 20CT05 20CT05 0 100 10 166 174 2599 Invert Clean & Lining to CP.13	2582	Excavate Part Cross Passage CP.8 from SB	2 25AUG	05A 04SEP05A	100	100	0		-104									
2587 Excavate Part Cross Passage CP.6 from SB 2 100C105 120C105 0 100 2 -68 -128 2584 Excavate Part Cross Passage CP.6 from NB 2 2 00C105 210C105 0 100 2 -68 -128 2584 Excavate Part Cross Passage CP.6 from NB 2 2 00C105 210C105 0 100 2 -68 -128 2594 Invert Clean & Lining to CP.16 10 12AUG05A 20AUG05A 100 100 0 -178 2595 Invert Clean & Lining to CP.14 10 20SEP05A 12OC105 0 100 100 100 160 -184 2598 Invert Clean & Lining to CP.13 10 03OCT05 26OC105 0 100 100 160 -184 2598 Invert Clean & Lining to CP.11 10 270CT05 270CT05 0 100 100 160 -178 2600 Invert Clean & Lining to CP.10 10 08NOV05 0 100 100 160 -165 2601 Invert Clean & Lining to CP.3 10<	2563	Excavate Part Cross Passage CP.6 from NB	2 31AUG	05A 17SEP05A	100	100	0		-101			I						
2564 Excavate Part Cross Passage CP.5 from NB 2 200CT05 210CT05 0 100 2 -86 -157 XPASSAGE LINING 2264 Invert Clean & Lining to CP.15 10 13AUG05A 20AUG05A 100 0 -177 2555 Invert Clean & Lining to CP.15 10 03SEP05A 12SEP05A 100 100 10 -178 2566 Invert Clean & Lining to CP.14 10 20SEP05 30SEP05 0 100 10 -160 -184 2598 Invert Clean & Lining to CP.12 10 150CT05 260CT05 0 100 10 -160 -184 2598 Invert Clean & Lining to CP.11 10 270CT05 07NOV05 0 100 10 -160 -178 2600 Invert Clean & Lining to CP.10 10 98NOV05 18NOV05 0 100 10 -160 -165 2600 Invert Clean & Lining to CP.3 10 10DC05 12DEC05 0 100 10 -160 -165 2601 Invert Clean & Lining to CP.3 10 13DE	2586	Excavate Part Cross Passage CP.5 from SB	2 20SEF	21SEP05	0	100	2	-68	-128					•				
X-PASAGE LINING X-PASAGE LINING to CP.16 X-PASAGE LINING to CP.1	2587	Excavate Part Cross Passage CP.6 from SB	2 10OC	05 12OCT05	0	100	2	-68	-128									
2594 Invert Clean & Lining to CP.16 10 13AUG05A 20AUG05A 100 100 0 -170 2595 Invert Clean & Lining to CP.15 10 03SEP05A 12SEP05A 100 100 10 -176 2596 Invert Clean & Lining to CP.14 10 20SEP05 0 100 10 -160 -184 2597 Invert Clean & Lining to CP.13 10 03OCT05 14OCT05 0 100 10 160 -184 2598 Invert Clean & Lining to CP.12 10 15OCT05 26OCT05 0 100 10 -160 -174 2600 Invert Clean & Lining to CP.11 10 27OCT05 07NOV05 0 100 10 -160 -174 2600 Invert Clean & Lining to CP.10 10 08NOV05 0 100 10 -160 -165 2601 Invert Clean & Lining to CP.3 10 01DEC05 12DEC05 0 100 10 -160 -165 2602 Invert Clean & Lining to CP.8 10 24DEC05 07JAN06 0 100 <td>2564</td> <td>Excavate Part Cross Passage CP.5 from NB</td> <td>2 20OC</td> <td>05 21OCT05</td> <td>0</td> <td>100</td> <td>2</td> <td>-86</td> <td>-157</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	2564	Excavate Part Cross Passage CP.5 from NB	2 20OC	05 21OCT05	0	100	2	-86	-157									
2501 Intervent Clean & Lining to CP.15 10 03SEP05A 12SEP05A 100 100 0 -178 2596 Invert Clean & Lining to CP.14 10 20SEP055 0 100 10 -160 -184 2597 Invert Clean & Lining to CP.13 10 03CT05 14OCT05 0 100 10 -160 -184 2598 Invert Clean & Lining to CP.12 10 15OCT05 26OCT05 0 100 10 -160 -174 2600 Invert Clean & Lining to CP.11 10 27OCT05 07NOV05 0 100 10 -160 -174 2600 Invert Clean & Lining to CP.10 10 08NOV05 18NOV05 0 100 10 -160 -165 2601 Invert Clean & Lining to CP.3 10 01DEC05 12DEC05 0 100 10 -160 -165 2601 Invert Clean & Lining to CP.9 10 13DEC05 23DEC05 0 100 10 -160 -165 2602 Invert Clean & Lining to CP.8 10 24DEC05 07JA	X-PASS/	AGE LINING																
2596 Invert Clean & Lining to CP.14 10 20SEP05 30SEP05 0 100 10 160 -184 2597 Invert Clean & Lining to CP.13 10 03OCT05 14OCT05 0 100 10 -160 -184 2598 Invert Clean & Lining to CP.12 10 15OCT05 26OCT05 0 100 10 -160 -174 2600 Invert Clean & Lining to CP.10 10 20NV05 0 100 10 -160 -165 2603 Invert Clean & Lining to CP.2 10 19NV05 30NV05 0 100 10 -160 -165 2601 Invert Clean & Lining to CP.3 10 10DC05 23DEC05 0 100 10 -160 -165 2601 Invert Clean & Lining to CP.9 10 13DEC05 23DEC05 0 100 10 -160 -165 2602 Invert Clean & Lining to CP.9 10 13DEC05 23DEC05 0 100 10 -160 -165 2602 Invert Clean & Lining to CP.9 10 13DEC05 <	2594	Invert Clean & Lining to CP.16	10 13AUG	05A 20AUG05A	100	100	0		-170									
Control Contro Control Control	2595	Invert Clean & Lining to CP.15	10 03SEP	05A 12SEP05A	100	100	0		-178									
And And And And And And And And And And	2596	Invert Clean & Lining to CP.14	10 20SEF	205 30SEP05	0	100	10	-160	-184					•				
A A	2597	Invert Clean & Lining to CP.13	10 03OC	05 14OCT05	0	100	10	-160	-184									
And the state of the state	2598	Invert Clean & Lining to CP.12	10 15OC	05 26OCT05	0	100	10	-160	-179									
And And And And And And And And And And	2599	Invert Clean & Lining to CP.11	10 27OC	05 07NOV05	0	100	10	-160	-174									
2604 Invert Clean & Lining to CP.3 10 01DEC05 12DEC05 0 100 10 -165 2601 Invert Clean & Lining to CP.9 10 13DEC05 23DEC05 0 100 10 -165 2602 Invert Clean & Lining to CP.8 10 24DEC05 07JAN06 0 100 10 -165 X-PASSAGE INVERT 2614 Invert Lining to CP.16 8 01SEP05A 02SEP05A 100 10 0 -161	2600	Invert Clean & Lining to CP.10	10 08NO	/05 18NOV05	0	100	10	-160	-165									
2601Invert Clean & Lining to CP.91013DEC0523DEC05010010-160-1652602Invert Clean & Lining to CP.81024DEC0507JAN06010010-165Image: Constraint of the constraint		-	10 19NO	/05 30NOV05	0	100	10	-160	-165									
2602 Invert Clean & Lining to CP.8 10 24DEC05 07JAN06 0 100 10 -165 Image: Constraint of the const	2604	Invert Clean & Lining to CP.3	10 01DE0	05 12DEC05	0	100	10	-160	-165									
X-PASSAGE INVERT 8 01SEP05A 02SEP05A 100 0 -161	2601	Invert Clean & Lining to CP.9	10 13DE0	23DEC05	0	100	10	-160	-165									
2614 Invert Lining to CP.16 8 01SEP05A 02SEP05A 100 0 -161	2602	Invert Clean & Lining to CP.8	10 24DE0	05 07JAN06	0	100	10	-160	-165									
2614 Invert Lining to CP.16 8 01SEP05A 02SEP05A 100 0 -161	X-PASS/	AGE INVERT		,														
2615 Invert Lining to CP.15 8 27SEP05 06OCT05 0 100 8 -120 -178			8 01SEP	05A 02SEP05A	100	100	0		-161				Þ					
	2615	Invert Lining to CP.15	8 27SEF	05 06OCT05	0	100	8	-120	-178									

Act.	Activity	Orig		Early	%	DWP %				JUL 22	AUG 23	SE 24		OCT 25	NOV 26	DEC 27	JAN
ID	Description	Dur	Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	11 18 25	1 ₁ 8 ₁ 15 22	29 5 12	19 <u>2</u> 6	_25 _3 _10 _17 _24 _3	1 7 14 21 2	8 5 12 19 26	29
	AGE INVERT				1	1	1	1									
	Invert Lining to CP.14	8	18OCT05	26OCT05	0	100	8	-128	-184								
2617	Invert Lining to CP.13	8	29OCT05	07NOV05	0	100	8	-130	-184								
2618	Invert Lining to CP.12	8	10NOV05	18NOV05	0	100	8	-132	-179								
2619	Invert Lining to CP.11	8	22NOV05	30NOV05	0	100	8	-134	-174								
2620	Invert Lining to CP.10	8	03DEC05	12DEC05	0	100	8	-136	-165								
2623	Invert Lining to CP.2	8	15DEC05	23DEC05	0	100	8	-116	-165								
X-PASSA	AGE FINISHING WORKS			ı 													
2630	Construct Rooms (incl.ABWF) at CP.20	24	20SEP05	19OCT05	0	100	24	-158	-208				•				
2631	Construct Rooms (incl.ABWF) at CP.19	24	20SEP05	02NOV05	0	100	24	-158	-208				•				
2632	Construct Rooms (incl.ABWF) at CP.18	24	20SEP05	16NOV05	0	100	24	-158	-208				•				
2633	Construct Rooms (incl.ABWF) at CP.17	24	20SEP05	30NOV05	0	100	24	-158	-208				•				
2634	Construct Rooms (incl.ABWF) at CP.16	24	20SEP05	14DEC05	0	100	24	-158	-208				•				
2635	Construct Rooms (incl.ABWF) at CP.15	24	15OCT05	30DEC05	0	100	24	-158	-208								
2636	Construct Rooms (incl.ABWF) at CP.14	24	03NOV05	14JAN06	0	100	24	-158	-208								
2637	Construct Rooms (incl.ABWF) at CP.13	24	15NOV05	06FEB06	0	100	24	-158	-208								
2638	Construct Rooms (incl.ABWF) at CP.12	24	26NOV05	20FEB06	0	100	24	-158	-208								
2639	Construct Rooms (incl.ABWF) at CP.11	24	08DEC05	06MAR06	0	100	24	-158	-208								
2640	Construct Rooms (incl.ABWF) at CP.10	24	20DEC05	20MAR06	0	100	24	-158	-208								
	G & COMMISSIONING																
	S NEST TUNNEL																
	ORY INSPECTIONS																
FSD INSPE	EntRt-All FS design approved by FSD (MHJV)	0	18OCT05		0	100	0	-84	-143					٠			
6918	EntRt-Issue, endorse & submit FSI 314 to FSD	6	01NOV05	07NOV05	0	100	6	-84	-143								

Act. ID	Activity Description	Orig Early Dur Start	Early Finish	% Compl	DWP %	Rem	Total Float	Variance	JUL 22	AUG 23	SEP 24		OCT 25	NOV 26	DEC 27	JAN
	ATION ADIT & BUILDING	Dur Start	Finish	Compi.	Compi.	Dur	Float	any Finis	11 18 25	23 1 8 15 22 29	9 <mark>5 12 19</mark>	26	3 10 17 24 3	1 ₁ 7 ₁ 14 21 28	3 <mark>5 12 19 26</mark>	29
	TALS & APPROVALS															
	BUILDER'S WORKS															
	VA Bldg Prep & submit louvre details	90 22NOV04A	04OCT05	50	100	12	-55	-163								
1985	VA Bldg Prep & sub aluminium cladding	90 22NOV04A	04OCT05	0	100	12	-49	-163								
1975	VA Bldg Prep & sub balustrade & metal wks	90 24NOV04A	04OCT05	0	100	12	-49	-161								
1971	VA Bldg Prep & submit door & window detail	90 03FEB05A	04OCT05	40	100	12	-49	-103								
1974	VA Bldg Approve louvre details	24 07APR05A	19OCT05	50	100	24	-67	-151								
1989	VA Bldg Prep & sub fall arrest system	90 19APR05A	04OCT05	0	100	12	-49	-49								
1991	VA Bldg Approve slate cladding	24 15JUN05A	19OCT05	0	100	24	-67	-151								
1972	VA Bldg Approve door & window details	24 05OCT05	02NOV05	0		24	-49	-103								
1976	VA Bldg Approve balustrade & metal works	24 05OCT05	02NOV05	0		24	-49	-161								
1988	VA Bldg Approve aluminium cladding	24 05OCT05	02NOV05	0		24	-49	-163				1				
1990	VA Bldg Approve fall arrest system	24 05OCT05	02NOV05	0		24	-49	-49		[-					
E&M EC	PT./MTRL.DETAIL SUBMITTAL															
8232	VaBldg-Sub.TVF, Ductworks & Control sys	78 02JUL04A	21DEC05	95	100	78	-5	-148								
8234	VaBldg-Sub.MVAC MCC, power & control sys	54 02JUL04A	23NOV05	95	100	54	-57	-204								
8231	VaBldg-Sub.FS AFA & FM200 sys	54 05JUL04A	23NOV05	95	100	54	55	-144								
8229	VaBldg-Sub.MVAC mech.vent. sys	54 03AUG04A	23NOV05	95	100	54	-95	-192								
8228	VaBldg-Sub.FS wet sys	54 05AUG04A	23NOV05	95	100	54	55	-144								
8233	VaBldg-Sub.MVAC / TVF pneumatic sys	54 14AUG04A	16NOV05	95	100	48	1	-60								
	VaBldg-Sub.CMCS & ELV sys	78 26AUG04A	21DEC05	98	100	78	-53	-186								
8235	VaBldg-Sub.PD irrig. sys	54 04FEB05A	23NOV05	85	100	54	31	-162								
E&M EC	PT./MTRL.APPROVAL BY ENGINEER															
6578	VaBldg-App. HV power dist. sys	18 14JUL04A	12OCT05	95	100	18	-59	-162								

Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL	AUG		SEP	ОСТ	NOV	DEC	JAN
ID	Description	Dur		Finish	Compl.		Dur	Float	arly Finis	22 11 18 25 1	23 8 15 22	29 5 1	24 2 19 26	25 3 10 17 24	26 31 7 14 21 2	27 8 5 12 19 26	2 9
E&M EQ	PT./MTRL.APPROVAL BY ENGINEER																
6579 \	VaBldg-App. LV power dist. sys	18	13AUG04A	12OCT05	90	100	18	-53	-138				-				
8495 \	VaBldg-App. building related luminaires	18	18AUG04A	12OCT05	80	100	18	-59	-132				+				
6581 \	VaBldg-App. FS wet sys	18	04SEP04A	12OCT05	60	100	18	55	-90				+				
6590 \	VaBldg-App. FS AFA & FM200 sys	18	14SEP04A	12OCT05	70	100	18	55	-90				+				
6587 \	VaBldg-App. of CMCS & ELV sys	18	20SEP04A	12OCT05	88	100	18	-53	-108								
6582 \	VaBldg-App. MVAC mech.vent. sys	18	23SEP04A	12OCT05	60	100	18	-95	-138				+				
6580 \	VaBldg-App. PD all fresh & flush water sys	18	04NOV04A	18NOV05	75	100	50	-13	-134				+				
6850 \	VaBldg-App. TVF, Ductworks & Control sys	18	12NOV04A	12OCT05	70	100	18	-5	-70				+				
6864 \	V6aBldg-App. MVAC MCC, power & control sys	18	12NOV04A	12OCT05	75	100	18	-57	-150				+				
8515 \	VaBldg-App. MVAC Package AC Unit sys	18	01FEB05A	12OCT05	90	100	18	49	-48								
7590 \	VaBldg-App. PD irrig. sys	18	05MAY05A	12OCT05	30	100	18	31	-108								
PROCUR	REMENT		/ /			1											
ARCHITE	ECTURAL																
1992 \	VA Bldg Procure doors & windows	120	29MAR05A	26OCT05	50	100	30	-63	-35				- -				
1994 \	VA Bldg Procure balustrade & metal works	30	20SEP05	26OCT05	0	100	30	-63	-35				, 🛉 —				
1995 \	VA Bldg Procure aluminium cladding	30	20SEP05	26OCT05	0	100	30	-63	-35				, 🛉 —				
2034 \	VA Bldg Initial delivery fall arrest system	0	08DEC05		0		0	-49	0							•	
2032 \	VA Bldg Initial delivery doors & windows	0	24DEC05		0		0	-63	0							•	
2035 \	VA Bldg Initial delivery balust & metal works	0	24DEC05		0		0	-63	0							•	
2038 \	VA Bldg Initial delivery aluminium cladding	0	24DEC05		0		0	-63	0				-			•	
E&M MA	TERIALS		· · · · · · · · · · · · · · · · · · ·														
6584 \	VaBldg-Proc & Manuf. LV power dist. equip't	180	20MAR05A	08MAY06	20	70	180	-53	-120							•	
6583 \	VaBldg-Proc. & Manuf. of HV dist. equip't	180	25MAR05A	08MAY06	15	80	180	-59	-144						<u> </u>		<u> </u>
	VaBldg-Proc. & Manuf. of CMCS & ELV sys	180	25MAR05A	08MAY06	15	50	180	-53	-90					<u> </u>		1	1

Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL AUG SEP OCT NOV DEC	JAN
ID	Description	Dur	-	Finish	Compl.	Compl.	Dur	Float	arly Finis	22 23 24 25 26 27 1 18 25 1 8 15 22 29 5 12 19 26 3 10 17 24 21 7 14 21 28 5 12 19	26 2 9 1
E&M MA	TERIALS										
6636	VaBldg-Proc & Manuf. FS AFA & FM200 sys	120	25MAR05A	22FEB06	15	60	120	53	-74		
6865	VaBldg-Proc & Manuf. MCC, power & control sys	180	25MAR05A	08MAY06	8	80	180	-57	-132		
6586	VaBldg-Proc & Manuf. FS wet sys	120	06JUN05A	22FEB06	20	70	120	53	-74		
6851	VaBldg-Proc & Manuf. TVF, Ductwks & Cont'l sys	180	09JUN05A	08MAY06	20	30	180	-5	-52		
6588	VaBldg-Proc & Manuf. MVAC mech.vent. sys	180	13OCT05	29MAY06	0	80	180	-95	-138		
7591	VaBldg-Proc & Manuf. PD irrig. sys	120	13OCT05	13MAR06	0	90	120	31	-108		
8496	VaBldg-Proc & Manf bldg related luminaires	180	13OCT05	29MAY06	0	80	180	-59	-132		
6585	VaBldg-Proc & Manuf. PD fresh & flush water sys	120	19NOV05	24APR06	0	90	120	-13	-134		
CONST	RUCTION WORKS										
ADIT TU	NNEL										
TUNNEL						1	1	1			
1535	VA Portal Lining (20m) Bldg.	24	03OCT05*	31OCT05	0	100	24	-37	-140		
1536	VA Form Portal Transition Structure VA Bldg.	18	01NOV05	21NOV05	0	100	18	-37	-146		
VA TRAN	ISITION STRUCTURE										
1565	VA Excav.VA-RT LH Junction 54m w/CP.7	10	05MAR05A	24SEP05	52	100	5	-43	-243		
1924	VA RC Tnl Interface upper part	88	20SEP05	05JAN06	0	100	88	-78	-90		
1923	VA RC Tnl Interface Lower part	40	17OCT05	01DEC05	0	100	40	669	-151		
SUBSTR	RUCTURE	1			1	1	1	1			
	VA Bldg. Fnd.GL.A-F/1-6 +101.7mPD	24	23APR05A	12OCT05	70	100	18	-107	-124		
6589	VaBldg Drainage & Earth mat	48	23APR05A	19OCT05	60	100	24	-107	-142		
SUPERS	TUCTURE				I						
RC WOF											
	VA Bldg.RC.Walls/Cols to GL GL.D-F/1-6	18	23AUG05A	19OCT05	0	100	24	-107	-107		
1537	VA Bldg.RC Base LPL GL.D-F/1-6 +105.00mPD	18	20SEP05	26OCT05	0	100	18	-73	-124		
1539	VA Bldg.RC.GL S/Slab GL.C-F/1-6 +109.60mPD	16	20SEP05	280CT05	0	100	16	-107	-107		
1540	VA Bldg.RC Walls/Cols to 1FL GL.C-F/1-6	16	29SEP05	07NOV05	0	100	16	-107	-107		

ID Description Date Start Pinish Compt Compt Dur Pinish Pinish Compt Dur Pinish Pinish Compt Dur Pinish	Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL		AUG	SEF		ОСТ	NOV	DEC	JAN
Incompose Incompose Incompose Incompose Incompose 1541 VA Bidg RC Sillab TFL GLC-F/1-6 16 200CT05 25NOV05 0 100 16 107 107 1542 VA Bidg RC Sillab TFL GLC-F/1-6 16 200CT05 05DEC05 0 100 16 107 107 1545 VA Bidg RC Sillab UFL GLC-F/1-6 16 200CT05 05DEC05 0 100 16 107 107 1545 VA Bidg RC Sillab UFL GLC-F/1-6 16 08VOV05 140EC05 0 100 16 107 107 1545 VA Bidg RC Sillab GLA-C/1-6 14 16DEC05 0 100 14 107 107 1545 VA Bidg RC Sillab UFL +131.65mPD 12 18NOV05 0 100 14 107 107 1545 VA Bidg RC Sillab UFL +131.65mPD 24 28NOV05 0 100 14 107 107 1545 VA Bidg Sillab Sillab UFL +131.65mPD 24 28NOV05 0 100 16 107 107 1545 VA B		•			•							1 8	23	24 9 5 12	19 26	25	26 31 7 14 21 2	27 8 5 12 19 26	2 9 1
1542 VA Bidg RC Walk/Cols to 2FL GL.C-F/1-6 16 200 CT05 25NOV05 0 100 16 107 107 1543 VA Bidg RC Sidalo 2FL GL.C-F/1-6 16 200 CT05 050 EC05 0 100 16 107 107 1544 VA Bidg RC Sidalo 2FL GL.C-F/1-6 16 00N/015 14DEC05 0 100 16 107 107 1544 VA Bidg RC Sidalo 2FL GL.C-F/1-6 16 00N/015 14DEC05 0 100 14 107 107 1544 VA Bidg RC Walk/Cols to IF GL.A-C/1-6 14 16DEC05 0 100 14 107 107 1546 VA Bidg RC Walk/Cols to IF GL.A-C/1-6 14 16DEC05 0 100 14 107 107 1546 VA Bidg RC Walk/Cols to IF GL.A-C/1-6 14 16DEC05 0 100 14 107 107 1546 VA Bidg RC Walk/Cols to IF GL.A-C/1-6 14 16DEC05 0 100 16 106 16 100 16 107 107 107 106 107 107 108	RC WOF	RKS		, i i i i i i i i i i i i i i i i i i i															
1542 VA Blag RC SSIble 2FL GL C-F/1-6 +124 495mPD 16 29OCTIG 05DECOG 0 100 16 107 1544 VA Blag RC Ssible 2FL GL C-F/1-6 16 08NV/05 14DECOS 0 100 12 105 107 1545 VA Blag RC Ssible URFL +131 65mPD 12 1080 V05 24DECOS 0 100 12 105 107 1545 VA Blag RC Smd Slab GLA-C/1-6 +109.560mPD 12 08DECOS 0 100 14 107 107 1546 VA Blag RC Smd Slab GLA-C/1-8 14 16DECOS 0.100 14 107 107 1546 VA Blag SmCost Steelwoods URFL +1316 650m 24 29NOV05 07JAN06 0 100 14 107 107 1546 VA Blag SmCost Steelwoods URFL +1316 650m 24 29NOV05 07JAN06 0 100 14 107 107 1545 VA Blag SmCost Steelwoods URFL +1316 650m 24 20NOV05 07JAN06 0 100 16 106 107 1545 VA Blag SmCost Steelwoods URFL +1316 (50mPD 12 20NOV05	1541	VA Bldg.RC S/Slab 1FL.GL.C-F/1-6 +116.70mPD	16	10OCT05	16NOV05	0	100	16	-107	-107									
1444 VA Bldg.RC Walla/Colds to URFL GL.C-F/1-6 16 08N0/05 14DEC05 0 100 16 100 12 100 16 100 12 100 16 100 12 100 12 100 12 100 12 100 12 100 12 100 12 100 12 100 12 100 12 100 12 100 12 100 12 100 12 100 12 100 12 100 12 100 14 100 <td>1542</td> <td>VA Bldg.RC Walls/Cols to 2FL GL.C-F/1-6</td> <td>16</td> <td>20OCT05</td> <td>25NOV05</td> <td>0</td> <td>100</td> <td>16</td> <td>-107</td> <td>-107</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	1542	VA Bldg.RC Walls/Cols to 2FL GL.C-F/1-6	16	20OCT05	25NOV05	0	100	16	-107	-107									
1445 VA Bidg RC SV3ibb URFL+131.65mPD 12 19NOV05 24DEC05 0 100 12 107 1447 VA Bidg RC. Gmd.Slab GLA-C/1-6 14 19DEC05 0 100 12 107 1546 VA Bidg RC. SValb/Cole to 1F GLA-C/1-6 14 19DEC05 0.100 14 107 107 1546 VA Bidg RC. Walb/Cole to 1F GLA-C/1-6 14 19DEC05 0.100 14 107 107 1546 VA Bidg RC. Walb/Cole to 1F GLA-C/1-6 14 19DEC05 0.100 14 107 107 1546 VA Bidg MC.Nextors Expension 24 29NOV05 07JAN06 0 100 16 107 1553 VA Bidg MVPool Tank/WPits & Toel GLH-S/10-12 16 150EC05 05JAN06 0 100 18 -6 107 1553 VA Bidg MVAC MCC, Dower 8 Expension 18 150EC05 05JAN06 0 100 18 -6 107 1554 VA Bidg MVAC MCC, Dower 8 5000JLAA 23NOV05 95 100 54 104 -243 -24	1543	VA Bldg.RC S/Slab 2FL GL.C-F/1-6 +124.95mPD	16	29OCT05	05DEC05	0	100	16	-107	-107									
1547 VA Bldg,RC. Grind. Slab GLA-C/1-6 12 06DEC05 0 100 12 107 107 1548 VA Bldg,RC. Walls/Cole to 1F GLA-C/1-6 14 16DEC05 0 100 14 107 107 1548 VA Bldg,RC. Walls/Cole to 1F GLA-C/1-6 14 16DEC05 0 100 14 107 107 1548 VA Bldg,RC. Walls/Cole to 1F GLA-C/1-6 14 16DEC05 0 100 14 107 107 1548 VA Bldg,RV. Walls/Cole to 1F GLA-C/1-6 14 16DEC05 0 100 16 106 107 1549 VA Bldg,RV/Pool Tanks/Pits 4 Test GLH-S/10-12 16 15DEC05 0 100 16 106 107 1553 VA.Bldg,Pilinths LPL 18 15DEC05 0 100 16 106 107 1553 VA.Bldg,Pilinths LPL 18 15DEC05 0 100 16 106 100 16 106 107 8200 EmtHpBidg-Sub.MVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 </td <td>1544</td> <td>VA Bldg.RC Walls/Cols to URFL GL.C-F/1-6</td> <td>16</td> <td>08NOV05</td> <td>14DEC05</td> <td>0</td> <td>100</td> <td>16</td> <td>-106</td> <td>-107</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	1544	VA Bldg.RC Walls/Cols to URFL GL.C-F/1-6	16	08NOV05	14DEC05	0	100	16	-106	-107									
1548 VA Bidg,RC, Walls/Cols to 1F GL.A-C/1-6 14 160EC06 0.4JAN06 0 100 14 -107 -107 STRUCTURAL STEELWORKS 1546 VA Bidg,Biruct,Stoelworks, URFL + 131.65mPD 24 29N 0/05 07.JAN06 0 100 24 79 -95 ARCHITECTURAL & BUILDER'S WORKS BUILDER'S WORKS BUILDER'S WORKS 16 150E 0X 0.JAN06 0 100 16 -106 -107 1563 VA Bidg,Wirdor Tanks/Pits & Test GL H-S/10-12 16 150EC06 0.JAN06 0 100 18 46 -107 1563 VA Bidg,Wirdor Tanks/Pits & Test GL H-S/10-12 16 150EC06 0.JAN06 0 100 18 46 -107 1563 VA Bidg,Wirdor Tanks/Pits & Test GL H-S/10-12 16 150EC06 0.JAN06 0 100 18 46 -107 1563 VA Bidg,Wirdor Tanks/Pits & Test GL H-S/10-12 16 150EC06 0.JAN06 0 100 16 -106 -107 8260 EnthyBidg-Sub,MXAC MCC, power A control sys 54 0.JUIL04A 23N/005 95	1545	VA Bldg.RC S/Slab URFL +131.65mPD	12	18NOV05	24DEC05	0	100	12	-105	-107									
TRUCTURAL STEELWORKS TS40 VA Bldg. Struct. Steelworks URFL + 131.65mPD 24 29 JOV05 07 JAN06 0 100 24 79 -95 ARCHITECTURAL & BUILDER'S WORKS BUILDER'S WORKS 1533 VA.Bldg.WiProof Tanks/Pits & Test GL.H-S/10-12 16 15DEC05 07 JAN06 0 100 16 -106 -107 TS33 VA.Bldg.Plinths LPL 18 15DEC05 07 JAN06 0 100 16 -106 -107 ENT NORTH PORTAL VENTILATION BUILDING SUBMITTALS 8240 EnrichBidg-Sub.MVAC MCC, power & control sys 54 02 JUL04A 23NOV05 95 100 54 -104 -243 8240 EnrichBidg-Sub.MVAC MCC, power & control sys 54 02 JUL04A 23NOV05 95 100 54 24 91 8240 EnrichBidg-Sub.MVAC MCC, power & control sys 54 02 JUL04A 23NOV05 95 100 54 24 91 8240 EnrichBidg-Sub.MVAC MCC, power & control sys 54 02 JUL04A 23NOV05 95 100	1547	VA Bldg.RC.Grnd.Slab GL.A-C/1-6 +109.60mPD	12	06DEC05	19DEC05	0	100	12	-107	-107	-								
1546 VA Bidg Struct Steelworks URFL +131.65mPD 24 29N0V05 07 JAN06 0 100 24 -79 -95 ARCHITECTURAL & BUILDER'S WORKS BUILDER'S WORKS 1553 VA.Bidg.WiProof Tanks/Plis & Test GL.H-S/10-12 16 15DEC05 05 JAN06 0 100 16 -106 -107 1553 VA.Bidg Plinths LPL 18 15DEC05 07 JAN06 0 100 16 -106 -107 ENT NORTH PORTAL VENTILATION BUILDING SUBMITTALS & APPROVALS EACH FIRE ALSUBMITTALS 54 02 JUL04A 23NOV05 95 100 54 -104 -243 8207 EnthpBidg-Sub.MVAC MCC, power & control sys 54 05 JUL04A 23NOV05 95 100 54 -91 82267 EnthpBidg-Sub.MVAC MCc, power & control sys 54 05 JUL04A 23NOV05 95 100 54 -128 -255 82267 EnthpBidg-Sub.MVAC //TVF pneumatic sys 54 05 JUL04A 23NOV05 95 100 54 -128 -255 -255 -255	1548	VA Bldg.RC.Walls/Cols to 1F GL.A-C/1-6	14	16DEC05	04JAN06	0	100	14	-107	-107									
ARCHITECTURAL & BUILDER'S WORKS BUILDER'S WORKS 1553 VA.Bidg.WProof Tanks/Pits & Test GL.H-S/10-12 16 15DECOS 05JAN06 0 100 16 -106 -107 1553 VA.Bidg.WProof Tanks/Pits & Test GL.H-S/10-12 16 15DECOS 07JAN06 0 100 18 -96 -107 ENT NOTAL VENTILATION BUILDING SUBMITTALS & APPROVALS 54 02JUL04A 23NOV05 95 100 54 -104 -243 8200 EntNpBidg-Sub.NVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 -104 -243 8200 EntNpBidg-Sub.MVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 -104 -243 8205 EntNpBidg-Sub.MVAC mech.vent.sys 54 05JUL04A 23NOV05 95 100 54 -128 -255 8253 EntNpBidg-Sub.MVAC mech.vent.sys 54 05AU04A 23NOV05 95 100 54 -146 -175 8255 EntNpBidg-Sub.MVAC / TVF pneumatic sys 54	STRUCT	URAL STEELWORKS				1	1	1											
UILDER'S WORKS 1553 VA.Bidg, WiProol Tanks/Pits & Test GL.H-S/10-12 16 15DEC05 05JAN06 0 100 16 -107 1554 VA.Bidg, Plinths LPL. 18 15DEC05 07JAN06 0 100 18 -96 -107 ENT NORTH PORTAL VENTILATION BUILDING SUBMITTALS & APPROVALS EAM EOPT.& MATERIAL.SUBMITTALS 54 02JUL04A 23NOV05 95 100 54 -104 -243 8257 EnthypBidg-Sub.FS AFA & FM200 sys 54 02JUL04A 23NOV05 95 100 54 -104 -243 8257 EnthypBidg-Sub.FS AFA & FM200 sys 54 03AUG04A 23NOV05 95 100 54 46 -175 8253 EnthypBidg-Sub.FS wet sys 54 05AUG04A 23NOV05 95 100 54 46 -175 8259 EnthypBidg-Sub.MXAC / TVF pneumatic sys 54 05AUG04A 23NOV05 95 100 54 46 -175 <t< td=""><td>1546</td><td>VA Bldg.Struct.Steelworks URFL +131.65mPD</td><td>24</td><td>29NOV05</td><td>07JAN06</td><td>0</td><td>100</td><td>24</td><td>-79</td><td>-95</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	1546	VA Bldg.Struct.Steelworks URFL +131.65mPD	24	29NOV05	07JAN06	0	100	24	-79	-95									
UILDER'S WORKS 1553 VA.Bidg, WiProol Tanks/Pits & Test GL.H-S/10-12 16 15DEC05 05JAN06 0 100 16 -107 1554 VA.Bidg, Plinths LPL. 18 15DEC05 07JAN06 0 100 18 -96 -107 ENT NORTH PORTAL VENTILATION BUILDING SUBMITTALS & APPROVALS EAM EOPT.& MATERIAL.SUBMITTALS 54 02JUL04A 23NOV05 95 100 54 -104 -243 8257 EnthypBidg-Sub.FS AFA & FM200 sys 54 02JUL04A 23NOV05 95 100 54 -104 -243 8257 EnthypBidg-Sub.FS AFA & FM200 sys 54 03AUG04A 23NOV05 95 100 54 46 -175 8253 EnthypBidg-Sub.FS wet sys 54 05AUG04A 23NOV05 95 100 54 46 -175 8259 EnthypBidg-Sub.MXAC / TVF pneumatic sys 54 05AUG04A 23NOV05 95 100 54 46 -175 <t< td=""><td>ARCHIT</td><td>ECTURAL & BUILDER'S WORKS</td><td>1 1</td><td>I</td><td></td><td>1</td><td>I</td><td>I</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	ARCHIT	ECTURAL & BUILDER'S WORKS	1 1	I		1	I	I											
1553 VA.Bldg.Wi/Proof Tanks/Pits & Test GL.H-S/10-12 16 15DEC05 05JAN06 0 100 16 -106 -107 1554 VA.Bldg.Plinths LPL. 18 15DEC05 07JAN06 0 100 18 -96 -107 SUBMITTALS & APPROVALS Eam EQPT.& MATERIAL.SUBMITTALS 8260 EnthyBidg-Sub.MVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 -104 -243 8257 EnthyBidg-Sub.MVAC mech.vent. sys 54 05JUL04A 23NOV05 95 100 54 -146 -175 8253 EnthyBidg-Sub.MVAC mech.vent. sys 54 05JUL04A 23NOV05 95 100 54 46 -175 8253 EnthyBidg-Sub.MVAC / TVF pneumatic sys 54 05AUG04A 23NOV05 95 100 54 46 -175 8255 EnthyBidg-Sub.MVAC / TVF pneumatic sys 54 05AUG04A 21DEC05 98 100 78 -66 -01 -01 -01 -01 -01 -01 -01 -01 -01																			
ENTROP North PORTAL VENTILATION BUILDING Second and a conditional stress of the condit stress of the conditional stress of the conditional			16	15DEC05	05JAN06	0	100	16	-106	-107		_							
SUBMITTALS & APPROVALS E&M EQPT.& MATERIAL.SUBMITTALS 8260 EntNpBidg-Sub.MVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 -104 -243 8257 EntNpBidg-Sub.JNVAC mech.vent. sys 54 05JUL04A 23NOV05 95 100 54 34 -91 8257 EntNpBidg-Sub.JNVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 -128 -255 8253 EntNpBidg-Sub.MVAC mech.vent. sys 54 05AUG04A 23NOV05 95 100 54 46 -175 8259 EntNpBidg-Sub.MVAC / TVF pneumatic sys 54 05AUG04A 23NOV05 95 100 54 46 -175 8259 EntNpBidg-Sub.MVAC / TVF pneumatic sys 54 14AUG04A 16NOV05 95 100 48 -2 -45 8256 EntNpBidg-Sub.MVAC Package AC Units 54 17JAN05A 23NOV05 95 90 54 46 -45 8256 EntNpBidg-Sub.MVAC Package AC Units 54 17JAN05A 23NOV05 <td< td=""><td>1554</td><td>VA.Bldg.Plinths LPL.</td><td>18</td><td>15DEC05</td><td>07JAN06</td><td>0</td><td>100</td><td>18</td><td>-96</td><td>-107</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	1554	VA.Bldg.Plinths LPL.	18	15DEC05	07JAN06	0	100	18	-96	-107									
E&M EOPT.& MATERIAL.SUBMITTALS 54 02JUL04A 23NOV05 95 100 54 -104 -243 8260 EntNpBidg-Sub.MVAC MCC, power & control sys 54 05JUL04A 23NOV05 95 100 54 34 -91 8257 EntNpBidg-Sub.FS AFA & FM200 sys 54 05JUL04A 23NOV05 95 100 54 34 -91 8258 EntNpBidg-Sub.MVAC mech.vent. sys 54 05AUG04A 23NOV05 95 100 54 46 -175 8259 EntNpBidg-Sub.MVAC / TVF pneumatic sys 54 05AUG04A 23NOV05 95 100 54 46 -175 8259 EntNpBidg-Sub.MVAC / TVF pneumatic sys 54 05AUG04A 23NOV05 95 100 48 -2 -45 8255 EntNpBidg-Sub.MVAC / TVF pneumatic sys 78 28AUG04A 21DEC05 98 100 78 -56 -201 8256 EntNpBidg-Sub.MVAC Package AC Units 54 17JAN05A 23NOV05 95 90 54 46 -45 6196 EntNpBidg-App. HV power di						1	1												
8260 EntNpBldg-Sub.MVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 -104 -243 8257 EntNpBldg-Sub.FS AFA & FM200 sys 54 05JUL04A 23NOV05 95 100 54 34 -91 8257 EntNpBldg-Sub.FS AFA & FM200 sys 54 05JUL04A 23NOV05 95 100 54 34 -91 8254 EntNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 -128 -255 8253 EntNpBldg-Sub.FS wet sys 54 05AUG04A 23NOV05 95 100 54 -175 8259 EntNpBldg-Sub.MVAC / TVF pneumatic sys 54 14AUG04A 16NOV05 95 100 48 -2 -45 8255 EntNpBldg-Sub.CMCS & ELV sys 78 28AUG04A 21DEC05 98 100 78 -56 -201 8256 EntNpBldg-Sub.MVAC Package AC Units 54 17JAN05A 23NOV05 95 90 54 46 -45 6196 EntNpBldg-App. HV power dist. sys	SUBMIT	TALS & APPROVALS																	
Result Result						1	1	1											
a254 EntNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 -25 8253 EntNpBldg-Sub.FS wet sys 54 05AUG04A 23NOV05 95 100 54 46 -175 8253 EntNpBldg-Sub.MVAC / TVF pneumatic sys 54 14AUG04A 16NOV05 95 100 48 -2 -45 8255 EntNpBldg-Sub.MVAC / TVF pneumatic sys 54 14AUG04A 16NOV05 95 100 78 -66 -201 8255 EntNpBldg-Sub.MVAC Package AC Units 54 17JAN05A 23NOV05 95 90 54 46 -45 E&M EQPT.& MATERIAL APPROVALS 18 14JUL04A 12OCT05 95 100 18 -104 -195						95	100			-243									
8253 EntNpBldg-Sub.KVAC / TVF pneumatic sys 54 05AUG04A 23NOV05 95 100 54 46 -175 8259 EntNpBldg-Sub.MVAC / TVF pneumatic sys 54 14AUG04A 16NOV05 95 100 48 -2 -45 8255 EntNpBldg-Sub.MVAC / TVF pneumatic sys 78 28AUG04A 21DEC05 98 100 78 -56 -201 8256 EntNpBldg-Sub.MVAC Package AC Units 54 17JAN05A 23NOV05 95 90 54 46 -45 E4M EQPT.& MATERIAL APPROVALS 18 14JUL04A 12OCT05 95 100 18 -104 -195						95	100		34										
8259 EntNpBldg-Sub.MVAC / TVF pneumatic sys 54 14AUG04A 16NOV05 95 100 48 -2 -45 8255 EntNpBldg-Sub.CMCS & ELV sys 78 28AUG04A 21DEC05 98 100 78 -56 -201 8256 EntNpBldg-Sub.MVAC Package AC Units 54 17JAN05A 23NOV05 95 90 54 46 -45 E&M EQPT.& MATERIAL APPROVALS 18 14JUL04A 12OCT05 95 100 18 -104 -195						95	100												
B255 EntNpBldg-Sub.CMCS & ELV sys 78 28AUG04A 21DEC05 98 100 78 -56 -201 8256 EntNpBldg-Sub.MVAC Package AC Units 54 17JAN05A 23NOV05 95 90 54 46 -45 E&M EQPT.& MATERIAL APPROVALS 6196 EntNpBldg-App. HV power dist. sys 18 14JUL04A 12OCT05 95 100 18 -104 -195																			
8256 EntNpBldg-Sub.MVAC Package AC Units 54 17JAN05A 23NOV05 95 90 54 46 -45 E&M EQPT.& MATERIAL APPROVALS 6196 EntNpBldg-App. HV power dist. sys 18 14JUL04A 12OCT05 95 100 18 -104 -195																			
E&M EQPT.& MATERIAL APPROVALS Image: Constraint of the second										-201									
6196 EntNpBldg-App. HV power dist. sys 18 14JUL04A 12OCT05 95 100 18 -104 -195	8256	EntNpBldg-Sub.MVAC Package AC Units	54	17JAN05A	23NOV05	95	90	54	46	-45									
	E&M EQ	PT.& MATERIAL APPROVALS																	
6197 EntNpBldg-App. LV power dist. sys 18 13AUG04A 12OCT05 90 100 18 -110 -159	6196	EntNpBldg-App. HV power dist. sys	18	14JUL04A	12OCT05	95	100	18	-104	-195									
	6197	EntNpBldg-App. LV power dist. sys	18	13AUG04A	12OCT05	90	100	18	-110	-159									

Act.	Activity	Orig		Early	%	DWP %					AUG 23		SEP 24		OCT 25	NOV 26		DEC 27	JAN 2
		Dur	Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	11 18 25	1 8 15 2	22 29 5	12 19	<mark>⊧26 ∣</mark> 3	10 17 24	31 7 14 2	21 28 5	12 19 26	29
(PT.& MATERIAL APPROVALS EntNpBldg-App. building related luminaires	18	18AUG04A	12OCT05	80	100	18	-50	-145										
0433	Entropping-App. building related furninalies		10700047	1200103	00	100	10	-50	-145										
6199	EntNpBldg-App. FS wet sys	18	04SEP04A	12OCT05	60	100	18	46	-121										
6210	EntNpBldg-App. FS AFA & FM200 sys	18	14SEP04A	12OCT05	70	100	18	34	-37			-	-						
6203	EntNpBldg-App. CMCS & ELV sys	18	20SEP04A	31OCT05	88	100	18	-72	-139							•			
6200	EntNpBldg-App. MVAC mech.vent. sys	18	23SEP04A	12OCT05	60	100	18	-128	-201				_						
6198	EntNpBldg-App. PD cleans. & flush water sys	18	04NOV04A	12OCT05	75	100	18	28	-139										
6823	EntNpBldg-App. TVF, Ductworks & Control sys	18	12NOV04A	12OCT05	70	100	18	-56	-133	-									
6837	EntNpBldg-App. MVAC MCC, power & control sys	18	12NOV04A	12OCT05	75	100	18	-104	-189										
6207	EntNpBldg-App. MVAC Package AC Unit sys	18	01FEB05A	12OCT05	90	0	18	46	9										
ABWF V	VORKS		I		1	1	1	1	1										
1955	NP.Bldg Prep & submit louvre details	24	19NOV04A	04OCT05	50	100	12	-2	-231		1		_						
1959	NP.Bldg Prep & sub aluminium cladding	24	19NOV04A	04OCT05	50	100	12	-26	-231				_						
1970	NP.Bldg Prep & submit slate cladding	24	19NOV04A	04OCT05	50	100	12	-2	-231	-			-	_					
1957	NP.Bldg Prep & sub balustrade & metal wks	24	20JAN05A	04OCT05	50	100	12	4	-181				_						
1961	NP.Bldg Prep & sub fall arrest system	24	01FEB05A	04OCT05	50	100	12	-2	-171				-						
1946	NP.Bldg Prep & submit door & window detail	24	17FEB05A	04OCT05	50	100	12	718	-163										
1954	NP.Bldg Approve door & window details	24	06APR05A	19OCT05	50	100	24	22	-151										
1956	NP.Bldg Approve louvre details	24	08APR05A	19OCT05	50	100	24	-14	-219	-									
1963	NP.Bldg Approve slate cladding	24	15JUN05A	19OCT05	50	100	24	-14	-219										
1962	NP.Bldg Approve fall arrest system	24	20SEP05	19OCT05	0	100	24	-14	-159				•						
1958	NP.Bldg Approve balustrade & metal works	24	05OCT05	02NOV05	0	100	24	4	-181										
1960	NP.Bldg Approve aluminium cladding	24	05OCT05	02NOV05	0	100	24	-26	-231	1						•			

Act.	Activity	Orig	Early	Early	%	DWP %	Pom	Total	Varianca	JUL	AUG	SEP		ОСТ	NOV	DEC	JAN
ID	Description	Dur	-	Finish		Compl.				22	23 1 ₁ 8 ₁ 15 22 2	24	10 26	25	26	27	28
	REMENT - MATERIAL	Bai	Otart		Compi.	oompi.	Bai	Tioat		11 18 23	1 18 113 122 12	<u>9</u> 0 (12)	19 20	3 10 17 24	31 1 14 21	<u>48 p 12 19 20</u>	
	WORKS																
	NP.Bldg Procure aluminium cladding	180	18JAN05A	19OCT05	50	100	24	-44	-39								
1001		100	100/1100/1	1000100	00	100			00								
1966	NP.Bldg Procure balustrade & metal works	120	24MAR05A	19OCT05	50	100	24	-38	-49								
E&M WO																	
6202	EntNpBldg-Proc & Manuf. LV power dist. equip't	180	20MAR05A	08MAY06	20	80	180	-110	-141						-		
6201	EntNpBldg-Proc. & Manuf. of HV dist. equip't	180	25MAR05A	08MAY06	15	100	180	-104	-177								
0201			2011/1 11 10 0/1	001111100									╞				
6208	EntNpBldg-Proc. & Manuf. of CMCS & ELV sys	180	25MAR05A	26MAY06	15	70	180	-72	-121								
		100					100			-							
6838	EntNpBldg-Proc & Manuf. MCC, power & control sys	180	25MAR05A	08MAY06	8	95	180	-104	-171								
6205	EntNpBldg-Proc & Manuf. FS wet sys	120	06JUN05A	08APR06	20	90	120	6	-143								
								-									
6824	EntNpBldg-Proc & Manuf. TVF, Ductwks&Cont'l sys	180	09JUN05A	10JUN06	20	80	180	-84	-143								
				001411/00			400			-							
6206	EntNpBldg-Proc & Manuf. MVAC mech.vent. sys	180	13OCT05	29MAY06	0	100	180	-128	-201								
8500	EntNpBldg-Proc & Manf bldg related luminaires	180	130CT05	29MAY06	0	80	180	-50	-145								
6204	EntNpBldg-Proc & Manuf. Cleans & flush water sys	120	18OCT05	17MAR06	0	100	120	24	-143								
	RUCTION																
	RUCTURE																
RC WOR					1												
1386	NP.Bldg RC Found & Drainage GL.A-K/2-6	54	14FEB05A	28SEP05	90	100	8	-132	-155								
SUPERS	TRUCTURE	I			1		I										
RC WOR																	
	AGEWAY & CENTRAL RESERVE																
	NP.Bldg Nth Bound C/Way RC Base Slab	18	20JUN05A	31AUG05A	100	100	0		-126			–					
1387	NP.Bldg RC Cols.& Walls to 1FL.GL.A-K/2-6	18	03AUG05A	19OCT05	40	100	24	-132	-159								
1289	NP.Bldg RC Walls to Tanks/Pits GL.A-K/2-6	1.8	03AUG05A	26AUG05A	100	100	0		-110								
1300	The Long NO Wails to ranks/ its GL.A-IVZ-0	10	UJAUGUJA	20400004	100	100			-110								
1385	NP.Bldg Nth Bound C/Way RC Ret. Wall W1	24	03SEP05A	08OCT05	25	100	16	-88	-139	1							
										-							
1389	NP.Bldg RC S/Slab 1FL.+72.50mPD GL.A-K/2-6	18	20SEP05	02NOV05	0	100	18	-132	-147								
1390	NP.Bldg RC Cols.& Walls to 2FL.GL.A-K/2-6	18	20OCT05	16NOV05	0	100	18	-132	-147								+
1000	The Long. The Colore Walls to 21 E.CE.ATIV2-0		2000100	10110 100		100	10	102	1.47								
								· 1					• •		-		

Act.	Activity	Orig		Early	%	DWP %					AUG 23		SEP 24	0CT 25	NOV 26	DEC 27	JAN 2
ID	Description AGEWAY & CENTRAL RESERVE	Dur	Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	11 18 25	1 8 15 2	2 29 5 1	2 ₁ 19 ₁ 26	3 10 17 24	31 7 14 21 28	5 12 19 26	29
	NP.Bldg RC S/Slab LPL.+74.40mPD GL.A-K/2-6	12	03NOV05	23NOV05	0	100	12	-132	-147								
1392	NP.Bldg RC S/Slab LPL.+75.50mPD GL.G-K/2-6	12	10NOV05	30NOV05	0	100	12	-132	-147							1	
1393	NP.Bldg - RC Trans Slab 2FL.~+78.5mPD GL.A-K/2-7	20	01DEC05	23DEC05	0	100	20	-132	-147								
1395	NP.Bldg RC Cols.& Walls to 3FL.GL.A-J/3-6	18	22DEC05	14JAN06	0	100	18	-130	-147								
1394	NP.Bldg - RC S/Slab U2FL.+78.40.65mPD GL.E-H/3-7	12	24DEC05	10JAN06	0	100	12	-132	-147								
SB CARRIA	AGEWAY							1	1								
1404	NP.Bldg Sth Bound C/Way RC Base Slab	18	30JUL05A	14OCT05	10	100	20	-114	-125								
1405	NP.Bldg Sth Bound C/Way RC Ret Wall W2	24	15OCT05	11NOV05	0	100	24	-114	-125								
1406	NP.Bldg RC Trans Slab 2FL.~78.5mPD GL.A-K/1-2	15	12NOV05	29NOV05	0	100	15	-114	-125								
1408	NP.Bldg RC Cols.& Walls to 3FL.GL.A-J/1-3	18	26NOV05	16DEC05	0	100	18	-114	-125								
1407	NP.Bldg RC S/Slab U2FL.~78.5mPD GL.E-H/1-3	12	10DEC05	03JAN06	0	100	12	-114	-125		-						
1409	NP.Bldg RC S/Slab 3FL.+85.98mPD GL.A-J/1-3	12	17DEC05	10JAN06	0	100	12	-114	-125	_							
1410	NP.Bldg RC Cols.& Walls to 4FL.GL.A-J/1-3	18	24DEC05	17JAN06	0	100	18	-34	-119								
FOLL P	LAZA & ANCILLIARY STRUCTURES																
CONTRA	ACT DEFINED DATES & SECTIONS																
AREA A	CCESS & VACATION DATES																
ACS_D5	Access to Portion - D5	0	10OCT05		0	0	0	10	0				>	Û			
SUBMIT	TALS & APPROVALS																
ABWF &	BUILDER'S WORKS																
1514	TP/FB - Approve lifts (x2) details	24	20SEP05	19OCT05	0	100	24	-59	-109				•				
1522	TP/FB - Approve footbridge details	24	20SEP05	19OCT05	0	100	24	-40	-278				•				
E&M EQ	PT. / MTRL. SUBMITTALS																
8258	EntNpBldg-Sub.TVF	78	02JUL04A	21DEC05	95	100	78	-56	-211								
E&M E	QPT. / MTRL. APPROVALS	1			1	·											
7547	TP-App. MVAC Package AC Unit sys	18	01FEB05A	18MAR06	30	0	18	-16	-51								
				1	1		1				1	-		1			+

Act.	Activity	Orig	Early	Early	%				Variance	JUL 22	AUG 23		SEP 24		OCT 25	NOV 26	DEC 27	JAN 28
ID	Description	Dur	Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	11 18 25	1 8 15 2	2 29	5 <u>12 1</u> 9	9 26	25 3 10 17 24 3	1 ₁ 7 <u>14</u> 21 28	3 5 12 19 26	2 9 1
DESIG	N & ENGINEERING																	1
PERMA	ANENT WORKS																	1
1244	Design/ICE Check Tool Booth Canopy	24	08NOV05	05DEC05	0	70	24	-40	-54									1
1341	Eng Approve Dsg Tool Booth Canopy	12	06DEC05	19DEC05	0	0	12	-40	-54									
	REMENT - MAJOR MATERIAL							1										
1518	Admin Bldg - Procure & maunfacture lift	270	20OCT05	20SEP06	0	40	270	-80	-134									1
0404	Orden/Esterioste/Deliver EDridge Otwertung Otest	400	0000705		0		400	10	54									
2184	Order/Fabricate/Deliver FBridge Structural Steel	120	26OCT05	25MAR06	0	30	120	-40	-54		_							
TOLL P		1 1			1	I												
	TP/FB - Procure & maunfacture lifts (x2)	270	20OCT05	20SEP06	0	30	270	-59	-109						_			
1512	TP/FB - Procure & maumacture mits (x2)	270	2000105	2032200	0	30	270	-59	-109									
1521	TP/FB - Procure & fabricate footbridge	110	200CT05	08MAR06	0	100	110	-40	-208									
1021			2000100	00111/11/00	Ŭ	100			200									
CONST	RUCTION WORKS	/		1		1												
	LAZA ROADWORKS																	
-																		
SURVE	r TP - Land Survey & report - Portion D5	8	10OCT05	19OCT05	0	0	0	0	0									
1/3/	TP - Land Survey & report - Portion DS	0	1000105	1900105	0	0	8	8	0									
ROADS	- FORMATION			1	1	1	1	1 1										-
	TP/Rd - Perm materials storage area; Ptn D2 & D3	175	01JUN04A	15OCT05	90	100	21	-71	-94									
				1000100	00	100			01									
1497	TP/Rd - Drainage ch.4+520 to 4+680	44	01AUG05A	27MAR06	20	0	150	-5	-14									
1744	TP/Rd - Drainage ch.4+320 to 4+460	40	20OCT05	05DEC05	0	0	40	11	0									
1877	TP/Rd - Water main	60	12NOV05	24JAN06	0	0	60	11	0									
4745		40	0010105	47144 000	-		40	45										
1745	TP/Rd - Drainage ch.4+460 to 4+520	46	22NOV05	17MAR06	0	0	46	15	0									
1879	TP/Rd - HV & LV Cable ducting	60	06DEC05	24FEB06	0	0	60	11	0									
10/0		00	3002003		Ŭ				5									<u> </u>
1825	TP/Rd - Drain Testing - ch.4+320 to 4+460	36	13DEC05	26JAN06	0	0	36	45	0									<u> </u>
									-									+
1775	TP/Rd - Telecom ducts	44	24DEC05	24FEB06	0	0	44	11	0									+
																		1
ROADS				1			-											
1743	TP/Rd - Drainage - EVA loop road - SW area	48	20OCT05	14DEC05	0	0	48	8	0									
																_		
1776	TP/Rd - Petrol Interceptor	24	14NOV05	10DEC05	0	0	24	-23	-41									
1754	TD/Dd Drain Teating EV/A loop road SW/ area	18			0	0	10	27	0									
1751	TP/Rd - Drain Testing - EVA loop road - SW area	18	15DEC05	07JAN06	U	U	18	37	0									
	1			1	1	1	1				I							+

Act.	Activity	Oric	Early	Early	%		Rom	Total	Variance	JUL	AUG	SEP	ост	NOV	DEC	JAN
ID	Description	Dur		Finish		Compl.	Dur	Float	arly Finis	22	23 1 8 15 22 3	24	25 26 3 10 17 24	26	27 28 5 12 19 26	28 5 2 9 1
ROADS	•	1			1	1		1		11 10 23		.9 0 12 19	20 5 10 17 24			
1752	TP/Rd - Sub-base - EVA loop road - SW area	6	15DEC05	21DEC05	0	0	6	49	0							
1756	TP/Rd - Drainage - EVA loop rd - E & NE area	55	15DEC05	28FEB06	0	0	55	8	0	-						
ROADS	- FINISHES					1										
1824	TP/Rd - Ptn D4 TCSS Ducts S&NB ch.4+460 to 4+520	24	20SEP05	19OCT05	0	100	24	-74	-74			•				
1500	TP/Rd - TCSS Ducts SB&NB C'Way ch.4+520 to 4+680	42	20OCT05	20MAR06	0	0	42	4	0							
1736	TP/Rd - Ptn D2&D3TCSS Dct S&NB ch.4+320 to 4+460	42	20OCT05	07DEC05	0	100	42	-74	-74							
1747	TP/Rd - Ptn D5 - TCSS Dct S&NB ch.4+320 to 4+460	30	08DEC05	14JAN06	0	0	30	-20	-42	>						
TOLL P	LAZA COLLECTOR'S SUBWAY	I	I	l 	1	ļ	1									
STRUCT																
1714	TP/CS - Substructure construction - Ptn A	18	25JUL05A	31OCT05	0	100	34	-102	-128					•		
1715	TP/CS - Substructure construction - Ptn B	18	25JUL05A	08OCT05	0	100	16	-78	-92							
1716	TP/CS - Substructure construction - Ptn C	18	25JUL05A	31OCT05	0	100	34	-72	-92					•		
1719	TP/CS - Waterproof & backfill - Ptn B	18	10OCT05	31OCT05	0	100	18	-78	-92	•				•		
1718	TP/CS - Waterproof & backfill - Ptn A	18	01NOV05	21NOV05	0	100	18	-102	-128				I			
1720	TP/CS - Waterproof & backfill - Ptn C	18	01NOV05	21NOV05	0	100	18	-72	-92				I			
1470	TP/CS - Excavation - Ptn D	8	24DEC05	05JAN06	0	0	8	15	0							
ABWF						1	1									
	TP/CS - Internal Finishes Ptn A, B & C	24	01NOV05	28NOV05	0	100	24	78	-92				[
TOLL P		1	1	I	1	1	I	1 1								
BORED	PILES															
1490	TP/FB - Site Investigation & Report - Cap FT1	12	20OCT05	02NOV05	0	0	12	11	0					—		
1491	TP/FB - Bored Pile 1.2m dia 4nr - Cap FT1	14	03NOV05	18NOV05	0	0	14	11	0	1						
FOUND	ATIONS															
1495	TP/FB - Pile Cap - Cap FT1	12	10DEC05	23DEC05	0	0	12	11	0]						
RC SUP	ERSTRUCTURE		•	·	1	·	·									
1694	TP/FB - Column & bearings C2	12	27APR05A	04OCT05	80	100	12	82	-86							
	1		L	1	1	1	1	1		1	ļ	-		1	+	-

Act.	Activity	Orig	Early	Early	%	DWP %					AUG 23		SEP 24		DCT 25	NOV 26		DEC 27	JAN 29
ID	Description	Dur	Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	11 18 25	23 1 ₁ 8 ₁ 15 µ	22 29 5	12 19	26 3 10	17 24 j	31 ₁ 7 ₁ 14 21	28 5	12 19 26	2 ₁ 9 1
	ERSTRUCTURE	-	T		1	T	1	1 1											
1707	TP/FB - Column & bearings C1	12	29APR05A	04OCT05	80	100	12	91	-85				Т						
1494	TP/FB - Column & bearings W2 (FT4)	12	13MAY05A	07SEP05A	100	100	0		-92										
1506	TP/FB - Column & bearings W1 (FT1)	12	24DEC05	10JAN06	0	0	12	11	0										
1507	TP/FB - Lift Machine room walls & stair (FT1)	15	24DEC05	13JAN06	0	0	15	14	0										
TOLL P	AZA BOOTHS	1	1		1	1	1												
STRUCT	URE																		
1510	TP/B - Construct toll islands - Portion A - 1 no	12	22NOV05	05DEC05	0	100	12	-102	-128										
1713	TP/B - Construct toll islands - Portion B - 5 no	30	29NOV05	05JAN06	0	100	30	-102	-116	1									•
ADMIN.	BLDG WORKSHOP	1	1		1	1	1	1 1											
FOUND																			
	Admin.Bldg. Wk Shop - Raft footing	18	14NOV05	03DEC05	0	0	18	-35	-41		ו				_				
STRUCT	URE	1	1		1	1	1												
	Admin.Bldg. Wk Shop - GF Slab	18	05DEC05	24DEC05	0	0	18	-35	-41										
1768	Admin.Bldg. Wk Shop - Columns & walls GF to Roof	18	19DEC05	11JAN06	0	0	18	-35	-41										
ADMIN	ISTRATION BUILDING	1	1		1	1	1	1 1											
SUBMI	ITALS & APPROVALS																		
ABWF 8	BUILDER'S WORKS																		
	Admin.Bldg Prep & submit glass canopy details	24	25AUG04A	04OCT05	50	100	12	-110	-302				+						
1893	Admin.Bldg Prep & submit louvre details	24	25AUG04A	04OCT05	50	100	12	-110	-302				-						
1897	Admin.Bldg Prep & sub aluminium cladding	24	25AUG04A	04OCT05	50	100	12	22	-302				+						
1889	Admin.Bldg Prep & submit curtain wall details	24	30SEP04A	04OCT05	50	100	12	-92	-272				+						
1883	Admin.Bldg Prep & sub sheet decking details	24	13NOV04A	19OCT05	12	100	24	-92	-248				+						
1891	Admin.Bldg Prep & submit door & window detail	24	13NOV04A	04OCT05	10	100	12	-80	-236				+						
1885	Admin.Bldg Prep & submit wood ceiling details	24	20NOV04A	04OCT05	50	100	12	-110	-230				+						
1899	Admin.Bldg Prep & sub fall arrest system	24	18DEC04A	04OCT05	50	100	12	-62	-206				+						
1517	Admin Bldg - Engineering & Submit lift details	78	28DEC04A	04OCT05	50	100	12	-68	-146				+						
					1	1							-			ļ			

Act. ID	Activity Description	Orig		Early	% Compl	DWP % Compl.					AUG 23		SEP 24		OCT 25		IOV 26	DEC 27	JAN
1 1	BUILDER'S WORKS	Dur	Start	Finish	Compi.	Compi.	Dur	Float	any Finis	11 18 25	1 ₁ 8 ₁ 15	22 29	5 12 19) <mark>26 3</mark>	10 17 24	31 7 (14 21 28	3 <mark>5 12 19 2</mark>	29
	Admin.Bldg Prep & sub balustrade & metal wks	24	05JAN05A	04OCT05	50	100	12	-104	-194										
1001	Admin.Bldg Prep & sub GRP water tank details	24		0400705	50	100	10	02	-188										
1001	Admin.Bidg Prep & Sub GRP water tank details	24	12JAN05A	04OCT05	50	100	12	-92	-188										
1892	Admin.Bldg Approve door & window details	24	06APR05A	19OCT05	50	100	24	-92	-224										
1894	Admin.Bldg Approve louvre details	24	07APR05A	19OCT05	50	100	24	-122	-290										
	Admin.Bldg Approve glass canopy details	24	07MAY05A	06OCT05	80	100	14	-112	-280										
	Admin Bldg - Approve lifts details	24	01JUN05A	19OCT05	50	100	24	-80	-134										
	Admin.Bldg Approve curtain wall details	24	22JUN05A	19OCT05	50	100	24	-104	-260										
	Admin.Bldg Prep & sub suspend ceiling details	24	12AUG05A	04OCT05	50	100	12	78	-20				-						
	Admin.Bldg Approve GRP water tank details	24	05OCT05	02NOV05	0	100	24	-92	-188										
1886	Admin.Bldg Approve wood ceiling details	24	05OCT05	02NOV05	0	100	24	-110	-230										
1888	Admin.Bldg Approve suspended ceiling details	24	05OCT05	02NOV05	0		24	78	-20										
1896	Admin.Bldg Approve balustrade & metal works	24	05OCT05	02NOV05	0	100	24	-104	-194										
1898	Admin.Bldg Approve aluminium cladding	24	05OCT05	02NOV05	0	100	24	22	-302										
1900	Admin.Bldg Approve fall arrest system	24	05OCT05	02NOV05	0	100	24	-62	-206										
1884	Admin.Bldg Approve sheet decking details	24	20OCT05	16NOV05	0	100	24	-92	-248										
1819	Admin.Bldg Approve stone cladding design	24	03NOV05	30NOV05	0		24	-2	-176										
1820	Admin.Bldg Approve slate cladding design	24	03NOV05	30NOV05	0		24	-2	-176										
	PT. / MTRL. SUBMITTALS						1												
8244	AdmBldg-Sub.FS AFA & FM200 sys	54	05JUL04A	23NOV05	95	100	54	16	-114										
8241	AdmBldg-Sub.MVAC mech.vent. sys	54	03AUG04A	23NOV05	95	100	54	-104	-270										
8240	AdmBldg-Sub.FS wet sys	54	05AUG04A	23NOV05	95	100	54	40	-258										
8242	AdmBldg-Sub.CMCS, TCS & ELV sys	78	26AUG04A	21DEC05	90	100	78	-114	-248										
8245	AdmBldg-Sub.Chiller & Pumps	54	30DEC04A	08SEP05A	100	100	0		-226										

ID Description Dir Stat Final Compl. Compl. Compl. Dir Hall averable Hall averable <th>Act.</th> <th>Activity</th> <th>Orig</th> <th>Early</th> <th>Early</th> <th>%</th> <th>DWP %</th> <th>Rem</th> <th>Total</th> <th>Variance</th> <th>JUL AUG SEP OCT NOV DEC JAN</th>	Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL AUG SEP OCT NOV DEC JAN
EAM EGPT, /MTRL. SUBMITTALS Set J Admids/Sub-SuFCU & SPAUs 54 ULANDAA 23KV0VG 80 100 64 23 144 Botta J Admids/Pubsics/LPG sys 54 07APROSA 23K0VG 80 100 54 23 144 Botta J Admids/Pubsics/LPG sys 54 07APROSA 23K0VG 80 100 54 23 144 Botta J Admids/Pubsics/LPG sys 54 07APROSA 23K0VG 80 100 18 40 276 Botta J Admids/Pubsics/LPG sys 18 14AUG04A 12OCT05 80 100 18 40 240 Botta J Admids/Pubsics/LPG sys 18 14AUG04A 12OCT05 80 100 18 40 240 6380 Admids/Pubsics/LPG sys 18 04SEP04A 12OCT05 80 100 18 40 240 6380 Admids/Pubsics/LPG sys 18 23SEP04A 12OCT05 80 100 18 40 240 6380 Admids/Pubsics/LPG sys 18 23SEP04A 12OCT05 100 18 14 <t< td=""><td></td><td></td><td></td><td></td><td>-</td><td></td><td>Compl.</td><td>Dur</td><td>Float</td><td>arly Finis</td><td>_ 22 23 24 25 26 27 St1 18 25 1 8 15 22 29 5 12 19 26 3 10 17 24 31 7 14 21 28 5 12 19 26 2 9</td></t<>					-		Compl.	Dur	Float	arly Finis	_ 22 23 24 25 26 27 St1 18 25 1 8 15 22 29 5 12 19 26 3 10 17 24 31 7 14 21 28 5 12 19 26 2 9
8247 AdmBidg-Design LPG sys 54 07APROSA 23N0V05 80 100 64 -23 134 8248 AdmBidg-Sub LPG sys 54 07APROSA 23N0V05 80 100 64 -23 144 6386 AdmBidg-Sub LPG sys 54 07APROSA 23N0V05 80 100 64 -23 40 6386 AdmBidg-Agp. HV power dist sys 18 14JUL04A 12OCT05 85 100 18 -80 -276 6386 AdmBidg-Agp. HV power dist sys 18 13AUG04A 12OCT05 80 100 18 48 -240 6380 AdmBidg-Agp. FS wet sys 18 13AUG04A 12OCT05 80 100 18 40 -201 6380 AdmBidg-Agp. FS AFA & FMD00 sys 18 14AUG04A 12OCT05 80 100 18 146 -216 6380 AdmBidg-Agp. FD all fresh & FMD00 sys 18 23SEP04A 12OCT05 50 100 18 141 170 6380 AdmBidg-Agp. FD all fresh & Flush water sys 18 04	E&M EQ	PT. / MTRL. SUBMITTALS									
8249 AdmBidg-Sub_LPG sys 64 07APR05A 29N0/V5 60 100 54 -29 -80 ESM EAM EAM LPG sys 18 1JJUL/4A 12OCT05 95 100 18 -80 -276 6386 AdmBidg-App, HV power dist. sys 18 1JJUG/AA 12OCT05 95 100 18 -80 -276 6386 AdmBidg-App, HV power dist. sys 18 1JJUG/Adv 12OCT05 60 100 18 -80 -240 8300 AdmBidg-App, FN power dist. sys 18 13MUGVA 12OCT05 60 100 18 40 -240 8300 AdmBidg-App, FN AS FN 200 sys 18 14SEP04A 12OCT05 60 100 18 140 -270 6380 AdmBidg-App, FN AS A S FN200 sys 18 23SEP04A 12OCT05 60 100 18 140 -270 6380 AdmBidg-App, FN AS A S FN200 sys 18 23SEP04A 12OCT05 60 100 18 140 -270 6380 AdmBidg-App, FN AS FN20 sys	8243	AdmBldg-Sub.FCUs & PAUs	54	04JAN05A	23NOV05	95	100	54	-101	-330	
EXA EOPT, MTRL APPROVALS Value V	8247	AdmBldg-Design LPG sys	54	07APR05A	23NOV05	80	100	54	-29	-134	
6386 AdmBldg-App. HV power dist. sys 18 14.UL04A 120CT05 95 100 18 40 276 6386 AdmBldg-App. LV power dist. sys 18 13AUG04A 120CT05 80 100 18 40 240 6386 AdmBldg-App. building related luminaires 18 13AUG04A 120CT05 80 100 18 48 128 6386 AdmBldg-App. building related luminaires 18 13AUG04A 120CT05 80 100 18 40 204 6386 AdmBldg-App. FS Met sys 18 04SEP04A 120CT05 70 100 18 40 204 6396 AdmBldg-App. of CMCS, TCS & ELV sys 18 20SEP04A 120CT05 80 100 18 14 170 6386 AdmBldg-App. MVAC moch.vent.sys 18 23SEP04A 120CT05 60 100 18 14 170 6386 AdmBldg-App. CN avait 18 23SEP04A 120CT05 30 100 18 24 24 6478 AdmBldg-App. CN avait sthun water sys	8249	AdmBldg-Sub.LPG sys	54	07APR05A	23NOV05	80	100	54	-29	-80	
6386 AdmBlg-App. LV power dist. sys 18 13AUGo4A 12OCTO5 90 100 18 40 -240 8503 AdmBlg-App. LV power dist. sys 18 14SEQ4A 12OCTO5 80 100 18 40 -240 6386 AdmBlg-App. FS AFA & FM200 sys 18 14SEPOA 12OCTO5 60 100 18 40 -240 6388 AdmBlg-App. FS AFA & FM200 sys 18 14SEPOA 12OCTO5 60 100 18 40 -240 6388 AdmBlg-App. of CMCS, TCS & ELV sys 18 12SEPOA 12OCTO5 60 100 18 140 -276 6388 AdmBlg-App. of CMCS, TCS & ELV sys 18 23SEPOA 12OCTO5 60 100 18 141 -170 6386 AdmBlg-App. MVAC mech.vent. sys 18 23SEPOA 12OCTO5 60 100 18 144 -246 6386 AdmBlg-App. Chiller & Hush water sys 18 12JAN05A 12OCTO5 30 100 18 44 -246 7586 AdmBlg-App. LPG sys 18 </td <td>E&M EQ</td> <td>PT. / MTRL. APPROVALS</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	E&M EQ	PT. / MTRL. APPROVALS									
8503 AdmBidg-App. Evalety 18 184UG04A 120C105 80 100 18 68 126 6388 AdmBidg-App. FS Net sys 18 04SEP04A 120C105 70 100 18 40 -24 6398 AdmBidg-App. FS AFA F M200 sys 18 14SEP04A 120C105 70 100 18 40 -24 6392 AdmBidg-App. FS AFA S FM200 sys 18 14SEP04A 120C105 60 100 18 41 170 6393 AdmBidg-App. GCMCS, TCS & ELV sys 18 23SEP04A 120C105 60 100 18 41 170 6383 AdmBidg-App. CUS & ALV sys 18 23SEP04A 120C105 60 100 18 41 -273 6393 AdmBidg-App. CUS & ALV sys 18 140C005 100 18 44 -24 6478 AdmBidg-App. CHG sys 18 14DC055 0 100 18 44 -24 788 AdmBidg-App. CHG sys 18 14DC055 0 100 36 2 -176	6385	AdmBldg-App. HV power dist. sys	18	14JUL04A	12OCT05	95	100	18	-80	-276	
6388 AdmBildg-App. FS wit sys 18 0.4SEP04A 120CT05 60 100 18 40 -204 6399 AdmBildg-App. FS AFA & FM200 sys 18 14SEP04A 120CT05 70 100 18 46 60 6399 AdmBildg-App. FS AFA & FM200 sys 18 14SEP04A 120CT05 70 100 18 41 -704 6399 AdmBildg-App. CMCS, TCS & ELV sys 18 20SEP04A 120CT05 60 100 18 -14 -704 6399 AdmBildg-App. MAC mech.vent.sys 18 23SEP04A 120CT05 60 100 18 -14 -216 6397 AdmBildg-App. CNLs & ALUs 18 23SEP04A 120CT05 75 100 18 22 -228 6478 AdmBildg-App. Chiller & Humps 18 17JAN05A 120CT05 30 100 18 29 -80 - <	6386	AdmBldg-App. LV power dist. sys	18	13AUG04A	12OCT05	90	100	18	-80	-240	
6339 AdmBildg-App. FS AFA & FM200 sys 18 148 EP04A 120CT05 70 100 18 16 60 6339 AdmBildg-App. Of CMCS, TCS & ELV sys 18 20SEP04A 120CT05 60 100 18 114 170 6389 AdmBildg-App. Of CMCS, TCS & ELV sys 18 20SEP04A 120CT05 60 100 18 144 -216 - <td< td=""><td>8503</td><td>AdmBldg-App. building related luminaires</td><td>18</td><td>18AUG04A</td><td>12OCT05</td><td>80</td><td>100</td><td>18</td><td>-68</td><td>-126</td><td></td></td<>	8503	AdmBldg-App. building related luminaires	18	18AUG04A	12OCT05	80	100	18	-68	-126	
6392 AdmBldg-App. of CMCS, TCS & ELV sys 18 20SEP04A 120CT05 80 100 18 -114 -170 6389 AdmBldg-App. MVAC mech.vent. sys 18 23SEP04A 120CT05 60 100 18 -104 -216 6389 AdmBldg-App. MVAC mech.vent. sys 18 23SEP04A 070CT05 60 100 15 -101 -273 6387 AdmBldg-App. FCUS & PAUs 18 23SEP04A 070CT05 60 100 15 -101 -273 6387 AdmBldg-App. CUIS & PAUs 18 04NOV04A 120CT05 75 100 18 22 -228 6478 AdmBldg-App. Chiller & Pumps 18 17JAN05A 120CT05 30 100 18 -44 -234 7586 AdmBldg-App. LPG sys 18 24NOV05 14DEC05 0 100 18 -84 -24 -80 -80 -80 -80 -80 -80 -80 -80 -80 -80 -80 -80 -80 -80 -80 -80 -80 -80 <td< td=""><td>6388</td><td>AdmBldg-App. FS wet sys</td><td>18</td><td>04SEP04A</td><td>12OCT05</td><td>60</td><td>100</td><td>18</td><td>40</td><td>-204</td><td></td></td<>	6388	AdmBldg-App. FS wet sys	18	04SEP04A	12OCT05	60	100	18	40	-204	
6389 AdmBldg-App. MVAC mech.vent. sys 18 23SEP04A 12OCT05 60 100 18 -104 -216 6396 AdmBldg-App. FCUs & PAUs 19 23SEP04A 07OCT05 60 100 15 -101 -273 6387 AdmBldg-App. FCUs & PAUs 19 23SEP04A 12OCT05 75 100 18 22 -228 6478 AdmBldg-App. Chiller & Pumps 18 17JAN05A 12OCT05 30 100 18 -44 -234 7586 AdmBldg-App. LPG sys 18 17JAN05A 12OCT05 50 100 18 -29 -80 DESIGN & ENGINEERING AdmBldg-App. LPG sys 18 24NOV05 14DEC05 0 100 18 -29 -80 1802 Admin.Bldg Design stone cladding 36 04APR05A 02NOV05 50 100 36 -2 -176 1902 Admin.Bldg Design state cladding 36 04APR05A 02NOV05 50 100 36 -2 -176 1904 Admin.Bldg.	6399	AdmBldg-App. FS AFA & FM200 sys	18	14SEP04A	12OCT05	70	100	18	16	-60	
Control Contro Control Control	6392	AdmBldg-App. of CMCS, TCS & ELV sys	18	20SEP04A	12OCT05	80	100	18	-114	-170	
6387 AdmBldg-App. PD all fresh & flush water sys 18 04NOV04A 12OCT05 75 100 18 22 -228 6478 AdmBldg-App. Chiller & Pumps 18 17JAN05A 12OCT05 30 100 18 -44 -234 7586 AdmBldg-App. LPG sys 18 24NOV05 14DEC05 0 100 18 -44 -234	6389	AdmBldg-App. MVAC mech.vent. sys	18	23SEP04A	12OCT05	60	100	18	-104	-216	
Administration Administrater Administration Admini	6396	AdmBldg-App. FCUs & PAUs	18	23SEP04A	07OCT05	60	100	15	-101	-273	
AdmBidg-App. LPG sys 18 24NOV05 14DEC05 0 100 18 -29 -80 - <td>6387</td> <td>AdmBldg-App. PD all fresh & flush water sys</td> <td>18</td> <td>04NOV04A</td> <td>12OCT05</td> <td>75</td> <td>100</td> <td>18</td> <td>22</td> <td>-228</td> <td></td>	6387	AdmBldg-App. PD all fresh & flush water sys	18	04NOV04A	12OCT05	75	100	18	22	-228	
DESIGN & ENGINEERING ABWF WORKS Image: Constraint of the co	6478	AdmBldg-App. Chiller & Pumps	18	17JAN05A	12OCT05	30	100	18	-44	-234	
ABWF WORKS Admin.Bldg Design stone cladding 36 04APR05A 02NOV05 50 100 36 -2 -176	7586	AdmBldg-App. LPG sys	18	24NOV05	14DEC05	0	100	18	-29	-80	
ABWF WORKS Admin.Bldg Design stone cladding 36 04APR05A 02NOV05 50 100 36 -2 -176	DESIG	N & ENGINEERING							·		
1803 Admin.Bldg Design slate cladding 36 04APR05A 02NOV05 50 100 36 -2 -176 PROCUREMENT - MATERIAL ABWF WORKS 1904 Admin.Bldg Procure wood ceiling 90 19JAN05A 19OCT05 0 100 24 -128 -38 1909 Admin.Bldg Procure balustrade & metal works 90 09MAR05A 19OCT05 0 100 24 -92 -92 1910 Admin.Bldg Procure aluminium cladding 90 09MAR05A 19OCT05 0 100 24 4 -110											
PROCUREMENT - MATERIAL ABWF WORKS Image: Constraint of the state of the st	1802	Admin.Bldg Design stone cladding	36	04APR05A	02NOV05	50	100	36	-2	-176	
ABWF WORKS 1904 Admin.Bldg Procure wood ceiling 90 19JAN05A 19OCT05 0 100 24 -128 -38 1909 Admin.Bldg Procure balustrade & metal works 90 09MAR05A 19OCT05 0 100 24 -92 -92 1910 Admin.Bldg Procure aluminium cladding 90 09MAR05A 19OCT05 0 100 24 4 -110	1803	Admin.Bldg Design slate cladding	36	04APR05A	02NOV05	50	100	36	-2	-176	
ABWF WORKS 1904 Admin.Bldg Procure wood ceiling 90 19JAN05A 19OCT05 0 100 24 -128 -38 1909 Admin.Bldg Procure balustrade & metal works 90 09MAR05A 19OCT05 0 100 24 -92 -92 1910 Admin.Bldg Procure aluminium cladding 90 09MAR05A 19OCT05 0 100 24 4 -110	PROCU	REMENT - MATERIAL		I		·					
1904Admin.Bldg Procure wood ceiling9019JAN05A19OCT05010024-128-381909Admin.Bldg Procure balustrade & metal works9009MAR05A19OCT05010024-92-921910Admin.Bldg Procure aluminium cladding9009MAR05A19OCT050100244-110											
1910 Admin.Bldg Procure aluminium cladding 90 09MAR05A 19OCT05 0 100 24 4 -110			90	19JAN05A	19OCT05	0	100	24	-128	-38	
	1909	Admin.Bldg Procure balustrade & metal works	90	09MAR05A	19OCT05	0	100	24	-92	-92	
1916 Admin.Bldg Procure slate cladding 90 14MAR05A 19OCT05 50 80 24 4 40	1910	Admin.Bldg Procure aluminium cladding	90	09MAR05A	19OCT05	0	100	24	4	-110	
	1916	Admin.Bldg Procure slate cladding	90	14MAR05A	19OCT05	50	80	24	4	40	

Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL	AUG	SE		ост	NOV	DEC	JAN
ID	Description	Dur	Start	Finish		Compl.					23	29 5 12	4	25 3 10 17 24	26 31 7 14 21 28	27 3 5 12 19 26	2 9 1
ABWF W	VORKS		'														
1902	Admin.Bldg Procure GRP water tank	90	16MAR05A	19OCT05	0	100	24	-110	-56								
6391	AdmBldg-Proc & Manuf. LV power dist. equip't	120	20MAR05A	20FEB06	20	100	120	-80	-162								
6390	AdmBldg-Proc & Manuf. of HV dist. equip't	120	25MAR05A	20FEB06	15	100	120	-80	-198	-							
6397	AdmBldg-Proc & Manuf. of CMCS, ELV & TCS sys	180	25MAR05A	08MAY06	10	90	180	-114	-152								
1917	Admin.Bldg Procure stone cladding	90	03MAY05A	19OCT05	50	70	24	4	40								
1905	Admin.Bldg Procure suspended ceiling	120	09MAY05A	16NOV05	0	0	48	36	88								
6394	AdmBldg-Proc & Manuf. FS wet sys	90	06JUN05A	07JAN06	20	100	90	40	-156								
6415	AdmBldg-Proc & Manuf. FCUs & PAUs	90	08OCT05	25JAN06	0	100	90	-101	-183								
6393	AdmBldg-Proc & Manuf. PD fresh & flush water sys	90	13OCT05	06FEB06	0	100	90	22	-198								
6395	AdmBldg-Proc & Manuf. MVAC mech.vent. sys	90	13OCT05	06FEB06	0	100	90	-104	-186								
6444	AdmBldg-Proc & Manuf. FS AFA & FM200 sys	120	13OCT05	13MAR06	0	40	120	16	-60	-							
6479	AdmBldg-Proc & Manuf. Chiller & Pumps	90	13OCT05	06FEB06	0	100	90	-44	-144								<u> </u>
8504	AdmBldg-Proc & Manf bldg related luminaires	180	13OCT05	29MAY06	0	80	180	-68	-126								
1938	Admin.Bldg Initial delivey glass canopy	0	12NOV05		0		0	-112	0	-					•		
2054	Admin.Bldg Initial delivery louvres	0	24NOV05		0		0	-122	0	-					•		
2055	Admin.Bldg Initial delivery curtain wall	0	24NOV05		0		0	-104	0	-					•		
2056	Admin.Bldg Initial delivery sheet decking	0	24NOV05		0		0	-92	0						•		
2057	Admin.Bldg Initial delivery doors & windows	0	24NOV05		0		0	-92	585	1					•		
2059	Admin.Bldg Initial delivery fall arrest syst	0	08DEC05		0		0	-62	0	1						•	
2060	Admin.Bldg Initial delivery balust & mtl wks	0	08DEC05		0		0	-104	0				1			•	
7582	AdmBldg-Proc & Manuf. LPG sys	120	15DEC05	22MAY06	0	10	120	-29	-80								
INTERF	ACE DATES								I								1
ADMINIS	STRATION BUILDING																
1729	Int. MS - Admin.Bldg E&M G/F access (partial)	0		10DEC05	0	100	0	-77	-137]						•	

D Description Duri State Final CompL CompL CompL CompL CompL Duri Final CompL CompL CompL Duri Final CompL CompL CompL CompL CompL Final CompL	Act.	Activity	Orig Early	Early	%	DWP %	Rem	Total	Variance	JUL 22	AUG 23	SEP 24		OCT 25	NOV 26	DEC 27	JAN 28
64.04 AdmBidg-E&M access to G/F (partial) 0 122/DEC0* 0 100 0 77 138 1327 Int. MS - AdminaBidg - E&M 1/F access (partial) 0 24DEC05 0 100 0 41 137 CONSTRUCTION Construction 24DEC05 0 100 12 148 137 1364 Admin Bidg - Septic tank construction 24 20SEP05 190CC05 0 12 149 130 6389 Admin Bidg - Septic tank construction 24 20SEP05 190CC05 0 100 24 149 140 1647 Admin Bidg Nh - Columna & Walls GF to 1F 24 23SEP05 29CC705 0 100 24 149 140 1648 Admin Bidg Nh - Columna & Walls GF to 1F 24 20SEP05 20C0705 0 100 24 149 1449 1644 Admin Bidg Nh - Columna & Walls GF to 1F 24 20SEP05 20C0705 0 100 24 149 1449 1644 Admin Bidg Nh - Columna & Walls GF to 1F 24 24 20SEP05 20C		Description	Dur Start	Finish	Compl	. Compl.	Dur	Float	arly Finis	11 18 25	1 8 15 22 2	9 5 12 1	I9 ∣26	3 10 17 24 3			2 9 1
1322 Int. MS - Admin. Bidg E&M /F access (partial) 0 24DECoS 0 100 0 481 -137 CONSTRUCTION CONSTRUCTION Construction 1344 Admin. Bidg Construction 24 205EPDS 190C/TOS 0 0 24 1148 -138 Construction 24 205EPDS 190C/TOS 0 0 24 211 40 Construction Concestruction 24 205EPDS 190C/TOS 0 0 24 211 40 Concestruction 24 205EPDS 190C/TOS 0 100 6 280 Concestruction Concestruction Concestruction 24 015EPD6A 070C/TOS 0 100 24 148 149 140 140 140 140 140 140 140 140 140 140 140 140 140 140 140 140 140 140 140			- T - T				1	1		-						•	
ONSTRUCTION CIVIL & A BWF WORKS SUBSTRUCTURE 1384 Admin.Bidg - Ground slab drainage 46 134U 605A 0.00 24 214 40 1388 Admin.Bidg - Earth Mat & Rods - All in prin D4 38 03NOV05 14DEC05 0 0 24 211 40 000 88 8 208 0 24 211 40 138 1746 Admin.Bidg - Earth Mat & Rods - All in prin D4 38 03NOV05 14DEC05 0 100 15 140 144 1681 Admin.Bidg Nh - OF Slub 24 015EP05A 07OCT05 0 100 24 140 140 1681 Admin.Bidg Nh - Columms & walls GF to 1F 24 23SEP05 29OCT05 0 100 24 140 140 1681 Admin.Bidg Nh - Columms & walls GF to 1F 24 24 08OCT05 100 24 140 140 1681 Admin.Bidg Nh - Columms & walls 2F to 3F 24			0 12DEC0	5*	0	100	0	-77	-135							•	
UNIX A RAWF WORKS SUBSTRUCTURE 1748 Admin Bidg Ground slab drainage 46 134/J.40006 0400706 45 100 12 149 136 1748 Admin Bidg Ground slab drainage 46 13A/J.0006 04 04 12 149 136 6398 Admin Bidg Septe tank construction 24 205EP06 14D EC05 0 100 36 8 260 NO SUPERSTRUCTURE Working. Mn GF Slab 24 015EP06A 07OC705 0 100 24 149 149 1647 Admin. Bidg. Nh GF Slab 24 005C705 12NV05 100 24 149 149 1648 Admin. Bidg. Nh Columns & walls SIF to 2F 24 240C705 2NV05 100 24 149 149 1665 Admin. Bidg. Nh Columns & walls 2F to 3F 24 1NN06 100 24 149 149 1666 Admin. Bidg.Nh GF Slab 24 0150C705	1827	Int. MS - Admin.Bldg E&M 1/F access (partial)	0	24DEC05	0	100	0	-81	-137	Ŷ						•	
SUBSTRUCTURE 1384 Admin Bidg. Ground sike brainange 46 13AUG05A 04OCT05 45 100 12 146 136 1746 Admin Bidg. Senth Kat & Rods. All In ptn D4 36 208 P005 19OCT05 0 0 24 211 40 6388 Admin Bidg Earth Mat & Rods. All In ptn D4 36 00005 100 38 260 7146 Admin Bidg Earth Mat & Rods. All In ptn D4 36 07OCT05 0 100 15 148	CONST	RUCTION															
1364 Admin.Bldg Ground slab drainage 46 13AUG05A 04OCT05 45 100 12 1449 -136 1746 Admin bldg - Septic tank construction 24 20SEP0S 19OCT05 0 0 24 211 40 6388 Admin bldg - Septic tank construction 24 20SEP0S 19OCT05 0 0 24 211 40 6388 Admin bldg - Septic tank construction 24 20SEP0S 19OCT05 0 100 36 8 -260 KC SUPERSTRUCTURE 1647 Admin Bldg Nh - Columns & walls GF to 1F 24 01SEP05A 07OCT05 0 100 24 149 149 1648 Admin Bldg Nh - Columns & walls GF to 1F 24 23SEP05 29OCT05 0 100 24 149 149 1649 Admin Bldg Nh - Columns & walls 3F to 2F 24 240CT05 29NOV05 0 100 24 149 149 1666 Admin Bldg Nh - Columns & walls 3F to 02F 24 10NOV05 24DEC05 0 100 24 149 <t< td=""><td>CIVIL &</td><td>ABWF WORKS</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	CIVIL &	ABWF WORKS															
1746 Admin bidg - Septic tank construction 24 20SEP05 190CT05 0 0 24 211 40 6388 Admin Bidg, - Earth Mat & Rods - All in pin D4 36 030V05 14DEC05 0 100 85 8 RC SUPERSTRUCTURE 11 1557 Admin Bidg Nh - GF Slab 24 01SEP06A 07OCT05 0 100 24 148 -148 1644 Admin Bidg Nh - GF Slab 24 01SEP06A 07OCT05 0 100 24 148 -148 1644 Admin Bidg Nh - Columns & walls GF to 1F 24 24 20CT05 28NOV05 0 100 24 148 -148 1648 Admin Bidg Nh - Columns & walls IF to 2F 24 240CT05 28NOV05 0 100 24 148 -148 1686 Admin Bidg Nh - Columns & walls 3F to Upp Rod 24 100V05 240EC05 0 100 24 149 -148 1686 Admin Bidg Nh - Columns & walls 3F to Upp Rod 24 07CT05 0 100 24 149 -148 -148 -	SUBSTR	RUCTURE															
1 Here 2 Julie Aufmin Bidg - Earth Mat & Rods - All in ptn D4 36 30N 0V06 14D EC05 0 100 36 8 -260 RC SUPERSTRUCTURE 1 Here 1 407 24 218 EP05A 070 CT05 0 100 15 148 149 1 Here 1 407 24 238 EP05 290 CT05 0 100 24 149 149 1 Here Admin.Bidg Nh - GC Slab 24 0400 CT05 0 100 24 149 149 1 Here Admin.Bidg Nh - GC Slab 24 0400 CT05 0 100 24 149 149 1 Here Admin.Bidg Nh - GC Slab 24 0400 CT05 0 100 24 149 149 1 Here Admin.Bidg Nh - Columns & walls 2F to 3F 24 07N 0V05 100 24 149 149 1 Here Admin.Bidg Nh - Columns & walls 3F to Upp Root 24 100 24 149 149 1 Here Admin.Bidg Nh - Columns & walls 3F to Upp Root 24 100 24 149 149	1364	Admin.Bldg Ground slab drainage	46 13AUG0	5A 04OCT05	45	100	12	-149	-136								
RCSUPERSTRUCTURE NORTH (GL: 1+1] 1657 Admin.Bidg Nth - GF Slab 24 01SEP05A 07OCT05 0 100 15 -149 -143 1647 Admin.Bidg Nth - Columns & walls GF to 1F 24 23SEP05 29OCT05 0 100 24 -149 -149 1648 Admin.Bidg Nth - Columns & walls GF to 1F 24 24 20SCT05 0 100 24 -149 -149 1649 Admin.Bidg Nth - Columns & walls IF to 2F 24 240CT05 26NOV05 0 100 24 -149 -149 1665 Admin.Bidg Nth - Columns & walls 2F to 3F 24 24DCC05 0 100 24 -149 -149 1666 Admin.Bidg Nth - Columns & walls 3F to Upp Roof 24 10DEC05 0 100 24 -149 -149 -149 1666 Admin.Bidg Nth - Columns & walls 3F to Upp Roof 24 10DEC05 0 100 24 -149 -149 -149 1672 Admin.Bidg Sth - GF Slab 24 01SEP05A 07OCT05 0 100	1746	Admin bldg - Septic tank construction	24 20SEP0	5 19OCT05	0	0	24	211	40					-		_	
NORTH (GL: 14) Image: Click of the click of	6398	Admin.Bldg Earth Mat & Rods - All in ptn D4	36 03NOV0	5 14DEC05	0	100	36	8	-260	-							
NORTH (GL: 14) Image: Click of the click of	RC SUP	ERSTRUCTURE				1	1	1									
1647 Admin.Bildg Nth - Columns & walls GF to 1F 24 23SEP05 29OCT05 0 100 24 149 -149 1648 Admin.Bildg Nth - Columns & walls GF to 1F 24 08OCT05 12NOV05 0 100 24 -149 -149 1649 Admin.Bildg Nth - Columns & walls 1F to 2F 24 240CT05 26NOV05 0 100 24 -149 -149 1661 Admin.Bildg Nth - Columns & walls 2F to 3F 24 240CT05 24DEC05 0 100 24 -149 -149 1666 Admin.Bildg Nth - Columns & walls 3F to Upp Roof 24 07NOV05 10DEC05 0 100 24 -149 -149 1666 Admin.Bildg Nth - Columns & walls 3F to Upp Roof 24 05DEC05 11JAN06 0 100 24 -149 -149 1666 Admin.Bildg Nth - Columns & walls 3F to Upp Roof 24 01SEP05A 07OCT05 0 100 24 -119 -149 50UTH WGL 11-21 T T 124 24SEP05 29OCT05 0 100 24 -119 -137 <td>NORTH [G</td> <td>GL.1-11]</td> <td></td>	NORTH [G	GL.1-11]															
1648 Admin.Bidg Nth - 1F Slab 24 080CT05 12N0V05 0 100 24 -149 -149 1648 Admin.Bidg Nth - Columns & walls 1F to 2F 24 240CT05 26N0V05 0 100 24 -149 -149 1661 Admin.Bidg Nth - Columns & walls 2F to 3F 24 07N0V05 10D 24 -149 -149 1665 Admin.Bidg Nth - Columns & walls 2F to 3F 24 07N0V05 10D 24 -149 -149 1666 Admin.Bidg Nth - Columns & walls 3F to Upp Roof 24 05DCC05 11JAN06 0 100 24 -149 -149 1668 Admin.Bidg Nth - Columns & walls 3F to Upp Roof 24 05DCC05 11JAN06 0 100 24 -149 -149 1674 Admin.Bidg Sth - Columns & walls 3F to Upp Roof 24 05DC05 0 100 24 -119 -149 1788 Admin.Bidg Sth - Columns & walls GF to 1F 24 23SEP05 29OCT05 0 100 24 -119 -137 1788 Admin.Bidg Sth - Columns & walls 1F to 2F 24	1557	Admin.Bldg Nth - GF Slab	24 01SEP0	5A 07OCT05	0	100	15	-149	-143								
1649 Admin.Bildg Nth - Columns & walls 1F to 2F 24 240CT05 26NOV05 0 100 24 149 -149 1661 Admin.Bildg Nth - Columns & walls 2F to 3F 24 07NOV05 10DEC05 0 100 24 -149 -149 1665 Admin.Bildg Nth - Columns & walls 2F to 3F 24 02NOV05 24DEC05 0 100 24 -149 -149 1666 Admin.Bildg Nth - Columns & walls 3F to Upp Roof 24 05DEC05 11JAN06 0 100 24 -149 -149 1662 Admin.Bildg Nth - Columns & walls 3F to Upp Roof 24 05DEC05 11JAN06 0 100 24 -149 -149 1662 Admin.Bildg Sth - Columns & walls 3F to Upp Roof 24 19DEC05 25JAN06 0 100 24 -119 -149 900Hrigg_11-21	1647	Admin.Bldg Nth - Columns & walls GF to 1F	24 23SEP0	5 29OCT05	0	100	24	-149	-149								
1661 Admin.Bldg Nth - 2F Slab 24 07NOV05 10DEC05 0 100 24 149 -149 1665 Admin.Bldg Nth - Columns & walls 2F to 3F 24 21NOV05 24DEC05 0 100 24 -149 -149 1666 Admin.Bldg Nth - Columns & walls 3F to Upp Roof 24 05DEC05 11JAN06 0 100 24 -149 -149 1672 Admin.Bldg Nth - Columns & walls 3F to Upp Roof 24 05DEC05 1JJAN06 0 100 24 -149 -149 1672 Admin.Bldg Sth - Columns & walls 3F to Upp Roof 24 01SEP05A 07 OCT05 0 100 15 -131 -131 1784 Admin.Bldg Sth - Columns & walls GF to 1F 24 01SEP05A 07 OCT05 0 100 24 -131 -131 1786 Admin.Bldg Sth - Columns & walls GF to 1F 24 080CT05 12NOV5 0 100 24 -131 -137 1786 Admin.Bldg Sth - 2F Slab 24 07NOV05 10EC05 0 100 24 -119 -137 <t< td=""><td>1648</td><td>Admin.Bldg Nth - 1F Slab</td><td>24 08OCT0</td><td>5 12NOV05</td><td>0</td><td>100</td><td>24</td><td>-149</td><td>-149</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	1648	Admin.Bldg Nth - 1F Slab	24 08OCT0	5 12NOV05	0	100	24	-149	-149								
1665 Admin.Bldg Nth - Columns & walls 2F to 3F 24 21NOV05 24DEC05 0 100 24 149 149 1666 Admin.Bldg Nth - Columns & walls 2F to 3F 24 05DEC05 11JAN06 0 100 24 149 149 1672 Admin.Bldg Nth - Columns & walls 3F to Upp Roof 24 19DEC05 25JAN06 0 100 24 119 149 500TH (6L-11-21)	1649	Admin.Bldg Nth - Columns & walls 1F to 2F	24 24OCT0	5 26NOV05	0	100	24	-149	-149								
1666 Admin.Bldg Nth - Roof Slab 24 05DEC05 11JAN06 0 100 24 -149 -149 1672 Admin.Bldg Nth - Columns & walls 3F to Upp Roof 24 19DEC05 25JAN06 0 100 24 -119 -149 SOUTH (GL11-21)	1661	Admin.Bldg Nth - 2F Slab	24 07NOV0	5 10DEC05	0	100	24	-149	-149								
1672 Admin.Bldg Nth - Columns & walls 3F to Upp Roof 24 19DEC05 25JAN06 0 100 24 -119 -149 SOUTH (GL 11-21)	1665	Admin.Bldg Nth - Columns & walls 2F to 3F	24 21NOV	5 24DEC05	0	100	24	-149	-149								
SOUTH [0_L11-21] 1624 Admin.Bldg Sth - GF Slab 24 01SEP05A 07OCT05 0 100 15 -131 -131 1784 Admin.Bldg Sth - Columns & walls GF to 1F 24 23SEP05 29OCT05 0 100 24 -131 -137 1785 Admin.Bldg Sth - 1F Slab 24 08OCT05 12NOV05 0 100 24 -131 -137 1786 Admin.Bldg Sth - Columns & walls 1F to 2F 24 240CT05 26NOV05 0 100 24 -119 -137 1787 Admin.Bldg Sth - 2F Slab 24 07NOV05 10DEC05 0 100 24 -119 -137 1788 Admin.Bldg Sth - Columns & walls 2F to 3F 24 21NOV05 24DEC05 0 100 24 -119 -137	1666	Admin.Bldg Nth - Roof Slab	24 05DEC0	5 11JAN06	0	100	24	-149	-149								
1624 Admin.Bldg Sth - GF Slab 24 01SEP05A 07OCT05 0 100 15 -131 -131 1784 Admin.Bldg Sth - Columns & walls GF to 1F 24 23SEP05 29OCT05 0 100 24 -131 -137 1785 Admin.Bldg Sth - 1F Slab 24 08OCT05 12NOV05 0 100 24 -131 -137 1786 Admin.Bldg Sth - Columns & walls 1F to 2F 24 24OCT05 26NOV05 0 100 24 -119 -137 1787 Admin.Bldg Sth - 2F Slab 24 07NOV05 10DEC05 0 100 24 -119 -137 1788 Admin.Bldg Sth - Columns & walls 2F to 3F 24 21NOV05 24DEC05 0 100 24 -119 -137 1788 Admin.Bldg Sth - Columns & walls 2F to 3F 24 21NOV05 24DEC05 0 100 24 -119 -137 1788 Admin.Bldg Sth - Columns & walls 2F to 3F 24 21NOV05 24DEC05 0 100 24 -119 -137	1672	Admin.Bldg Nth - Columns & walls 3F to Upp Roof	24 19DEC0	5 25JAN06	0	100	24	-119	-149								
1784 Admin.Bldg Sth - Columns & walls GF to 1F 24 23SEP05 29OCT05 0 100 24 -131 -137 1785 Admin.Bldg Sth - 1F Slab 24 08OCT05 12NOV05 0 100 24 -131 -137 1786 Admin.Bldg Sth - Columns & walls 1F to 2F 24 24OCT05 26NOV05 0 100 24 -119 -137 1787 Admin.Bldg Sth - 2F Slab 24 07NOV05 10DEC05 0 100 24 -119 -137 1788 Admin.Bldg Sth - Columns & walls 2F to 3F 24 21NOV05 24DEC05 0 100 24 -119 -137	SOUTH [G	i L.11-21]															
1785 Admin.Bldg Sth - 1F Slab 24 080CT05 12N0V05 0 100 24 -131 -137 1786 Admin.Bldg Sth - Columns & walls 1F to 2F 24 240CT05 26N0V05 0 100 24 -119 -137 1787 Admin.Bldg Sth - 2F Slab 24 07N0V05 10DEC05 0 100 24 -119 -137 1788 Admin.Bldg Sth - 2F Slab 24 21N0V05 24DEC05 0 100 24 -119 -137 1788 Admin.Bldg Sth - Columns & walls 2F to 3F 24 21N0V05 24DEC05 0 100 24 -119 -137	1624	Admin.Bldg Sth - GF Slab	24 01SEP0	5A 07OCT05	0	100	15	-131	-131								
1786 Admin.Bldg Sth - Columns & walls 1F to 2F 24 240CT05 26NOV05 0 100 24 -119 -137 1787 Admin.Bldg Sth - 2F Slab 24 07NOV05 10DEC05 0 100 24 -119 -137 1788 Admin.Bldg Sth - Columns & walls 2F to 3F 24 21NOV05 24DEC05 0 100 24 -119 -137	1784	Admin.Bldg Sth - Columns & walls GF to 1F	24 23SEP0	5 29OCT05	0	100	24	-131	-137								
1787 Admin.Bldg Sth - 2F Slab 24 07NOV05 10DEC05 0 100 24 -119 -137 1788 Admin.Bldg Sth - Columns & walls 2F to 3F 24 24DEC05 0 100 24 -119 -137	1785	Admin.Bldg Sth - 1F Slab	24 08OCT0	5 12NOV05	0	100	24	-131	-137								
1788 Admin.Bldg Sth - Columns & walls 2F to 3F 24 21NOV05 24DEC05 0 100 24 -119 -137	1786	Admin.Bldg Sth - Columns & walls 1F to 2F	24 24OCT0	5 26NOV05	0	100	24	-119	-137								
	1787	Admin.Bldg Sth - 2F Slab	24 07NOV0	5 10DEC05	0	100	24	-119	-137								
1789 Admin.Bldg Sth - Roof Slab 24 05DEC05 11JAN06 0 100 24 -119 -137	1788	Admin.Bldg Sth - Columns & walls 2F to 3F	24 21NOV	5 24DEC05	0	100	24	-119	-137								
	1789	Admin.Bldg Sth - Roof Slab	24 05DEC0	5 11JAN06	0	100	24	-119	-137								

Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL	AUG	SEP		NOV	DEC	JAN
ID	Description	Dur		Finish		Compl.	Dur	Float	arly Finis	22 11 18 25	23	24 29 5 12 í	25 19 26 3 10 17 24	26 31 7 14 21 2	27 8 5 12 19 26	2 9 1
SOUTH [G	L.11-21]		1				1									
1791	Admin.Bldg Sth - Columns & walls 3F to Upp Roof	24	19DEC05	25JAN06	0	100	24	-35	-137							
ABWF																
CRITICAL					1 -									_		
1730	Admin.Bldg Crit Rm - Int. Blockwork GF	12	28NOV05	10DEC05	0	100	12	-131	-137					-		
1904	Admin.Bldg Crit Rm - Ext. Doors & Glazing GF	18	28NOV05	17DEC05	0	100	18	-125	-143							
1004	Admin.Blug Chi Rin - Ext. Doors & Glazing GF	10	2010/005	T/DEC05	0	100	10	-125	-143					_		
1366	Admin.Bldg Crit Rm - Int. Finishes GF	18	12DEC05	04JAN06	0	100	18	-107	-137							
				0.00	Ŭ											
1731	Admin.Bldg Crit Rm - Int. Blockwork 1F	12	12DEC05	24DEC05	0	100	12	-131	-137							
										-						
	G ROOMS				1			1							_	
1792	Admin.Bldg Oth Rm - Int. Blockwork GF	24	05DEC05	04JAN06	0	100	24	-83	-137							
	ORKS - GENERAL															
FS WOR																
	AdmBldg-Hydrant Pump & Tank set 1st fix	48	12DEC05	16FEB06	0	100	48	61	-135							
0411	AdmBiog-Hydrant Pump & Tank Set TSt fix	48	12DEC05	IOFEBUO	0	100	48	01	-135							
	ICAL WORKS				1	1	1	1								
	R DISTRIBUTION MAJOR EQPT.															
	AdmBldg-HV power dist. sys 1st fix	36	12DEC05	25JAN06	0	100	36	-53	-135							
P&D WC	RKS															
	DR EQUIPMENT		1	L	T	1	1	1	-							
6412	AdmBldg-Water Pumps & Tanks 1st fix	24	12DEC05	11JAN06	0	100	24	85	-135							
1	STRATION BLDG G/F															
MVAC W																
		00	4005005	05 14 100	-	100	00		405							
6405	AdmBldg G/F -AC(1st Fix) mech.vent.	36	12DEC05	25JAN06	0	100	36	-77	-135							
STATU	TORY INSPECTIONS															
	NATER SUPPLY							1						_		
6456	AdmBldg-All plumb. design approved by WSD	0	21NOV05		0	100	0	85	-135					\diamond		
0.477		-	0505005	10DEC05	0	100	<u> </u>	05	105							
6477	AdmBldg-Sub. WWO 046 part 1 to 3 to WSD	6	05DEC05	TUDEC05	0	100	6	85	-135							
	PECTIONS	1	I	l 	1	1	1	1								<u> </u>
	AdmBldg-All FS design approved by FSD (MHJV)	0	21NOV05		0	100	0	19	-135					\diamond		
0408	Aundiag-Air Fo design approved by FOD (MITJV)		21100000		0	100	0	19	-130							
6493	AdmBldg-Issue, endorse & submit FSI 314 to FSD	6	05DEC05	10DEC05	0	100	6	19	-135							
		Ĭ	0022000		Ŭ		Ŭ									

Act.	Activity	Orig		Early	%	DWP %	Rem	Total	Variance	JUL 22	AUG 23		EP	OCT 25	NOV 26	DEC 27	JAN 28
ID	Description	Dur	Start	Finish	Compl.	Compl.	Dur	Float	arly Finis	11 18 25 1	8 15 22	29 5 12	19 <u>26</u>	25 3 10 17 24	31 ₁ 7 <u>14</u> 21 2		2 9 1
SHATIN	I HEIGHTS SOUTH PORTAL BUILDING																
SUBMIT	TALS & APPROVALS																
ABWF 8	BUILDER'S WORKS																
1998	SHT SPB - Prep & submit door & window detail	24	13NOV04A	04OCT05	50	100	12	-2	-46								
2000	SHT SPB - Approve door & window details	24	03JUN05A	19OCT05	0	100	24	-14	-34								
2006	SHT SPB - Prep & sub balustrade & metal wks	24	13JUL05A	04OCT05	50	100	12	-44	-46								
2007	SHT SPB - Approve balustrade & metal works	24	05OCT05	02NOV05	0	100	24	-44	-46								
E&M EC	QPT. / MTRL. SUBMITTALS	1 1			1	1	I	1 1									
	ShtSpBldg-Sub.TVF, Ductworks & Control sys	78	02JUL04A	21DEC05	95	100	78	-56	-154								
8268	ShtSpBldg-Sub.MVAC MCC, power & control sys	54	02JUL04A	23NOV05	95	100	54	-86	-160								
8284	ShtRtSb-Sub.HV/LV main & submain dist. sys	54	02JUL04A	23NOV05	95	100	54	-62	-145								
8270	ShtSpBldg-Sub.FS AFA & FM200 sys	54	05JUL04A	23NOV05	95	60	54	58	-26								
8265	ShtSpBldg-Sub.MVAC mech.vent. sys	54	03AUG04A	23NOV05	95	100	54	-42	-100								
8269	ShtSpBldg-Sub.FS wet sys	54	05AUG04A	23NOV05	95	100	54	18	-106								
	ShtSpBldg-Sub.MVAC / TVF pneumatic sys	54	14AUG04A	16NOV05	95	10	48	4	2								
0201	onopping-oup.invAo / TvT priedmatic sys	54	14700047	10140 000	55		-0		Z								
8263	ShtSpBldg-Sub.CMCS & ELV sys	78	26AUG04A	21DEC05	98	100	78	-14	-118								
8272	ShtSpBldg-Sub.PD irrig. sys	54	04FEB05A	23NOV05	85	100	54	18	-112								
E&M EC	QPT. / MTRL. APPROVALS	1 1			1	ļ	I	1 1									
7040	ShtSpBldg-App. HV power dist. sys	18	14JUL04A	12OCT05	95	100	18	-50	-112								
7209	ShtSpBldg-App. PD cleans. & flush water sys	18	04AUG04A	18NOV05	75	100	50	-20	-90								
7046	ShtSpBldg-App. LV power dist. sys	18	13AUG04A	12OCT05	90	100	18	-62	-106								
8507	ShtSpBldg-App. building related luminaires	18	18AUG04A	12OCT05	80	100	18	-44	-82								
7155	ShtSpBldg-App. FS wet sys	18	04SEP04A	12OCT05	60	100	18	18	-52								
7205	ShtSpBldg-App. FS AFA & FM200 sys	18	14SEP04A	12OCT05	70	0	18	58	28								
7085	ShtSpBldg-App. of CMCS & ELV sys	18	20SEP04A	12OCT05	88	100	18	-14	-40								
							_		-)						

Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL AUG SEP OCT N		JAN
ID	Description	Dur	-	Finish		Compl.					6 27 4 21 28 5 12 19 26	28
E&M EC	PT. / MTRL. APPROVALS											
7116	ShtSpBldg-App. MVAC mech.vent. sys	18	23SEP04A	12OCT05	60	100	18	-42	-46			
7133	ShtSpBldg-App. TVF, Ductworks & Control sys	18	12NOV04A	12OCT05	70	100	18	-56	-76			
7147	ShtSpBldg-App. MVAC MCC, power & control sys	18	12NOV04A	12OCT05	75	100	18	-86	-106			
7101	ShtSpBldg-App. MVAC Package AC Unit sys	18	01FEB05A	12OCT05	90	0	18	34	8			
7229	ShtSpBldg-App. PD irrig. sys	18	05MAY05A	12OCT05	30	100	18	18	-58			
PROCU	REMENT - MATERIAL											
E & M W	ORKS											
7047	ShtSpBldg-Proc & Manuf. LV power dist. equip't	180	20MAR05A	08MAY06	20	50	180	-62	-88			
7041	ShtSpBldg-Proc. & Manuf. of HV dist. equip't	180	25MAR05A	08MAY06	15	60	180	-50	-94			
7086	ShtSpBldg-Proc. & Manuf. of CMCS & ELV sys	180	25MAR05A	22MAY06	15	10	180	-26	-34			
7148	ShtSpBldg-Proc & Manuf. MCC, power & control sys	180	25MAR05A	08MAY06	5	50	180	-86	-88			
7156	ShtSpBldg-Proc & Manuf. FS wet sys	120	06JUN05A	06MAR06	20	30	120	6	-46			
7134	ShtSpBldg-Proc & Manuf. TVF,Ductwks & Cont'l sys	180	09JUN05A	08MAY06	20	40	180	-56	-58			
7117	ShtSpBldg-Proc & Manuf. MVAC mech.vent. sys	120	13OCT05	13MAR06	0	30	120	-42	-46			
7230	ShtSpBldg-Proc & Manuf. PD irrig. sys	120	13OCT05	13MAR06	0	40	120	18	-58			
8508	ShtSpBldg-Proc & Manf bldg related luminaires	180	13OCT05	29MAY06	0	40	180	-44	-82			
2015	SHT SPB - Procure door & windows	120	20OCT05	20MAR06	0	10	120	-14	-34			
2024	SHT SPB - Procure balustrade & metal works	120	03NOV05	03APR06	0	10	120	-44	-46			
7210	ShtSpBldg-Proc & Manuf. Cleans & flush water sys	120	19NOV05	24APR06	0	40	120	-20	-90			
7102	ShtSpBldg-Proc & Manuf. MVAC Package AC Units	120	15DEC05	22MAY06	0	0	120	-20	-46	• <u> </u>		
SHT TU	INNEL	1				1		1				
SUBMIT	TALS & APPROVALS											
E&M EC	PT. / MTRL. SUBMITTALS											
8279	ShtRtNb-Sub.Tunnel Lgt sys	78	02JUL04A	21DEC05	90	100	78	-77	-157			
8281	ShtRtNb-Sub.TVS control sys	54	02JUL04A	23NOV05	95	100	54	-4	-97			

Act. ID	Activity Description	Orig Early Dur Start	Early Finish	% Compl	DWP %					AUG 23		SEP 24		0CT 25	NOV 26		DEC 27	JAN
1 1	QPT. / MTRL. SUBMITTALS	Dui Start	FILISI	Compi.	. Compi.	Dui	Float		22 11 18 25 1	8 15	22 29 5	12 19	26 3 1	0 17 24	31 7 14 21	1 28 5	5 12 19 <u> </u> 26	29
	ShtRtSb-Sub.Tunnel Lgt sys	78 02JUL04A	21DEC05	90	100	78	-56	-139										
8287	ShtRtSb-Sub.TVS control sys	54 02JUL04A	23NOV05	95	100	54	-4	-97										
8282	ShtRtNb-Sub.FS AFA & Linear sys	54 05JUL04A	23NOV05	95	100	54	-70	-175										
	ShtRtSb-Sub.FS AFA & Linear sys	54 05JUL04A	23NOV05	95	100	54	-70	-175										
	ShtRtNb-Sub. TVS in Tunnel	54 07JUL04A	23NOV05	95	100	54	-34	-127										
														_				
8289	ShtRtSb-Sub. TVS in Tunnel	54 07JUL04A	12OCT05	95	100	18	128	-91										
8280	ShtRtNb-Sub.CMCS & ELV sys	78 26AUG04A	21DEC05	98	100	78	-40	-138										
8286	ShtRtSb-Sub.CMCS & ELV sys	78 26AUG04A	21DEC05	98	100	78	-32	-130										
E&M EC	QPT. / MTRL. APPROVALS	. I. I.		1														
7624	ShtRtSb-App. TVS in Tunnel	18 29JUL04A	12OCT05	70	100	18	128	-73										
7627	ShtRtNb-App. TVS in Tunnel	18 29JUL04A	12OCT05	70	100	18	-34	-73				+						
6938	ShtRtSb-App. Tunnel Lgt sys	18 05AUG04A	12OCT05	80	100	18	-56	-61				+						
6991	ShtRtNb-App. Tunnel Lgt sys	18 05AUG04A	12OCT05	80	100	18	-77	-79				+						
6932	ShtRtSb-App. HV/LV main & submain dist. sys	18 13AUG04A	12OCT05	65	100	18	-62	-91				_						
6985	ShtRtNb-App. HV/LV main & submain dist. sys	18 13AUG04A	12OCT05	80	100	18	-62	-91				_						
6969	ShtRtSb-App. FS AFA & Linear sys	18 14SEP04A	12OCT05	70	100	18	-70	-121				+						
7022	ShtRtNb-App. FS AFA & Linear sys	18 14SEP04A	12OCT05	70	100	18	-70	-121				+						
6945	ShtRtSb-App. CMCS & TCS & ELV sys	18 20SEP04A	12OCT05	88	100	18	-32	-52				4						
6998	ShtRtNb-App. CMCS & ELV sys	18 20SEP04A	12OCT05	88	100	18	-40	-60				4						
6957	ShtRtSb-App. TVS control sys	18 12NOV04A	12OCT05	70	100	18	-4	-43										
	ShtRtNb-App. TVS control sys	18 12NOV04A	12OCT05	70	100	18	-4	-43	<u> </u>									
																		<u> </u>
	REMENT - MATERIAL																	
	NNEL NORTHBOUND ShtRtNb-Proc & Manuf. ES Main & submain dist.	180 20MAR05A	08MAY06	20	40	180	-62	-73										<u> </u>
0980	Shirkind-Floc & Manul. ES Main & Submain dist.	100 ZUWARUSA	UDIVIA 106	20	40	180	-62	-13				_				_		T

Act. Act.viy Dur Early Early St. Dur Dur <t< th=""><th>Act.</th><th>Activity</th><th>Orig</th><th>Early</th><th>Early</th><th>%</th><th>DWP %</th><th>Rem</th><th>Total</th><th>Variance</th><th>JUL AUG SEP OCT NOV DEC JAN</th></t<>	Act.	Activity	Orig	Early	Early	%	DWP %	Rem	Total	Variance	JUL AUG SEP OCT NOV DEC JAN
SHT TUNNEL NORTHBOUND 100 25MAR05A 06MAY06 15 20 180 40 42 0000 SIRRNb-Proc & Manul, ES AFA & Linger sys 180 25MAR05A 06MAY06 15 70 160 40 42 7020 SirRNb-Proc & Manul, TNS control sys 180 25MAY05A 13JUN0E 6 10 180 44 45 7020 SirRNb-Proc & Manul, TNS in Turnel 180 0QUN05A 0BMAY06 5 30 40 45 6002 SirRNb-Proc & Manul, TNS in Turnel 180 0QUN05A 0BMAY06 15 20 180 32 34 6002 SirRNb-Proc & Manul, TUNDEL JSUTHBOUND 180 130CT05 20MAY05A 0BMAY06 15 70 180 70 103 44 45 6970 SirRNb-Proc & Manul, TCKOS & ELV sys 180 20MAY05A 0BMAY06 15 70 180 70 103 44 45 6970 SirRNb-Proc & Manul, TS AFA & Linear sys 180 20MAY05A 130.VA6A 0BMAY06 20 130 45 5		· · · · · · · · · · · · · · · · · · ·		-	•						
Tri22 ShiftNb-Proc & Manuf. FS AFA & Linear sys 180 ZMAR06A 08MAY06 15 70 180 -70 -103 Tri22 ShiftNb-Proc & Manuf. TVS control sys 180 ZMAY05A 13JUN06 5 10 180 -34 45 0692 ShiftNb-Proc & Manuf. Turnel 180 13OCT05 23MAY05A 0 40 180 -77 73 0640 ShiftNb-Proc & Manuf. Turnel 180 13OCT05 23MAY05A 0 40 180 -77 73 06440 ShiftNb-Proc & Manuf. CMCS & ELV sys 180 25MAR05A 08MAY06 15 20 180 -20 180	SHT TU	NNEL NORTHBOUND									
V111 SNRIND-Proc & Manuf. TVS control sys 180 29MAYOSA 13UUN06 5 10 180 34 55 V228 SNRIND-Proc & Manuf. TVS in Tunnel 180 09UN05A 09MAYOS 13UUN06 5 10 180 34 55 E999 SINEND-Proc & Manuf. CMCS & ELV sys 180 22MAR05A 09MAYOS 15 20 180 34 55 B40 SINEND-Proc & Manuf. CMCS & ELV sys 180 22MAR05A 09MAYOS 15 20 180 34 55 B40 SINEND-Proc & Manuf. CMCS & ELV sys 180 22MAR05A 09MAYOS 15 20 180 24 77 79 B40 SINEND-Proc & Manuf. CMCS & ELV sys 180 29MAYOS 15 70 180 70 180 70 103 70 103 B40 SINEND-Proc & Manuf. TCS SINEND B3 24MAYOSA 13UNOSA 09MAYOS 13U NOSA 20 180 24 55 64 B40 SINEND-Proc & Manuf. TCS Sin Tunnel 180 09MAYOSA 13UNOSA 09MAYOS	6999	ShtRtNb-Proc & Manuf. CMCS & ELV sys	180	25MAR05A	08MAY06	15	20	180	-40	-42	
Total SHIRKND-Proc & Manuf, TVS in Tunnel 180 OBMAYOB 5 30 180 24 -55 SHIRKND-Proc & Manuf, Tunnel Lgt sys 180 130CT06 29MAYOB 15 20 180 27 79 GM6 SHIRKND-Proc & Manuf, Tunnel Lgt sys 180 25MAR05A 0BMAYOB 15 20 180 22 -34 GM7 SHIRKND-Proc & Manuf, CMCS & ELV sys 180 25MAR05A 0BMAYOB 15 70 180 27 79 GM8 SHIRKND-Proc & Manuf, TVS ontrol sys 180 25MAR05A 0BMAYOB 15 70 180 22 73 GM3 SHIRKND-Proc & Manuf, TVS ontrol sys 180 25MAR05A 0BMAYOB 20 180 24 25 GM3 SHIRKND-Proc & Manuf, TVS ontrol sys 180 25MAR05A 0BMAYOB 20 30 180 24 25 GM3 SHIRKND-Proc & Manuf, TVS ontrol sys 180 0BMAYOB 20 30 180 24 25 GM3 SHIRKND-Proc & Manuf, Tvs in Tunnel 100 GMAYOB 20	7023	ShtRtNb-Proc & Manuf. FS AFA & Linear sys	180	25MAR05A	08MAY06	15	70	180	-70	-103	
6992 ShtRithl-Proc & Manul, Tunnel Lgt sys 180 130CT05 29MAY06 0 40 180 77 79 0 0 0 0 0 180 77 79 0 0 0 0 0 180 77 79 0	7011	ShtRtNb-Proc & Manuf. TVS control sys	180	25MAY05A	13JUN06	5	10	180	-34	-55	
SHT TUNNEL SOUTHBOUND 6946 ShtRisb-Proc & Manuf. CMCS & ELV sys 180 25MAR05A 08MAV06 15 20 180 32 -34 6970 ShtRisb-Proc & Manuf. FS AFA & Linear sys 180 25MAR05A 08MAV06 15 70 180 -70 -103 6933 ShtRisb-Proc & Manuf. ES Main & submain dist. 180 20MAY05A 08MAV06 30 50 180 42 -73 6998 ShtRisb-Proc & Manuf. TVS control sys 180 25MAY05A 08MAV06 20 30 180 34 -55 7625 ShtRisb-Proc & Manuf. TVS in Tunnel 180 09JUN05A 08MAV06 20 30 180 34 -55 6939 ShtRisb-Proc & Manuf. Tunnel Lgt sys 180 13UC05 29MAV06 0 20 180 46 -61 SHT NORT H PORTAL BUILDING SUMITTALS & A.PPROVALS 40 30UN05A 190CT05 50 100 12 12 24 6 2001 SHT NPB - Prep & submittande & metal works 24 050CT05 02NU05 0	7628	ShtRtNb-Proc & Manuf. TVS in Tunnel	180	09JUN05A	08MAY06	5	30	180	-34	-55	
B446 ShtRiSb-Proc & Manut. CMCS & ELV sys 180 25MAR05A 06MAY06 15 20 180 -32 -34 B970 ShtRiSb-Proc & Manut. FS AFA & Linear sys 180 25MAR05A 06MAY06 15 70 180 -70 -103 B933 ShtRiSb-Proc & Manut. ES Main & submain dist. 180 20MAY05A 06MAY06 30 50 180 -27 -73 6983 ShtRiSb-Proc & Manut. TVS control sys 180 25MAY05A 13JUN06 5 20 180 -34 -55 7625 ShtRiSb-Proc & Manut. TVS in Tunnel 180 08JUN05A 06MAY06 0 20 180 -56 -61 6939 ShtRiSb-Proc & Manut. Tunnel Lgt sys 180 13OCT05 29MAY06 0 20 180 -56 -61 SHT NORTH PORTAL BUILDING Submit door & window details 24 13NU06A 04OCT05 50 100 12 112 -46 2001 SHT NPB - Prep & sub-balustrade & metal wks 24 03UN05A 190CT05 0 100 24 100 -34	6992	ShtRtNb-Proc & Manuf. Tunnel Lgt sys	180	13OCT05	29MAY06	0	40	180	-77	-79	
6970 ShirkISb-Proc & Manul. FS AFA & Linear sys 180 25MAR05A 08MAY06 15 70 180 -70 -103 6933 ShirkISb-Proc & Manul. ES Main & submain dist. 180 20MAY05A 08MAY06 30 50 180 -73 6938 ShirkISb-Proc & Manul. TVS control sys 180 25MAY05A 13JUN06 5 20 180 -44 -55 7625 ShirkISb-Proc & Manul. TVS in Turnel 180 09JUN05A 08MAY06 0 20 30 180 -56 -61 6333 ShirkISb-Proc & Manul. TVS in Turnel 180 09JUN05A 08MAY06 0 20 30 180 -56 -61 SHTRISb-Proc & Manul. Turnel Lgt sys 180 130CT05 29 30 180 -56 -61 SUBMITTALS A PPROVALS Str DORTAL BUILDING Str DORTAL BUILDER'S WORKS -50 100 12 12 14 -46 2001 SHT NP8 - Approve dort & window detail 24 13UL05A 04OCT05 50 100 12 76 -46 2008 <t< td=""><td>SHT TU</td><td>NNEL SOUTHBOUND</td><td>1</td><td>1</td><td></td><td></td><td>1</td><td>1</td><td></td><td></td><td></td></t<>	SHT TU	NNEL SOUTHBOUND	1	1			1	1			
6933 ShtRiSb-Proc & Manut. ES Main & submain dist. 180 20MAY06A 08MAY06 30 50 180 62 -73 6938 ShtRiSb-Proc & Manut. TVS control sys 180 25MAY06A 13JUN06 5 20 180 -34 -55 7625 ShtRiSb-Proc & Manut. TVS in Tunnel 180 09JUN05A 08MAY06 20 30 180 -34 -55 6939 ShtRiSb-Proc & Manut. Tunnel Lgt sys 180 130CT05 29MAY06 0 20 180 -56 -61 SH NORTH PORTAL BUILDING Structure Structure Structure	6946	ShtRtSb-Proc & Manuf. CMCS & ELV sys	180	25MAR05A	08MAY06	15	20	180	-32	-34	
6958 ShtRitSb-Proc & Manuf. TVS control sys 180 25MAY05A 13JUN06 5 20 180 -34 -55 7625 ShtRiSb-Proc & Manuf. TVS in Tunnel 180 09JUN05A 08MAY06 20 30 180 -34 -55 6939 ShtRiSb-Proc & Manuf. Tunnel Lgt sys 180 130 TOC 05 29MAY06 0 20 180 -56 -61 SHT NORTH PORTAL BUILDING SUBILITIALS & APPROVALS ABWF & BUILDER'S WORKS 1999 SHT NPB - Prep & submit door & window detail 24 13JUL05A 04OCT05 50 100 12 112 -46 2001 SHT NPB - Approve door & window detail 24 03UN05A 19OCT05 0 100 12 176 -46 2003 SHT NPB - Approve balustrade & metal works 24 05OCT05 02NOV55 0 0 24 76 -46 2305 ShtNpBidg-Sub.TVF, Ductworks & Control sys 78 02JUL04A 21NCV5 95 100 78 -52 -150 8295 ShtNpBidg-	6970	ShtRtSb-Proc & Manuf. FS AFA & Linear sys	180	25MAR05A	08MAY06	15	70	180	-70	-103	
7625 ShtRtSb-Proc & Manuf. TVS in Tunnel 180 09JUN05A 08MAY06 20 30 180 -34 -55 6939 ShtRtSb-Proc & Manuf. Tunnel Lgt sys 180 130CT05 29MAY06 0 20 180 -56 -61 SHT NORT H PORTAL BUILDING SUBINITIALS & APPROVALS ABWF & BUIDER'S WORKS 1999 SHT NPB - Prep & submit door & window detail 24 13NOV04A 04OCT05 50 100 12 112 146 2001 SHT NPB - Approve door & window details 24 03UN05A 190OCT05 50 100 12 112 146 2001 SHT NPB - Approve door & window details 24 03UN05A 190CT05 50 100 12 76 -46 2008 SHT NPB - Approve balustrade & metal works 24 050CT05 50 100 12 76 -46 8205 ShtNpBidg-Sub.TVF, Ductworks & Control sys 78 02JUL04A 21NCV5 95 100 78 -52 -150 8297 ShtNpBidg-Sub.FS AFA & FM200 sys	6933	ShtRtSb-Proc & Manuf. ES Main & submain dist.	180	20MAY05A	08MAY06	30	50	180	-62	-73	
6939 ShtRibb-Proc & Manuf. Tunnel Lgt sys 180 130CT05 29MAY06 0 20 180 -56 -61 SHTRIbb-Proc & Manuf. Tunnel Lgt sys 180 130CT05 29MAY06 0 20 180 -56 -61 SHTNORTH PORTAL BUILDING SUBILTALS & APPROVALS ABWF & BUILDER'S WORKS 1999 SHT NPB - Approve door & window details 24 03JUN05A 190CT05 50 100 12 112 -46 2001 SHT NPB - Approve door & window details 24 03JUN05A 190CT05 50 100 12 76 -46 2009 SHT NPB - Approve balustrade & metal werks 24 050CT05 02NOV05 0 0 24 76 -46 2009 SHT NPB - Approve balustrade & metal werks 24 050CT05 02NOV05 0 0 24 76 -46 EXAMPCIAL SUBMITTALS 8295 ShtNpBidg-Sub.TVF, Ductworks & Control sys 78 02JUL04A 23NOV05 95 100 54 104 -178 -104	6958	ShtRtSb-Proc & Manuf. TVS control sys	180	25MAY05A	13JUN06	5	20	180	-34	-55	
SHT NORTH PORTAL BUILDING SUBMITTALS & APPROVALS ABWF & BUILDER'S WORKS 1999 SHT NPB - Prep & submit door & window detail 24 13NOV04A 04OCT05 50 100 12 112 -46 2001 SHT NPB - Approve door & window details 24 03JUN05A 19OCT05 0 100 24 100 -34 2008 SHT NPB - Prep & sub balustrade & metal wrks 24 13JUL05A 04OCT05 50 100 12 76 -46 2009 SHT NPB - Prep & sub balustrade & metal wrks 24 05OCT05 02NOV05 0 0 24 76 -46 2009 SHT NPB - Approve balustrade & metal works 24 05OCT05 02NOV05 0 0 24 76 -46 E&M EQPT. / MTRL SUBMITTALS 8295 ShtNpBldg-Sub.TVF, Ductworks & Control sys 78 02JUL04A 21DEC05 95 100 54 -104 -178 8299 ShtNpBldg-Sub.FS AFA & FM200 sys 54 02JUL04A 23NOV05 95 100 54 46 -52 -104 -178	7625	ShtRtSb-Proc & Manuf. TVS in Tunnel	180	09JUN05A	08MAY06	20	30	180	-34	-55	
SUBMITTALS & APPROVALS ABWF & BUILDER'S WORKS 1999 SHT NPB - Prep & submit door & window detail 24 13N0V04A 04OCT05 50 100 12 112 -46 2001 SHT NPB - Approve door & window details 24 03JUN05A 19OCT05 0 100 24 100 -34 2008 SHT NPB - Approve door & window details 24 13JUL05A 04OCT05 50 100 12 76 -46 2009 SHT NPB - Approve balustrade & metal works 24 05OCT05 02NOV05 0 0 24 76 -46 E&M EOPT. / MTRL. SUBMITTALS 8295 ShtNpBidg-Sub.TVF, Ductworks & Control sys 78 02JUL04A 21DEC05 95 100 78 -52 -150 8295 ShtNpBidg-Sub.MVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 46 -52 8299 ShtNpBidg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 46 -52 8299 ShtNpBidg-Sub.MVA	6939	ShtRtSb-Proc & Manuf. Tunnel Lgt sys	180	13OCT05	29MAY06	0	20	180	-56	-61	
ABWF & BUILDER'S WORKS 1999 SHT NPB - Prep & submit door & window detail 24 13NOV04A 04OCT05 50 100 12 112 -46 2001 SHT NPB - Approve door & window details 24 03JUN05A 190CT05 0 100 24 100 -34 2008 SHT NPB - Approve door & window details 24 13JUL05A 04OCT05 50 100 12 76 -46 2009 SHT NPB - Approve balustrade & metal works 24 05OCT05 02NV05 0 0 24 76 -46 2009 SHT NPB - Approve balustrade & metal works 24 05OCT05 02NV05 0 0 24 76 -46 2009 SHT NPB - Approve balustrade & metal works 24 05OCT05 02NV05 0 0 24 76 -46 E8M EQPT. / MTRL. SUBMITTALS 24 02JUL04A 21DEC05 95 100 78 -52 -150 8299 ShtNpBidg-Sub.MVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 46 -	SHT NO	ORTH PORTAL BUILDING		11				1	· · ·		
1999 SHT NPB - Prep & submit door & window detail 24 13NOV04A 04OCT05 50 100 12 112 -46 2001 SHT NPB - Approve door & window details 24 03JUN05A 19OCT05 0 100 24 100 -34 2008 SHT NPB - Prep & sub balustrade & metal wks 24 13JUL05A 04OCT05 50 100 12 76 -46 2009 SHT NPB - Approve balustrade & metal wks 24 05OCT05 02NOV05 0 0 24 76 -46 E&M EQPT. / MTRL. SUBMITTALS 8295 ShtNpBldg-Sub.TVF, Ductworks & Control sys 78 02JUL04A 21DEC05 95 100 78 -52 -150 8297 ShtNpBldg-Sub.MVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 -104 -178 8299 ShtNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 -46 -52 8294 ShtNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 -41	SUBMI	TTALS & APPROVALS									
2001 SHT NPB - Approve door & window details 24 0.3JUN05A 19OCT05 0 100 24 100 -34 2008 SHT NPB - Prep & sub balustrade & metal wks 24 13JUL05A 04OCT05 50 100 12 76 -46 2009 SHT NPB - Approve balustrade & metal works 24 05OCT05 02NOV05 0 0 24 76 -46 EXMECT: / MTRL. SUBMITTALS 8295 ShtNpBildg-Sub.TVF, Ductworks & Control sys 78 02JUL04A 21DEC05 95 100 78 -52 -150 8295 ShtNpBildg-Sub.MVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 104 -178 8295 ShtNpBildg-Sub.MVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 104 -178 8299 ShtNpBildg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 46 -52 8294 ShtNpBildg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100	ABWF 8	BUILDER'S WORKS									
Image: Normal Substrate S	1999	SHT NPB - Prep & submit door & window detail	24	13NOV04A	04OCT05	50	100	12	112	-46	
2009 SHT NPB - Approve balustrade & metal works 24 05OCT05 02NOV05 0 0 24 76 -46 E&M EQPT. / MTRL. SUBMITTALS 8295 ShtNpBldg-Sub.TVF, Ductworks & Control sys 78 02JUL04A 21DEC05 95 100 78 -52 -150 8297 ShtNpBldg-Sub.MVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 -104 -178 8299 ShtNpBldg-Sub.FS AFA & FM200 sys 54 05JUL04A 23NOV05 95 100 54 46 -52 8294 ShtNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 46 -52 8294 ShtNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 46 -52 8294 ShtNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 41 -100	2001	SHT NPB - Approve door & window details	24	03JUN05A	19OCT05	0	100	24	100	-34	
E&M EQPT. / MTRL. SUBMITTALS 78 02JUL04A 21DEC05 95 100 78 -52 -150 8295 ShtNpBldg-Sub.TVF, Ductworks & Control sys 78 02JUL04A 23NOV05 95 100 54 -104 -178 8299 ShtNpBldg-Sub.FS AFA & FM200 sys 54 05JUL04A 23NOV05 95 100 54 46 -52 8294 ShtNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 46 -52 8294 ShtNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 46 -52	2008	SHT NPB - Prep & sub balustrade & metal wks	24	13JUL05A	04OCT05	50	100	12	76	-46	
8295 ShtNpBldg-Sub.TVF, Ductworks & Control sys 78 02JUL04A 21DEC05 95 100 78 -52 -150 8297 ShtNpBldg-Sub.MVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 -104 -178 8299 ShtNpBldg-Sub.FS AFA & FM200 sys 54 05JUL04A 23NOV05 95 100 54 46 -52 8294 ShtNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 46 -52 8294 ShtNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 41 -100	2009	SHT NPB - Approve balustrade & metal works	24	05OCT05	02NOV05	0	0	24	76	-46	
8297 ShtNpBldg-Sub.MVAC MCC, power & control sys 54 02JUL04A 23NOV05 95 100 54 -104 -178 8299 ShtNpBldg-Sub.FS AFA & FM200 sys 54 05JUL04A 23NOV05 95 100 54 46 -52 8294 ShtNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 46 -52	E&M EC	PT. / MTRL. SUBMITTALS		· · ·							
8299 ShtNpBldg-Sub.FS AFA & FM200 sys 54 05JUL04A 23NOV05 95 100 54 46 -52 8294 ShtNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 -41 -100	8295	ShtNpBldg-Sub.TVF, Ductworks & Control sys	78	02JUL04A	21DEC05	95	100	78	-52	-150	
8294 ShtNpBldg-Sub.MVAC mech.vent. sys 54 03AUG04A 23NOV05 95 100 54 -41 -100	8297	ShtNpBldg-Sub.MVAC MCC, power & control sys	54	02JUL04A	23NOV05	95	100	54	-104	-178	
	8299	ShtNpBldg-Sub.FS AFA & FM200 sys	54	05JUL04A	23NOV05	95	100	54	46	-52	
8298 ShtNpBldg-Sub.FS wet sys 54 05AUG04A 23NOV05 95 100 54 40 -94	8294	ShtNpBldg-Sub.MVAC mech.vent. sys	54	03AUG04A	23NOV05	95	100	54	-41	-100	
	8298	ShtNpBldg-Sub.FS wet sys	54	05AUG04A	23NOV05	95	100	54	40	-94	

Act.	Activity	Orig	Early	Early	%	DWP %			Variance	JUL AUG 22 23	SE		OCT 25	NOV 26	DEC 27	JAN
ID	Description	Dur	Start	Finish	Compl.	Compl.	Dur	Float	arly Finis			19 26 3				2 9 1
	PT. / MTRL. SUBMITTALS				1											
8296	ShtNpBldg-Sub.MVAC / TVF pneumatic sys	54	14AUG04A	16NOV05	95	10	48	2	0							
8292	ShtNpBldg-Sub.of CMCS & ELV sys	78	26AUG04A	21DEC05	95	100	78	-28	-130							
E&M EQ	PT. / MTRL. APPROVALS															
7262	ShtNpBldg-App. HV power dist. sys	18	14JUL04A	12OCT05	95	100	18	-76	-100							
7268	ShtNpBldg-App. LV power dist. sys	18	13AUG04A	12OCT05	90	100	18	-80	-100							
8511	ShtSpBldg-App. building related luminaires	18	18AUG04A	120CT05	80	100	18	-40	-64							
7377	ShtNpBldg-App. FS wet sys	18	02SEP04A	120CT05	60	100	18	40	-40							
7427	ShtNpBldg-App. FS AFA & FM200 sys	18	14SEP04A	12OCT05	70	0	18	46	2							
7307	ShtNpBldg-App. of CMCS & ELV sys	18	20SEP04A	120CT05	88	100	18	-28	-52							
7338	ShtNpBldg-App. MVAC mech.vent. sys	18	23SEP04A	120CT05	60	100	18	-41	-46							
7431	ShtNpBldg-App. PD cleans. & flush water sys	18	04NOV04A	120CT05	75	100	18	10	-58							
7355	ShtNpBldg-App. TVF, Ductworks & Control sys	18	12NOV04A	120CT05	70	100	18	-52	-72	_						
7369	ShtNpBldg-App. MVAC MCC, power & control sys	18	12NOV04A	120CT05	75	100	18	-104	-124							
7323	ShtNpBldg-App. MVAC Package AC Unit sys	18	01FEB05A	120CT05	90	0	18	50	14							
PROCU	REMENT - MATERIAL															
ABWF V																
	SHT NPB - Procure doors & windows	120	12JAN05A	19OCT05	50	10	24	100	86							
2028	SHT NPB - Procure balustrade & metal works	120	09MAR05A	02NOV05	50	10	24	76	74							
7269	ShtNpBldg-Proc & Manuf. LV power dist. equip't	180	20MAR05A	08MAY06	20	50	180	-80	-82							
7263	ShtNpBldg-Proc. & Manuf. of HV dist. equip't	180	25MAR05A	08MAY06	15	50	180	-76	-82							
7308	ShtNpBldg-Proc. & Manuf. of CMCS & ELV sys	180	25MAR05A	08MAY06	15	20	180	-28	-34							
7370	ShtNpBldg-Proc & Manuf. MCC, power & control sys	180	25MAR05A	08MAY06	5	70	180	-104	-106							
7428	ShtNpBldg-Proc & Manuf. FS AFA & FM200 sys	120	25MAR05A	27MAR06	15	0	120	16	-10							
7378	ShtNpBldg-Proc & Manuf. FS wet sys	120	06JUN05A	20FEB06	20	20	120	40	-22							
7378	ShtNpBldg-Proc & Manuf. FS wet sys	120	06JUN05A	20FEB06	20	20	120	40	-22							

Act. ID	Activity Description	Orig Dur		Early Finish	% Compl	DWP %			Variance arly Finis	JUL AUG SEP OCT NOV DEC 22 23 24 25 26 27 SI1 18 25 1 8 15 22 29 5 12 19 26 3 10 17 24 31 7 14 21 28 5 12 19 26 10 17 24 31 7 14 21 28 5 12 19 26 5 12 19 26	
ABWF V	•	Dui	Otart	1 mion	Compi.	. Oompi.	Dui	loat		<u>אַן פּרן גַרן כָּצְגַ דְגַ אָרן זין דע אַגַ אָדן זין טון ג</u> ַסָּצַ פּרן גַדן כָּצָגַ גַצַ כּרן אָן דע גע אָדן דע אַ	2 5
	ShtNpBldg-Proc & Manuf. TVF,Ductwks&Cont'l sys	180	09JUN05A	08MAY06	20	30	180	-52	-54		
7339	ShtNpBldg-Proc & Manuf. MVAC mech.vent. sys	120	13OCT05	13MAR06	0	20	120	-41	-46		
7432	ShtNpBldg-Proc & Manuf. Cleans & flush water sys	120	13OCT05	13MAR06	0	40	120	10	-58		
8512	ShtSpBldg-Proc & Manf bldg related luminaires	180	13OCT05	29MAY06	0	30	180	-40	-64		
7324	ShtNpBldg-Proc & Manuf. MVAC Package AC Units	120	10NOV05	11APR06	0	0	120	26	-10		
	ENCLOSURE & T3 UNDERPASS			1		1	1	1			
UBMIT	TALS & APPROVALS										
E&M EQ	QPT./ MTRL.SUBMITTALS					_	_				
8302	Sht-N.R9-Sub.Tunnel Lgt sys	78	02JUL04A	21DEC05	90	100	78	-44	-124		
8304	Sht-N.R9-Sub.TVS control sys	54	02JUL04A	23NOV05	95	100	54	-4	-78		
8309	Sht-N.R9-Sub.MCC, power & control sys	54	02JUL04A	23NOV05	95	100	54	-19	-93		
8305	Sht-N.R9-Sub.FS AFA & Linear sys	54	05JUL04A	23NOV05	95	100	54	25	-65		
8308	Sht-N.R9-Sub.LCC, power & control sys	54	07JUL04A	23NOV05	90	100	54	-23	-79		
8303	Sht-N.R9-Sub.CMCS & ELV sys	78	26AUG04A	21DEC05	98	100	78	3	-95		
E&M EC	QP. / MTRL. APPROVALS							1			-
7487	Sht-N.R9-App. Tunnel Lgt sys	18	05AUG04A	12OCT05	80	100	18	-44	-46		
7481	Sht-N.R9-App. HV/LV main & submain dist. sys	18	13AUG04A	12OCT05	80	100	18	-17	-37		
7604	Sht-N.R9-App. LCC, power & control sys	18	18AUG04A	12OCT05	80	100	18	-23	-25		
7517	Sht-N.R9-App. FS AFA & Linear sys	18	14SEP04A	12OCT05	70	80	18	25	-11		
7494	Sht-N.R9-App. CMCS & ELV sys	18	20SEP04A	12OCT05	88	100	18	3	-17		
7505	Sht-N.R9-App. TVS control sys	18	12NOV04A	23NOV05	70	100	54	-4	-60		
7529	Sht-N.R9-App. TVF, Ductworks & Control sys	18	12NOV04A	12OCT05	70	100	18	-26	-46		
7612	Sht-N.R9-App. MCC, power & control sys	18	12NOV04A	12OCT05	75	100	18	-19	-39		

Act.	Activity	-	-	Early	%	DWP %	Rem	Total	Variance	JUL 22	AUG 23		SEP 24		OCT 25	26		DEC 27	JAN 28
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7495	Sht-N.R9-Proc & Manuf. CMCS & ELV sys	180	25MAR05A	09MAY06	15	0	180	2	0		I								
7518	Sht-N.R9-Proc & Manuf. FS AFA & Linear sys	120	25MAR05A	28FEB06	15	0	120	18	0										
7613	Sht-N.R9-Proc & Manuf. MCC, power & control sys	180	25MAR05A	06JUN06	5	20	180	-43	-45										
7506	Sht-N.R9-Proc & Manuf. TVS control sys	180	25MAY05A	08MAY06	5	5	180	-4	-6				_						
							100												
7530	Sht-N.R9-Proc & Manuf. TVF, Ductwks & Cont'l sys	180	09JUN05A	08MAY06	20	20	180	-26	-28										
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/488	Sht-IN.K9-Proc & Manut. Tunnel Lgt sys	180	1300105	291VIAY06	0	20	180	-44	-46										
7605	Sht N D0 Drog & Monuf L CC, nower & control ave	100	1200705	20144.206	0	F	100	22	25										
1005	Shi-N.R9-Ploc & Mahul. LCC, power & control sys	180	1300105	291VIA 100	0	э	180	-23	-20										
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APPENDIX M COMPLAINT LOG

Appendix M - Complaint Log

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
40426	Butterfly Valley	26 April 2004	A public noise complaint was recently received by EPD. The complaint was related to the noise generated from the Route 8 – ENT site near Butterfly Valley at the night time on 21 April 2004. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 23 April 2004.	 <u>Noise at night time</u> The information provided by the RSS indicated that no works were undertaken by the Contractor during the concerned period. The concerned noise might probably be due to a burglary case occurred at same night. <u>Noise during day-time</u> It is believed that the day-time noise complaint was due to the site formation works of the Project. Considering the powered mechanical equipment used at the Butterfly Valley and the echo effect of the valley, ET believe that the day-time construction noise from the site at Butterfly Valley might cause nuisance to the nearby resident to some extent, though there was no noise level exceedance at the Government Quarters during our routine monitoring in last three months. The Contractor agreed to implement mitigation measures, including good site practices, selecting quieter plant and working methods and reduction in numbers of noisy plant operating currently, in order to mitigate noise impacts at the NSRs. 	Closed
40914	Garden Villa	13-Sep-04 (by EPD) 14-Sep-04 (by ET Leader)	 Environmental Protection Department (EPD) received a public noise complaint on 13 September 2004 about construction noise generated from the Route 8 – Eagle's Nest Tunnel and Associated Works (R8-ENT) Project, nearby by Garden Villa at Tai Po Road, Sha Tin. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 14 September 2004. The complaint was about general construction noise generated from a construction site nearby Garden Villa at Tai Po Road, Sha Tin. As informed by EPD, 	 Environmental Permits A Construction Noise Permit (No. GW-RN0405-04) was obtained by the Contractor for the use of powered mechanical equipment (PME) in the concerned works area and use of TAR no.1 during restricted hours. Blasting Works According to the information provided by the Resident Site Staff (RSS), for carrying out blasting works, a blasting permit should be issued by the Mines Division of Civil Engineering and Development Department (CEDD), but not under the jurisdiction of EPD. The CNP issued by EPD only specified the use of PME but not the blasting works during restricted hours. 	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			 the complainant was particularly concerned of two issues: The complainant was informed by the Contractor (Leighton – Kumagai Joint Venture) that blasting works would be conducted during restricted hours. He worried about the noise nuisance would be induced by the blasting works. Noise nuisance from some site vehicles traveling on the Temporary Access Road (TAR no.1) near Garden Villa was noted by the complainant during restricted hours. 	As advised by the RSS, the Contractor did intend to apply for a permit to the Mines Division of CEDD for blasting works during restricted hours. However, up to the time of preparation of this report, the Contractor still had not obtained the approval from the Mines Division and therefore, no blasting works were performed by the Contractor during restricted hours. <u>Use of TAR no.1</u> According to Condition 3d of the above-mentioned CNP, there was restriction on the use of site vehicles traveling on TAR no.1. The usage of site vehicles on TAR no.1 in a 2-week period before the date of complaint, i.e. 30 th August to 12 th September 2004 showed that the only vehicle type using TAR no.1 for the concerned period was concrete truck and the number of vehicle pass was limited to 4 times per hour, which was in compliance with the above CNP's conditions. Regular noise monitoring was undertaken by ET at Garden Villa on 30 th August and 6 th September 2004 during restricted hours (1900 – 2300 hours). The monitoring results were 58.7 dB(A) and 58.6 dB(A), respectively, which were below the noise limit level of 60 dB(A). However, it should be noted that site vehicles were not used by the Contractor on TAR no.1 during restricted hours on these two monitoring day. Based on the information obtained, the validity for the noise complaint in associated with night-time blasting works could not be concluded under ET's investigation, since no blasting works had been performed by the Contractor during restricted hours at the time of the report preparation. Also, it should be highlighted that for carrying out blasting works, permission should be obtained by Mines Division of CEDD, but not under the control of EPD. For the use of TAR no.1, the RSS's records showed that the number of vehicle pass in the period between 30 th August and 12 th September 2004 was complied with the CNP's conditions. It should be noted that only a maximum of 3 concrete trucks	

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			Environmental Protection Department	 passing the site entrance was recorded. Therefore, it was considered that the nuisance noted by the complainant was not due to the site vehicles adopted by the Contractor (LKJV). Nevertheless, the Contractor was reminded to ensure the compliance of the CNP conditions and adopt good site practice to minimize the construction noise. According to the information provided by the RSS, no 	
41021	Garden Villa	09-Oct-04 (by EPD) 21-Oct-04 (by ET Leader)	 (EPD) received a public noise complaint on 9 October 2004 about construction noise generated from the Route 8 – Eagle's Nest Tunnel and Associated Works (R8-ENT) Project, nearby by Garden Villa at Tai Po Road, Sha Tin. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 21 October 2004. The complaint was about nighttime construction noise generated from a construction site nearby Garden Villa at Tai Po Road, Sha Tin. As informed by EPD, the complainant was particularly concerned of two issues: Construction works undertaken by the Contractor (Leighton–Kumagai Joint Venture) were noted after 2300 hour. Some workers were noted leaving the site through Temporary Access Road (TAR) no.1 at around 2 am, causing nuisance to the residents in Garden Villa. 	 According to the information provided by the RSS, no construction activity was undertaken in the nighttime period (2300 – 0700 hours) at the concerned site area. LKJV did admit that some vehicles had been operating at midnight for transporting LKJV's survey workers from the site. Inconsiderate behaviors were noted causing nuisance to Garden Villa residents: Driving the vehicles too fast, which generated excessive engine noise; Noise inside the vehicles (such as staff talking or radios) escaping through the open vehicle windows; and Vehicle beeping horn to request the guards to open the gate. In order to rectify the situation, LKJV had notified the relevant staff with the receipt of the complaint and urged them to take appropriate measures when using TAR1 at night: to drive slowly in order to reduce the engine noise, especially when approaching Garden Villa; to roll up the vehicle windows to contain any noise from talking or radios; and 	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
41023	Government Quarters (Butterfly Valley)	20-Oct-04 (by MHJV) 23-Oct-04 (by ET Leader)	A public complaint was received by the Engineer's Representative (ER) of Route 8 – Eagle's Nest Tunnel and Associated Works (R8-ENT) Project on 20 th October 2004. The complaint was raised by a resident of the Government Quarters at Caldecott Road, concerning dust generation as a result of the construction activities at Butterfly Valley. The ER subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 23 rd October 2004.	 The complaint was considered valid based on: ER's site observations; ET's weekly site audit; and 1-hr TSP exceedance record. Also, the sources of dust generation were identified as 2 portions of the haul roads, one at Slope BV-S2 and one linking between South Portal Tunnel to Mui Kong Tsuen, were found to be dry. Dust impact due to the haulage of excavated materials at the South Portal. Enhanced dust suppression measures had been implemented by the Contractor: added rockfill to the haul road between South Portal Tunnel and the Gully fill area; maintained watering to haul road at Slope BV-S2; requested the fill material supplier to ensure the material was in a damp condition before leaving quarry; provided for material not dampened at the Quarry to be directed to the wheel wash for water spray before entering the site; when cleaning drill holes along slope BV-S4 to ensure adequate water was available for flushing to suppress dust emission; AND provided damper stockpiles of cleared material at BV-S2 before loading. Based on ER's site observations, most of the above mitigation measures have been implementing by the Contractor. Also, an additional water browser was delivered to site on 29th Oct 04. No significant fugitive dust emission has been found. During ET's site inspections on 27th Oct and 3rd Nov 2004, the situation was found improved. No deficiency relating to air quality impact was noted by ET during the two audit sessions. The results of air quality monitoring (1-hr and 24-hr TSP) in the period between 21st Oct and 2nd Nov 2004 were all found to be complied with the Action / Limit Levels. 	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
41124	Government Quarters (Butterfly Valley)	21-Nov-04 (by LKJV) 24-Nov-04 (by ET Leader)	A public complaint was received by the Contractor of Route 8 – Eagle's Nest Tunnel and Associated Works (R8- ENT) Project on 21 st November 2004 (Sunday). The complaint was concerned about excessive noise generation from construction machinery at Butterfly Valley on the same day. The Engineer's Representative (ER) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 24 th November 2004.	According to the ER, the only construction activity at Butterfly Valley undertaken on 21 st Nov 04 was formation of access road near Slope BV-S2. The activity only involved operations of 1 no. of excavator and 1 no. of dump truck with grab, which complied with the condition stipulated in a valid CNP GW-RW0484-04, which was hold by the Contractor. Routine noise monitoring was conducted on 21 st and 28 th Nov 2004 at NM6. All the measured noise levels (48.5 to 56.4 dB(A)) were well below the noise limit level. In addition, the measurement results were within the baseline noise level. Therefore, the complaint was considered to be invalid. Nevertheless, the Contractor was reminded to ensure the compliance of the conditions stipulated in CNP. The Contractor was also recommended to adopt good site practice in order to minimize the construction noise.	Closed
41201	Government Quarters (Butterfly Valley)	01-Dec-04 (by MHJV & ET Leader)	A public complaint was received by the Engineer's Representative (ER) of Route 8 – Eagle's Nest Tunnel and Associated Works (R8-ENT) Project on 1 st December 2004. The complaint was raised by a resident of the Government Quarters at Caldecott Road, concerning dust generation at Butterfly Valley. The Environmental Team (ET) of the Project was informed with the complaint on the same day. The resident complained that a large portion of the excavated slopes was not properly covered, which caused dust nuisance to her.	 The complaint was considered valid based on: 1. ER's site observations; 2. ET's weekly site audit Upon receipt of the complaint, a series dust control measures had been implemented by the Contractor, such as covering of the exposed slopes with appropriate sheeting, regular watering to the haul roads and excavated slope faces, etc. During the ET's weekly site audit on 08-Dec-04 together with the representative of HyD, IEC, ER and the Contractor, the above mitigation measures were observed. The idle slopes at BVS2 had been covered by tarpaulin sheeting and erosion mat. The left exposed slope surfaces at BVS2 were under excavation, thus being unable to be covered. According to the ER, the complainant has expressed his satisfaction to the site condition on 07-Dec-04, after the implementation of dust mitigation measures by the 	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				Contractor. However, owing to the prevailing of the dry season, the Contractor was reminded to ensure the dust control measures are effectively implemented.	
50125	Garden Villa (North Portal)	21-Jan-05 (by EPD) 25-Jan-05 (by ET Leader)	 Environmental Protection Department (EPD) received a public noise complaint on 21 January 2005 about construction noise and dust generated from the Route 8 – Eagle's Nest Tunnel and Associated Works (R8-ENT) Project, nearby by Garden Villa at Tai Po Road, Sha Tin. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 25 January 2005. The complaint was about construction noise and dust generated from a construction site nearby Garden Villa at Tai Po Road, Sha Tin. The complainant was particularly concerned of two issues: Noise from tunnel blasting work carrying out at around 7:30am and 10:00pm; and Dump trucks without covering of canvas when leaving the construction site. 	 Noise from blasting For carrying out the blasting, the Contractor had obtained the permit from relevant authority. The ET's noise monitoring results did not show any exceedance for the measurement taken when blasting was in place. It should be highlighted that for carrying out blasting works, permission should be obtained by Mines Division of CEDD, but not under the control of EPD. In order to minimize the nuisance from the works, the Contractor was recommended: To inform the residents around the area about the time of blasting in advance; and To re-schedule the blasting time table, if possible, in order to avoid nuisance. Uncovered dump trucks In order to evaluate the situation, two inspections were carried out by the ET at Garden Villa on 27-Jan and 28-Jan-05 to identify the dump trucks leaving the site with uncovered load. On 27-Jan-05, 3 nos. of trucks, which were working for ENT Project, was noted by-passing Garden Villa without proper cover. Enhanced control (penalty system) was implemented by the Contractor after the inspection on 27-Jan. During the inspection on 28-Jan-05, 24 nos. of dump trucks for ENT Project were found leaving the site. No non-compliance was noted for the trucks working for ENT Project. LKJV was reminded to keep closely monitoring on the condition and the effectiveness of the proposed control measures. 	Closed

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50308	Garden Villa (North Portal)	05-Mar-05 (by EPD) 08-Mar-05 (by ET Leader)	 EPD received a public complaint on 5 March 2005 about construction noise and dust generated from the construction sites of Route 8 – Eagle's Nest Tunnel and Associated Works (R8-ENT) and Route 8 - Sha Tin Heights Tunnel and Approaches (R8-SHT), nearby by Garden Villa at Tai Po Road, Sha Tin. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 8 March 2005. The complaint was about construction noise and dust generated from the construction sites nearby Garden Villa at Tai Po Road, Sha Tin. The complainant was particularly concerned of the following issues: Nighttime & Sunday construction noise Noise from tunnel blasting at early morning and nighttime Dust from construction activities 	 Nighttime & Sunday construction noise no exceedance for noise monitoring restricted hour works were found complied with the CNPs records of vehicular trips on TAR1 did not show noncompliance of CNP conditions Noise from tunnel blasting at early morning and nighttime no exceedance for noise monitoring valid blasting permit had been obtained from CEDD blasting work is not under the jurisdiction of EPD Dust from construction activities dump trucks with uncovered / inadequately covered materials were observed leaving site no exceedance for TSP monitoring enhanced dust suppression measures had been implemented by the Contractor Conclusions The complaint against the dust issue (uncovered / inadequately covered dump trucks) was considered justifiable The Contractor was reminded to review the current checking system. Continuous spot checks would be performed by ET and RSS. 	Closed
50330	Garden Villa (TAR1)	30-Mar-05 (by EPD & ET Leader)	Environmental Protection Department (EPD) received a public complaint on 30 th March 2005 about construction noise from the sites of Route 8 – Eagle's Nest Tunnel and Associated Works (R8-ENT) near Garden Villa at Tai Po Road, Sha Tin. The complaint, which was lodged by a resident of Garden Villa on 29 th March 2005, was about the noise generated by heavy vehicles traveling in and out of the construction site near Garden Villa. According to the complaint, the noise was made from 7am onwards.	The site of concern was likely to be the Temporary Access Road no.1 (TAR1) connecting Tai Po Road and the construction sites of R8-ENT and Route 8 - Sha Tin Heights Tunnel and Approaches (R8-SHT). The time period of concern was within normal working hours (7am to 7pm) on a weekday not being holidays. According to the EM&A Manual, the criterion of construction noise in term of L_{eq} -30min within this period is 75 dB(A) for domestic premises. Since the commencement of the Project, no exceedance of daytime noise criterion of 75 dB(A) was recorded at Station AM3 (Garden Villa). During the 2-hour measurement period of the ad-hoc monitoring (0700-0900 hrs), all the measured noise levels (L_{eq} -30min) were below the daytime noise	Closed

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				 criterion of 75 dB(A). Based on the results of routine noise monitoring and the adhoc measurement on 1st April 2005 at Garden Villa, no exceedance of daytime noise criterion of 75 dB(A) was recorded. The complaint lodged is therefore considered not justifiable. In order to minimize the nuisance generated by the vehicle use at Garden Villa, the Contractor has proposed to limit the frequency of trucks existing from TAR1 at a rate of one truck per minute during the time period of concern (7am to 8:30am). 	
50415	Government Quarters	09-Apr-05 (by EPD) 15-Apr-05 (by ET Leader)	The complaint, which was lodged by a resident of 7/F, 38B, 8-10 Caldecott Road (Governmental Quarters) on 9 th April 2005, was about the noise generated by the construction works at the Butterfly Valley during daytime. The complainant mentioned that the instant noise level taken by himself was 78 to 82 dB(A). EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 15^{th} April 2005. The time period of concern was within normal working hours (7am to 7pm) on a weekday not being public holidays. According to the EM&A Manual, the criterion of construction noise in term of L_{eq} -30min within this period is 75 dB(A) for domestic premises.	 Governmental Quarters (Station NM6) is one of the designated noise monitoring stations in the EM&A programme. Routine monitoring is undertaken on a weekly basis in accordance with the EM&A Manual. Since the commencement of the Project, no exceedance of daytime noise criterion of 75 dB(A) was recorded at this station. Ad-hoc measurement was conducted at the complainant's premises on 22 Apr 05. The measured noise level was 69.0 dB(A), which was well below the daytime noise criterion of 75 dB(A). Based on the results of routine noise monitoring and the adhoc measurements conducted in the complainant premises, no exceedance of daytime noise criterion of 75 dB(A) was recorded. The complaint lodged is therefore considered not justifiable. 	Closed

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50419	Government Quarters	15-Apr-05 (by EPD) 19-Apr-05 (by ET Leader)	The complaint was lodged by a resident of 8-10 Caldecott Road (Government Quarters) on 15 th April 2005 to EPD as well as the Chief Resident Engineer of the Project. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 19 th April 2005. The complainant mentioned that they had experienced quite a lot of noise emanating from the tunnel drilling area after 11pm over several nights and most particularly at the night of 14 th April 2005 and at 4am on 15 th April 2005.	The site of concern was likely to be the South Portal. For carrying out construction works at this area during restricted hours, two Construction Noise Permits (CNPs no. GW- RW0085-05 and GW-RW0086-06) were obtained by the Contractor in accordance with the requirements stipulated in Noise Control Ordinance. According to the information provided by the Resident Site Staff and the Contractor, the construction activities undertaken in the period between 11 th and 15 th April 2005 from 1900 to 0700 hours included drilling, breaking, trimming, set up of rock drill, installation of arch-rib and grouting. The powered mechanical equipment (PME) involved in the above works included backhoe, rock drill, loader, dumper, shot-crete machine, group pump, mobile platform and grout machine, which were covered by the CNPs. According to the routine monitoring results, for the time period between 2300-0700 hours, the measured noise levels exceeded the corresponding noise Limit Level of 50dB(A). However, the measured levels were found within the range of baseline level and below the average baseline level. Based on the routine noise monitoring results at Station NM6, the measured noise levels for the period between 2300-0700 hours were below the baseline noise level, which was comparable to the ambient level. According to the RSS's record, the PME items operated during the concerned period were found covered by the 2 CNPs hold by the Contractor. Based on the available information, there is not enough evidence to prove whether the complaint against nighttime construction noise generated in the concerned period (11 th to 15 th April 2005) is justifiable or not.	Closed

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50512	Yew Chung International School	12-May-05	On 11 May 05, a notice was sent to Yew Chung International School (YCIS) by the Contractor, providing their tentative blasting schedule on 12 May 05. It was shown that one of the blasting operations was scheduled at 09:30am, at when an examination was being held in YCIS. Upon receipt of the notice, a representative of YCIS lodged a complaint to the Contractor via the Project's hotline at 07:40 on 12 May 2005. The complainant expressed her objection to the blasting operation taken at 09:30am when the examination was taken place. The Contractor then agreed on one occasion only to delay the tunnel blast planned for 9:30am until 9:50am (i.e. 5 min after the examination). The complainant satisfied but did expect no future blasting during the examination period. According to the Engineer's Representative, the Contractor did not wish to make any commitment to ensure no blasting would be taken within the examination period.	A 1-day continuous noise measurement was conducted by the Environmental Team at Station NM1 on 26 May 05. According to the ER's record, two blasting operations were taken in the vicinity of YCIS on 26 May 05. One surface blast was taken at Butterfly Valley at 15:42 and one tunnel blasting was taken at South Portal at 16:56. The measurement results showed that the noise impact in term of Leq-5min and Leq-30min arising from the blasting operations was insignificant. No exceedance of construction noise criterion for examination period was recorded (Leq- 30min < 65dB(A)). The complaint lodged was therefore considered not justifiable. However, in order to minimize the potential nuisance arising from the blasting noise and the siren sounds prior to blasting, the Contractor was recommended to consider scheduling the blasting operations beyond the examination periods.	Closed

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50610	Government Quarters	10-Jun-05	On 10 June 2005, the Resident Site Staff (Maunsell-Hyder Joint Venture) received a complaint from a resident of the Government Quarters at Caldecott Road. The complaint was concerned about the construction dust generation as a result of the construction activities of the Project at Butterfly Valley. The complainant had not specified which construction activities had contributed to the dust generation.	 Site Observations According to the RSS's preliminary investigation, it was considered that soil nailing at Slope BV-S2 was the dominant dust source and was likely to be the activity of concern. The dust suppression measures taken were found inadequate to control the dust dispersion from the works. Noticeable dust dispersion from the soil nailing work could be observed. Corrective Actions After the Contractor was notified by the RSS of the complaint, immediate action was taken by the Contractor on the same day (10 June 2005). The dust mitigation measures for the soil nailing were enhanced. An additional thicker cover was used. Also, continuous water spray was applied to suppress the dust emission. Environmental Outcome The RSS made a response to the complainant on 10 June 2005. The complainant was informed of the rectification actions taken by the Contractor. No further adverse comment was received from the complainant. Conclusions Based on the RSS's information, this complaint is considered to be valid and related to the construction activities of the Project. However, corrective action had been taken by the Contractor immediately and the situation was found improved. 	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50712	A scattered house near South Portal and Tai Po Road Water Treatment Works Staff Quarters	12-Jul-05	On 12 July 2005, a resident, whose house is located near South Portal and Tai Po Road Water Treatment Works Staff Quarters, lodged a complaint to the Contractor via the Project's hotline at 11:40am. The complainant expressed his concern on the nuisance caused by the blasting works at early morning (before 07:00 hours) and late night (after 23:00 hours).	 Site Activity According to the information provided by the RSS, tunnel blasting works have been taken place in the concerned period in north bound tunnel from the Ventilation Adit towards the direction of the South Portal. Environmental Requirements In the EP, the EM&A Manual of the Project and the NCO, no requirement is specified for the control of blasting operation and the associated environmental impact, such as blasting noise. It should be highlighted that for carrying out blasting works, permission should be obtained by Mines Division of CEDD, but not under the jurisdiction of EPD. For carrying out the above-mentioned blasting operations, the Contractor has obtained a valid blasting permit from CEDD under the Dangerous Goods Ordinance (Cap. 295). Under this permit, the Contractor is allowed to carry out 24-hour blasting works within the designated area. Contractor's Actions Though the blasting noise is not under the control of any environmental related regulation and the Contractor is allowed to carry out 24-hour blasting, the Contractor would try to keep the blasts of concern undertaken between 07:00 to 23:00 hours. This arrangement could effectively reduce the potential nuisance to the residents within the more sensitive time period (23:00 to 07:00 on next day). Conclusions The subjected blasting operations were carried out by the Contractor under a valid blasting permit. The complaint lodged is therefore considered not justifiable. 	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50809	Government Quarters (8-10 Caldecott Road)	09-Aug-05	On 9 August 2005, a resident of 8-10 Caldecott Road (Government Quarters) lodged a complaint to the Contractor via the Project's hotline at 14:30. The complainant expressed her concern on the nuisance caused by the blasting works undertaken at Butterfly Valley. Noise impact arising from the blasting works was one of the issues raised by the complainant.	Ad-hoc Noise Measurement An ad-hoc noise measurement was carried out on the roof of Government Quarters during a surface blast on 16 August 2005. According to the record of the RSS and the site observation, a surface blasting was undertaken at Butterfly Valley at around 15:38 on the monitoring day. The results show that the measured noise level in term of Leq- 30min, i.e. 69.1 dB(A) during the surface blasting was well below the daytime construction noise criterion of 75 dB(A). <i>Conclusion and Recommendation</i> According to the results of ad-hoc noise measurement taken at Government Quarters on 16 August 2005, the measured noise levels (Leq-30min) did not exceed the noise criterion of 75 dB(A). In addition, the subjected blasting operations were carried out by the Contractor under a valid blasting permit. For the concern of noise impact, the complaint was considered not justifiable.	Closed
50830	Government Quarters (8-10 Caldecott Road)	30-Aug-05	 The RSS received a public complaint from a resident of Government Quarters addressing two noise issues: 1. Noise nuisance caused by drilling works at Butterfly Valley; 2. Noise nuisance due to blasting 0045 hrs of 28 August 2005. 	Noise Measurement No exceedance was recorded for the routine noise monitoring at NM6 (Government Quarters). Ad-hoc noise measurement was conducted on 1 and 2 Sept 05. All measured noise levels complied with the noise criteria. Conclusion The complaint was considered not justifiable. However, the Contractor had taken proactive actions in order to minimize the nuisance of the residents, (1) to stop the rock breaking works at BVS2 and (2) to install temporary noise barriers for drilling works.	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50928	Government Quarters (8-10 Caldecott Road)	28-Sept-05	A resident of Government Quarters complaint about a blast undertaken at 0215hr on 28 Sept 05.	Investigation in progress	On- going