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)

March 2006

Approved By _____

(Environmental Team Leader)

REMARKS:

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

CINOTECH accepts no responsibility for changes made to this report by third parties.

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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-eighth 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 March 2006 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, drainage works, tunnel lining and construction of portal buildings and Administration Building.

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 Due to the Project***	***Action Taken***
	Action Level	***Limit Level***		
1-hr TSP	0	0	0	N/A
24-hr TSP	0	0	0	N/A
Noise	0	1	1	Notification of exceedance was issued.

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 Taken	Status	Remark
	Number	Nature			
Complaint received	0	---	N/A	N/A	---
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;
- Retaining wall construction;
- Installation of water proofing membrane in tunnels;
- Portal building construction.

The anticipated environmental impacts will be mainly on surface runoff during rainy days, 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 acts 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 HILL Hong Kong Ltd. was appointed as the IEC under Condition 2.1 of the EP. This is the twenty-eighth monthly EM&A report summarizing the EM&A works for the Project in March 2006.

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 HILL 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:

- Soil nailing, box culvert, retaining wall, water-main works, cut slope, haul road construction, noise barrier footing, rock dowel and earth filling at Butterfly Valley;
- Drainage works at Butterfly Valley and Toll Plaza;
- Water proofing membrane and tunnel lining construction at ENT Tunnel;
- OHVD slab and road slab construction at ENT Tunnel;
- Tunnel drainage, cross passage, ventilation adit concrete lining, E&M MSFD installation and painting for OHVD soffit at ENT Tunnel;
- Concreting at South Portal, North Portal, Toll Plaza and Ventilation Adit;
- Footbridge and subway construction at Toll Plaza;
- Chlorine barrier wall construction at Portion X;
- E&M installation work within SHT works area; and
- Plastering and painting of wall at SHT Portal Buildings.

Table 1.1 Key Project Contacts

Party	Role	Name	Position	Phone No.	Fax No.
HyD	Permit Holder	Mr. Kroc Leung	SE2/R8K	2762 3662	2714 5198
		Mr. George Law	E4/R8K	2762 3675	
MHJV	Engineer	Mr. Conrad Ng	Project Manager	2605 6262	2691 2649
	Engineer's Representative	Mr. Peter Poon	CRE	3552 2500	2743 9200
		Mr. Eric Wong	RE (S & EP)	3552 2551	
		Ms. Sammie Chan	TO (EN)	3552 2605	
Cinotech	Environmental Team	Dr. Priscilla Choy	The ET Leader	2151 2089	3107 1388
		Mr. Alex Ngai	Audit Team Leader	2151 2090	
		Mr. Henry Leung	Monitoring Team Leader	2151 2087	
CH2M	Independent Environmental Checker	Mr. David Yeung	Independent Environmental Checker	2507 2203	2507 2293
		Mr. Billy Yu	Assistant Independent Environmental Checker	2872 2949	
LKJV	Contractor	Mr. Ray Brewster	Project Director	9092 6128	2743 1600
		Mr. Danny Cheng	QA/E Manager	3552 2113	
Enquiries Hotline				3552 2226	-
Complaint Hotline				3552 2380	-

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.

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 the reporting month.

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 School	Rooftop
AM3	Slope no. 07SW-D/FR4 near Garden Villa	On Ground
AM4	Government Quarters	Ground Floor[1]

Note: [1]The 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 2.2 Air 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 m^3/min. and 1.4 m^3/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 ±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 TSP monitoring was conducted as scheduled during the reporting month.

2.15 No Action/Limit Level exceedance was recorded for both 1-hr and 24-hr TSP monitoring in the reporting month.

2.16 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**.

2.17 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.

Table 3.1 Noise Monitoring 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

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 3.2 Noise 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	L_{10}(30 min.)dB(A) L_{90}(30 min.)dB(A) L_{eq}(30 min.)dB(A)	(a) 0700-1900 hrs. on weekdays (b) 1900-2300 hrs. on weekdays (c) 0700-2300 hrs. on holidays (d) 2300-0700 hrs on any days	Once per week	Façade
NM5				Façade
NM6				Free Field
NM7				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 Action Level exceedance (noise complaint) was recorded in the reporting month.

3.14 A noise limit level exceedance was recorded on 2nd March 2006 at NM1 (Yew Chung / PLK). According to the field observations, the exceedance was considered related to the construction works of the Project, which involved the operations of excavator-mounted breakers and drilling machines near the South Portal Building. Notice of exceedance (NOE) was issued to all related parties on 3rd March 2006. No further exceedance was identified since 10th March 2006. The exceedance report is provided in **Appendix H**.

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 2nd, 9th, 16th, 23rd and 30th March 2006 by ET. The audit session on 2nd March 2006 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

Permit No.	Valid Period		Details	Status
	From	To		
Environmental Permit (EP)				
EP-103/2001/C	22/07/05	N/A	Construction and operation of (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; I 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 Waste Producer				
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)				
GW-RW0643-05	08/10/05	07/04/06	*Location*: Butterfly Valley *Time period*: general holiday (including Sundays) between 0700 and 2300 hours, and any other day between 1900 and 2300 hours.	Valid
GW-RW0073-06	07/2/06	4/5/06	*Location:* Butterfly Valley *Time period*: General holidays (including Sundays) between 2300 to 0700 hrs	Valid
GW-RW0043-06	6/2/06	5/8/06	*Location*: Ventilation Adit *Time period*: general holiday (including Sundays) between 0700 and 2300 hours, and any other day between 1900 and 2300 hours.	Valid

Permit No.	Valid Period		Details	Status
	From	To		
GW-RN0532-05	04/10/05	03/04/06	*Location*: South Portal *Time period*: general holiday (including Sundays) between 0900 and 2300 hours, and any other day between 1900 and 2300 hours.	Valid
GW-RN0447-05	04/10/05	03/04/06	*Location*: South Portal *Time period*: Any day between 2300 and 0700 hours on next day.	Valid
GW-RN0449-05	04/10/05	03/04/06	*Location*: North Portal *Time period*: general holiday (including Sundays) between 0900 and 2300 hours, and any other day between 1900 and 2300 hours.	Valid
GW-RN0448-05	04/10/05	03/04/06	*Location*: North Portal *Time period*: Any day between 2300 and 0700 hours on next day.	Valid
GW-RN0537-05	11/11/05	10/05/06	*Location:* Toll Plaza *Time period:* general holiday (including Sundays) between 0900 and 2300 hours, and any other day between 1900 and 2300 hours.	Valid
GW-RN0593-05	08/12/05	07/06/06	*Location*: South and North Portal Buildings *Time period:* general holiday (including Sundays) between 0900 and 2400 hours, and any other day between 1900 and 2400 hours.	Valid
GW-RN0086-06	6/3/06	10/5/06	*Location*: South Portal to North Portal tunnel end *Time period:* Any days not being a general holiday between 2300 and 0700 hours 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 and 24-hr TSP Monitoring

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

Construction noise

4.8 A noise limit level exceedance was recorded on 2nd March 2006 at NM1. According to the field observations, the exceedance was considered related to the construction works of the Project, which involved the operations of excavator-mounted breakers and drilling machines near the South Portal Building. Notice of exceedance (NOE) was issued to all related parties on 3rd March 2006. Mitigation measures were taken by the Contractor by providing movable noise barriers to screen the noise from the breaking and drilling works. No further exceedance was identified since 10th March 2006.

Table 4.2 Observations and Recommendations of Site Audit

Parameters	Date	Observations / Recommendations	Remedial Actions
Water Quality	2-Mar-06 30-Mar-06	The treatment capacity at Toll Plaza was considered inadequate to cater for the wet season. The Contractor was recommended to review the drainage system and provide adequate treatment facility.	The situation would be followed up in Apr 06.
	2-Mar-06	Standing water was observed at Toll Plaza and Ventilation Adit. The Contractor was reminded to remove the water as soon as possible to prevent mosquito breeding.	Rectification / improvement was observed during the site audit on 9-Mar-06.
	30-Mar-06	The Contractor was reminded to protect the exposed slope surface near the box culvert at Portion H1 by covering or shotcreting in order to minimize the contaminated runoff running into the box culvert during rainy days.	Rectification / improvement was observed during the site audit on 3-Apr-06.
Air Quality	2-Mar-06 23-Mar-06	Exposed slope surface was observed at Slope SP-S2. The Contractor was reminded to cover the slope or perform hydroseeding as soon as possible.	Rectification / improvement was observed during the site audit on 30-Mar-06.
	16-Mar-06	The contractor was reminded to provide watering for the haul road at portion D4 to avoid dust emission by vehicles movement.	Rectification / improvement was observed during the site audit on 23-Mar-06.
Chemical and Waste Management	2-Mar-06	Refuse without proper collection was observed near North Portal Building. The Contractor was reminded to provide skips or other means for collection of general refuse.	Rectification / improvement was observed during the site audit on 9-Mar-06.
	23-Mar-06	Oil stain was observed on bare ground next to U-channel for the site at ventilation adit. The contractor was also reminded to take away the empty diesel oil drum.	Rectification / improvement was observed during the site audit on 30-Mar-06.
	30-Mar-06	General refuse was found near the existing box culvert at Portion H1 (near South Portal). The Contractor was reminded to collect and dispose of the refuse as soon as possible.	Rectification / improvement was observed during the site audit on 3-Apr-06.

Implementation Status of Event Action Plans

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

Summary of Complaints and Prosecutions

4.10 No environmental related complaint or prosecution was received in the reporting month.

4.11 There were 22 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 coming months include:

- Surface runoff generated at Toll Plaza and Butterfly Valley areas;
- Potential dust emission from slope works and haul road construction at Butterfly Valley, excavation, soil nailing and vehicle movement on haul roads;
- Noise generation from excavation works, rock breaking works at Butterfly Valley;
- Accumulation of standing water after rains.

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:

ENT Tunnel
- Concrete lining and waterproofing membrane at VA junction, OHVD slab, road slab, tunnel drainage, painting for OHVD soffit and E&M MSFD installation.

Butterfly Valley
- Cut slope, haul road, box culvert, open channel, soil nailing, rock dowel, retaining wall, water mains construction, noise barrier foundation and drainage works.

South Portal Building
- Concreting of columns, walls and slab at 3/F and 4/F levels.

North Portal Building
- Concreting of columns, walls and slabs at 3/F and 4/F levels and plastering

Toll Plaza's Structures and Administration Building
- Footbridge, Toll Collector's Passageway, drainage, laying of concreting block, aluminum window installation, concreting of columns, walls and slabs for workshop.

Ventilation Adit Tunnel and Building
- Concreting of columns, walls and slabs at 2/F to vent shaft floor and drainage works.

Other Works Areas
- Chlorine barrier wall panel installation construction at Portion X.
- E&M installation works within SHT works area.
- Plastering, painting of wall, window installation and drainage works at SHT Portal Buildings.

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 One project-related noise level exceedance was recorded at Station NM1 on 2nd March 2006. Rectification actions were taken by the Contractor and no further exceedance was recorded since 10th March 2006.

6.3 No environmental complaint or prosecution was received in the reporting month.

Recommendations

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

Water Impact

- To review and implement temporary drainage system especially for the areas at Butterfly Valley and Toll Plaza.
- To closely monitor the capacity of existing de-silting 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.

Dust Impact

- To ensure adequate water spray or other dust suppression measures are applied for the WTW access road and the haul roads and stockpile areas in Butterfly Valley.
- To cover idle soil slope surface and stockpile of dusty materials to prevent wind erosion.

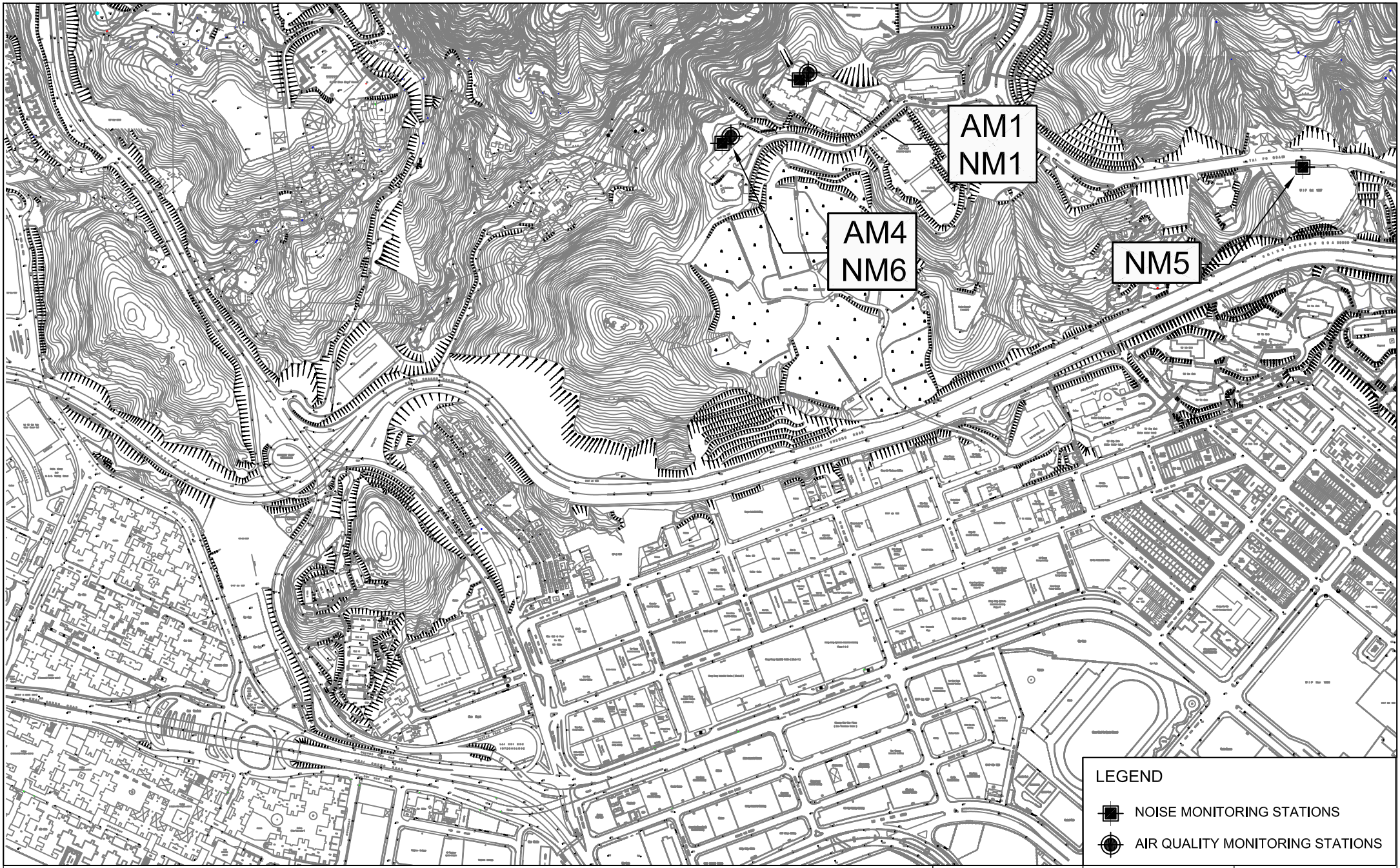
Noise Impact

- To closely observe the more stringent requirement for construction during school examination periods.
- To provide temporary noise barriers for noisy activities (such as breaking works).
- To reduce the number of noisy equipment in concurrent operation.

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



Title

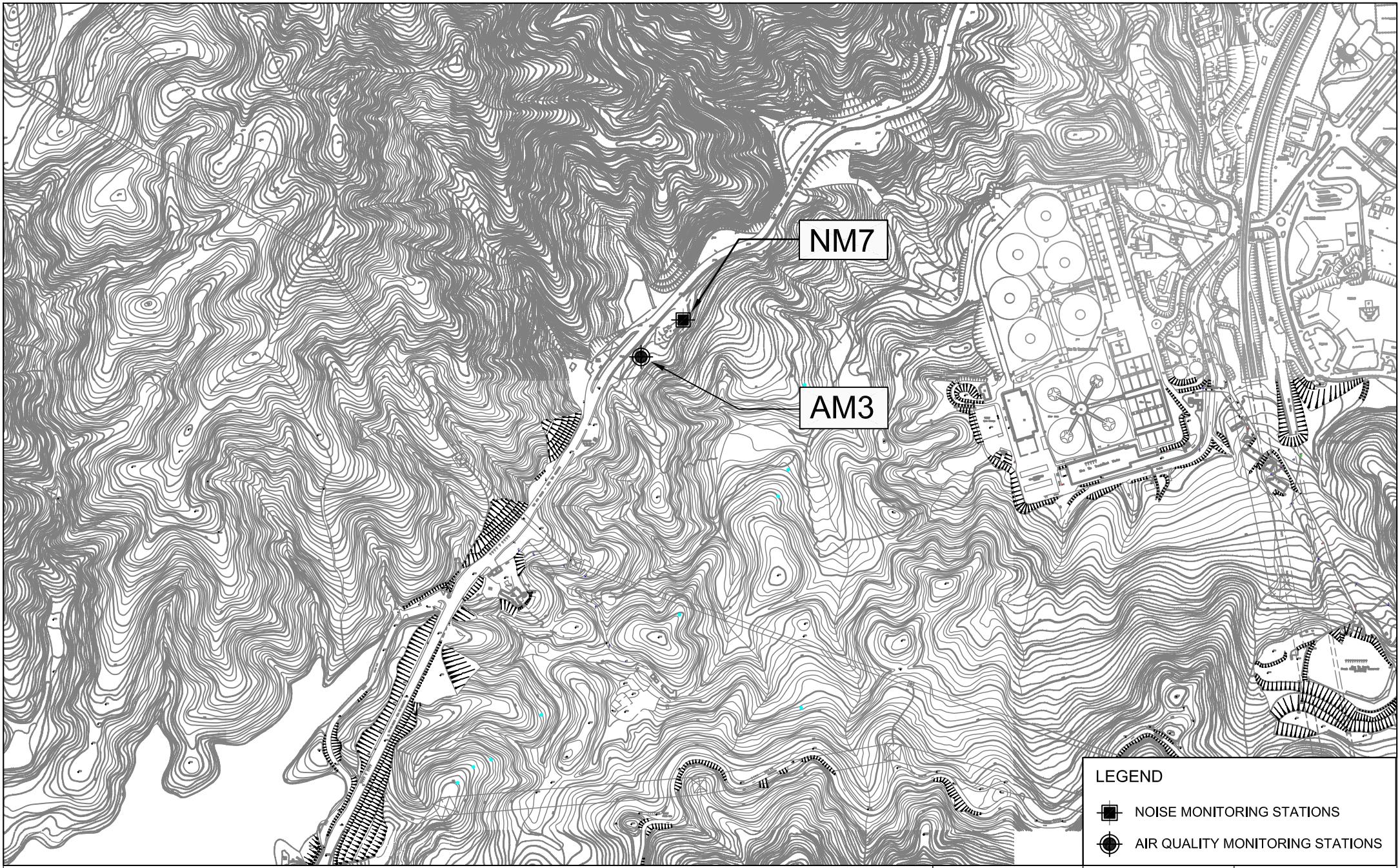
ROUTE 8 (PREVIOUSLY KNOWN AS ROUTE 9) BETWEEN CHEUNG SHA WAN AND SHA TIN
CONTRACT NO. HY/2003/02 - EAGLE'S NEST TUNNEL AND ASSOCIATED WORKS

LOCATIONS OF MONITORING STATIONS

Scale	Project No.
1 : 6500 (A4)	MA3024
Date	Figure No.
2006	1a

CINOTECH consultants limited

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



Title

ROUTE 8 (PREVIOUSLY KNOWN AS ROUTE 9) BETWEEN CHEUNG SHA WAN AND SHA TIN
CONTRACT NO. HY/2003/02 - EAGLE'S NEST TUNNEL AND ASSOCIATED WORKS

LOCATIONS OF MONITORING STATIONS

Scale	Project No.
1 : 6500 (A4)	MA3024
Date	Figure No.
2006	1b

CINOTECH consultants limited

F:\PEOJECTS\MA3024\DRAWING\IMPACT\ENT\FIGURE 1b.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	500
AM3	350	
AM4	294	

24-Hour TSP

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

Construction Noise

Period	Action Level	Limit Level, dB(A)			
	for all stations	NM1	NM5	NM6	NM7
0700-1900 hrs on normal weekdays	When one documented complaint is received	70/65*	75	75	75
0700-2300 hrs on holidays & 1900-2300 hrs on all other days		-	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

CINOTECH

File No. MA3024/18/0015

Station: Po Leung Kuk Choi Kai Yau School
Operator: WK
Date: 27-Jan-06
Next Due Date: 26-Mar-06
Equipment No.: A-01-18
Serial No. 0723

Ambient Condition			
Temperature, Ta (K)	290	Pressure, Pa (mmHg)	765.2

Orifice Transfer Standard Information					
Equipment No.:	A-04-03	Slope, mc	0.0572	Intercept, bc	0.0261
Last Calibration Date:	23-Apr-05	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	22-Apr-06	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) 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	12.3	3.57	61.91	7.8	2.84
2	9.8	3.18	55.21	5.9	2.47
3	7.2	2.73	47.26	4.3	2.11
4	5.4	2.36	40.87	3.2	1.82
5	3.1	1.79	30.85	2.0	1.44

By Linear Regression of Y on X

Slope , mw = 0.0450 **Intercept, bw =** 0.0110

Correlation coefficient* = 0.9976

*If Correlation Coefficient < 0.990, check and recalibrate.

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 = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **3.66**

Remarks:

Conducted by: W.K. Tang Signature: Date: 27 Jan 06

Checked by: Signature: Date: 27 Jan 06

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA3024/18/0016

Station: Po Leung Kuk Choi Kai Yau School
Operator: KH
Date: 25-Mar-06
Next Due Date: 24-May-06
Equipment No.: A-01-18
Serial No. 0723

Ambient Condition			
Temperature, Ta (K)	296.9	Pressure, Pa (mmHg)	762.9

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

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	13.7	3.72	64.50	8.7	2.96
2	10.2	3.21	55.59	6.5	2.56
3	8.8	2.98	51.60	5.4	2.33
4	5.6	2.38	41.07	3.3	1.82
5	3.5	1.88	32.37	1.9	1.38

By Linear Regression of Y on X

Slope , mw = 0.0493 **Intercept, bw :** -0.2064

Correlation coefficient* = 0.9997

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

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

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **3.64**

Remarks:

Conducted by: KH Signature: Date: 25 Mar 06

Checked by: Signature: Date: 25/3/06

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA2027/A14/0016

Station: Garden Vilia
Operator: WK
Date: 9-Feb-06
Next Due Date: 8-Apr-06
Equipment No.: A-01-14
Serial No. 1354

Ambient Condition			
Temperature, Ta (K)	283.2	Pressure, Pa (mmHg)	770.7

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

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	12.3	3.62	62.88	7.1	2.75
2	10.1	3.28	56.94	5.4	2.40
3	7.4	2.81	48.67	4.2	2.12
4	5.1	2.33	40.33	3.2	1.85
5	3.0	1.79	30.82	1.9	1.42

By Linear Regression of Y on X

Slope , mw = 0.0396 **Intercept, bw =** 0.2108

Correlation coefficient* = 0.9956

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

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

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **3.43**

Remarks:

Conducted by: WK Signature: Kwai Date: 9 Feb 06
Checked by: HL Signature: Date: 9-Feb-06

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA3024/17/0017

Station: Government Quarter
Operator: WK
Date: 27-Jan-06
Next Due Date: 26-Mar-06
Equipment No.: A-01-17
Serial No. 3460

Ambient Condition			
Temperature, Ta (K)	290	Pressure, Pa (mmHg)	765.2

Orifice Transfer Standard Information					
Equipment No.:	A-04-03	Slope, mc	0.0572	Intercept, bc	0.0261
Last Calibration Date:	23-Apr-05	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	22-Apr-06	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) 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	12.5	3.60	62.41	7.7	2.82
2	10.3	3.26	56.61	6.3	2.55
3	7.5	2.79	48.24	5.0	2.27
4	5.6	2.41	41.62	3.2	1.82
5	3.0	1.76	30.34	1.7	1.33

By Linear Regression of Y on X

Slope , mw = 0.0471 **Intercept, bw =** -0.0929

Correlation coefficient* = 0.9956

*If Correlation Coefficient < 0.990, check and recalibrate.

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 = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **3.60**

Remarks:

Conducted by: W.K. Tang Signature: Date: 27 Jan 06

Checked by: Signature: Date: 27 Jan 06

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA3024/17/0018

Station: Government Quarter
Operator: KH
Date: 25-Mar-06
Next Due Date: 24-May-06
Equipment No.: A-01-17
Serial No. 3460

Ambient Condition			
Temperature, Ta (K)	296.9	Pressure, Pa (mmHg)	762.9

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

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	14.0	3.76	65.20	8.6	2.94
2	10.6	3.27	56.68	6.6	2.58
3	8.1	2.86	49.49	4.9	2.22
4	5.6	2.38	41.07	3.3	1.82
5	3.6	1.90	32.84	2.2	1.49

By Linear Regression of Y on X

Slope , mw = 0.0456 **Intercept, bw =** -0.0254

Correlation coefficient* = 0.9995

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

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

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **3.72**

Remarks:

Conducted by: KH Signature: Date: 25 Mar 06

Checked by: HL Signature: Date: 25 Mar 06

WELLAB LTD.

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.

ATTN: **Mr. Henry Leung**

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

Certificate of Calibration

Item for calibration:

Description	: RS232 Integral Vane Digital Anemometer
Manufacturer	: AZ Instrument
Model No.	: 451104
Serial No.	: 9020746
Project No.	: C13
Equipment No.	: A-03-01

Test conditions:

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

D.04.03

Andersen Instruments, Inc.

Orifice Transfer Standard Certification Worksheet

Date: 04/23/2005 **Rootsmeter S/N:** 9736553 **Ta:** 22.00 C
Operator: RA **Calibrator S/N:** 1888A **Pa:** 761.0 mm Hg
Calibrator Model #: G25A **Placed in service:**

Run	Vol. Init. (m3)	Vol. Final (m3)	Δ Vol. (m3)	Δ Time (min)	ΔP (mm Hg)	ΔH (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

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H(Ta / Pa)}$ (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

$$Vstd = \Delta Vol((Pa - \Delta P) / Pstd)(Tstd / Ta)$$
$$Qstd = Vstd / \Delta Time$$
$$Va = \Delta Vol((Pa - \Delta P) / Pa)$$
$$Qa = Va / \Delta Time$$

For subsequent flow rate calculations:

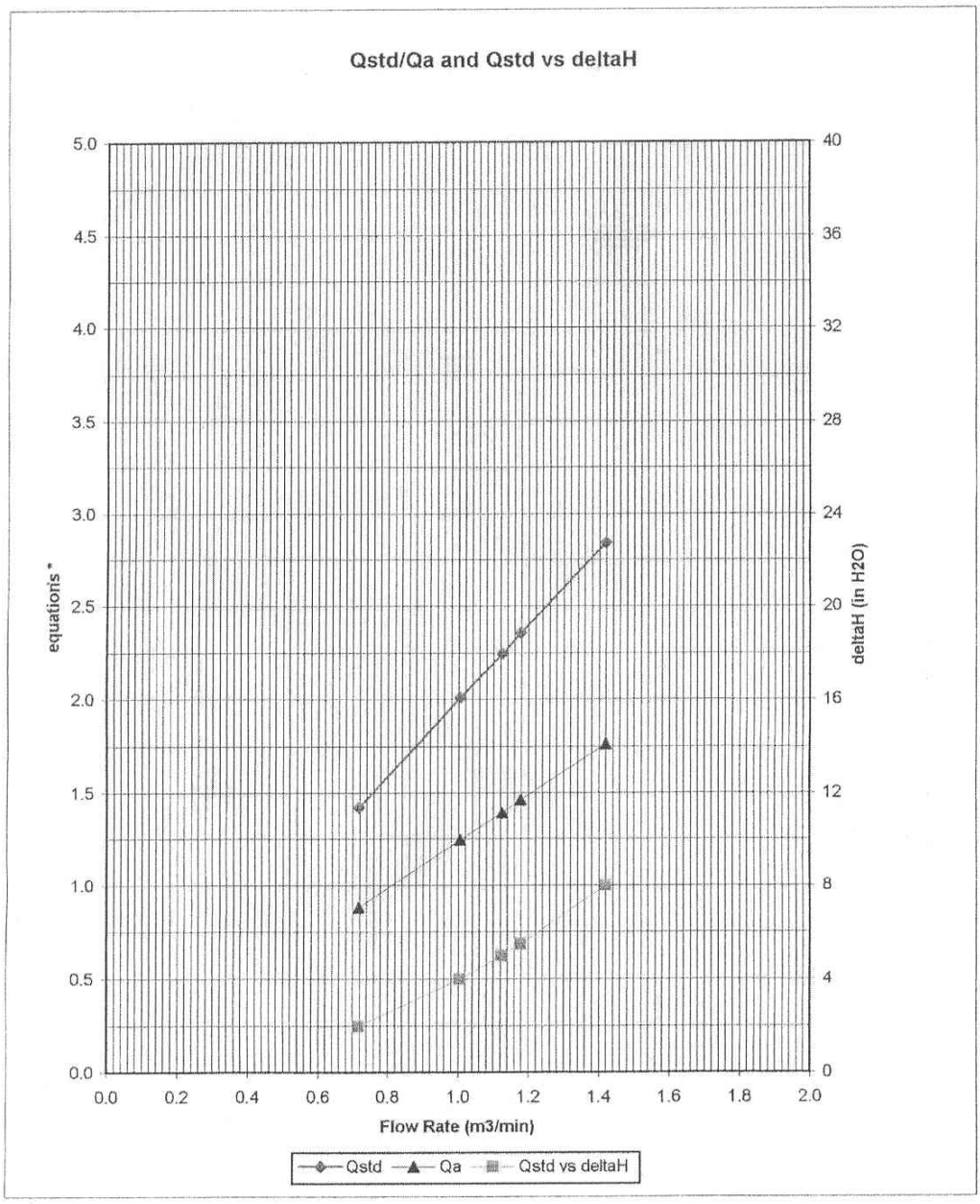
$$Qstd = 1 / m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right) - b\right)$$
$$Qa = 1 / m\left(\left(\sqrt{\Delta H(Ta / Pa)}\right) - b\right)$$

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

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

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.



* y-axis equations:

Qstd series: $\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$

Qa series: $\sqrt{(\Delta H(Ta / Pa))}$

WELLAB LTD.

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TEST REPORT

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

ATTN: **Mr. Henry Leung**

Test Report No.:	C/N/51216/1
Date of Issue:	2005-12-16
Date Received:	2005-12-15
Date Tested:	2005-12-15
Date Completed:	2005-12-16
Next Due Date:	2006-12-15
Page:	1 of 1

Certificate of Calibration

Item for calibration:

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2337665
Microphone No.	: 2289749
Equipment No.	: N-01-01

Test conditions:

Room Temperatre	: 20 degree Celsius
Relative Humidity	: 63%

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

WELLAB LTD.
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.

ATTN: **Mr. Henry Leung**

Test Report No.:	C/N/51116/1
Date of Issue:	2005-11-16
Date Received:	2005-11-15
Date Tested:	2005-11-15
Date Completed:	2005-11-16
Next Due Date:	2006-11-15
Page:	1 of 1

Certificate of Calibration

Item for calibration:

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2337666
Microphone No.	: 2289750
Equipment No.	: N-01-02

Test conditions:

Room Temperatre	: 20 degree Celsius
Relative Humidity	: 60%

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

WELLAB LTD.
Unit C, 1/F, Goldlion Holdings Center
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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.

ATTN: **Mr. Henry Leung**

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

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

Test conditions:

Room Temperatre	: 22 degree Celsius
Relative Humidity	: 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

WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center
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TEST REPORT

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

ATTN: **Mr. Henry Leung**

Test Report No.:	C/N/50905-2
Date of Issue:	2005-09-06
Date Received:	2005-09-05
Date Tested:	2005-09-05
Date Completed:	2005-09-06
Next Due Date:	2006-09-05
Page:	1 of 1

Certificate of Calibration

Item for calibration:

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2359303
Equipment No.	: N-01-04

Test conditions:

Room Temperatre	: 21 degree Celsius
Relative Humidity	: 62%
Pressure	: 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

WELLAB LTD.
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.

ATTN: **Mr. Henry Leung**

Test Report No.:	C/N/51015/1
Date of Issue:	2005-10-15
Date Received:	2005-10-13
Date Tested:	2005-10-14
Date Completed:	2005-10-15
Next Due Date:	2006-10-14
Page:	1 of 1

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	: 22 degree Celsius
Relative Humidity	: 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
Operation Manager

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Shatin, Hong Kong.
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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/05/1115-1
Date of Issue:	2005-11-15
Date Received:	2005-11-14
Date Tested:	2005-11-15
Date Completed:	2005-11-15
Next Due Date:	2006-11-14
Page:	1 of 1

ATTN: **Mr. Henry Leung**

Item for calibration:

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

Test conditions:

Room Temperatre	: 20 degree Celsius
Relative Humidity	: 65%
Pressure	: 1015.2 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 ± 0.1 dB

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

Patrick.

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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/06/60304
Date of Issue:	2006-03-04
Date Received:	2006-03-03
Date Tested:	2006-03-03
Date Completed:	2006-03-04
Next Due Date:	2007-03-04

ATTN: **Mr. Henry Leung**

Page: 1 of 1

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: Brüel & Kjær
Model No.	: 4231
Serial No.	: 2343007
Project No.	: C13
Equipment No.	: N-02-02

Test conditions:

Room Temperatre	: 20 degree Celsius
Relative Humidity	: 71%
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 ± 0.2 dB

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

Patrick.

PATRICK TSE
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WELLAB LTD.

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Shatin, Hong Kong.
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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/50905-1A
Date of Issue:	2005-09-06
Date Received:	2005-09-05
Date Tested:	2005-09-05
Date Completed:	2005-09-06
Next Due Date:	2006-09-05

ATTN: **Mr. Henry Leung**

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	: 21 degree Celsius
Relative Humidity	: 62%
Pressure	: 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 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

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

Patrick.

PATRICK TSE
Operation Manager

APPENDIX C
ENVIRONMENTAL MONITORING AND AUDIT SCHEDULE

Environmental Monitoring for Eagle's Nest Tunnel
Air Quality and Noise Monitoring Schedule for March 2006

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26-Feb	27-Feb	28-Feb	1-Mar	2-Mar	3-Mar	4-Mar
	1 hr TSP	1 hr TSP		1 hr TSP Noise		
5-Mar	6-Mar	7-Mar	8-Mar	9-Mar	10-Mar	11-Mar
	1 hr TSP	1 hr TSP			1 hr TSP Noise	
12-Mar	13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar
	1 hr TSP	1 hr TSP		1 hr TSP Noise		
19-Mar	20-Mar	21-Mar	22-Mar	23-Mar	24-Mar	25-Mar
		1 hr TSP	1 hr TSP	1 hr TSP Noise		
26-Mar	27-Mar	28-Mar	29-Mar	30-Mar	31-Mar	1-Apr
		1 hr TSP		1 hr 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 April 2006

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

APPENDIX D
WIND DATA

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
1-Mar-2006	0:00	2.2	WSW
1-Mar-2006	1:00	2.7	W
1-Mar-2006	2:00	2.7	WSW
1-Mar-2006	3:00	2.2	W
1-Mar-2006	4:00	2.7	WSW
1-Mar-2006	5:00	2.7	SSW
1-Mar-2006	6:00	2.2	WSW
1-Mar-2006	7:00	1.8	SW
1-Mar-2006	8:00	2.2	W
1-Mar-2006	9:00	2.7	WSW
1-Mar-2006	10:00	3.1	WSW
1-Mar-2006	11:00	3.1	WSW
1-Mar-2006	12:00	4.5	WSW
1-Mar-2006	13:00	5.4	WSW
1-Mar-2006	14:00	4.5	SW
1-Mar-2006	15:00	3.1	WSW
1-Mar-2006	16:00	3.1	SW
1-Mar-2006	17:00	2.2	W
1-Mar-2006	18:00	2.2	WSW
1-Mar-2006	19:00	2.7	WSW
1-Mar-2006	20:00	3.1	WSW
1-Mar-2006	21:00	3.6	WSW
1-Mar-2006	22:00	2.2	SW
1-Mar-2006	23:00	2.2	SW
2-Mar-2006	0:00	2.7	WSW
2-Mar-2006	1:00	2.2	SW
2-Mar-2006	2:00	2.2	WSW
2-Mar-2006	3:00	2.7	WSW
2-Mar-2006	4:00	3.1	WSW
2-Mar-2006	5:00	2.2	WSW
2-Mar-2006	6:00	1.8	SW
2-Mar-2006	7:00	1.8	SW
2-Mar-2006	8:00	2.2	WSW
2-Mar-2006	9:00	2.2	WNW
2-Mar-2006	10:00	3.1	WNW
2-Mar-2006	11:00	2.7	WNW
2-Mar-2006	12:00	2.2	W
2-Mar-2006	13:00	3.1	WNW
2-Mar-2006	14:00	3.6	WNW
2-Mar-2006	15:00	1.8	WNW
2-Mar-2006	16:00	2.2	WNW
2-Mar-2006	17:00	2.2	W
2-Mar-2006	18:00	0.9	WSW
2-Mar-2006	19:00	0.9	NE
2-Mar-2006	20:00	0	ENE
2-Mar-2006	21:00	0	ENE
2-Mar-2006	22:00	0	---
2-Mar-2006	23:00	0	---
3-Mar-2006	0:00	0	---
3-Mar-2006	1:00	0	---
3-Mar-2006	2:00	0	---
3-Mar-2006	3:00	0	ENE
3-Mar-2006	4:00	0	---
3-Mar-2006	5:00	0	---

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
3-Mar-2006	6:00	0	---
3-Mar-2006	7:00	0	---
3-Mar-2006	8:00	0	---
3-Mar-2006	9:00	0.4	WNW
3-Mar-2006	10:00	1.8	WNW
3-Mar-2006	11:00	2.7	WNW
3-Mar-2006	12:00	2.7	WNW
3-Mar-2006	13:00	2.2	WNW
3-Mar-2006	14:00	2.7	N
3-Mar-2006	15:00	2.7	N
3-Mar-2006	16:00	1.3	N
3-Mar-2006	17:00	2.7	N
3-Mar-2006	18:00	1.3	E
3-Mar-2006	19:00	0	SE
3-Mar-2006	20:00	0.4	S
3-Mar-2006	21:00	0	NE
3-Mar-2006	22:00	0.9	W
3-Mar-2006	23:00	0.4	W
4-Mar-2006	0:00	0	W
4-Mar-2006	1:00	1.3	W
4-Mar-2006	2:00	2.2	W
4-Mar-2006	3:00	1.8	WNW
4-Mar-2006	4:00	1.8	WNW
4-Mar-2006	5:00	1.3	WNW
4-Mar-2006	6:00	2.7	SSW
4-Mar-2006	7:00	1.8	WSW
4-Mar-2006	8:00	4	W
4-Mar-2006	9:00	3.1	W
4-Mar-2006	10:00	4.5	W
4-Mar-2006	11:00	3.6	WNW
4-Mar-2006	12:00	3.1	WNW
4-Mar-2006	13:00	3.1	WNW
4-Mar-2006	14:00	3.6	WNW
4-Mar-2006	15:00	2.7	WNW
4-Mar-2006	16:00	1.3	WNW
4-Mar-2006	17:00	0.9	WNW
4-Mar-2006	18:00	0.4	WNW
4-Mar-2006	19:00	1.8	W
4-Mar-2006	20:00	3.1	WNW
4-Mar-2006	21:00	2.2	WNW
4-Mar-2006	22:00	3.1	W
4-Mar-2006	23:00	3.1	WNW
5-Mar-2006	0:00	3.1	WNW
5-Mar-2006	1:00	1.8	WNW
5-Mar-2006	2:00	0.9	WNW
5-Mar-2006	3:00	0	WNW
5-Mar-2006	4:00	0	E
5-Mar-2006	5:00	0	SSE
5-Mar-2006	6:00	0	W
5-Mar-2006	7:00	0.4	SW
5-Mar-2006	8:00	0	WSW
5-Mar-2006	9:00	0.4	S
5-Mar-2006	10:00	0	ESE
5-Mar-2006	11:00	0.4	SSW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
5-Mar-2006	12:00	2.2	SW
5-Mar-2006	13:00	2.7	WSW
5-Mar-2006	14:00	3.1	WSW
5-Mar-2006	15:00	2.2	WSW
5-Mar-2006	16:00	2.7	WSW
5-Mar-2006	17:00	2.2	SW
5-Mar-2006	18:00	2.2	W
5-Mar-2006	19:00	1.3	SSW
5-Mar-2006	20:00	2.7	SW
5-Mar-2006	21:00	2.7	WSW
5-Mar-2006	22:00	3.1	SW
5-Mar-2006	23:00	0.9	WSW
6-Mar-2006	0:00	2.7	WSW
6-Mar-2006	1:00	1.8	SSW
6-Mar-2006	2:00	3.1	WSW
6-Mar-2006	3:00	3.6	W
6-Mar-2006	4:00	3.1	WSW
6-Mar-2006	5:00	3.1	W
6-Mar-2006	6:00	2.2	W
6-Mar-2006	7:00	0.9	WSW
6-Mar-2006	8:00	1.3	WSW
6-Mar-2006	9:00	0.9	SSW
6-Mar-2006	10:00	1.8	W
6-Mar-2006	11:00	1.3	SW
6-Mar-2006	12:00	0.9	W
6-Mar-2006	13:00	1.8	W
6-Mar-2006	14:00	1.3	W
6-Mar-2006	15:00	0.4	W
6-Mar-2006	16:00	1.3	W
6-Mar-2006	17:00	0.4	W
6-Mar-2006	18:00	0.9	W
6-Mar-2006	19:00	0.4	WNW
6-Mar-2006	20:00	0	WNW
6-Mar-2006	21:00	0.4	WNW
6-Mar-2006	22:00	0	---
6-Mar-2006	23:00	0	---
7-Mar-2006	0:00	0	---
7-Mar-2006	1:00	0	---
7-Mar-2006	2:00	0	WNW
7-Mar-2006	3:00	0	WNW
7-Mar-2006	4:00	0	WNW
7-Mar-2006	5:00	0	---
7-Mar-2006	6:00	0	---
7-Mar-2006	7:00	0	SSW
7-Mar-2006	8:00	0.9	W
7-Mar-2006	9:00	2.7	WSW
7-Mar-2006	10:00	3.1	SW
7-Mar-2006	11:00	4	WSW
7-Mar-2006	12:00	4.9	WSW
7-Mar-2006	13:00	4.5	W
7-Mar-2006	14:00	4.5	W
7-Mar-2006	15:00	4.9	WNW
7-Mar-2006	16:00	3.6	W
7-Mar-2006	17:00	4	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
7-Mar-2006	18:00	3.1	WSW
7-Mar-2006	19:00	3.6	W
7-Mar-2006	20:00	3.1	WNW
7-Mar-2006	21:00	4	W
7-Mar-2006	22:00	4	WSW
7-Mar-2006	23:00	4	WSW
8-Mar-2006	0:00	3.6	WSW
8-Mar-2006	1:00	4	WSW
8-Mar-2006	2:00	4	WSW
8-Mar-2006	3:00	3.6	WSW
8-Mar-2006	4:00	2.2	WSW
8-Mar-2006	5:00	2.7	WSW
8-Mar-2006	6:00	3.6	WSW
8-Mar-2006	7:00	3.6	WSW
8-Mar-2006	8:00	2.7	WSW
8-Mar-2006	9:00	3.6	WSW
8-Mar-2006	10:00	4.5	W
8-Mar-2006	11:00	4	WSW
8-Mar-2006	12:00	3.6	WSW
8-Mar-2006	13:00	4	WSW
8-Mar-2006	14:00	3.6	W
8-Mar-2006	15:00	3.6	WNW
8-Mar-2006	16:00	1.8	WNW
8-Mar-2006	17:00	1.8	W
8-Mar-2006	18:00	1.8	W
8-Mar-2006	19:00	2.2	W
8-Mar-2006	20:00	0	W
8-Mar-2006	21:00	0.4	WNW
8-Mar-2006	22:00	0.9	WNW
8-Mar-2006	23:00	0	WNW
9-Mar-2006	0:00	0.4	W
9-Mar-2006	1:00	0	---
9-Mar-2006	2:00	0	---
9-Mar-2006	3:00	0	---
9-Mar-2006	4:00	0	---
9-Mar-2006	5:00	0	---
9-Mar-2006	6:00	0	---
9-Mar-2006	7:00	0	---
9-Mar-2006	8:00	0	---
9-Mar-2006	9:00	0.9	WNW
9-Mar-2006	10:00	1.8	WNW
9-Mar-2006	11:00	1.3	WNW
9-Mar-2006	12:00	0.4	WNW
9-Mar-2006	13:00	2.7	W
9-Mar-2006	14:00	1.3	WNW
9-Mar-2006	15:00	1.8	NNE
9-Mar-2006	16:00	1.8	NE
9-Mar-2006	17:00	2.2	NE
9-Mar-2006	18:00	1.8	ENE
9-Mar-2006	19:00	1.3	E
9-Mar-2006	20:00	0	ESE
9-Mar-2006	21:00	0	ENE
9-Mar-2006	22:00	0	---
9-Mar-2006	23:00	0	---

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
10-Mar-2006	0:00	0	---
10-Mar-2006	1:00	0	---
10-Mar-2006	2:00	0	---
10-Mar-2006	3:00	0	---
10-Mar-2006	4:00	0	---
10-Mar-2006	5:00	0	---
10-Mar-2006	6:00	0	ENE
10-Mar-2006	7:00	0	SSE
10-Mar-2006	8:00	0	---
10-Mar-2006	9:00	0	WNW
10-Mar-2006	10:00	2.2	W
10-Mar-2006	11:00	2.7	W
10-Mar-2006	12:00	4	WSW
10-Mar-2006	13:00	4.5	WSW
10-Mar-2006	14:00	3.6	WNW
10-Mar-2006	15:00	3.6	WNW
10-Mar-2006	16:00	4.5	WNW
10-Mar-2006	17:00	3.6	WNW
10-Mar-2006	18:00	3.6	W
10-Mar-2006	19:00	2.2	WSW
10-Mar-2006	20:00	2.2	WSW
10-Mar-2006	21:00	0.4	WNW
10-Mar-2006	22:00	0.4	WSW
10-Mar-2006	23:00	0.9	W
11-Mar-2006	0:00	1.8	SSW
11-Mar-2006	1:00	1.8	WSW
11-Mar-2006	2:00	0.4	W
11-Mar-2006	3:00	0.9	WNW
11-Mar-2006	4:00	1.3	W
11-Mar-2006	5:00	0.4	WSW
11-Mar-2006	6:00	2.2	W
11-Mar-2006	7:00	2.7	WNW
11-Mar-2006	8:00	3.1	W
11-Mar-2006	9:00	1.8	W
11-Mar-2006	10:00	3.1	W
11-Mar-2006	11:00	2.7	WSW
11-Mar-2006	12:00	1.3	WSW
11-Mar-2006	13:00	1.8	W
11-Mar-2006	14:00	3.6	WSW
11-Mar-2006	15:00	1.8	W
11-Mar-2006	16:00	0.9	W
11-Mar-2006	17:00	1.3	W
11-Mar-2006	18:00	1.3	WSW
11-Mar-2006	19:00	0.9	WSW
11-Mar-2006	20:00	1.3	S
11-Mar-2006	21:00	0.4	S
11-Mar-2006	22:00	1.3	SSW
11-Mar-2006	23:00	0.9	SSW
12-Mar-2006	0:00	0.4	SSW
12-Mar-2006	1:00	0.4	S
12-Mar-2006	2:00	0.4	SW
12-Mar-2006	3:00	0	WSW
12-Mar-2006	4:00	0	W
12-Mar-2006	5:00	0	SW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
12-Mar-2006	6:00	0	---
12-Mar-2006	7:00	0.4	W
12-Mar-2006	8:00	0.4	W
12-Mar-2006	9:00	0	W
12-Mar-2006	10:00	0.9	SSW
12-Mar-2006	11:00	0.4	SW
12-Mar-2006	12:00	1.3	WNW
12-Mar-2006	13:00	2.2	W
12-Mar-2006	14:00	0.9	W
12-Mar-2006	15:00	0.9	WSW
12-Mar-2006	16:00	0.4	SSW
12-Mar-2006	17:00	0.4	W
12-Mar-2006	18:00	2.7	WNW
12-Mar-2006	19:00	4	WNW
12-Mar-2006	20:00	3.6	WNW
12-Mar-2006	21:00	3.1	W
12-Mar-2006	22:00	3.6	WSW
12-Mar-2006	23:00	4	WSW
13-Mar-2006	0:00	3.6	WNW
13-Mar-2006	1:00	4	WNW
13-Mar-2006	2:00	3.6	WSW
13-Mar-2006	3:00	5.8	WNW
13-Mar-2006	4:00	4.9	WNW
13-Mar-2006	5:00	3.1	WSW
13-Mar-2006	6:00	3.1	WSW
13-Mar-2006	7:00	2.7	SW
13-Mar-2006	8:00	2.7	WSW
13-Mar-2006	9:00	4	WNW
13-Mar-2006	10:00	4	WSW
13-Mar-2006	11:00	2.7	WSW
13-Mar-2006	12:00	2.7	WSW
13-Mar-2006	13:00	1.8	W
13-Mar-2006	14:00	3.1	WSW
13-Mar-2006	15:00	2.2	WSW
13-Mar-2006	16:00	2.2	SW
13-Mar-2006	17:00	2.7	WSW
13-Mar-2006	18:00	1.8	WSW
13-Mar-2006	19:00	2.2	WSW
13-Mar-2006	20:00	3.1	WSW
13-Mar-2006	21:00	3.1	WNW
13-Mar-2006	22:00	2.7	WNW
13-Mar-2006	23:00	3.6	WNW
14-Mar-2006	0:00	3.1	WNW
14-Mar-2006	1:00	1.3	WNW
14-Mar-2006	2:00	2.7	WNW
14-Mar-2006	3:00	3.6	WNW
14-Mar-2006	4:00	4	WNW
14-Mar-2006	5:00	4.9	WNW
14-Mar-2006	6:00	3.1	WNW
14-Mar-2006	7:00	3.1	WNW
14-Mar-2006	8:00	1.8	WNW
14-Mar-2006	9:00	2.2	WSW
14-Mar-2006	10:00	1.8	WNW
14-Mar-2006	11:00	3.1	WNW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
14-Mar-2006	12:00	4	WNW
14-Mar-2006	13:00	3.6	WNW
14-Mar-2006	14:00	2.7	WNW
14-Mar-2006	15:00	3.6	W
14-Mar-2006	16:00	3.6	WNW
14-Mar-2006	17:00	2.2	WNW
14-Mar-2006	18:00	1.8	WNW
14-Mar-2006	19:00	0.4	SSW
14-Mar-2006	20:00	0.4	SW
14-Mar-2006	21:00	0.9	SSW
14-Mar-2006	22:00	0.4	SSW
14-Mar-2006	23:00	0	WNW
15-Mar-2006	0:00	0	WNW
15-Mar-2006	1:00	0.4	WNW
15-Mar-2006	2:00	0	WNW
15-Mar-2006	3:00	0	---
15-Mar-2006	4:00	0	WSW
15-Mar-2006	5:00	0.9	WSW
15-Mar-2006	6:00	1.8	WSW
15-Mar-2006	7:00	1.8	SSW
15-Mar-2006	8:00	1.8	SW
15-Mar-2006	9:00	1.8	WSW
15-Mar-2006	10:00	1.3	WSW
15-Mar-2006	11:00	0.9	WNW
15-Mar-2006	12:00	1.8	WNW
15-Mar-2006	13:00	1.8	WSW
15-Mar-2006	14:00	1.8	W
15-Mar-2006	15:00	2.2	WNW
15-Mar-2006	16:00	1.3	WNW
15-Mar-2006	17:00	0.9	W
15-Mar-2006	18:00	0.4	WNW
15-Mar-2006	19:00	1.3	W
15-Mar-2006	20:00	0.9	W
15-Mar-2006	21:00	0	W
15-Mar-2006	22:00	0	---
15-Mar-2006	23:00	0.4	W
16-Mar-2006	0:00	0.4	NW
16-Mar-2006	1:00	0	---
16-Mar-2006	2:00	0	---
16-Mar-2006	3:00	0	---
16-Mar-2006	4:00	0.4	W
16-Mar-2006	5:00	0	---
16-Mar-2006	6:00	0	SSE
16-Mar-2006	7:00	0	---
16-Mar-2006	8:00	0	---
16-Mar-2006	9:00	0	SW
16-Mar-2006	10:00	0	NW
16-Mar-2006	11:00	1.3	WNW
16-Mar-2006	12:00	1.3	WNW
16-Mar-2006	13:00	1.3	WNW
16-Mar-2006	14:00	3.6	NE
16-Mar-2006	15:00	3.6	NE
16-Mar-2006	16:00	3.1	NE
16-Mar-2006	17:00	2.7	NE

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
16-Mar-2006	18:00	0.4	ENE
16-Mar-2006	19:00	0	NE
16-Mar-2006	20:00	0	ENE
16-Mar-2006	21:00	0	---
16-Mar-2006	22:00	0	---
16-Mar-2006	23:00	0	---
17-Mar-2006	0:00	0	---
17-Mar-2006	1:00	0	WNW
17-Mar-2006	2:00	0	W
17-Mar-2006	3:00	0	W
17-Mar-2006	4:00	0	---
17-Mar-2006	5:00	0	W
17-Mar-2006	6:00	0	---
17-Mar-2006	7:00	0	---
17-Mar-2006	8:00	1.8	WSW
17-Mar-2006	9:00	3.1	WSW
17-Mar-2006	10:00	3.1	WSW
17-Mar-2006	11:00	3.6	WSW
17-Mar-2006	12:00	3.6	WSW
17-Mar-2006	13:00	3.6	WSW
17-Mar-2006	14:00	3.1	WSW
17-Mar-2006	15:00	1.8	SSW
17-Mar-2006	16:00	1.8	SSW
17-Mar-2006	17:00	1.8	SSW
17-Mar-2006	18:00	2.2	WSW
17-Mar-2006	19:00	3.1	W
17-Mar-2006	20:00	1.3	WSW
17-Mar-2006	21:00	0.4	SSW
17-Mar-2006	22:00	0.4	SSW
17-Mar-2006	23:00	0	SSW
18-Mar-2006	0:00	0	SSW
18-Mar-2006	1:00	0	W
18-Mar-2006	2:00	1.3	W
18-Mar-2006	3:00	0.9	W
18-Mar-2006	4:00	0	---
18-Mar-2006	5:00	0	---
18-Mar-2006	6:00	0	---
18-Mar-2006	7:00	0	---
18-Mar-2006	8:00	0	---
18-Mar-2006	9:00	0	---
18-Mar-2006	10:00	0.4	W
18-Mar-2006	11:00	0.4	WNW
18-Mar-2006	12:00	0.9	WNW
18-Mar-2006	13:00	1.8	N
18-Mar-2006	14:00	1.8	N
18-Mar-2006	15:00	3.1	NE
18-Mar-2006	16:00	2.7	E
18-Mar-2006	17:00	3.6	NE
18-Mar-2006	18:00	2.2	NE
18-Mar-2006	19:00	0.4	ENE
18-Mar-2006	20:00	0	NE
18-Mar-2006	21:00	0	ESE
18-Mar-2006	22:00	0	---
18-Mar-2006	23:00	0	---

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
19-Mar-2006	0:00	0	---
19-Mar-2006	1:00	0	---
19-Mar-2006	2:00	0	---
19-Mar-2006	3:00	0	---
19-Mar-2006	4:00	0	---
19-Mar-2006	5:00	0	---
19-Mar-2006	6:00	0	SW
19-Mar-2006	7:00	0.9	W
19-Mar-2006	8:00	0	WSW
19-Mar-2006	9:00	1.8	WNW
19-Mar-2006	10:00	3.1	WNW
19-Mar-2006	11:00	4.5	WSW
19-Mar-2006	12:00	4	WSW
19-Mar-2006	13:00	4.5	SSW
19-Mar-2006	14:00	4.5	SSW
19-Mar-2006	15:00	4	WSW
19-Mar-2006	16:00	4	SW
19-Mar-2006	17:00	4.5	WSW
19-Mar-2006	18:00	4.5	WSW
19-Mar-2006	19:00	5.4	WSW
19-Mar-2006	20:00	4.9	WSW
19-Mar-2006	21:00	4.5	WSW
19-Mar-2006	22:00	4	SW
19-Mar-2006	23:00	4	WSW
20-Mar-2006	0:00	3.6	W
20-Mar-2006	1:00	4.5	WNW
20-Mar-2006	2:00	4	WSW
20-Mar-2006	3:00	4.5	W
20-Mar-2006	4:00	3.1	W
20-Mar-2006	5:00	4	SW
20-Mar-2006	6:00	3.6	WSW
20-Mar-2006	7:00	3.6	WSW
20-Mar-2006	8:00	4	WSW
20-Mar-2006	9:00	4.9	WSW
20-Mar-2006	10:00	4.5	W
20-Mar-2006	11:00	4.5	W
20-Mar-2006	12:00	4	WSW
20-Mar-2006	13:00	4.5	W
20-Mar-2006	14:00	4	WSW
20-Mar-2006	15:00	4.5	W
20-Mar-2006	16:00	4	W
20-Mar-2006	17:00	4	WSW
20-Mar-2006	18:00	4	W
20-Mar-2006	19:00	3.6	W
20-Mar-2006	20:00	2.7	W
20-Mar-2006	21:00	3.6	WNW
20-Mar-2006	22:00	3.6	W
20-Mar-2006	23:00	3.6	W
21-Mar-2006	0:00	1.8	W
21-Mar-2006	1:00	1.8	W
21-Mar-2006	2:00	1.8	W
21-Mar-2006	3:00	1.8	WSW
21-Mar-2006	4:00	1.3	WSW
21-Mar-2006	5:00	0.4	SW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
21-Mar-2006	6:00	0.4	W
21-Mar-2006	7:00	0.4	SW
21-Mar-2006	8:00	0.4	S
21-Mar-2006	9:00	0.9	W
21-Mar-2006	10:00	0	WSW
21-Mar-2006	11:00	0.4	SW
21-Mar-2006	12:00	0.4	WNW
21-Mar-2006	13:00	1.8	N
21-Mar-2006	14:00	2.7	WNW
21-Mar-2006	15:00	2.2	W
21-Mar-2006	16:00	1.8	W
21-Mar-2006	17:00	1.3	WNW
21-Mar-2006	18:00	0.9	W
21-Mar-2006	19:00	0.4	W
21-Mar-2006	20:00	1.3	W
21-Mar-2006	21:00	0	W
21-Mar-2006	22:00	0	---
21-Mar-2006	23:00	0	---
22-Mar-2006	0:00	0	WSW
22-Mar-2006	1:00	0.4	SSW
22-Mar-2006	2:00	0	SW
22-Mar-2006	3:00	0.4	W
22-Mar-2006	4:00	1.3	WNW
22-Mar-2006	5:00	0.9	WSW
22-Mar-2006	6:00	1.3	W
22-Mar-2006	7:00	1.3	WSW
22-Mar-2006	8:00	0.9	W
22-Mar-2006	9:00	0.4	SW
22-Mar-2006	10:00	1.3	SSW
22-Mar-2006	11:00	1.8	SW
22-Mar-2006	12:00	0.9	WSW
22-Mar-2006	13:00	1.3	NNE
22-Mar-2006	14:00	2.7	WNW
22-Mar-2006	15:00	1.3	W
22-Mar-2006	16:00	0.4	W
22-Mar-2006	17:00	2.7	NNE
22-Mar-2006	18:00	2.7	N
22-Mar-2006	19:00	0	NNE
22-Mar-2006	20:00	0	SW
22-Mar-2006	21:00	0.9	WNW
22-Mar-2006	22:00	0.4	WNW
22-Mar-2006	23:00	0	WSW
23-Mar-2006	0:00	0	---
23-Mar-2006	1:00	0	SSW
23-Mar-2006	2:00	0	---
23-Mar-2006	3:00	0	WSW
23-Mar-2006	4:00	0	---
23-Mar-2006	5:00	0	SSE
23-Mar-2006	6:00	0	SSW
23-Mar-2006	7:00	0	S
23-Mar-2006	8:00	0.9	N
23-Mar-2006	9:00	1.8	N
23-Mar-2006	10:00	2.7	NNE
23-Mar-2006	11:00	4	NNE

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
23-Mar-2006	12:00	4.9	NNE
23-Mar-2006	13:00	2.7	NNE
23-Mar-2006	14:00	3.6	NE
23-Mar-2006	15:00	0.4	ENE
23-Mar-2006	16:00	0.4	E
23-Mar-2006	17:00	0.9	E
23-Mar-2006	18:00	0.4	WSW
23-Mar-2006	19:00	0.4	WNW
23-Mar-2006	20:00	0.4	WNW
23-Mar-2006	21:00	0	WSW
23-Mar-2006	22:00	0.4	WSW
23-Mar-2006	23:00	2.7	SSW
24-Mar-2006	0:00	3.1	WSW
24-Mar-2006	1:00	4	WSW
24-Mar-2006	2:00	4.9	W
24-Mar-2006	3:00	3.6	WSW
24-Mar-2006	4:00	4.9	W
24-Mar-2006	5:00	3.1	W
24-Mar-2006	6:00	3.6	W
24-Mar-2006	7:00	3.1	W
24-Mar-2006	8:00	3.6	WNW
24-Mar-2006	9:00	4	WNW
24-Mar-2006	10:00	4.5	W
24-Mar-2006	11:00	3.1	WNW
24-Mar-2006	12:00	2.7	SSW
24-Mar-2006	13:00	2.2	WSW
24-Mar-2006	14:00	0.9	WNW
24-Mar-2006	15:00	1.3	WNW
24-Mar-2006	16:00	1.8	WNW
24-Mar-2006	17:00	2.2	W
24-Mar-2006	18:00	3.1	WSW
24-Mar-2006	19:00	3.6	WSW
24-Mar-2006	20:00	4	WSW
24-Mar-2006	21:00	3.6	SW
24-Mar-2006	22:00	3.1	WSW
24-Mar-2006	23:00	2.7	WNW
25-Mar-2006	0:00	3.1	WNW
25-Mar-2006	1:00	1.8	W
25-Mar-2006	2:00	1.3	WSW
25-Mar-2006	3:00	1.8	W
25-Mar-2006	4:00	3.1	WSW
25-Mar-2006	5:00	4.9	WSW
25-Mar-2006	6:00	4.5	WSW
25-Mar-2006	7:00	4	WSW
25-Mar-2006	8:00	3.6	WSW
25-Mar-2006	9:00	2.7	WSW
25-Mar-2006	10:00	2.2	WSW
25-Mar-2006	11:00	1.8	WSW
25-Mar-2006	12:00	2.7	WNW
25-Mar-2006	13:00	3.1	WNW
25-Mar-2006	14:00	2.7	WNW
25-Mar-2006	15:00	2.2	WSW
25-Mar-2006	16:00	2.2	W
25-Mar-2006	17:00	2.7	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
25-Mar-2006	18:00	2.2	WNW
25-Mar-2006	19:00	3.1	SW
25-Mar-2006	20:00	3.1	WSW
25-Mar-2006	21:00	3.1	SW
25-Mar-2006	22:00	3.6	WSW
25-Mar-2006	23:00	2.7	WSW
26-Mar-2006	0:00	3.1	WSW
26-Mar-2006	1:00	2.7	WSW
26-Mar-2006	2:00	1.8	WSW
26-Mar-2006	3:00	0.4	W
26-Mar-2006	4:00	1.3	WNW
26-Mar-2006	5:00	1.8	WNW
26-Mar-2006	6:00	1.8	W
26-Mar-2006	7:00	1.8	WNW
26-Mar-2006	8:00	0.9	WNW
26-Mar-2006	9:00	0.4	WNW
26-Mar-2006	10:00	1.3	WSW
26-Mar-2006	11:00	1.3	WSW
26-Mar-2006	12:00	0.9	WSW
26-Mar-2006	13:00	3.6	WSW
26-Mar-2006	14:00	2.7	WSW
26-Mar-2006	15:00	1.3	SSW
26-Mar-2006	16:00	2.2	W
26-Mar-2006	17:00	1.8	W
26-Mar-2006	18:00	1.3	SSW
26-Mar-2006	19:00	2.2	WSW
26-Mar-2006	20:00	2.2	SW
26-Mar-2006	21:00	1.8	SW
26-Mar-2006	22:00	2.2	SSW
26-Mar-2006	23:00	2.2	SSW
27-Mar-2006	0:00	2.7	SSW
27-Mar-2006	1:00	2.2	SSW
27-Mar-2006	2:00	2.2	WSW
27-Mar-2006	3:00	1.8	WSW
27-Mar-2006	4:00	1.8	SW
27-Mar-2006	5:00	1.8	SW
27-Mar-2006	6:00	2.7	WSW
27-Mar-2006	7:00	2.2	WSW
27-Mar-2006	8:00	1.8	WSW
27-Mar-2006	9:00	0.9	SW
27-Mar-2006	10:00	1.3	SSW
27-Mar-2006	11:00	1.8	SSW
27-Mar-2006	12:00	2.2	W
27-Mar-2006	13:00	1.3	WNW
27-Mar-2006	14:00	1.3	WNW
27-Mar-2006	15:00	0.4	WNW
27-Mar-2006	16:00	0.4	WNW
27-Mar-2006	17:00	0	WNW
27-Mar-2006	18:00	0.4	WNW
27-Mar-2006	19:00	1.8	W
27-Mar-2006	20:00	1.3	WNW
27-Mar-2006	21:00	0.4	W
27-Mar-2006	22:00	4.5	WNW
27-Mar-2006	23:00	2.2	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
28-Mar-2006	0:00	1.8	W
28-Mar-2006	1:00	0.9	SW
28-Mar-2006	2:00	1.3	WNW
28-Mar-2006	3:00	2.7	WNW
28-Mar-2006	4:00	1.3	SSW
28-Mar-2006	5:00	2.2	WNW
28-Mar-2006	6:00	3.1	W
28-Mar-2006	7:00	2.2	WSW
28-Mar-2006	8:00	2.2	WSW
28-Mar-2006	9:00	3.6	WNW
28-Mar-2006	10:00	4	WNW
28-Mar-2006	11:00	4	WNW
28-Mar-2006	12:00	3.6	WNW
28-Mar-2006	13:00	2.2	WNW
28-Mar-2006	14:00	2.2	WNW
28-Mar-2006	15:00	2.2	WNW
28-Mar-2006	16:00	1.8	NW
28-Mar-2006	17:00	2.2	W
28-Mar-2006	18:00	1.8	WSW
28-Mar-2006	19:00	0.9	W
28-Mar-2006	20:00	0	S
28-Mar-2006	21:00	0	S
28-Mar-2006	22:00	0	---
28-Mar-2006	23:00	0	---
29-Mar-2006	0:00	0	---
29-Mar-2006	1:00	0	---
29-Mar-2006	2:00	0	---
29-Mar-2006	3:00	0	---
29-Mar-2006	4:00	0	---
29-Mar-2006	5:00	0	---
29-Mar-2006	6:00	0	---
29-Mar-2006	7:00	1.3	W
29-Mar-2006	8:00	4.5	W
29-Mar-2006	9:00	4.5	WNW
29-Mar-2006	10:00	5.8	WNW
29-Mar-2006	11:00	4.5	WNW
29-Mar-2006	12:00	4.9	WNW
29-Mar-2006	13:00	4	WNW
29-Mar-2006	14:00	4	WNW
29-Mar-2006	15:00	4	WNW
29-Mar-2006	16:00	4	WNW
29-Mar-2006	17:00	4	W
29-Mar-2006	18:00	3.6	WSW
29-Mar-2006	19:00	3.6	WSW
29-Mar-2006	20:00	3.6	WSW
29-Mar-2006	21:00	2.7	WSW
29-Mar-2006	22:00	2.7	WSW
29-Mar-2006	23:00	2.7	SW
30-Mar-2006	0:00	2.7	WSW
30-Mar-2006	1:00	2.7	WSW
30-Mar-2006	2:00	3.1	WNW
30-Mar-2006	3:00	3.6	WNW
30-Mar-2006	4:00	2.2	WSW
30-Mar-2006	5:00	1.8	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
30-Mar-2006	6:00	0.9	W
30-Mar-2006	7:00	0.4	WNW
30-Mar-2006	8:00	0.9	W
30-Mar-2006	9:00	1.8	WNW
30-Mar-2006	10:00	1.3	WSW
30-Mar-2006	11:00	1.3	W
30-Mar-2006	12:00	2.2	N
30-Mar-2006	13:00	4	W
30-Mar-2006	14:00	3.6	W
30-Mar-2006	15:00	3.1	W
30-Mar-2006	16:00	4	W
30-Mar-2006	17:00	3.1	W
30-Mar-2006	18:00	2.2	W
30-Mar-2006	19:00	2.2	W
30-Mar-2006	20:00	1.3	W
30-Mar-2006	21:00	1.3	SW
30-Mar-2006	22:00	2.7	WSW
30-Mar-2006	23:00	2.7	WNW
31-Mar-2006	0:00	2.7	WSW
31-Mar-2006	1:00	2.2	W
31-Mar-2006	2:00	1.8	SSW
31-Mar-2006	3:00	2.2	WSW
31-Mar-2006	4:00	2.2	WSW
31-Mar-2006	5:00	2.7	WSW
31-Mar-2006	6:00	1.8	W
31-Mar-2006	7:00	2.7	WSW
31-Mar-2006	8:00	3.1	WSW
31-Mar-2006	9:00	2.2	WSW
31-Mar-2006	10:00	1.8	WSW
31-Mar-2006	11:00	2.2	WSW
31-Mar-2006	12:00	2.7	WSW
31-Mar-2006	13:00	3.6	W
31-Mar-2006	14:00	2.7	W
31-Mar-2006	15:00	3.6	W
31-Mar-2006	16:00	3.6	W
31-Mar-2006	17:00	3.6	WSW
31-Mar-2006	18:00	2.7	W
31-Mar-2006	19:00	2.7	W
31-Mar-2006	20:00	3.6	WNW
31-Mar-2006	21:00	3.1	WSW
31-Mar-2006	22:00	2.7	WSW
31-Mar-2006	23:00	3.6	WSW

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 Condition	Filter Weight (g)		Flow Rate (m^3/min.)		Elapse Time		Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m^3/min)	Total vol. (m^3)	Sampling Time(hrs.)	Conc. (μg/m^3)
		Initial	Final	Initial	Final	Initial	Final							
2-Mar-06	Sunny	2.8578	2.8647	1.24	1.24	3904.9	3905.9	283.3	769.4	0.0069	1.24	74.5	1.0	92.6
6-Mar-06	Cloudy	2.8564	2.8699	1.22	1.22	3929.9	3930.9	291.4	763.5	0.0135	1.22	73.2	1.0	184.6
7-Mar-06	Cloudy	2.8801	2.8912	1.21	1.21	3930.9	3931.9	293.8	763.5	0.0111	1.21	72.9	1.0	152.4
10-Mar-06	Sunny	2.9052	2.9118	1.20	1.20	3955.9	3956.9	298.4	762.5	0.0066	1.20	72.2	1.0	91.4
13-Mar-06	Cloudy	2.8811	2.8856	1.24	1.24	3956.9	3957.9	284.7	768.2	0.0045	1.24	74.2	1.0	60.6
14-Mar-06	Cloudy	2.8862	2.8904	1.24	1.24	3957.9	3958.9	283.2	770.2	0.0042	1.24	74.5	1.0	56.3
16-Mar-06	Sunny	2.8832	2.9028	1.22	1.22	3982.9	3983.9	289.5	762.9	0.0196	1.22	73.4	1.0	267.2
21-Mar-06	Cloudy	2.8833	2.9045	1.21	1.21	3983.9	3984.9	293.4	760.2	0.0212	1.21	72.7	1.0	291.4
22-Mar-06	Cloudy	2.8685	2.8801	1.22	1.22	4008.9	4009.9	295.1	769.3	0.0116	1.22	73.0	1.0	159.0
23-Mar-06	Cloudy	2.8934	2.9031	1.20	1.20	4009.9	4010.9	298.4	757.8	0.0097	1.20	72.0	1.0	134.7
28-Mar-06	Sunny	2.8816	2.8864	1.21	1.21	4034.9	4035.9	295.1	762.4	0.0048	1.21	72.9	1.0	65.9
30-Mar-06	Sunny	2.8808	2.8967	1.22	1.22	4035.9	4036.9	294.9	764.2	0.0159	1.22	73.0	1.0	217.9
31-Mar-06	Sunny	2.8961	2.9041	1.21	1.21	4036.9	4037.9	296.3	762.5	0.0080	1.21	72.8	1.0	110.0
													Min	56.3
													Max	291.4
													Average	144.9

Location AM 3 - Garden Villa

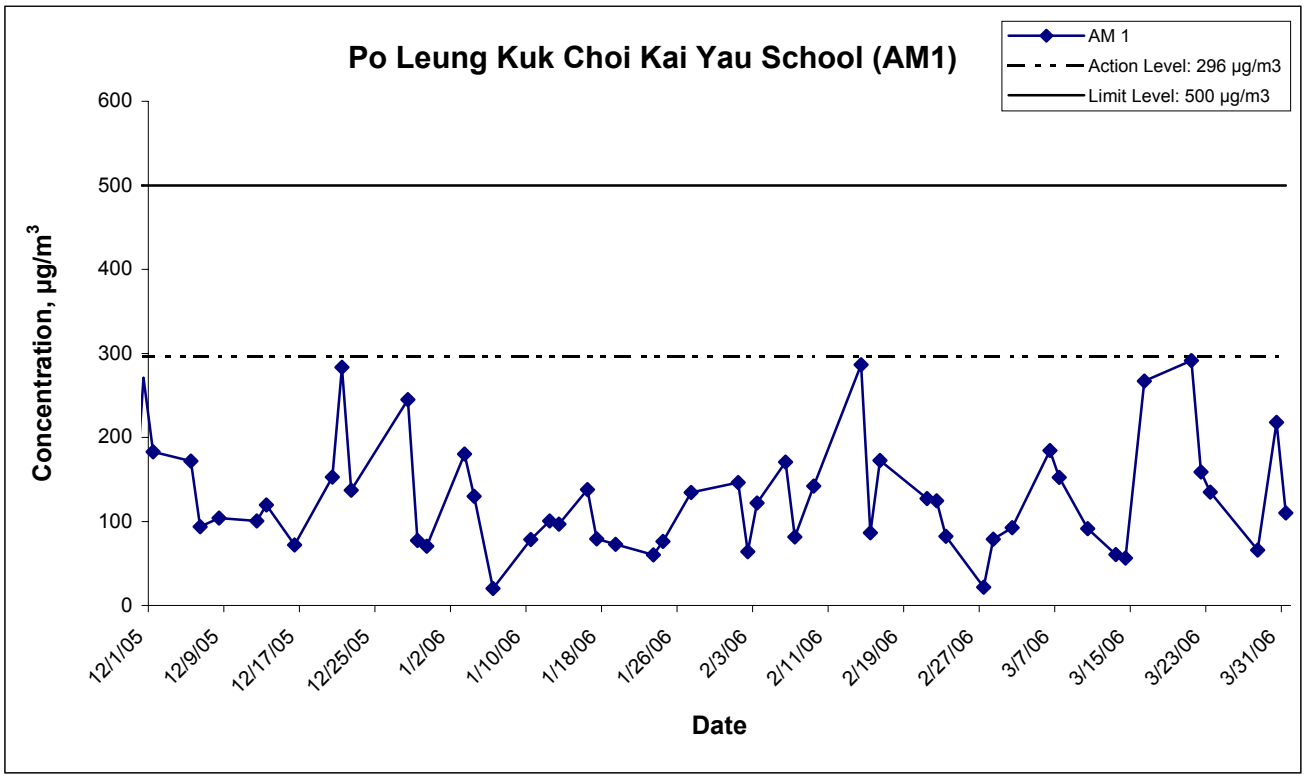
Date	Weather Condition	Filter Weight (g)		Flow Rate (m^3/min.)		Elapse Time		Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m^3/min)	Total vol. (m^3)	Sampling Time(hrs.)	Conc. (μg/m^3)
		Initial	Final	Initial	Final	Initial	Final							
2-Mar-06	Cloudy	2.8933	2.9095	1.21	1.21	4251.1	4252.1	283.3	769.4	0.0162	1.21	72.6	1.0	223.3
6-Mar-06	Cloudy	2.8775	2.8812	1.19	1.19	4276.1	4277.1	290.9	764.1	0.0037	1.19	71.2	1.0	52.0
7-Mar-06	Cloudy	2.8594	2.8652	1.18	1.18	4277.1	4278.1	293.8	763.5	0.0058	1.18	70.8	1.0	82.0
10-Mar-06	Sunny	2.8776	2.8844	1.18	1.18	4302.1	4303.1	294.5	763.9	0.0068	1.18	70.7	1.0	96.2
13-Mar-06	Cloudy	2.8785	2.8886	1.20	1.20	4303.1	4304.1	284.7	768.2	0.0101	1.20	72.3	1.0	139.7
14-Mar-06	Cloudy	2.8666	2.8703	1.21	1.21	4304.1	4305.1	283.2	770.2	0.0037	1.21	72.6	1.0	51.0
16-Mar-06	Sunny	2.8758	2.8847	1.19	1.19	4329.1	4330.1	289.3	762.9	0.0089	1.19	71.4	1.0	124.7
21-Mar-06	Cloudy	2.8713	2.8919	1.18	1.18	4330.1	4331.1	293.4	760.2	0.0206	1.18	70.7	1.0	291.6
22-Mar-06	Cloudy	2.8654	2.8734	1.16	1.16	4355.1	4356.1	299.9	757.4	0.0080	1.16	69.6	1.0	114.9
23-Mar-06	Cloudy	2.8846	2.8944	1.16	1.16	4356.1	4357.1	298.4	757.8	0.0098	1.16	69.9	1.0	140.3
28-Mar-06	Sunny	2.8642	2.8686	1.19	1.19	4381.1	4382.1	291.1	763.2	0.0044	1.19	71.1	1.0	61.9
30-Mar-06	Sunny	2.8422	2.8600	1.18	1.18	4382.1	4383.1	294.9	764.2	0.0178	1.18	70.7	1.0	251.9
31-Mar-06	Sunny	2.8405	2.8545	1.17	1.17	4383.1	4384.1	296.3	762.5	0.0140	1.17	70.4	1.0	198.9
													Min	51.0
													Max	291.6
													Average	140.6

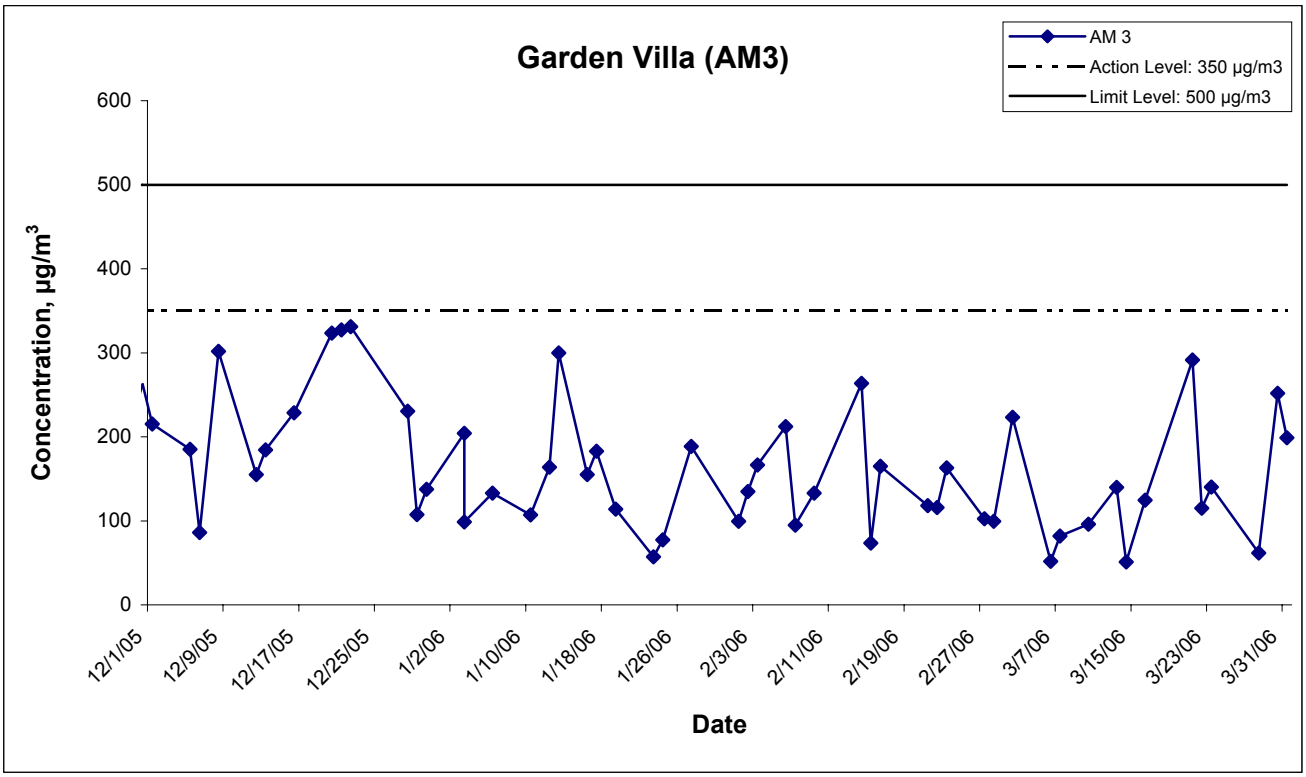
Appendix E - 1-hour TSP Monitoring Results

Location AM 4 - Government Quarters

Date	Weather Condition	Filter Weight (g)		Flow Rate (m^3/min.)		Elapse Time		Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m^3/min)	Total vol. (m^3)	Sampling Time(hrs.)	Conc. (μg/m^3)
		Initial	Final	Initial	Final	Initial	Final							
2-Mar-06	Sunny	2.8663	2.8766	1.23	1.23	3863.8	3864.8	283.3	769.4	0.0103	1.23	73.9	1.0	139.3
6-Mar-06	Cloudy	2.8812	2.8961	1.21	1.21	3888.8	3889.8	291.4	763.5	0.0149	1.21	72.7	1.0	205.0
7-Mar-06	Cloudy	2.8782	2.8888	1.21	1.21	3889.8	3890.8	293.8	763.5	0.0106	1.21	72.4	1.0	146.4
10-Mar-06	Sunny	2.8720	2.8801	1.20	1.20	3914.8	3915.8	298.4	762.5	0.0081	1.20	71.8	1.0	112.8
13-Mar-06	Cloudy	2.8949	2.9016	1.23	1.23	3915.8	3916.8	284.7	768.2	0.0067	1.23	73.7	1.0	90.9
14-Mar-06	Cloudy	2.8960	2.9033	1.23	1.23	3916.8	3917.8	283.2	770.2	0.0073	1.23	74.0	1.0	98.7
16-Mar-06	Sunny	2.8924	2.9005	1.23	1.23	3941.8	3942.8	289.5	762.9	0.0081	1.23	73.8	1.0	109.7
21-Mar-06	Cloudy	2.8875	2.9047	1.21	1.21	3942.8	3973.8	293.4	760.2	0.0172	1.21	72.3	31.0	237.9
22-Mar-06	Cloudy	2.8975	2.9087	1.21	1.21	3967.8	3968.8	295.1	769.3	0.0112	1.21	72.5	1.0	154.5
23-Mar-06	Cloudy	2.8701	2.8795	1.19	1.19	3968.8	3969.8	298.4	757.8	0.0094	1.19	71.6	1.0	131.3
28-Mar-06	Sunny	2.8665	2.8705	1.22	1.22	3993.8	3994.8	295.1	762.4	0.0040	1.22	73.0	1.0	54.8
30-Mar-06	Sunny	2.8556	2.8714	1.22	1.22	3993.8	3997.8	294.9	764.2	0.0158	1.22	73.2	4.0	216.0
31-Mar-06	Sunny	2.8651	2.8786	1.22	1.22	3995.8	3996.8	296.3	762.5	0.0135	1.22	72.9	1.0	185.2
													Min	54.8
													Max	237.9
													Average	144.8

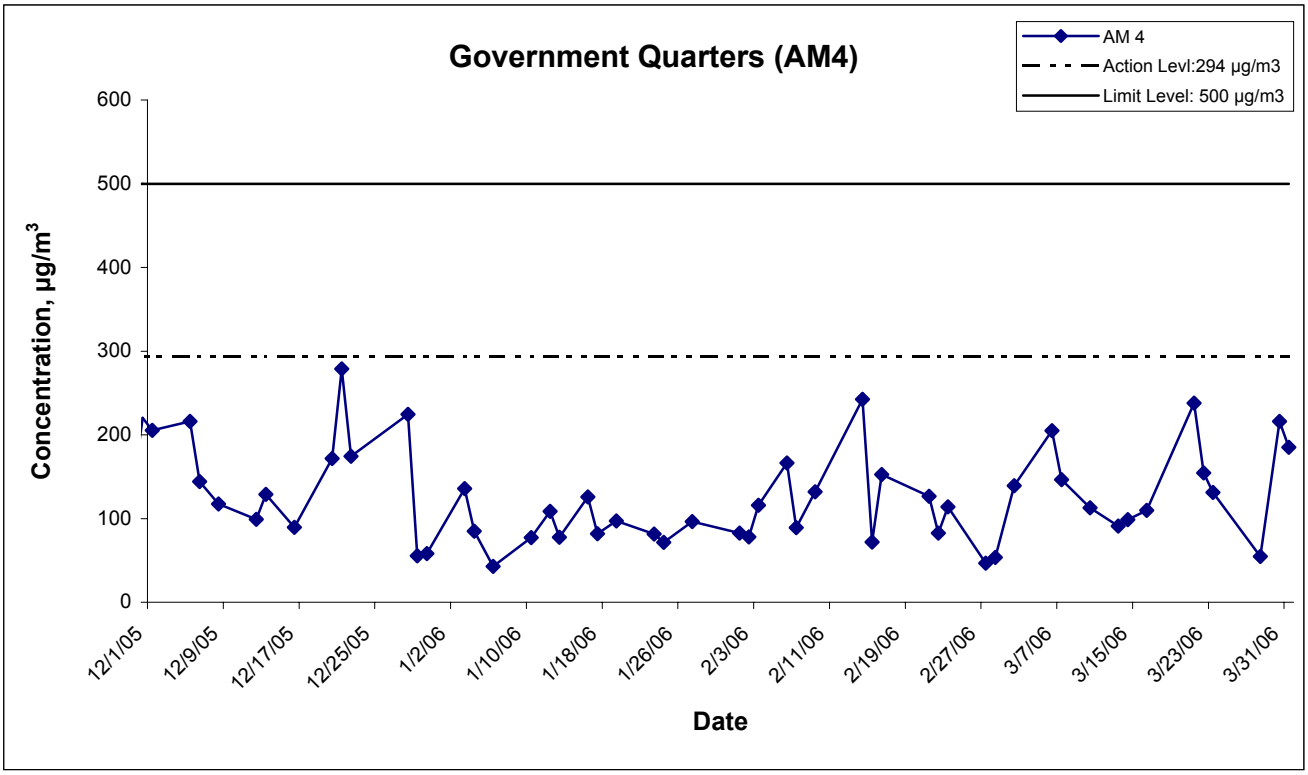
1-hr TSP Levels





Title: Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works Graphical Presentation of 1-hour TSP Impact Monitoring Results	Scale: N.T.S Date: Mar 06	Project No.: MA3024 Appendix: E	CINOTECH

1-hr TSP Levels



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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 Condition	Filter Weight (g)		Flow Rate (m^3/min.)		Elapse Time		Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m^3/min)	Total vol. (m^3)	Sampling Time(hrs.)	Conc. ($\mu g/m^3$)
		Initial	Final	Initial	Final	Initial	Final							
3-Mar-06	Cloudy	2.8735	3.0098	1.23	1.23	3905.9	3929.9	287.0	766.9	0.1363	1.23	1773.0	24.0	76.9
9-Mar-06	Sunny	2.8632	3.1542	1.23	1.23	3931.9	3955.9	292.9	765.3	0.2910	1.23	1773.2	24.0	164.1
15-Mar-06	Cloudy	2.9006	3.0544	1.23	1.23	3958.9	3982.9	289.2	766.2	0.1538	1.23	1765.4	24.0	87.1
21-Mar-06	Cloudy	2.8706	3.0823	1.21	1.21	3984.9	4008.9	293.6	760.1	0.2117	1.21	1745.1	24.0	121.3
27-Mar-06	Cloudy	2.8864	2.9428	1.22	1.22	4110.9	4134.9	292.1	760.7	0.0564	1.22	1755.5	24.0	32.1
													Min	32.1
													Max	164.1
													Average	96.3

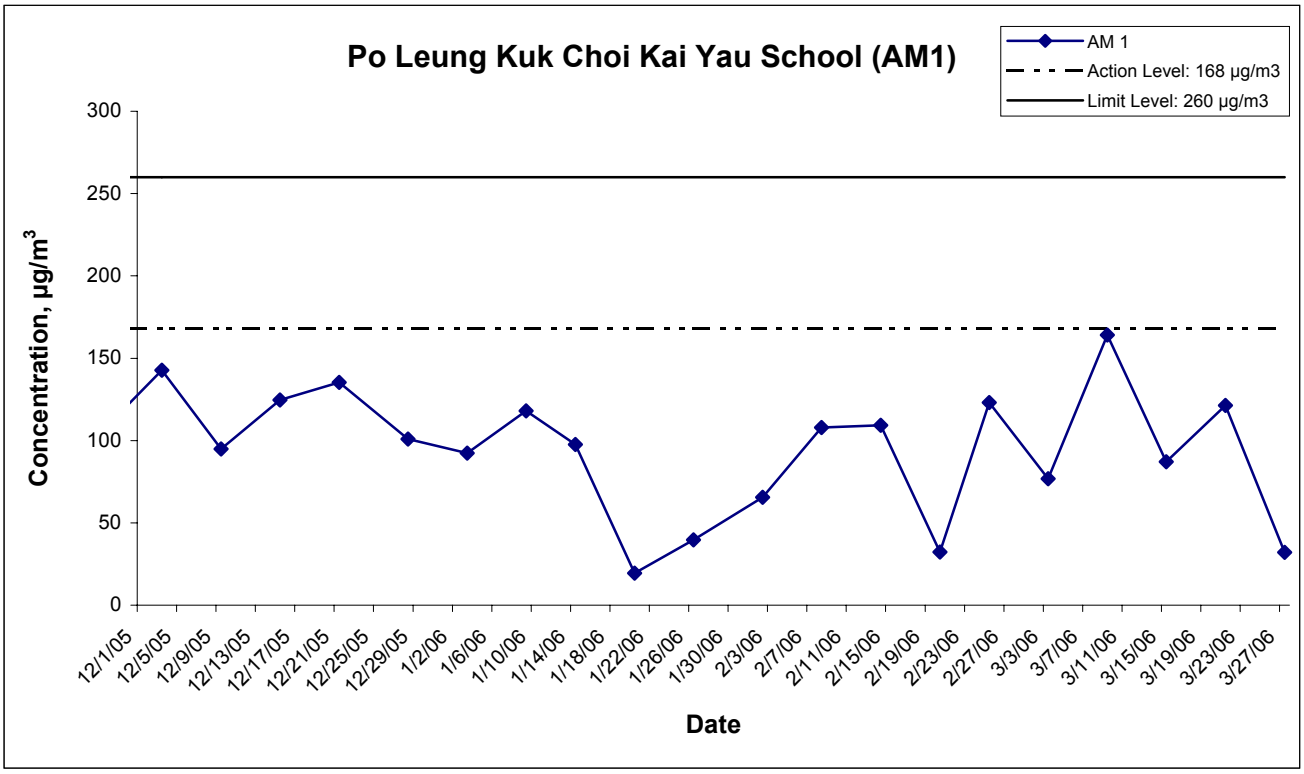
Location AM 3 - Garden Villa

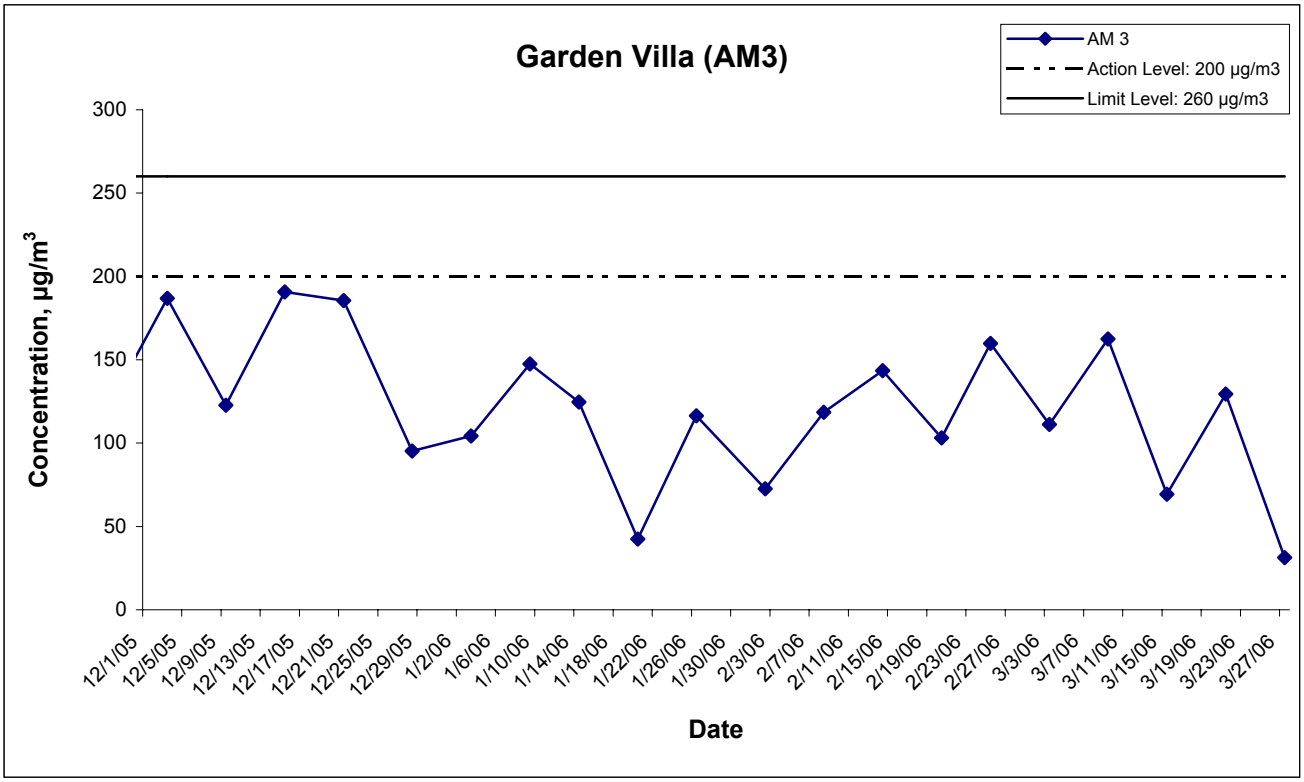
Date	Weather Condition	Filter Weight (g)		Flow Rate (m^3/min.)		Elapse Time		Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m^3/min)	Total vol. (m^3)	Sampling Time(hrs.)	Conc. ($\mu g/m^3$)
		Initial	Final	Initial	Final	Initial	Final							
3-Mar-06	Cloudy	2.8931	3.0849	1.20	1.20	4252.1	4276.1	287.0	766.9	0.1918	1.20	1725.2	24.0	111.2
9-Mar-06	Cloudy	2.8596	3.1362	1.18	1.18	4278.1	4302.1	293.3	764.9	0.2766	1.18	1701.9	24.0	162.5
15-Mar-06	Sunny	2.9001	3.0192	1.19	1.19	4305.1	4329.1	289.2	766.2	0.1191	1.19	1717.1	24.0	69.3
21-Mar-06	Cloudy	2.8759	3.0953	1.18	1.18	4331.1	4355.1	293.4	760.2	0.2194	1.18	1695.7	24.0	129.4
27-Mar-06	Sunny	2.8835	2.9366	1.18	1.18	4357.1	4381.1	292.1	760.7	0.0531	1.18	1700.6	24.0	31.2
													Min	31.2
													Max	162.5
													Average	100.7

Location AM 4 - Government Quarters

Date	Weather Condition	Filter Weight (g)		Flow Rate (m^3/min.)		Elapse Time		Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m^3/min)	Total vol. (m^3)	Sampling Time(hrs.)	Conc. ($\mu g/m^3$)
		Initial	Final	Initial	Final	Initial	Final							
3-Mar-06	Cloudy	2.8538	2.9938	1.22	1.22	3864.8	3888.8	287.0	766.9	0.1400	1.22	1760.7	24.0	79.5
9-Mar-06	Sunny	2.8950	3.0899	1.21	1.21	3890.8	3914.8	292.9	765.3	0.1949	1.21	1742.1	24.0	111.9
15-Mar-06	Cloudy	2.8866	3.0717	1.22	1.22	3917.8	3941.8	289.2	766.2	0.1851	1.22	1753.5	24.0	105.6
21-Mar-06	Cloudy	2.8837	3.0815	1.20	1.20	3973.8	3967.8	293.6	760.1	0.1978	1.20	1734.3	-6.0	114.0
27-Mar-06	Cloudy	2.8864	2.9573	1.22	1.22	3969.8	3993.8	292.1	760.7	0.0709	1.22	1759.8	24.0	40.3
													Min	40.3
													Max	114.0
													Average	90.3

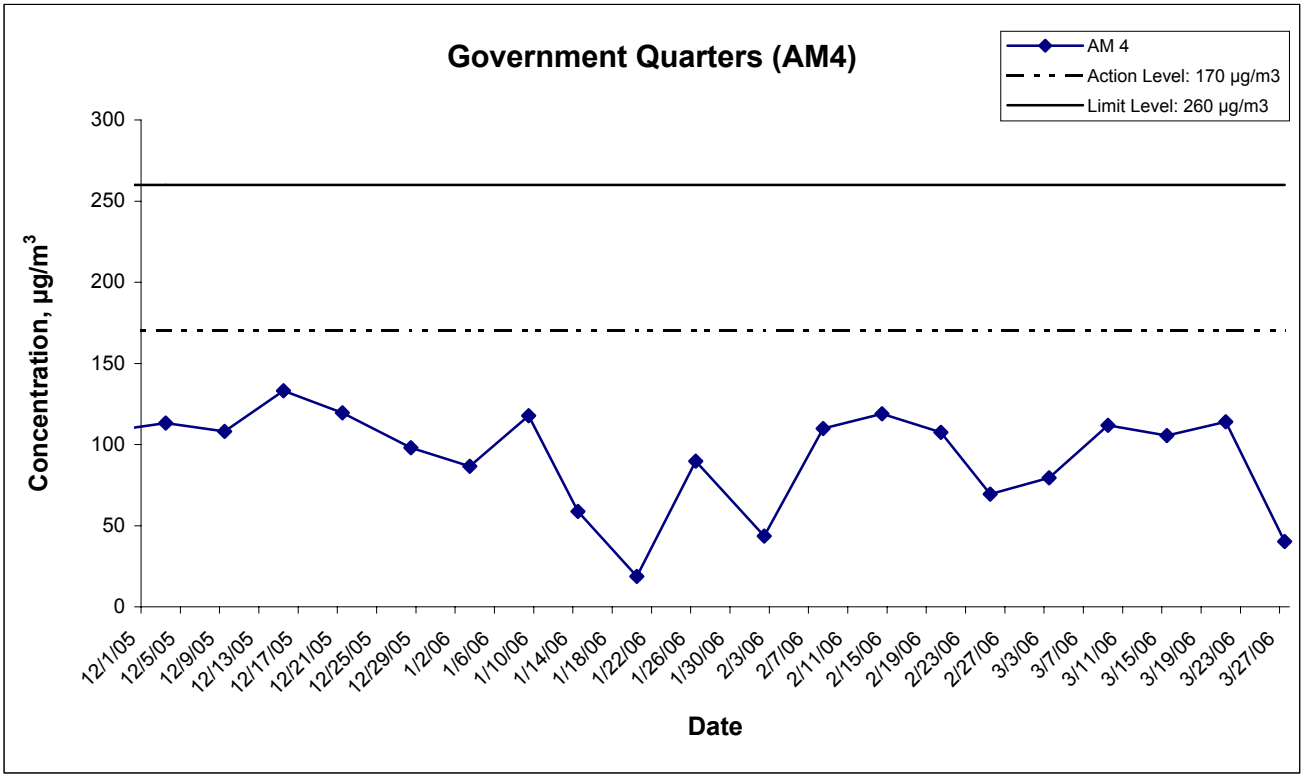
24-hr TSP Levels





Title: Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works Graphical Presentation of 24-hour TSP Impact Monitoring Results	Scale: N.T.S Date: Mar 06	Project No.: MA3024 Appendix: F	CINOTECH

24-hr TSP Levels



Title Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works Graphical Presentation of 24-hour TSP Impact Monitoring Results	Scale N.T.S Date Mar 06	Project No. MA3024 Appendix F	CINOTECH

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	Unit: dB (A) (30-min) Measured Noise Level			Remarks
			L_{eq}	L_{10}	L_{90}	
2-Mar-06	13:10	Sunny	**71.8**	74.0	68.5	-
10-Mar-06	13:10	Sunny	68.1	69.5	65.5	
16-Mar-06	13:50	Fine	68.6	73.5	64.0	
23-Mar-06	15:00	Cloudy	65.3	67.5	60.5	
31-Mar-06	14:55	Cloudy	64.5	66.0	62.5	

Location NM5 - Villa Carlton								
Date	Time	Weather	Unit: dB (A) (30-min) Measured Noise Level			Baseline Level	Construction Noise Level	Remarks
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}	
2-Mar-06	11:00	Sunny	72.4	75.0	68.0	77.1	72.4, Measured ≤ Baseline	The major noise source was identified as traffic noise from Tai Po Road.
10-Mar-06	14:40	Sunny	78.2	81.5	67.5		71.7	
16-Mar-06	15:25	Fine	79.1	82.0	69.0		74.8	
23-Mar-06	16:45	Cloudy	77.3	78.5	69.5		63.8	
31-Mar-06	13:15	Cloudy	78.7	82.0	68.0		73.6	

Location NM6 - Government Quarters						
Date	Time	Weather	Unit: dB (A) (30-min) Measured Noise Level			Remarks
			L_{eq}	L_{10}	L_{90}	
2-Mar-06	13:50	Sunny	71.6	73.0	68.0	-
10-Mar-06	13:55	Sunny	67.9	68.5	64.5	
16-Mar-06	14:30	Fine	68.4	71.5	63.0	
23-Mar-06	15:50	Cloudy	64.8	67.0	61.5	
31-Mar-06	14:05	Cloudy	67.0	69.0	63.5	

Location NM7 - Garden Vilia								
Date	Time	Weather	Unit: dB (A) (30-min) Measured Noise Level			Baseline Level	Construction Noise Level	Remarks
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}	
2-Mar-06	9:30	Cloudy	70.4	73.5	64.0	59.0	70.1	-
10-Mar-06	10:15	Sunny	68.6	70.5	64.0		68.1	
16-Mar-06	11:30	Cloudy	71.0	73.0	67.5		70.7	
23-Mar-06	10:20	Cloudy	72.7	75.0	68.5		72.5	
31-Mar-06	14:20	Sunny	68.5	71.0	63.5		68.0	

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

*Bolded value indicated limit level exceedance

Appendix G - Noise Monitoring Results

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

Location NM5 - Villa Carlton									
Date	Time	Weather	dB (A) (5-min)				Baseline Level	Construction Noise Level	Remarks
			L_{eq}	L_{10}	L_{90}	Average L_{eq}	L_{eq}	L_{eq}	
2-Mar-06	19:50	Cloudy	73.9	77.0	69.5	74.2	75.8	74.2, Measured ≤ Baseline	The major noise source was identified as traffic noise from Tai Po Road.
	19:55		74.6	77.5	70.0				
	20:00		74.0	77.5	70.5				
10-Mar-06	19:05	Cloudy	74.4	77.5	70.5	74.8		74.8, Measured ≤ Baseline	
	19:10		75.0	77.5	70.5				
	19:15		74.9	78.0	71.0				
16-Mar-06	19:30	Cloudy	73.8	77.5	69.5	74.2		74.2, Measured ≤ Baseline	
	19:35		74.2	77.0	70.0				
	19:40		74.7	77.5	70.5				
23-Mar-06	19:15	Cloudy	74.5	77.0	69.5	74.1		74.1, Measured ≤ Baseline	
	19:20		73.9	77.0	68.5				
	19:25		73.8	76.5	69.5				
31-Mar-06	19:25	Cloudy	74.0	77.5	70.0	74		74.0, Measured ≤ Baseline	
	19:30		74.4	77.0	70.0				
	19:35		73.6	77.5	69.5				

Location NM6 - Government Quarters									
Date	Time	Weather	dB (A) (5-min)				Baseline Level	Construction Noise Level	Remarks
			L_{eq}	L_{10}	L_{90}	Average L_{eq}	L_{eq}	L_{eq}	
2-Mar-06	20:35	Cloudy	55.2	58.0	51.5	55.7	56.1	55.7, Measured ≤ Baseline	-
	20:40		55.9	58.5	51.0				
	20:45		56.0	59.0	51.5				
10-Mar-06	19:50	Cloudy	54.9	58.0	50.5	54.8		54.8, Measured ≤ Baseline	
	19:55		55.0	57.5	51.0				
	20:00		55.4	57.5	51.0				
16-Mar-06	20:15	Cloudy	53.8	56.5	51.5	54.3		54.3, Measured ≤ Baseline	
	20:20		54.4	57.0	51.0				
	20:25		54.6	57.5	51.0				
23-Mar-06	20:05	Cloudy	54.1	57.5	51.0	54.2		54.2, Measured ≤ Baseline	
	20:10		53.8	58.0	51.5				
	20:15		54.6	57.5	51.0				
31-Mar-06	20:10	Cloudy	53.9	57.0	50.5	54		54.0, Measured ≤ Baseline	
	20:15		54.6	57.5	51.0				
	20:20		53.4	57.5	51.0				

Location NM7 - Garden Villa									
Date	Time	Weather	dB (A) (5-min)				Baseline Level	Construction Noise Level	Remarks
			L_{eq}	L_{10}	L_{90}	Average L_{eq}	L_{eq}	L_{eq}	
2-Mar-06	19:40	Cloudy	59.7	61.5	53.5	59.2	58.3	51.9	The major noise source was identified as traffic noise from Tai Po Road.
	19:45		58.9	60.5	53.0				
	19:50		59.1	61.0	53.5				
10-Mar-06	19:32	Cloudy	58.4	61.0	53.5	58.5		45.0	
	19:37		59.0	61.5	53.0				
	19:42		57.9	60.5	52.5				
16-Mar-06	19:00	Cloudy	59.4	61.0	56.0	59.4		52.9	
	19:05		59.3	61.0	56.0				
	19:10		59.5	61.0	56.5				
23-Mar-06	19:00	Cloudy	57.7	59.5	54.0	57.6		57.6, Measured ≤ Baseline	
	19:05		57.6	59.0	54.0				
	19:10		57.6	59.5	54.0				
31-Mar-06	19:00	Cloudy	59.4	60.5	56.0	59.3		52.4	
	19:05		59.2	60.0	56.0				
	19:10		59.3	60.0	56.0				

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

*Bolded value indicated limit level exceedance

Appendix G - Noise Monitoring Results

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

Location NM5 - Villa Carlton									
Date	Time	Weather	dB (A) (5-min)				Baseline Level	Construction Noise Level	Remarks
			L_{eq}	L_{10}	L_{90}	Average L_{eq}	L_{eq}	L_{eq}	
2-Mar-06	23:02	Cloudy	73.1	76.5	70.0	73.2	74.3	73.2, Measured ≤ Baseline	The major noise source was identified as traffic noise from Tai Po Road.
	23:07		73.7	77.0	70.5				
	23:12		72.9	76.5	70.0				
10-Mar-06	23:05	Cloudy	73.3	76.5	70.0	73.2		73.2, Measured ≤ Baseline	
	23:10		73.0	76.5	69.5				
	23:15		73.4	76.0	69.5				
16-Mar-06	23:07	Cloudy	73.0	77.5	70.0	73.6		73.6, Measured ≤ Baseline	
	23:12		73.7	77..0	69.5				
	23:17		74.0	77.5	70.0				
23-Mar-06	23:10	Cloudy	73.6	77.0	70.5	73.5		73.5, Measured ≤ Baseline	
	23:15		72.9	76.5	70.5				
	23:20		74.0	77.5	71.0				
31-Mar-06	23:00	Cloudy	73.0	77.5	70.5	73.2		73.2, Measured ≤ Baseline	
	23:05		73.0	77.5	70.5				
	23:10		73.7	77.5	69.5				

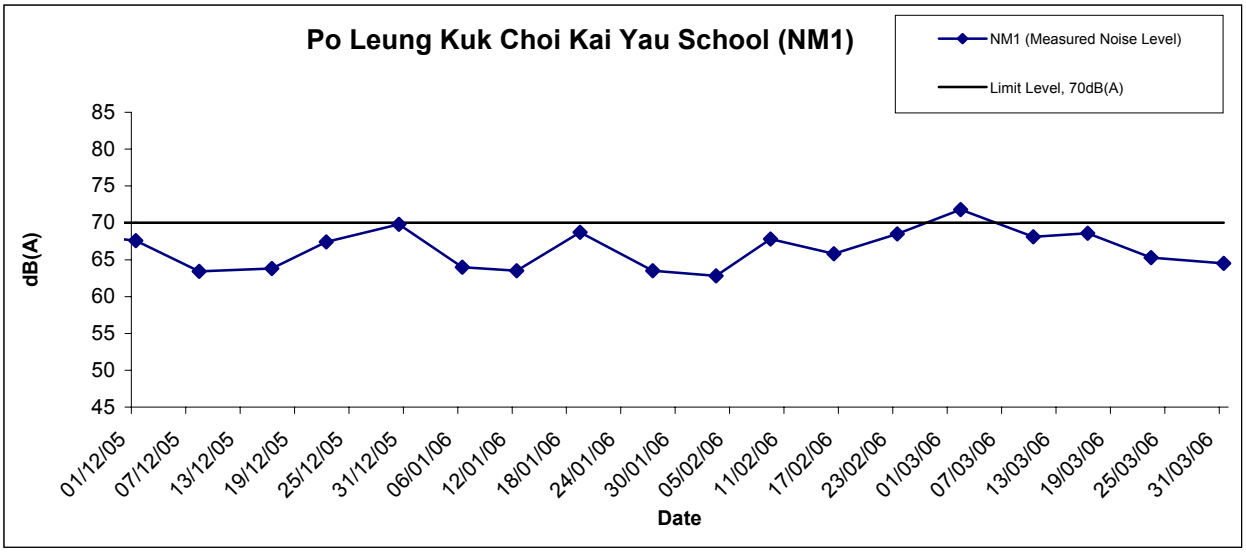
Location NM6 - Government Quarters									
Date	Time	Weather	dB (A) (5-min)				Baseline Level	Construction Noise Level	Remarks
			L_{eq}	L_{10}	L_{90}	Average L_{eq}	L_{eq}	L_{eq}	
2-Mar-06	23:25	Cloudy	51.9	53.5	49.5	51.5	52.8	51.5, Measured ≤ Baseline	-
	23:30		50.8	53.5	50.0				
	23:35		51.6	54.5	50.5				
10-Mar-06	23:27	Cloudy	52.0	54.5	50.5	52.1		52.1, Measured ≤ Baseline	
	23:32		51.8	54.0	50.5				
	23:37		52.5	55.0	51.0				
16-Mar-06	23:30	Cloudy	52.4	55.0	50.0	51.9		51.9, Measured ≤ Baseline	
	23:35		51.7	55.0	50.5				
	23:40		51.5	54.5	50.5				
23-Mar-06	23:32	Cloudy	51.9	54.5	50.0	51.7		51.7, Measured ≤ Baseline	
	23:37		52.2	55.5	50.5				
	23:42		51.0	54.5	50.0				
31-Mar-06	23:21	Cloudy	52.5	55.5	50.5	52.2		51.2, Measured ≤ Baseline	
	23:26		51.7	55.0	51.0				
	23:31		52.4	55.5	50.5				

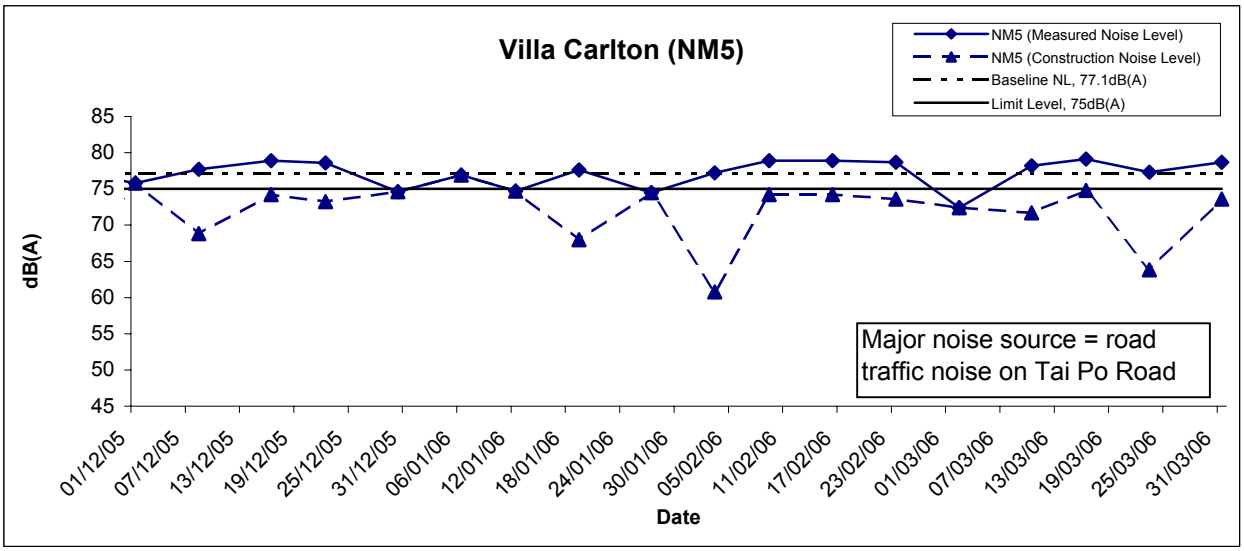
Location NM7 - Garden Villa									
Date	Time	Weather	dB (A) (5-min)				Baseline Level	Construction Noise Level	Remarks
			L_{eq}	L_{10}	L_{90}	Average L_{eq}	L_{eq}	L_{eq}	
2-Mar-06	23:48	Cloudy	54.8	58.5	51.5	55.3	56.5	55.3, Measured ≤ Baseline	The major noise source was identified as traffic noise from Tai Po Road.
	23:53		55.7	59.0	52.0				
	23:58		55.4	58.5	51.5				
10-Mar-06	23:50	Cloudy	55.0	58.5	50.5	55.4		55.4, Measured ≤ Baseline	
	23:55		55.5	59.0	51.0				
	0:00		55.6	58.5	51.0				
16-Mar-06	23:53	Cloudy	55.7	59.0	52.0	55.6		55.6, Measured ≤ Baseline	
	23:58		55.1	59.0	52.5				
	0:03		56.0	59.5	52.5				
23-Mar-06	23:56	Cloudy	54.9	58.5	51.5	55.3		55.3, Measured ≤ Baseline	
	0:01		55.8	59.0	51.0				
	0:06		55.0	59.0	50.0				
31-Mar-06	23:05	Cloudy	54.7	59.0	51.0	55.5		55.5, Measured ≤ Baseline	
	23:10		55.7	59.5	51.5				
	23:15		56.1	59.5	51.5				

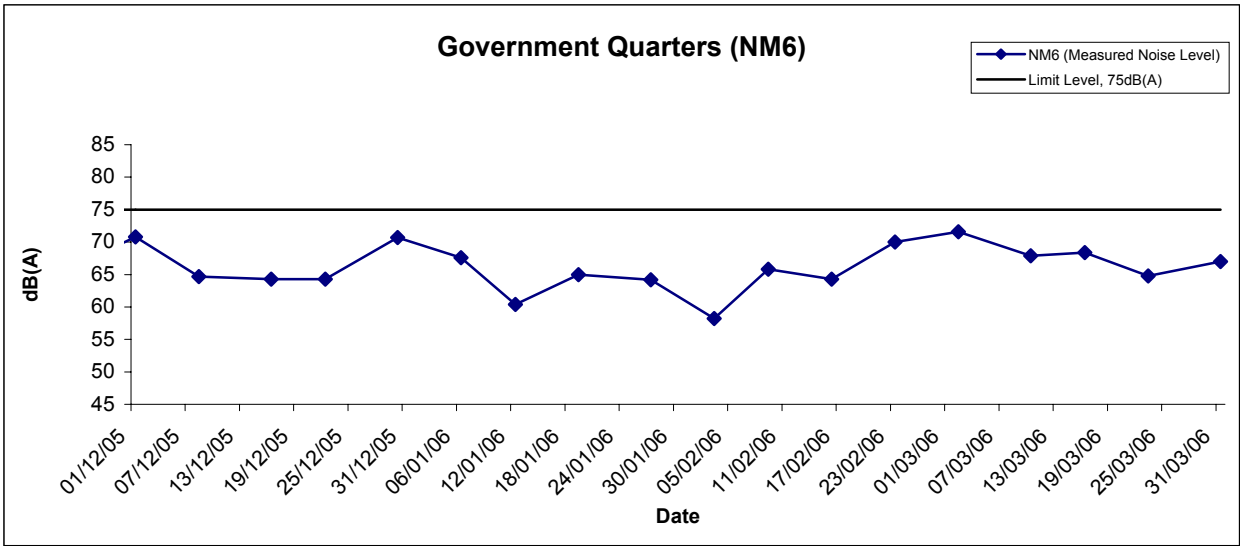
Construction Noise Level (Leq) = Measured Noise Level (Leq) - Baseline Noise Level (Leq)

*Bolded value indicated limit level exceedance

Noise Levels



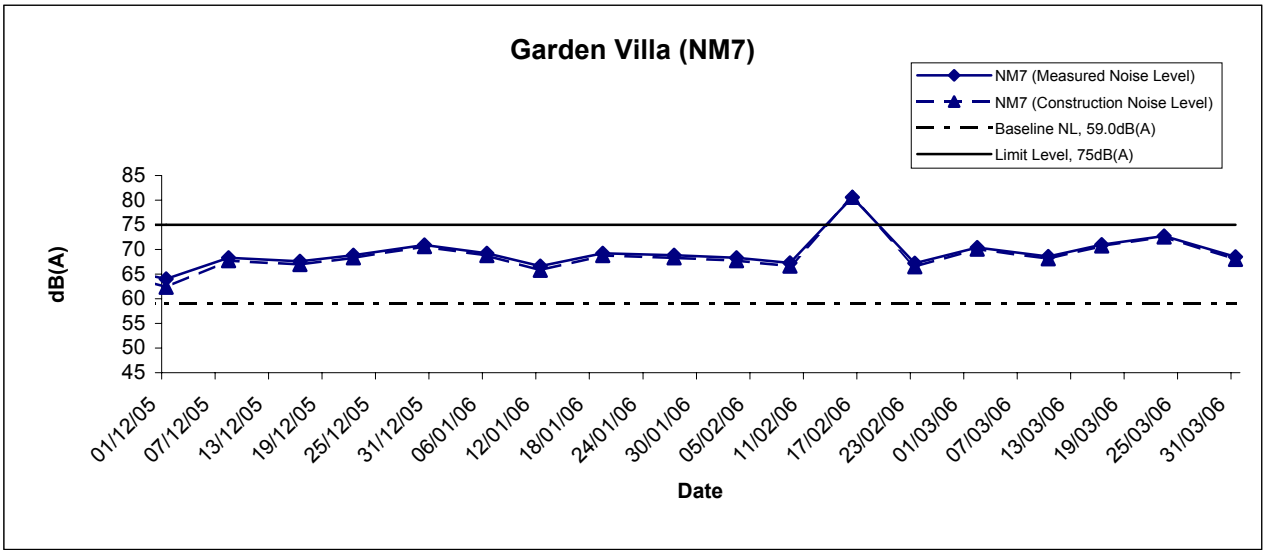




* Construction Noise Level = Measured Noise Level - Baseline Level
(If the measured noise level is lower than the baseline level, the construction noise level will be taken as the meaured one)

Title: Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S	Project No.: MA3024	CINOTECH
	Date: Mar 06	Appendix: G	

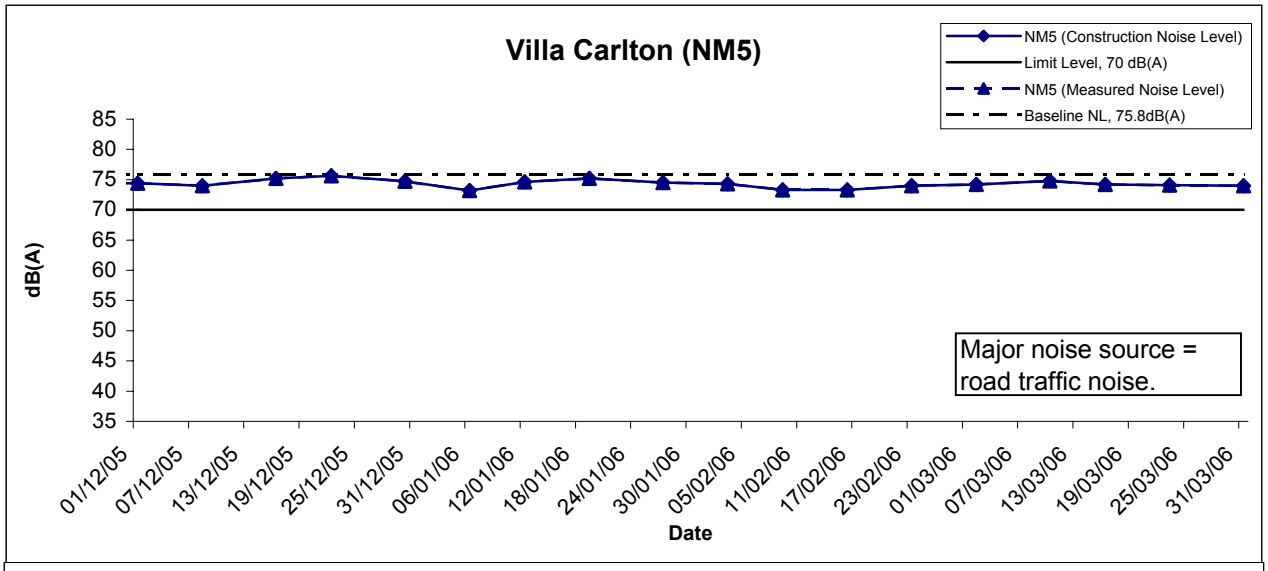
Noise Levels

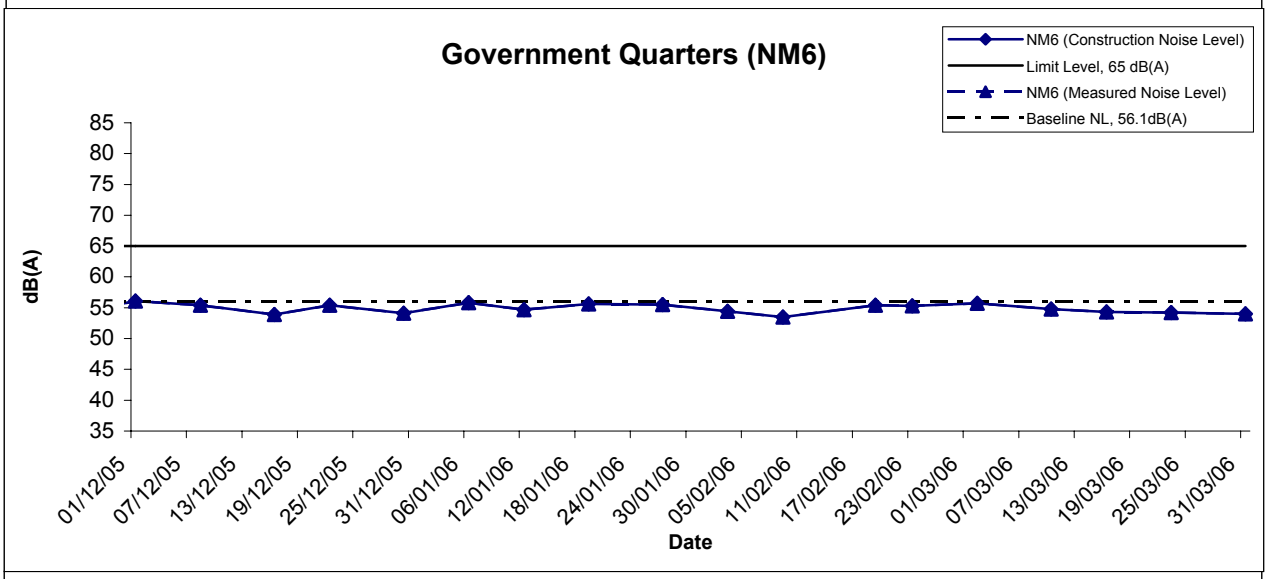


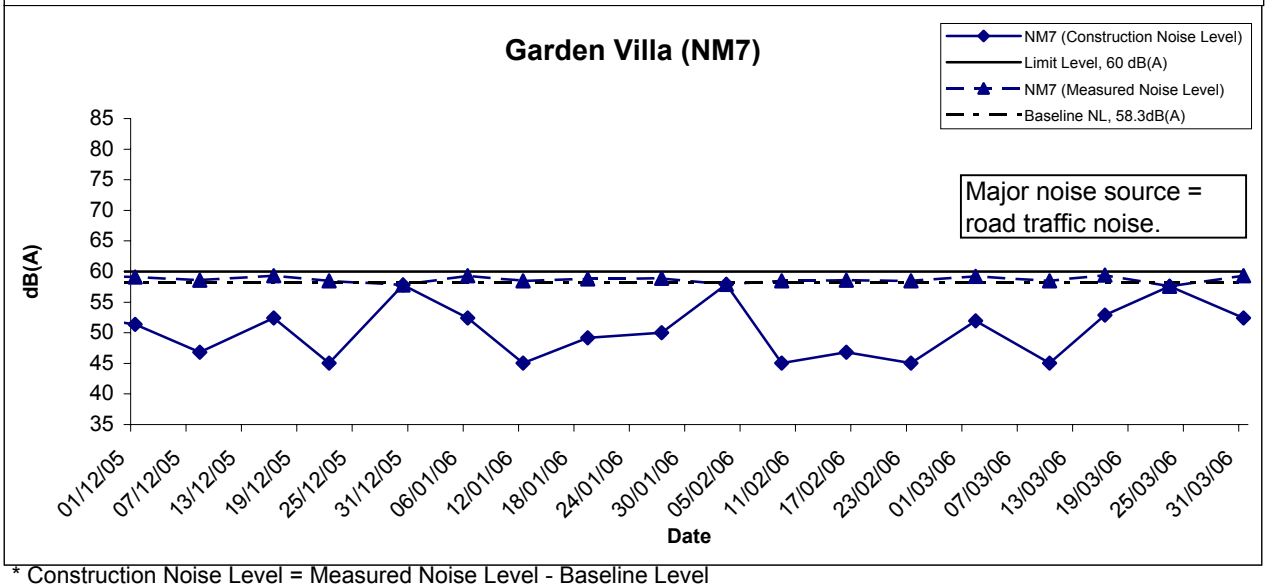
* Construction Noise Level = Measured Noise Level - Baseline Level
(If the measured noise level is lower than the baseline level, the construction noise level will be taken as the meaured one)

Title: Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S	Project No.: MA3024	CINOTECH
	Date: Mar 06	Appendix: G	

Restricted Hours (19:00 to 23:00) - Noise Levels



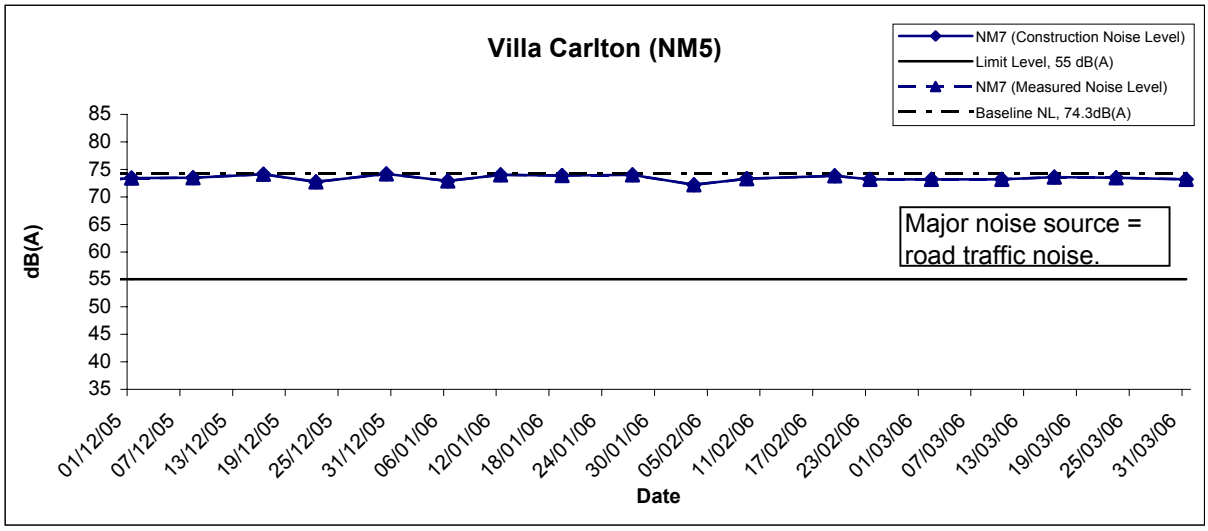


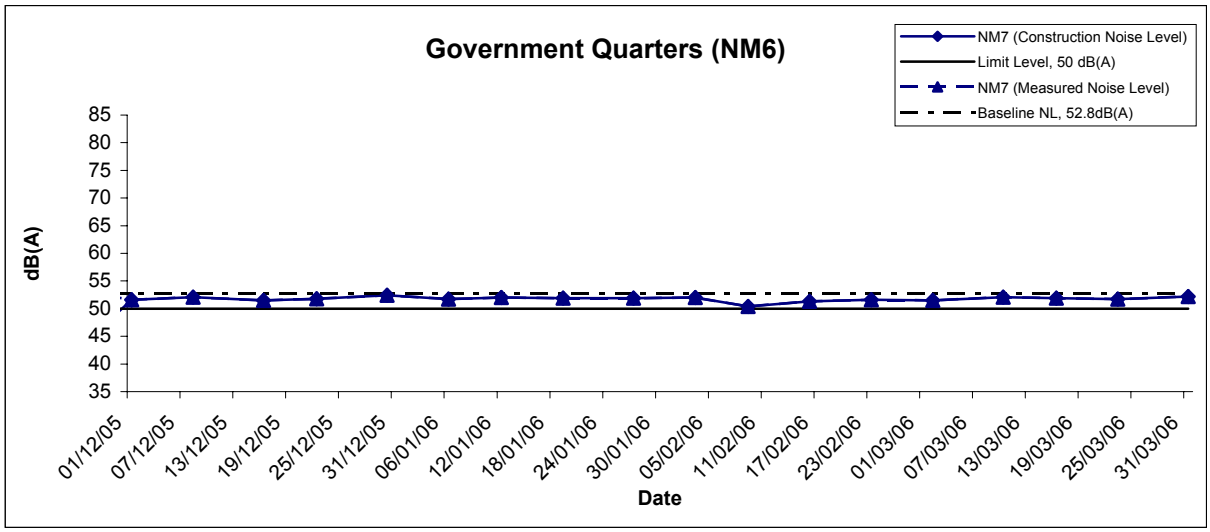


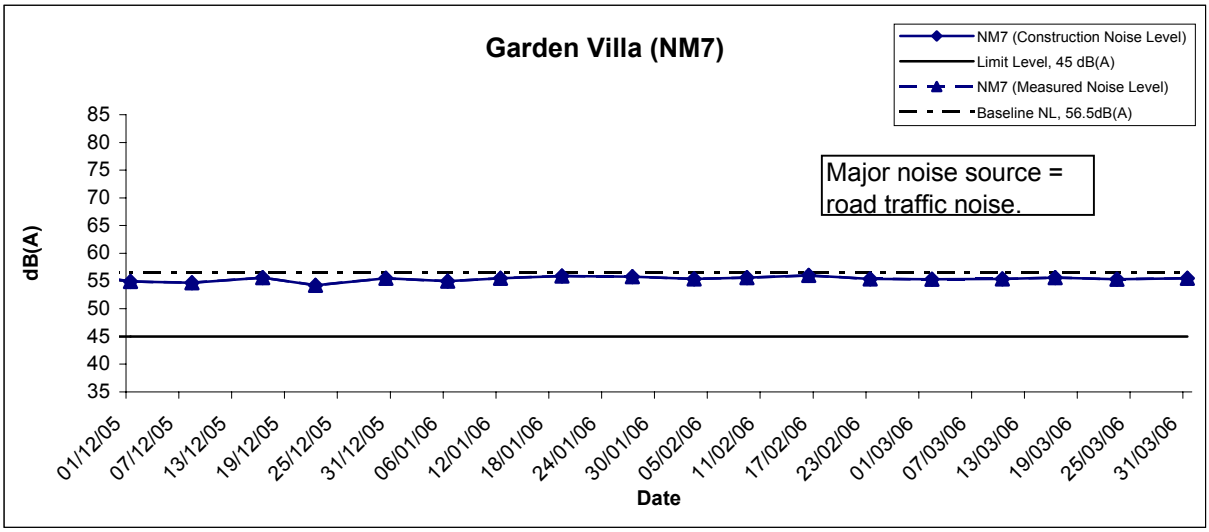
* Construction Noise Level = Measured Noise Level - Baseline Level
(If the measured noise level is lower than the baseline level, the construction noise level will be taken as the meaured one)

Title: Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S Date: Mar 06	Project No.: MA3024 Appendix: G	CINOTECH

Restricted Hours (23:00 to 07:00) - Noise Levels







* Construction Noise Level = Measured Noise Level - Baseline Level

(If the measured noise level is lower than the baseline level, the construction noise level will be taken as the meaured one)

Title: Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works	Scale: N.T.S	Project No.: MA3024	CINOTECH
Graphical Presentation of Construction Noise Monitoring Results	Date: Mar 06	Appendix: G	

APPENDIX H
SUMMARY OF EXCEEDANCE

Summary of Exceedance Recorded in the Reporting Month

a) Exceedance Reports for 1-hr TSP (NIL)

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

c) Exceedance Reports for Construction Noise

- No Action Level exceedance was recorded in the reporting month.
- One Limit Level exceedance was recorded on 2 March 2006 at Station NM1.

Report No. 60302_NM1

Exceedance(s) on 2 March 2006

Station No.	Parameter	Measured Level (Leq dB(A))	Action Level	Limit Level (Leq dB(A))	Level exceeded
NM1 (PLKCKY School)	Construction Noise	71.8	When one documented complaint is received	70.0	Limit

* A repeated measurement was taken and the measured noise level was found to be 72.0 dB(A).

(a) Statement of exceedance(s)

Construction noise at NM1 (Po Leung Kuk Choi Kai Yau School) exceeded the Limit level.

(b) Cause of exceedance(s)

During the noise measurement, the following observations were made:
1. The major noise source was identified as the noise from breaking works and drilling works of ENT Project.

Further to the site investigation during the weekly audit, it was considered that the major noise source noted during the measurement was from 2 excavator-mounted breakers and the drilling machine operated near the South Portal Building.

(c) Action required under the action plan

ET to notify EPD and Contractor (via ER) and increase monitoring frequency to check mitigation effectiveness. Contractor to implement mitigation measures and prove to ET Leader and ER effectiveness of measures applied.

(d) Action taken under the action plan

Repeated measurement was taken to confirm the exceedance.

(e) ET's conclusions and recommendations for mitigation

The exceedance was considered due to the R8-ENT Project and the Contractor was required to implement noise mitigation measures to reduce the construction.

APPENDIX I
SITE AUDIT SUMMARY

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	60302-ENT
Date	2 March 2006 (Thu)
Time	1400 – 1630

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

Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
60302E-01	• The treatment capacity at Toll Plaza was considered inadequate to cater for the works area during the wet season. The Contractor was recommended to review the drainage system and provide adequate treatment facility.	B1, B7iii & B7iv
60302E-02	• Exposed slope surface was observed at Slope SP-S2. The Contractor was reminded to cover the slope or perform hydroseeding as soon as possible.	B10 & B11
60302E-03	• Standing water was observed at Toll Plaza and Ventilation Adit. The Contractor was reminded to remove the water as soon as possible to prevent mosquito breeding.	B14
	B. Air Quality	
	• No environmental deficiency was identified during the site inspection.	
	C. Noise	
	• No environmental deficiency was identified during the site inspection.	
	D. Waste / Chemical Management	
60302E-04	• Refuse without proper collection was observed near North Portal Building. The Contractor was reminded to provide skips or other means for collection of general refuse.	E1ii & E1iii
	E. Permit / Licenses	
	• No environmental deficiency was identified during the site inspection.	
	F. Others	
	• The deficiencies identified during last audit (ref. 60223-ENT) on 23 February 2006 were rectified by the Contractor.	

	Name	Signature	Date
Recorded by	KK Chan		3 March 2006
Checked by	Kenneth Lam		3 March 2006

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	60309-ENT
Date	9 March 2006 (Thu)
Time	1330 – 1645

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. • No environmental deficiency was identified during the site inspection. • No environmental deficiency was identified during the site inspection. *B. Air Quality* • No environmental deficiency was identified during the site inspection. *C. Noise* • No environmental deficiency was identified during the site inspection. *D. Waste / Chemical Management* • No environmental deficiency was identified during the site inspection. *E. Permit / Licenses* • No environmental deficiency was identified during the site inspection. *F. Others* • The deficiencies identified during last audit (ref. 60302-ENT) on 2 March 2006 were rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Tommy Ho		9 March 2006
Checked by	KK Chan		9 March 2006

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	60316-ENT
Date	16 March 2006 (Thu)
Time	1400 – 1645

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

Ref. No.	Remarks/Observations	Related Item No.
60316E-2	***A. Water Quality*** • No environmental deficiency was identified during the site inspection. ***B. Air Quality*** • The contractor was reminded to provide watering for the haul road at portion D4 to avoid dust generated by vehicles movement. ***C. Noise*** • No environmental deficiency was identified during the site inspection. ***D. Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***E. Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***F. Others*** • Stagnant water was observed at Capture container at Toll Plaza. It should be removed or provided with Larvicide oil to avoid mosquito breeding.	C7 G5
60316E-1		

	Name	Signature	Date
Recorded by	Tommy Ho		16 March 2006
Checked by	KK Chan		16 March 2006

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	60323-ENT
Date	23 March 2006 (Thu)
Time	1330 – 1600

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

Ref. No.	Remarks/Observations	Related Item No.
60323E-1	***A. Water Quality*** • The contractor was reminded to provide cover or hydro-seeding for open slope at ~~SP-S3~~. SP-S2.	B11
	B. Air Quality • No environmental deficiency was identified during the site inspection.	
	C. Noise • No environmental deficiency was identified during the site inspection.	
60323E-2	***D. Waste / Chemical Management*** • Stain oil was observed on bare ground next to U-channel for the site at ventilation adit. The contractor was also reminded to take away the empty diesel oil drum.	E12
	E. Permit / Licenses • No environmental deficiency was identified during the site inspection.	
	F. Others • Stagnant water was observed at Capture container at Toll Plaza. It should be removed or provided with Larvicide oil to avoid mosquito breeding.	

	Name	Signature	Date
Recorded by	Tommy Ho	Tom	23 March 2006
Checked by	KK Chan		23 March 2006

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	60330-ENT
Date	30 March 2006 (Thu)
Time	1330 – 1600

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

Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
60330E-2	• The Contractor was reminded to protect the exposed slope surface near the box culvert at Portion H1 by covering or shotcreting in order to minimize the contaminated runoff running into the box culvert during rainy days.	B11
60330E-3	• The Contractor was reminded to review the capacity of the existing treatment facilities at Toll Plaza for the coming wet season and ensure adequate treatment was provided for the wastewater before discharge.	B7iii
	B. Air Quality	
	• No environmental deficiency was identified during the site inspection.	
	C. Noise	
	• No environmental deficiency was identified during the site inspection.	
	D. Waste / Chemical Management	
60330E-1	• General refuse was found near the existing box culvert at Portion H1 (near South Portal). The Contractor was reminded to collect and dispose of the refuse as soon as possible.	E1i
	E. Permit / Licenses	
	• No environmental deficiency was identified during the site inspection.	
	F. Others	
	• The deficiencies identified during last audit (ref. 60323-ENT) on 23 March 2006 were rectified by the Contractor.	

	Name	Signature	Date
Recorded by	KK Chan		31 March 2006
Checked by	Alex Ngai		31 March 2006

APPENDIX J
EVENT ACTION PLANS

Appendix J - Event Action Plans

Event/Action Plan for Air Quality

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

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

Event/Action Plan for Construction Noise

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

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

APPENDIX K
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)

Appendix K - Summary of Environmental Mitigation Implementation Schedule

Types of Impacts	Mitigation Measures	Status
Construction Dust	• 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.	^
	• Every main haul road should be sprayed with water or a dust suppression chemical so as to maintain the entire road surface wet.	^
	• 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.	^

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.	^
	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. • 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; 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.	^
Ecology	• 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.	^
	• 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 and Visual Impact	• 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 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.	^
	• Measurement of vibration would also be carried out on a need basis during the piling work	^

Remarks:

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

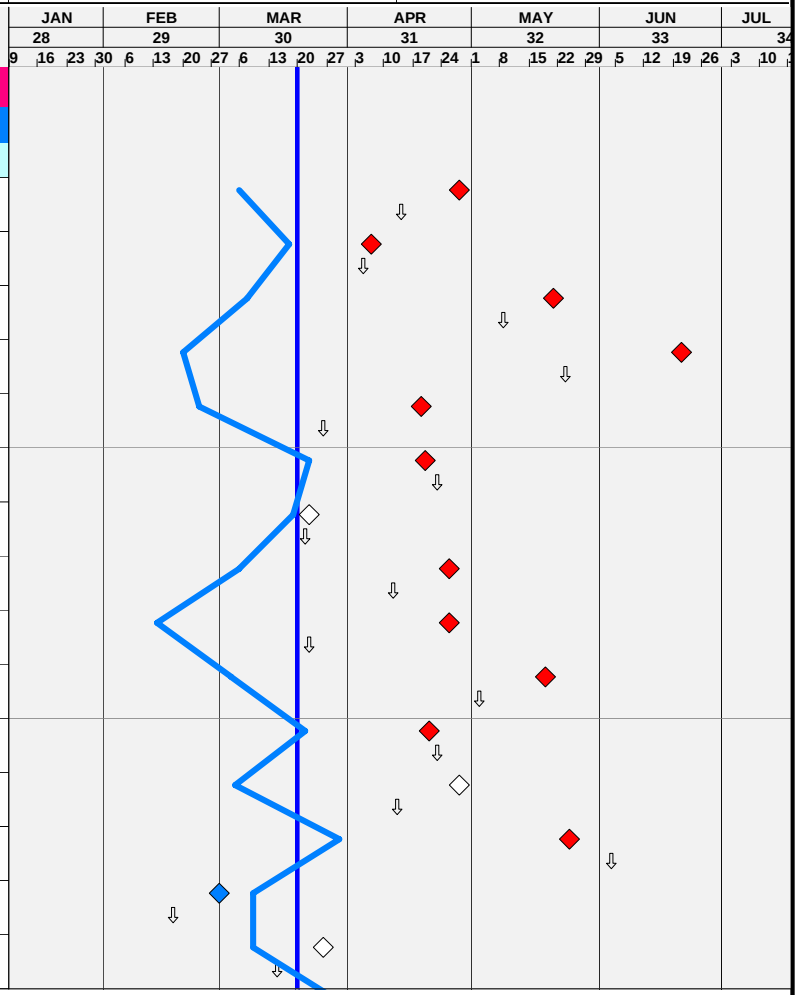
APPENDIX L
CONSTRUCTION PROGRAMME

Data Date 20MAR06
Run Date 27MAR06 16:57

3 MONTH ROLLING PROGRAMME

Monthly Update
Detailed Works Progr.(DWP) r
Progress Bar
Critical Activity

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
GENERAL									
Contract defined dates, stages and sections									
Stages of the Works									
KD04A	KD04 Proposed - Noise Barrier Founds (17Apr06)	0		27APR06	0	0	0	-10	-14
KD05B	KD-5B TCSS Access NB SPB (04Apr06)	0		06APR06	0	0	0	-2	-2
KD05D	KD-5D TCSS Access SB SPB (24Apr06)	0		20MAY06	0	0	0	-26	-12
KD05A2	KD-05A Proposed - TCSS Access BV West (15May06)	0		20JUN06	0	0	0	-36	-28
KD06NA2	TCSS Acc to NB Tun Soffit Ch2000-1700 (27Apr06)	0		18APR06	0	0	0	9	-24
KD06NA1	TCSS Acc to NB Tun Soffit SthPtl-Ch1700 (10Apr06	0		19APR06	0	0	0	-9	3
KD06NB1	TCSS Acc Dct,Cont SwtRm SthPtl-1700 (1May06)	0		22MAR06	0	0	0	40	-1
KD06NC2	TCSS Acc to NB Tun XPS CblT Ch2000-1700 (10Apr06	0		25APR06	0	0	0	-15	-14
KD06NC3	TCSS Acc NB Tun XPS CblT Ch2450-2000 (29Mar06)	0		25APR06	0	0	0	-27	-34
KD06NC1	TCSS Acc to NB Tun XPS CblT Ch1700-SPtl (10Apr06	0		18MAY06	0	0	0	-38	-16
KD06NE	TCSS Access outside CblT NthASthPtl (1May06)	0		20APR06	0	0	0	11	2
KD06SA2	TCSS Acc SB Tun Soffit Ch2000-1700 (31May06)	0		27APR06	0	0	0	34	-15
KD06SA1	TCSS Acc SB Tun Soffit SthPtl-1700 (11May06)	0		24MAY06	0	0	0	-13	10
KD06SB4	TCSS Acc to SB Tun Soffit NPtle-Ch2450 (28Feb06)	0		28FEB06A	100	0	0		-11
KD06SB2	TCSS Acc to SB Tun Soffit Ch2000-1700 (31May06)	0		25MAR06	0	0	0	67	-11



Leighton - Kumagai Joint Venture

LEIGHTON - KUMUGAI JV

R8 - EAGLES'S NEST TUNNEL

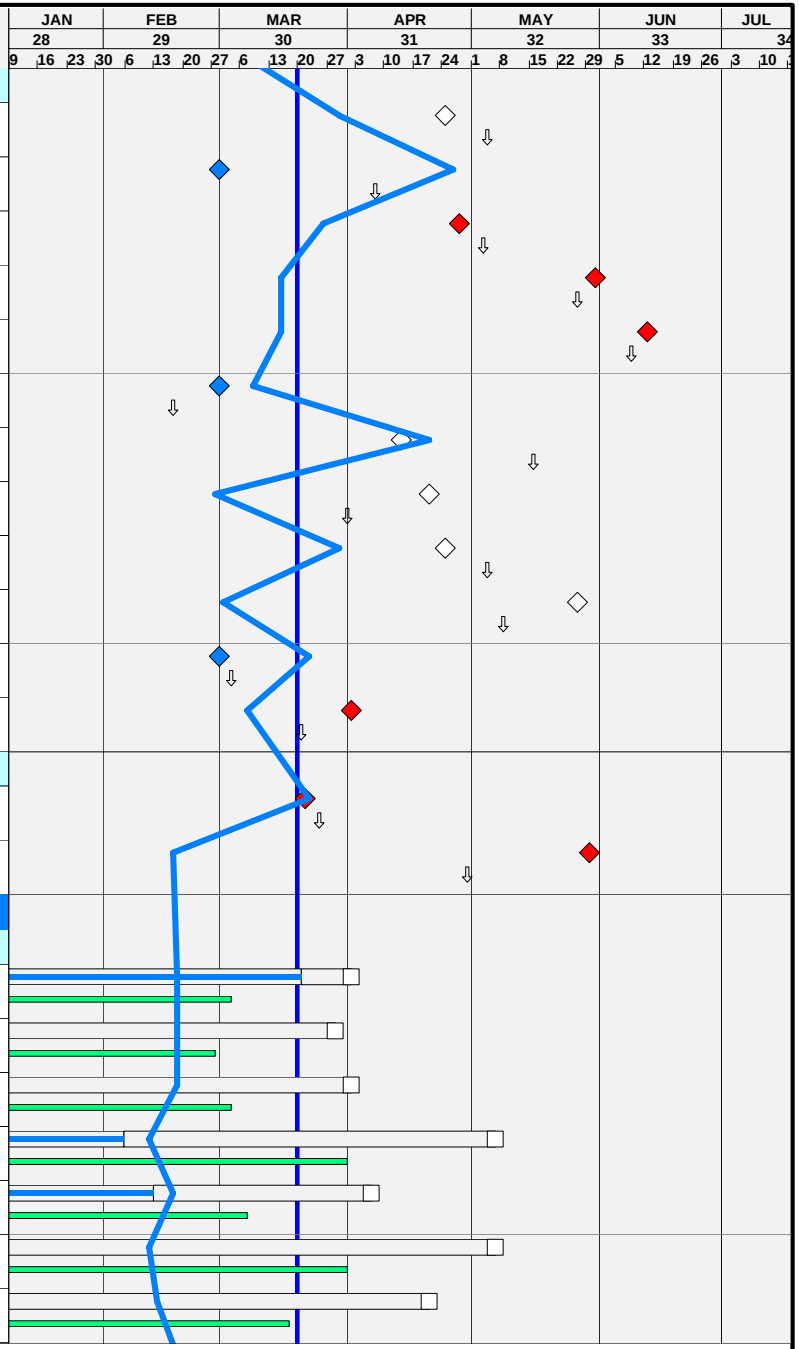
CONTRACTORS TARGET PROGRAMME

Proj. Name: W17E
Layout: 3 MONTHS ROLLING PROGRAMME
Filter: 3 MONTH ROLLING PROGRAMME
Current Proj: W17E
Target 1 Proj: BE01

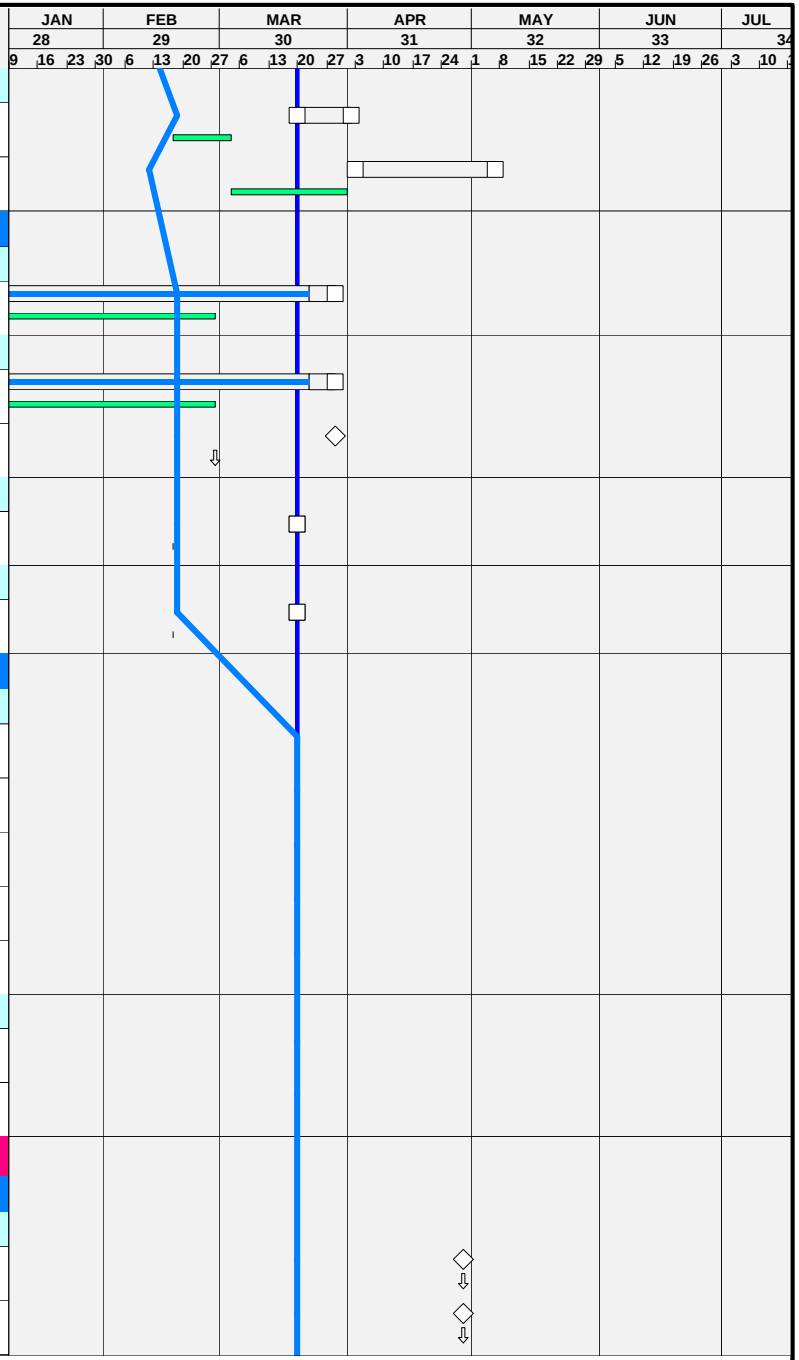
LKJV/ENT/DWP/B

Date	Revision	Checked	Approved
20MAR0	Programme update Mar (	GW	RB

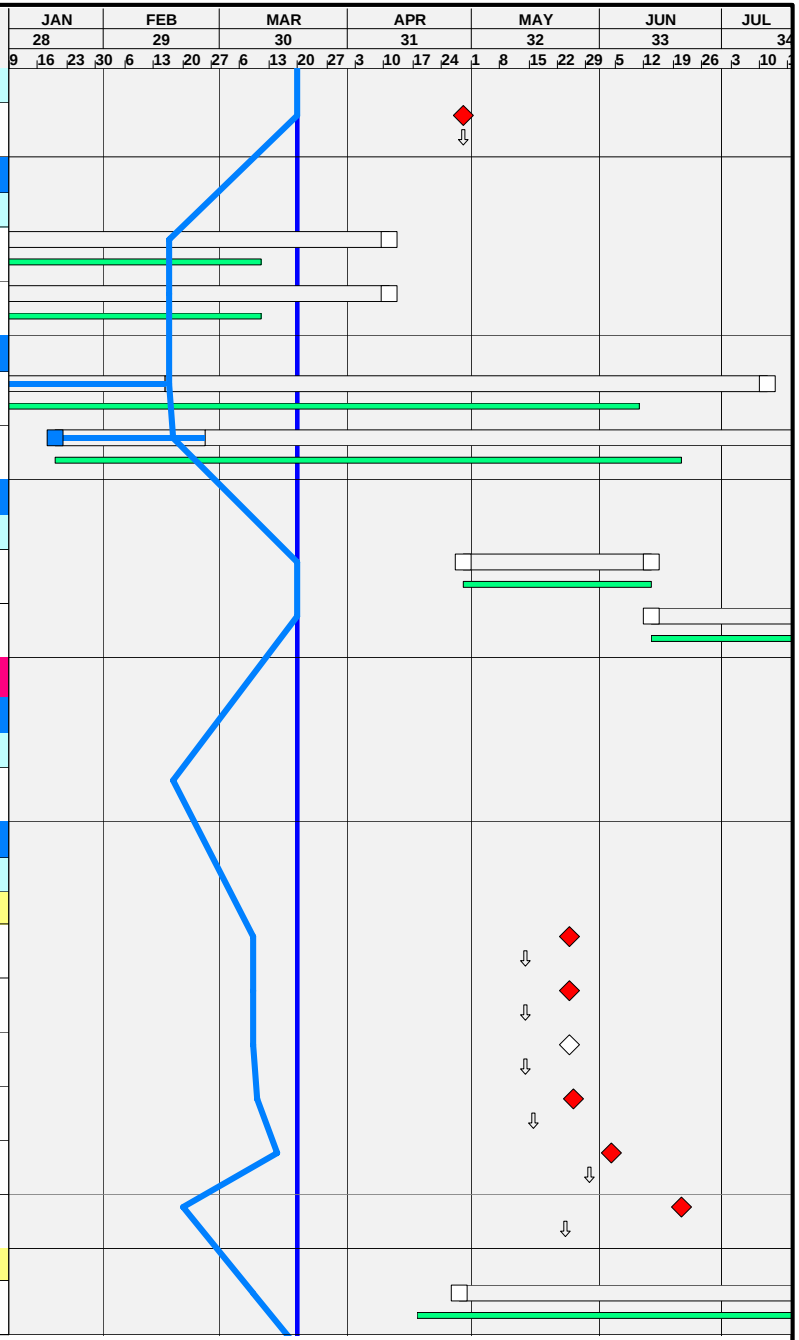
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
Stages of the Works									
KD06SB1	TCSS Acc to SB Tun Soffit SthPtl-1700 (11May06)	0		24APR06	0	0	0	17	10
KD06SC4	TCSS Acc SB Tun XPS CblT NthPtl -Ch2450 28Feb06	0		28FEB06A	100	0	0		38
KD06SC3	TCSS Acc SB Tun XPS CblT Ch2450-2000 (19Apr06)	0		27APR06	0	0	0	-8	6
KD06SC1	TCSS Acc SB Tun XPS CblT Ch1700-SthPtl (31May06)	0		30MAY06	0	0	0	-19	-4
KD06SC2	TCSS Acc SB Tun XPS CblT Ch2000-~1700 (11May06)	0		12JUN06	0	0	0	-32	-4
KD06XD4	KD-6AS TCSS Acc Swt Rm NthPtl-Ch2450 (28Feb06)	0		28FEB06A	100	0	0		-11
KD06XD2	KD-6CS TCSS Acc Swt Rm Ch2000-~1700 (1May06)	0		13APR06	0	0	0	18	32
KD06XD1	KD-6CD TCSS Acc Swt Rm Ch~1700-SthPtl (15May06)	0		20APR06	0	0	0	25	-20
KD06SE	TCSS Access outside CblT NthSthPtl (2Jun06)	0		24APR06	0	0	0	39	10
KD06V	KD-6V TCSS Acc to Adit - incl VB & CP7 (12Jun06)	0		26MAY06	0	0	0	17	-18
KD06B	KD-6B TCSS Access to NPB OHVD NB (28.Feb.06)	0		28FEB06A	100	0	0		3
KD06C	KD-6C TCSS Access to NPB OHVD SB (27.Mar.06)	0		01APR06	0	0	0	-5	-12
Sections of the Works									
KD13	KD-13 Compl. Section 5 of the works (15Sep05)	0		21MAR06	0	0	0	-187	3
KD22A	KD22 Proposed - Noise enclosure founds (7Jan06)	0		29MAY06	0	0	0	-142	-30
Submittals & Approvals									
Drawing Submittal & Approval									
8034	Prep.& Sub. Independ't Serv. Dwgs for SHT&T3&LCK	48	04AUG04A	01APR06	98	98	12	484	-25
8024	Engineer Comment / Approve ENT ISD Submissions	18	06AUG04A	28MAR06	85	85	8	142	-25
8030	Res-sub. & Approv of ENT ISD	24	06SEP04A	01APR06	70	70	12	142	-25
8035	Engineer Comment / Approve SHT&T3LCK ISD Sub.	24	13SEP04A	06MAY06	85	85	12	460	-25
8032	Engineer Comment / Approve SHT&T3&LCK CSD Sub.	18	25OCT04A	06APR06	90	90	15	460	-25
8036	Re-sub. & Approv of SHT & T3 & LCK ISD	36	31MAR05A	06MAY06	70	70	36	460	-25
8033	Re-sub. & Approv. of SHT & T3 & LCK CSD	24	28JUN05A	20APR06	60	60	24	460	-25



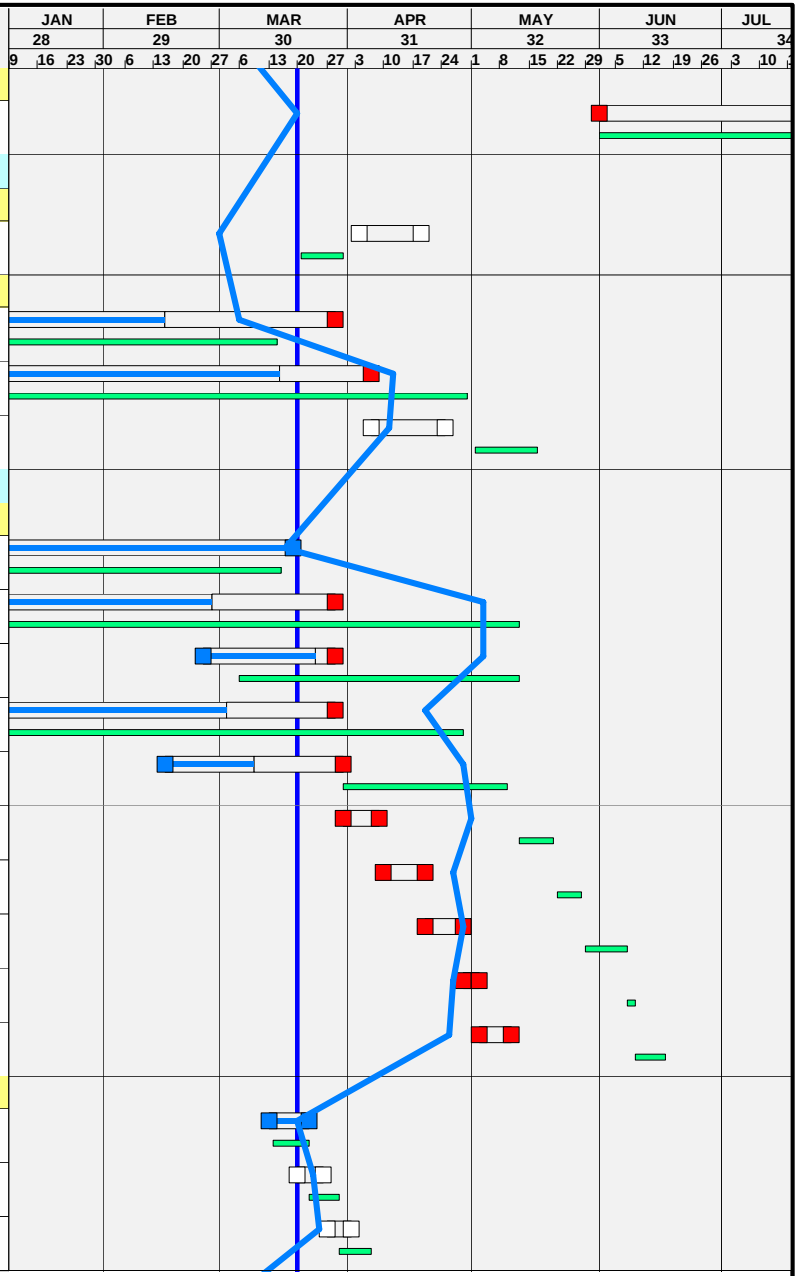
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
Drawing Submittal & Approval									
8022	Engineer Comment / Approve ENT CSD Submissions	12	20MAR06	01APR06	0	0	12	460	-25
8029	Re-sub. & Approv. of ENT CSD	24	03APR06	06MAY06	0	0	24	460	-25
SEM Interface with SHT & T3									
SHT RC Full Enclosure									
2473	Apprv.for Det.Engineering of Encl.Vent.Fans	12	07JUL04A	28MAR06	99	99	8	461	-25
T3 Underpass									
2481	Apprv.for Det.Engineering of T3 Underpass	12	07JUL04A	28MAR06	99	99	8	461	-25
2482	Order T3 Underpass Eqpt.	0		28MAR06	0	0	0	461	-25
SHT Remainder Area									
2494	Order Remaining Area Eqpt.	0	20MAR06	18MAR06	0	0	0	469	-25
T3 Remainder Area									
2488	Order T3 Remaining Area Eqpt.	0	20MAR06	18MAR06	0	0	0	469	-25
Interface Milestones									
SHT RC Full Enclosure									
2320	SHT South Portal Building-Final SEM Works Detail	0	20MAR06	16APR04A	0	0	0	0	0
2321	SHT North Portal Building-Final SEM Works Detail	0	20MAR06	14JUN04A	0	0	0	0	0
2322	SHT Shatin Heights Tunnel-Final SEM Works Detail	0	20MAR06	15APR04A	0	0	0	0	0
2323	SHT RC Full Enclosure - Final SEM Works Details	0	20MAR06	16APR04A	0	0	0	0	0
2324	SHT Remaining SEM & HyD.Entrusted Works required	0	20MAR06	14JUN04A	0	0	0	0	0
T3 Underpass									
2325	T3 Remaining SEM & HyD.Entrusted Works required	0	20MAR06	30APR04A	0	0	0	0	0
2326	T3 Underpass - Final SEM Works Detail	0	20MAR06	16APR04A	0	0	0	0	0
LAI CHI KOK VIADUCT									
CONTRACT DEFINED DATES, STAGES & SECTIONS									
PORTION ACCESS & VACATION									
ACS_M1	Access to Portions - M1	0		28APR06*	0	0	0	79	0
ACS_M2	Access to Portions - M2	0		28APR06*	0	0	0	575	0



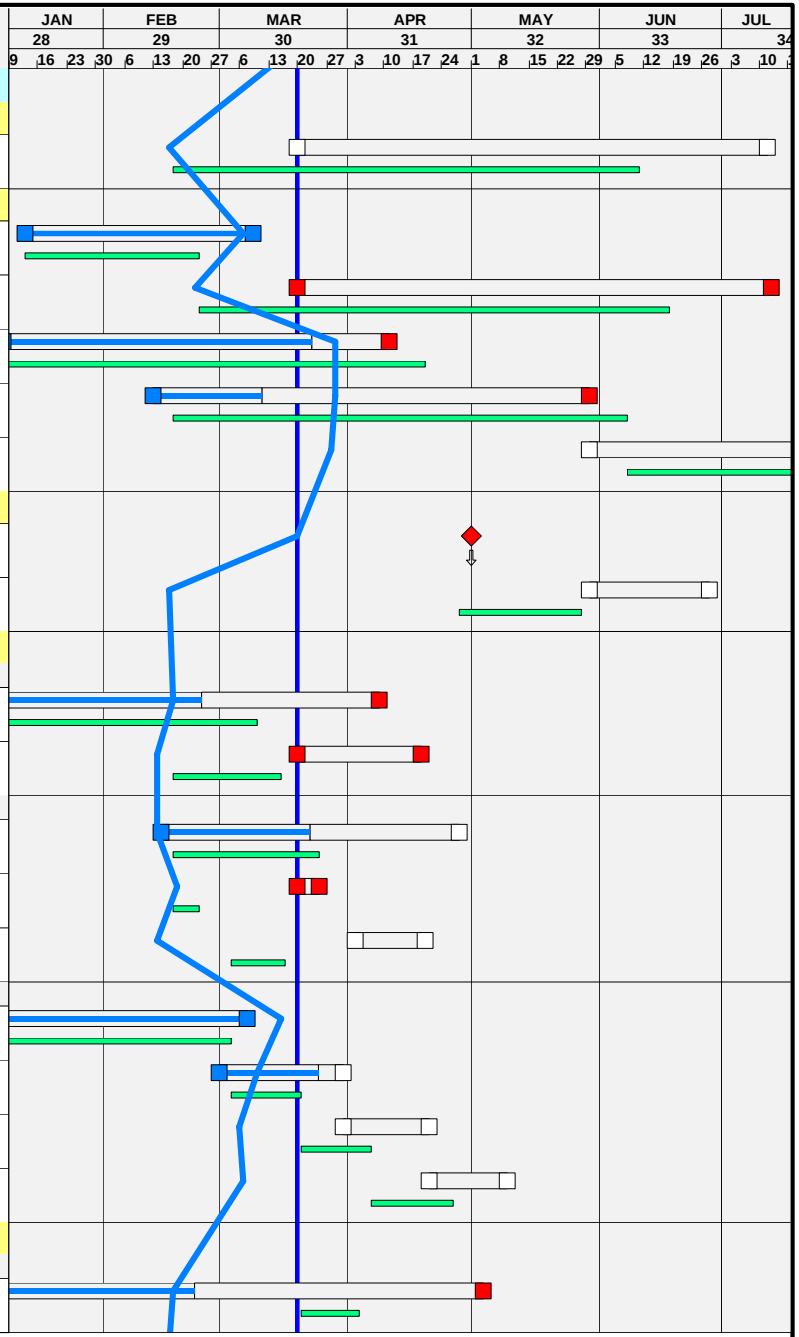
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
PORTION ACCESS & VACATION									
ACS_M3	Access to Portions - M3	0		28APR06*	0	0	0	-11	0
SUBMITTALS & APPROVALS									
E&M EQPT./MTRL.APPROVALS BY ENGINEER									
8314	LCKVd-App.Enclosure Lgt sys (incl Excision NEs)	18	05AUG04A	10APR06	80	80	18	350	-25
8318	LCKVd-App. Elect Power sys (incl Excision NEs)	18	07DEC04A	10APR06	80	80	18	358	-25
Procurement - Material									
8320	LCKVd-Proc & Manuf. Elect Power sys (incl Excisi	180	20MAY05A	11JUL06	65	65	90	358	-25
8315	LCKVd-Proc & Manuf. Encl. Lgt sys (incl Excision	180	20JAN06A	20JUL06	20	20	80	350	-25
Construction Works									
LCK Viaduct Noise Enclosure 1 (Sec 15, Excision)									
8322	LckVd NE1-Elect Works 1st Fix	36	29APR06*	13JUN06	0	0	36	63	0
8332	LckVd NE1-Elect Works 2nd Fix	30	14JUN06	19JUL06	0	0	30	63	0
BUTTERFLY VALLEY									
Contract Key Dates & Milestones									
Area Access & Vacation Dates									
ACS_A	Access to Portions - A	0	20OCT03A		100	100	0		-30
Construction Works									
BUTTERFLY VALLEY 3RD PARTY WORKS									
TCSS at Butterfly valley Approach									
S2462	TCSS Access to Gantry MLS-CAP13 (NB) (15MAY06)	0		24MAY06	0	0	0	-8	-9
S2602	TCSS Access to Gantry MLS-CAP11 (NB) (15MAY06)	0		24MAY06	0	0	0	-8	-9
S2622	TCSS Access to Gantry MLS-CAP12 (SB) (11JUN06)	0		24MAY06	0	0	0	14	-9
S2632	TCSS Access to VMS MLS-CAP14,15 (11JUN06)	0		25MAY06	0	0	0	13	-9
S2392	TCSS Access to Duct & D.Pit East BV (11JUN06)	0		03JUN06	0	0	0	6	-4
S2592	TCSS Access to Duct & D.Pit West BV (15MAY06)	0		20JUN06	0	0	0	-30	-23
Noise Barrier Works by ACCIONA									
S2562	Access for 7m N.B. Works by Acciona at BV South	77	28APR06	31JUL06	0	0	77	60	-9



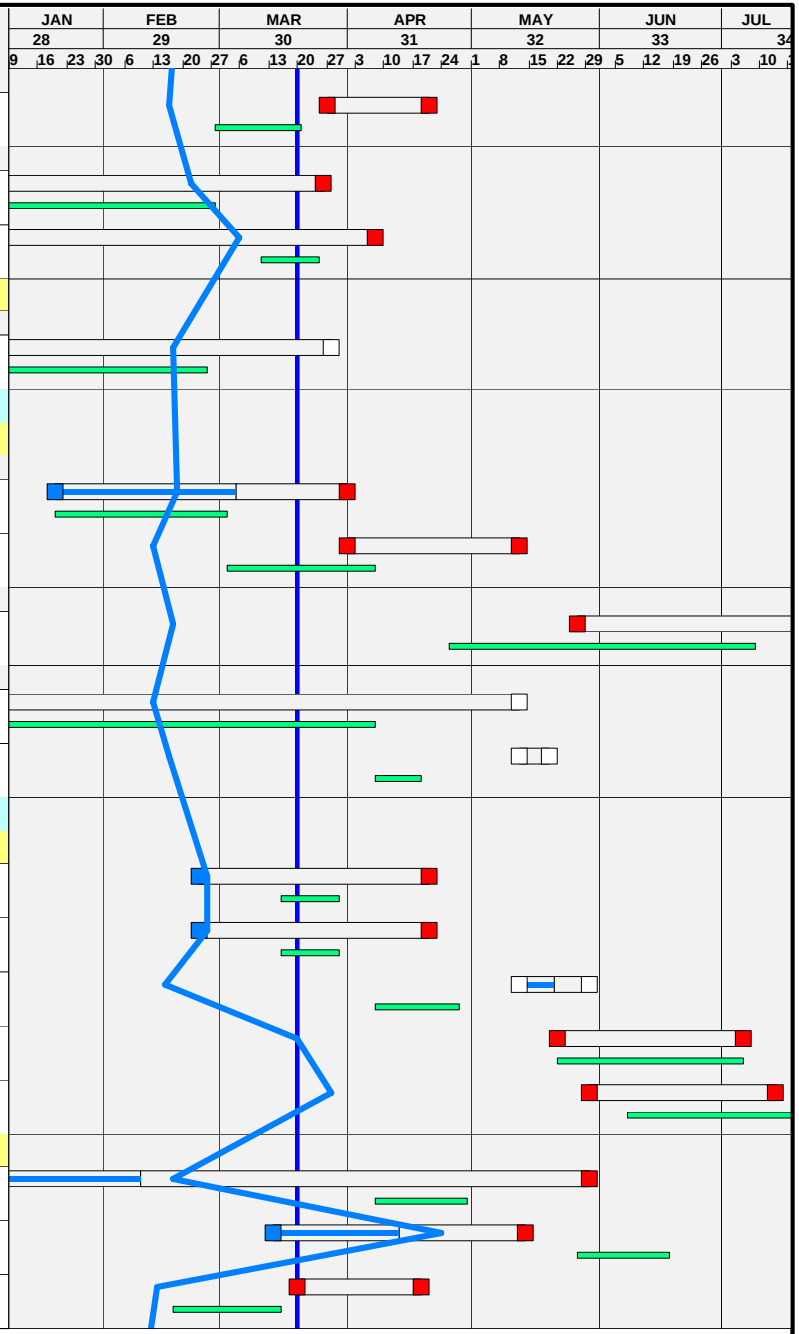
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
Noise Barrier Works by ACCIONA									
S2612	Access for Semi-Enclosure Works by Acciona	90	01JUN06	14SEP06	0	0	90	-85	0
MAJOR DRAINAGE DIVERSIONS									
Filling									
S2680	Fill on top of Box Culvert 45 & culvert A	9	04APR06	18APR06	0	0	9	474	-12
Box Culvert									
S2382	Box Culvert 45 & culvert A - structure	53	11NOV05A	28MAR06	70	60	8	-127	-12
S2350	Box Culvert 36>43 & 32 - Structure	66	31DEC05A	06APR06	77	14	15	-127	17
S2710	Box Cul. Final Structure (Strip, Clean & Fill)	12	07APR06	24APR06	0	0	12	67	17
MAJOR UTILITY DIVERSIONS									
WSD twin 600mm watermain									
101167	Inst.DN600 WSD Pipe along BV-S2/8 (CH140>200)	40	31OCT05A	18MAR06A	100	45	0		-3
S2251	MB2-4(A1-3) - on natural slope	66	31DEC05A	28MAR06	66	0	8	-59	33
S2191	Ch.100-150 (MB2-12) - on natural slope	19	25FEB06A	28MAR06	85	0	8	-59	33
S2171	Ch. 150-312 (MB12-19) - at Toe of Slope BV-S2	56	31DEC05A	28MAR06	70	0	8	-59	23
S2211	Ch355-412 (across Box Culvert)	28	16FEB06A	30MAR06	50	0	10	-61	28
S2231	Testing	7	31MAR06	08APR06	0	0	7	-61	31
S2241	Sterilization	6	10APR06	19APR06	0	0	6	-61	31
S2261	Water Sampling (by WSD)	8	20APR06	28APR06	0	0	8	-61	31
S2281	Connection (by WSD)	2	29APR06	02MAY06	0	0	2	-61	31
S2301	Outstanding thrust blocks (NB/MB01 & NB/MB28)	6	03MAY06	10MAY06	0	0	6	-61	31
900mm watermain									
S2291	900mm - Water Sampling (By WSD)	8	13MAR06A	22MAR06A	100	0	0		0
S2311	900mm - Connection by WSD	6	20MAR06	25MAR06	0	0	6	24	3
S2331	900mm - Complete Thrust Blocks at Tie-in	6	27MAR06	01APR06	0	0	6	24	3



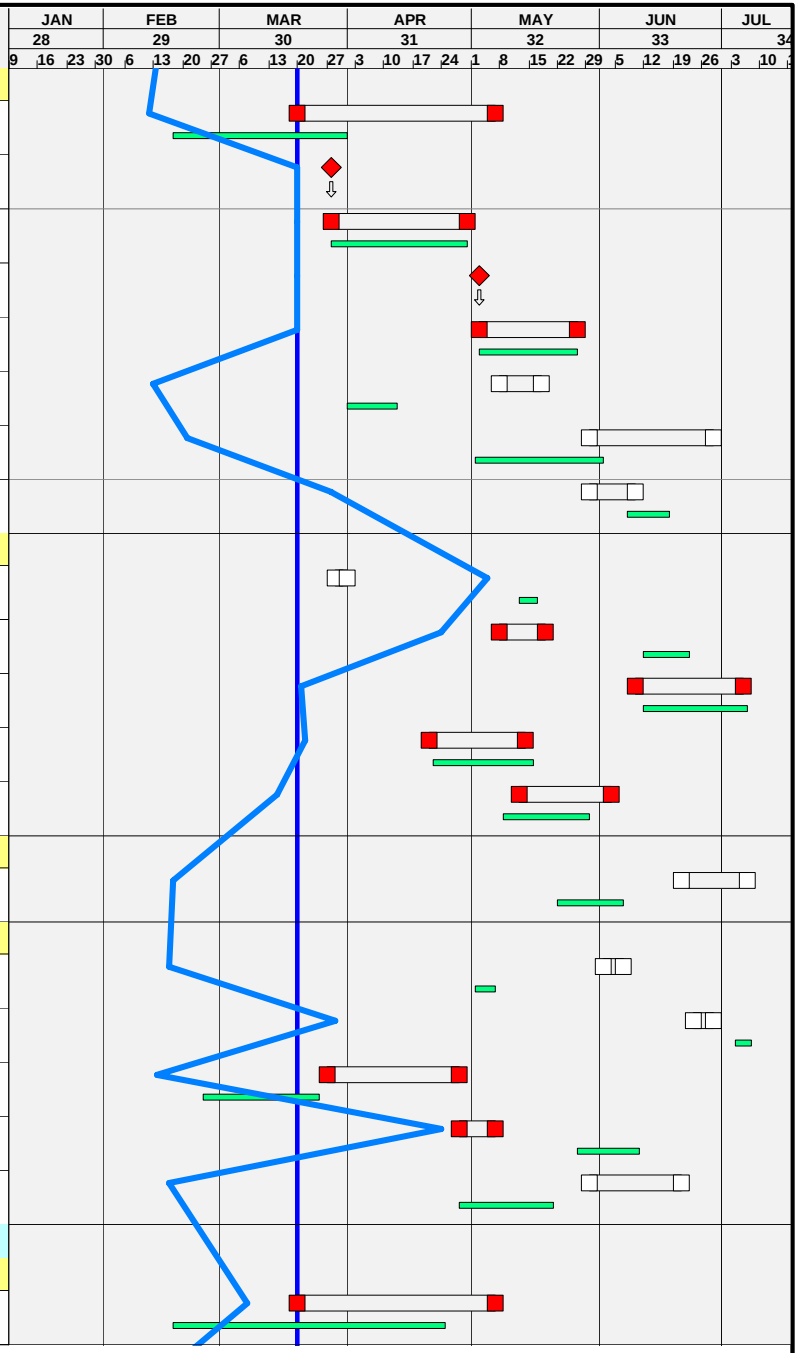
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
EARTHWORKS & SLOPEWORKS									
SI & INSTRUMENTATION									
1009	Confirmation Drill Holes (Post-Construction)	90	20MAR06	11JUL06	0	0	90	115	-25
BV-R1 Remaining Works									
S2520	BV-R1 - Lagging Wall Details from MHJV	18	13JAN06A	08MAR06A	100	70	0		-11
S3240	BV-R1 - Construction of Lagging Wall	91	20MAR06	12JUL06	0	0	91	-113	-20
S2110	Retaining Wall BV-R1 Structure (Base)	72	07JAN06A	10APR06	80	33	18	-127	5
S2120	Retaining Wall BV-R1 Structure (Wall)	87	13FEB06A	29MAY06	25	0	55	-127	7
S2360	BV-R1 - Backfill	48	30MAY06	26JUL06	0	0	48	39	7
SLOPE SP-S2 & SP-S3									
S2480	WSD Access Rd No Longer Available for Use	0		30APR06*	0	0	0	0	0
S2370	Remaining Works to Slopes SP-S3 & SP-S2	24	30MAY06	27JUN06	0	0	24	126	-25
SLOPE BV-S2									
EXCAVATION (SOFT & ROCK)									
102692	BV-S2/9 (South)Slope excvtn (rock & some soft)	83	05SEP05A	08APR06	80	80	17	-122	-25
102695	BV-S2/10 (South)Slope excvtn (rock & some soft)	22	20MAR06	18APR06	0	0	22	-122	-25
SLOPE STABILISATION (SOIL NAILS,ROCK BOLTS ETC)									
102691	BV-S2/8 Inst.Rock bolts & Test (60nr.w/3.rig)	22	15FEB06A	27APR06	50	0	15	442	-25
102694	BV-S2/9 Inst.Rock bolts & Test (4nr.w/1.rig)	5	20MAR06	24MAR06	0	0	5	-122	-25
102696	BV-S2/10 Row B3 Soil Nails & Test 39nr.w/2.rig	11	03APR06	19APR06	0	0	11	447	-25
SURFACE DRAINAGE									
103694	BV-S2 Berm 7 Surface drainage	14	25APR05A	07MAR06A	100	20	0		-3
103695	BV-S2 Berm 8 Surface drainage	14	01MAR06A	30MAR06	80	0	10	446	-9
103696	BV-S2 Berm 9 Surface drainage	14	31MAR06	20APR06	0	0	14	446	-9
103697	BV-S2 Berm 10 Surface drainage	14	21APR06	09MAY06	0	0	14	446	-9
SLOPE BV-S4									
SLOPE FINISHES									
102380	BV-S4/3a-4a & 5 hydro-seeding & tensarmat	12	12SEP05A	03MAY06	70	0	10	-13	-21



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
SLOPE FINISHES									
101139	11nw/434 BV-S4/1-2-3bcd-4b Hydro-seed/Tensarmat	18	27MAR06	20APR06	0	0	18	-13	-23
SURFACE DRAINAGE									
103705	BV-S4/3 Surface Drainage	8	17MAR05A	25MAR06	70	25	6	-13	-23
103706	BV-S4/4 Surface Drainage	12	07SEP05A	07APR06	5	0	10	1	-11
SLOPE SP-S1									
SURFACE DRAINAGE									
103711	Sp-S1/4 Surface Drainage	7	06JUL04A	27MAR06	40	40	7	28	-25
RC STRUCTURES									
RETAINING WALL BV-R2									
CONCRETE WORKS									
101116	BV-R2 (7) Capping Beam and wall	30	20JAN06A	31MAR06	62	62	11	-121	-25
101117	BV-R2 (8) Capping Beam and wall	30	01APR06	12MAY06	0	0	30	-121	-25
FINISHES									
101123	BV-R2 Wall finishes	60	27MAY06	07AUG06	0	0	60	-2	-25
BACKFILLING									
101122	BV-R2(A&B) Granular Drain & Compacted Backfill	36	07APR05A	12MAY06	5	5	30	151	-25
101126	BV-R2(C) Granular Drain & Compacted Backfill	6	13MAY06	19MAY06	0	0	6	145	-25
ROADWORKS - North End of BV									
Stormwater Drainage									
S3020	Storm Drainage to enable TCSS Works at Median	12	24FEB06A	20APR06	0	0	2	-104	-15
S3040	Storm Drainage to enable CLP Works	12	24FEB06A	20APR06	0	0	2	-104	-15
S2420	Outstanding East Loop Rd. Drainage	28	13MAY06	29MAY06	50	50	14	62	-25
S3200	Storm Drainage to Sth Bnd (Nr. Typ D N.B.)	37	22MAY06	05JUL06	0	0	37	-120	0
S2440	Storm Drainage to Nrth Bnd (Nr. Typ C&E N.B.)	37	30MAY06	13JUL06	0	0	37	-127	7
Noise Barrier Footings & Sign Gantries									
S2230	Semi Enclosure Footing (Typ B) R-Bay 15-17	16	13DEC05A	29MAY06	35	0	14	-121	-23
S3260	Semi Enclosure Footing (Typ E) L-Bay 14-17	18	14MAR06A	13MAY06	50	0	12	-58	29
S2270	Semi Enclosure Footing (Type D) L-Bay 11-13	22	20MAR06	18APR06	0	0	22	-102	-25



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
Noise Barrier Footings & Sign Gantries									
S3270	Semi Enclosure Ftng (Type C) L-Bay 1-6	36	20MAR06	06MAY06	0	0	36	-116	-25
S3290	Removal of Tunnel Desilting Tanks	0		27MAR06*	0	0	0	-112	0
S2240	Semi Enclosure Ftng (Typ B) R-Bay 14-7	25	28MAR06	29APR06	0	0	25	-112	0
S3110	Relocation of WSD Access Rd.	0		02MAY06*	0	0	0	-133	0
S2310	Semi Enclosure Footing (Typ D) L-Bay 7-10	20	03MAY06	26MAY06	0	0	20	-133	0
S3530	Base for HML 1	9	08MAY06	17MAY06	0	0	9	144	-25
S3030	Semi Enclosure Ftng (Typ B) R-Bay 1-6	25	30MAY06	28JUN06	0	0	25	91	-23
S3540	Base for HML 2	9	30MAY06	09JUN06	0	0	9	125	7
Ducting & Drawpits									
S2650	CLP Ducts above DN 600mm (CH265>280)	3	29MAR06	31MAR06	0	0	3	71	33
S2600	BV North - CLP Ducts & Drawpits at SPB (3no.)	10	08MAY06	18MAY06	0	0	10	-31	29
S2570	Bv North - CLP Ducts and Drawpits (4no.)	21	10JUN06	05JUL06	0	0	21	-3	1
S2560	BV North - TCSS Ducting & Drawpits (West)	18	21APR06	13MAY06	0	0	18	1	1
S2580	BV North - TCSS Ducting & Drawpits (East)	18	13MAY06	03JUN06	0	0	18	6	-4
Road Pavement & Associated Work									
S2920	Road Works to East Loop Rd Typ III (EVA)	13	21JUN06	06JUL06	0	0	13	119	-25
Miscellaenous Works									
S2870	Erect HML 1	4	02JUN06	06JUN06	0	0	4	144	-25
S3100	Erect HML 2	4	24JUN06	28JUN06	0	0	4	125	7
S2660	Construct Foul Holding Tank & Connections	24	27MAR06	27APR06	0	0	24	-58	-25
S2910	Foul Drain Pipe Across SB Tube (3m Below FRL)	6	28APR06	06MAY06	0	0	6	-58	29
S2670	Install Twin DN200 Pipes to SPB via E. Loop Rd	18	30MAY06	20JUN06	0	0	18	62	-25
ROADWORKS - South End of BV									
Stormwater Drainage									
S2640	Storm Drainage to Sth Bnd (Near. 7m N.B.)	30	20MAR06	06MAY06	0	0	30	-95	-9



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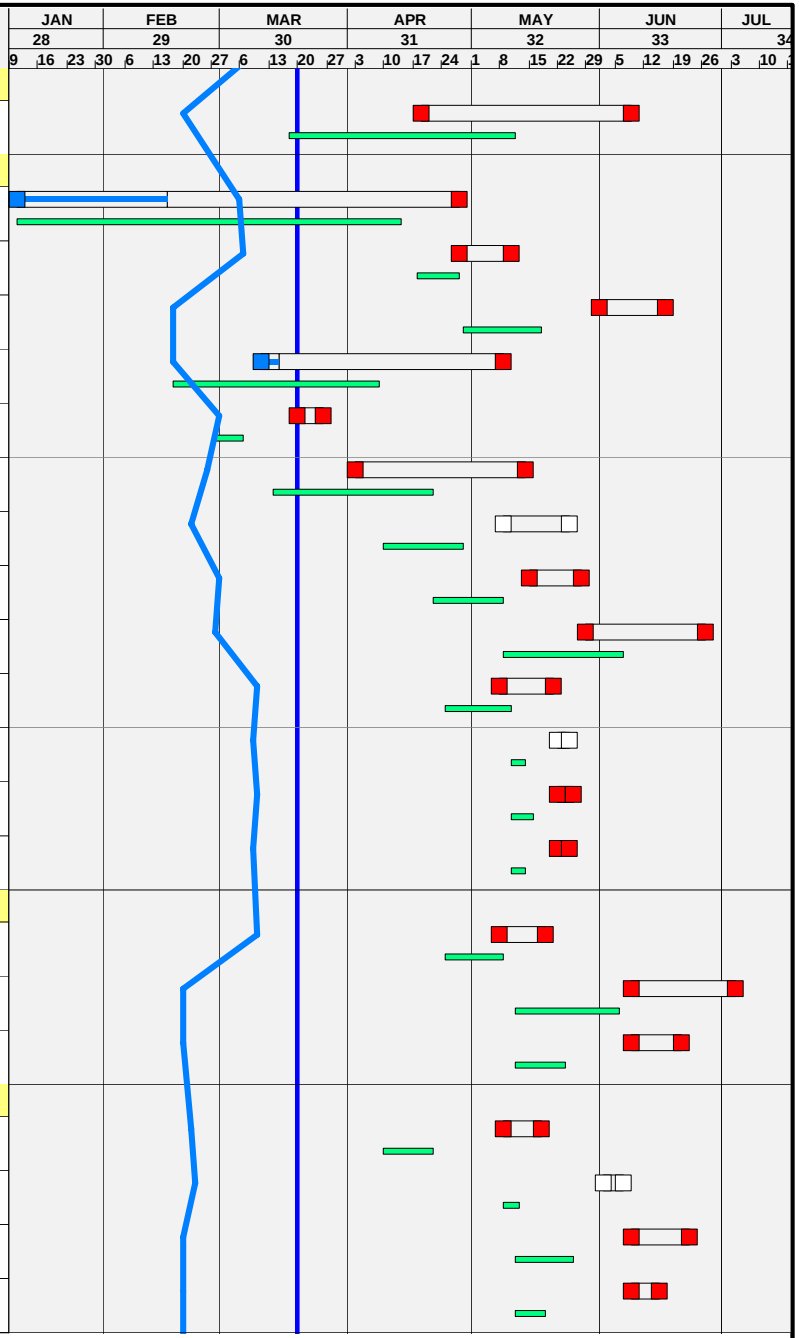
Stormwater Drainage									
S2490	Storm Drainage to Nrth Bnd (Foot of BVS2)	41	19APR06	08JUN06	0	0	41	-122	-23
Noise Barrier Footings & Sign Gantries									
S2400	7 Barrier (Typ A) Bay 3-16	54	11JAN06A	27APR06	34	15	30	-95	-9
S3560	7m Barrier (Typ A) Bay 8 - Including Gantry Foot	9	28APR06	10MAY06	0	0	9	-78	-9
S3180	7m Barrier Ftg (Typ A1, A2) Bay 1-2	14	01JUN06	16JUN06	0	0	14	-95	-25
S3170	5.5m Barrier Footings Bay 3-14	42	11MAR06A	08MAY06	8	0	37	-119	-20
S3280	Pre-drilling for Mini-piling	6	20MAR06	25MAR06	0	0	6	-158	-17
S2471	Mini-piling	30	03APR06	13MAY06	0	0	30	-158	-17
S2491	5.5m Barrier Footings Bay 1-2	14	09MAY06	24MAY06	0	0	14	34	-20
S3330	Load Test for mini-piles	12	15MAY06	27MAY06	0	0	12	-158	-17
S2481	5.5m Barrier Footings Bay 15-17	24	29MAY06	26JUN06	0	0	24	-158	-17
S2620	BV South - Sign / Lane Signal Gantry Bases (5no)	12	08MAY06	20MAY06	0	0	12	-8	-9
S2461	Sign gantry Installation MLS-CAP12	3	22MAY06*	24MAY06	0	0	3	14	-9
S3370	Signal Gantry Installation MLS-CAP14 & 15	4	22MAY06	25MAY06	0	0	4	13	-9
S3380	Sign Gantry Installation MLS-CAP11,13	3	22MAY06	24MAY06	0	0	3	-8	-9
Ducting & Drawpits									
S2530	BV South - TCSS Ducts & Drawpits (East)	10	08MAY06	18MAY06	0	0	10	-85	-9
S2740	BV South - LV Ducts & Drawpits	20	09JUN06	03JUL06	0	0	20	-122	-23
S3350	BV South - TCSS Ducts & Drawpits (West)	10	09JUN06	20JUN06	0	0	10	-30	-23
Miscellaneous Works									
S2610	BV South - Footing HML9 (Adjacent 5.5m NB)	8	09MAY06	17MAY06	0	0	8	-84	-20
S2850	Erect HML9	4	02JUN06	06JUN06	0	0	4	411	-20
S2790	Installation of DN 200 Fire Hydrant Pipe & FH's	12	09JUN06	22JUN06	0	0	12	-114	-23
S3320	Base for kiosk K4	6	09JUN06	15JUN06	0	0	6	-32	-23



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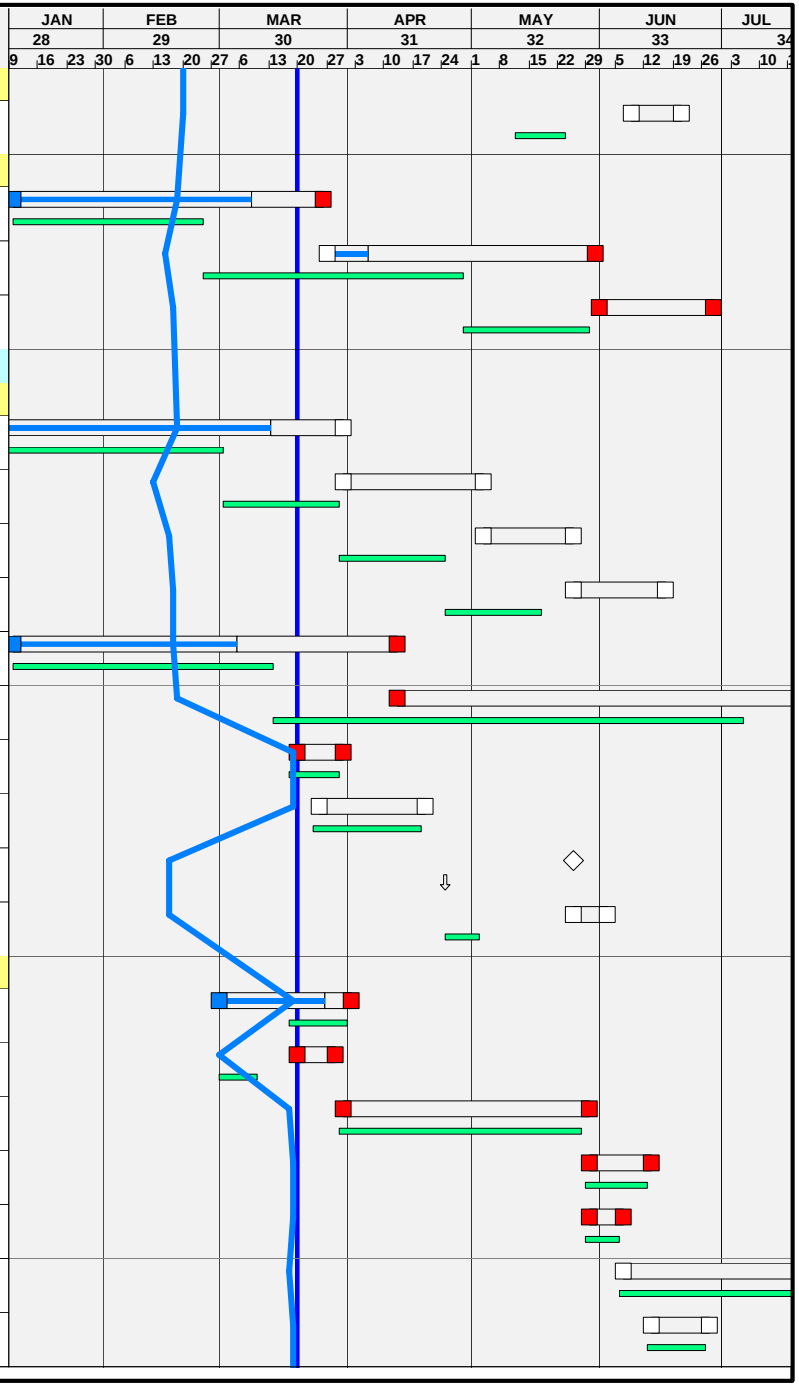
Miscellaneous Works									
S3340	Construction of Weighbridge Pit	10	09JUN06	20JUN06	0	0	10	108	-23
ACCIONA Works at Abutment									
S3060	ACCIONA - Construct Access for Abutment M Work	26	10JAN06A	25MAR06	77	77	6	-95	-25
S3070	ACCIONA - Construct X-Head at Abutment M	50	27MAR06	30MAY06	15	15	50	-95	-25
S3080	ACCIONA - Cure, Strip & Reinstate Area - Abut. M	24	01JUN06	28JUN06	0	0	24	5	-25
DSD MAINTENANCE ROAD									
DSD Maintenance Rd DSD1-1 (Acciona Interface)									
S2300	ACCIONA - Construct X-Head for Pier 20	66	05DEC05A	30MAR06	85	85	10	123	-25
S2320	ACCIONA - Strip Falsework & Formwork for X-Head	24	31MAR06	03MAY06	0	0	24	123	-25
S2340	ACCIONA - Remove Crane Platform	18	04MAY06	25MAY06	0	0	18	123	-25
S3570	WSD Slope Reinstatement	18	26MAY06	16JUN06	0	0	18	426	-25
S2280	ACCIONA - Construct Access & platform - Pier P21	48	10JAN06A	12APR06	58	58	20	-21	-25
S2500	ACCIONA - Construct Pierhead & X-Head - Pier P21	90	13APR06	03AUG06	0	0	90	-21	-25
S3410	CLP Ducts Under Access Rd DSD1-1 Lay-by	10	20MAR06	30MAR06	0	0	10	-19	-1
S2330	Com DN200 Div along DSD1-1 - inc. Leak Collect	18	25MAR06*	19APR06	0	0	18	170	-1
S2460	LKJV Regain Access at Pier 20	0		25MAY06	0	0	0	123	-25
S2390	Remaining DN200 Watermain at Pier 20 Access	6	26MAY06	02JUN06	0	0	6	123	-25
DSD Maintenanace Rd DSD1 (Parallel to Channel)									
S3210	2 No. Cross Rd Pipes & Roadside Gullies	12	01MAR06A	01APR06	80	0	4	-17	-1
S3510	Construct Temporary Access Rd at 900mm main	8	20MAR06*	28MAR06	0	0	8	-17	-16
S2830	Twin DN200 Water Pipe	45	31MAR06	29MAY06	0	0	45	-19	-1
S2700	Access rd DSD1 -barrier footings	12	30MAY06	13JUN06	0	0	12	-19	-1
S3390	Complete Formation at DSD1	6	30MAY06	06JUN06	0	0	6	-19	-1
S3120	DN 200 Watermain Diversion EB18 - EB70	40	07JUN06	24JUL06	0	0	40	59	-1
S2720	Access rd DSD1 - Barriers	12	14JUN06	27JUN06	0	0	12	126	-1



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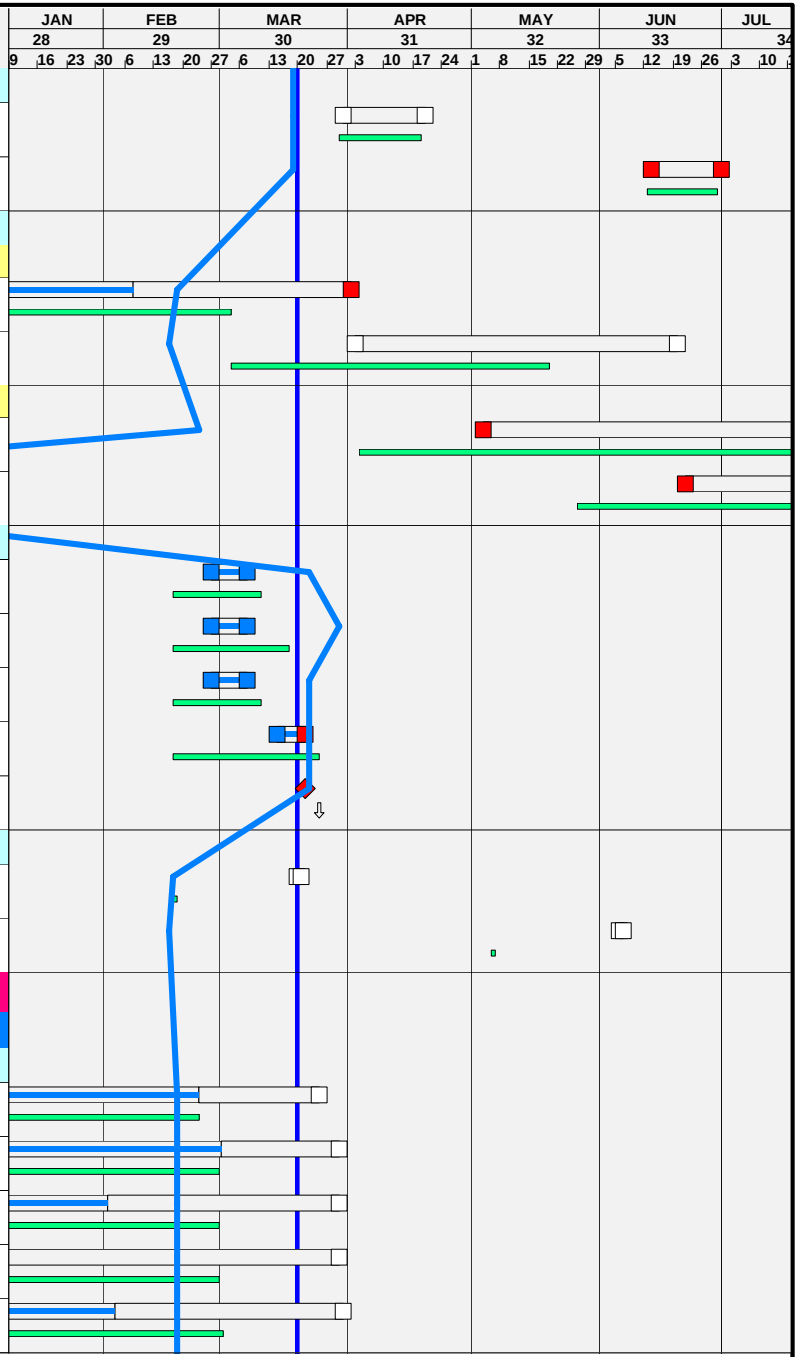
Works By CLP									
S2820	Lay CLP Cables (25m induct) Ch0.00 - Ch110	13	31MAR06	19APR06	0	0	13	25	-1
S2840	Lay CLP Cables Ch110 - Ch230	15	14JUN06	30JUN06	0	0	15	-19	-1
Terrain Mitigation									
NTMM - BV-S2									
102392	NTMM - Constr.Peforated Drain Channel	24	11JUL05A	01APR06	80	80	12	-122	-25
102350	NTMM - Afforestation of Area	60	03APR06	19JUN06	0	0	60	133	-25
Landscaping & Establishment									
101475	BV - Hard Landscaping	90	04MAY06	19AUG06	0	0	90	-13	-21
101476	BV - Soft Landscaping & Planting	100	22JUN06	15MAR07	0	0	100	-13	-22
EXCISION WORK-SHEK LEI PUI WATER TREATMENT PLANT									
102752	Soilid Barrier Type I - Cladding	18	27FEB06A	07MAR06A	100	0	0		3
102753	Soilid Barrier Type III - Cladding	24	27FEB06A	07MAR06A	100	0	0		9
102754	Soilid Barrier Type IV - Cladding	18	27FEB06A	07MAR06A	100	0	0		3
102751	Soilid Barrier Type II - Cladding	30	15MAR06A	21MAR06	95	0	2	-148	3
TARG1	Target Date WTW - complete	0		21MAR06	0	0	0	-187	3
Landscaping & Establishment									
101183	Sth.Appr.Hard Landscaping	1	20MAR06	20MAR06	0	0	1	435	-25
101184	Sth.Appr.Soft Landscaping	1	06JUN06	06JUN06	0	0	1	435	-25
ENT SOUTH PORTAL VENTILATION BUILDING									
SUBMITTALS & APPROVALS									
E&M EQPT.& MATERIAL APPROVALS									
8491	EntSpBldg-App. building related luminaires	18	18AUG04A	24MAR06	95	90	5	443	-25
6006	EntSpBldg-App. FS wet sys	18	04SEP04A	29MAR06	95	50	9	439	-25
6036	EntSpBldg-App. FS AFA & FM200 sys	18	14SEP04A	29MAR06	90	85	9	358	-25
6192	EntSpBldg-App. of CMCS & ELV sys	18	20SEP04A	29MAR06	80	50	9	349	-25
6005	EntSpBldg-App. MVAC mech.vent. sys	18	23SEP04A	30MAR06	90	80	10	468	-25



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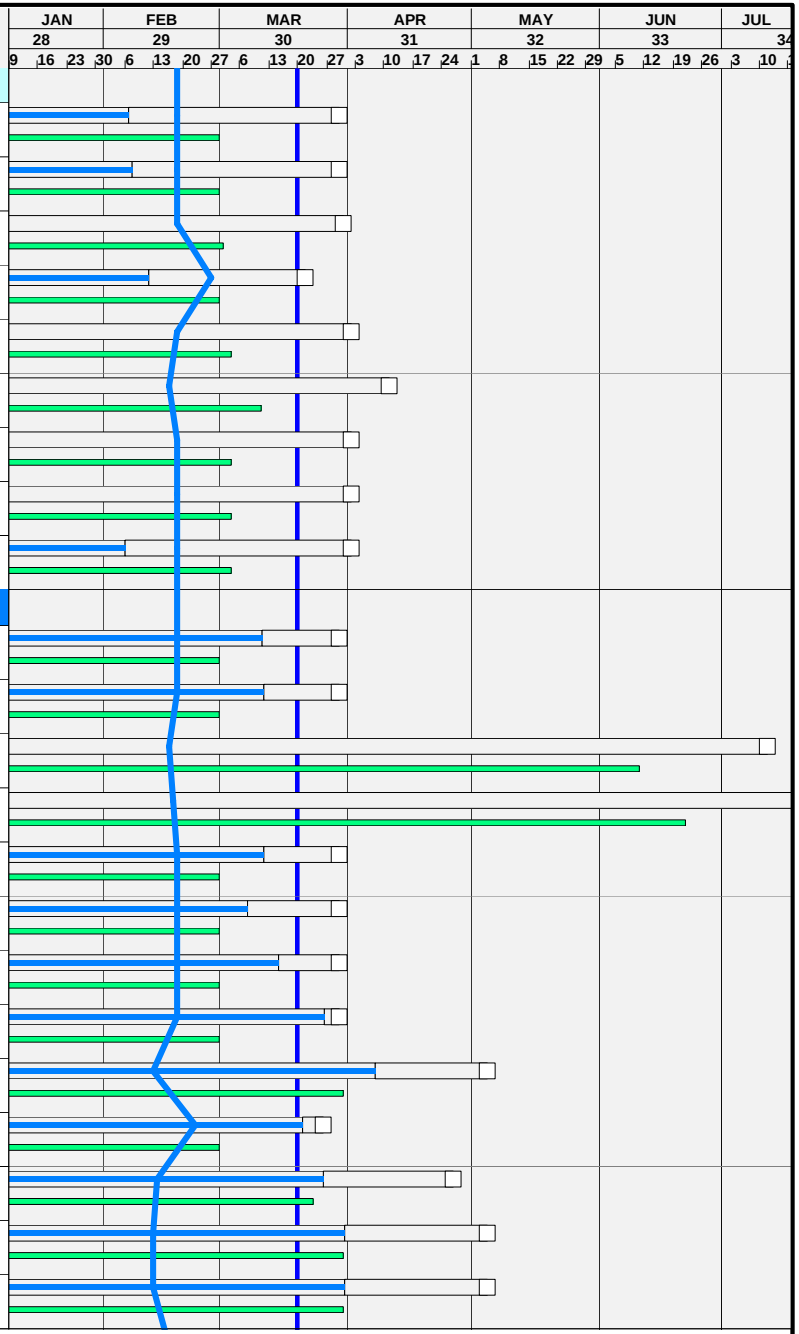
E&M EQPT.& MATERIAL APPROVALS									
6003	EntSpBldg-App. PD cleans. & flush water sys	18	04NOV04A	29MAR06	90	85	9	439	-25
6742	EntSpBldg-App. MVAC MCC, power & control sys	18	12NOV04A	29MAR06	90	50	9	439	-25
7615	EntSpBldg-App. HV/LV main & submain cable sys	18	07DEC04A	30MAR06	80	80	10	436	-25
6750	EntSpBldg-App. MVAC / TVF pneumatic sys	18	07MAR05A	21MAR06	90	90	2	442	-18
1939	SP.Bldg. - Approve louvre details	24	07APR05A	01APR06	50	50	12	424	-25
6004	EntSpBldg-App. PD irrig. sys	18	05MAY05A	10APR06	30	30	18	419	-25
1919	SP.Bldg. - Approve door & window details	24	07MAY05A	01APR06	50	50	12	454	-25
1947	SP.Bldg. - Approve slate cladding design	24	15JUN05A	01APR06	50	50	12	424	-25
1943	SP.Bldg. - Approve aluminium cladding	24	13DEC05A	01APR06	50	50	12	424	-25
PROCUREMENT - MATERIAL									
6008	EntSpBldg-Proc & Manuf. LV power dist. equip't	180	21MAR05A	29MAR06	95	95	9	447	-25
6007	EntSpBldg-Proc. & Manuf. of HV dist. equip't	180	29MAR05A	29MAR06	95	95	9	439	-25
6079	EntSpBldg-Proc & Manuf. FS AFA & FM200 sys	120	29MAR05A	11JUL06	40	40	90	358	-25
6193	EntSpBldg-Proc. & Manuf. of CMCS & ELV sys	180	29MAR05A	21JUL06	45	45	99	349	-25
6743	EntSpBldg-Proc & Manuf. MCC, power & control sys	180	29MAR05A	29MAR06	95	95	9	439	-25
6012	EntSpBldg-Proc & Manuf. FS wet sys	120	06JUN05A	29MAR06	93	93	9	439	-25
6761	EntSpBldg-Proc & Manuf. TVF,Ductwks & Cont'l sys	180	09JUN05A	29MAR06	95	95	9	439	-25
6010	EntSpBldg-Proc & Manuf. Cleans & flush water sys	120	30SEP05A	29MAR06	98	98	2	439	-25
8492	EntSpBldg-Proc & Manf bldg related luminaires	180	23NOV05A	04MAY06	83	83	30	443	-25
6751	EntSpBldg-Proc & Manuf. MVAC / TVF pneumatic sys	120	16DEC05A	25MAR06	95	95	6	442	-22
6011	EntSpBldg-Proc & Manuf. PD irrig. sys	120	17DEC05A	26APR06	76	76	29	419	-25
6009	EntSpBldg-Proc & Manuf. MVAC mech.vent. sys	120	06JAN06A	04MAY06	71	71	35	443	-25
6035	EntSpBldg-Proc & Manuf. MVAC Package AC Units	120	06JAN06A	04MAY06	71	71	35	443	-25



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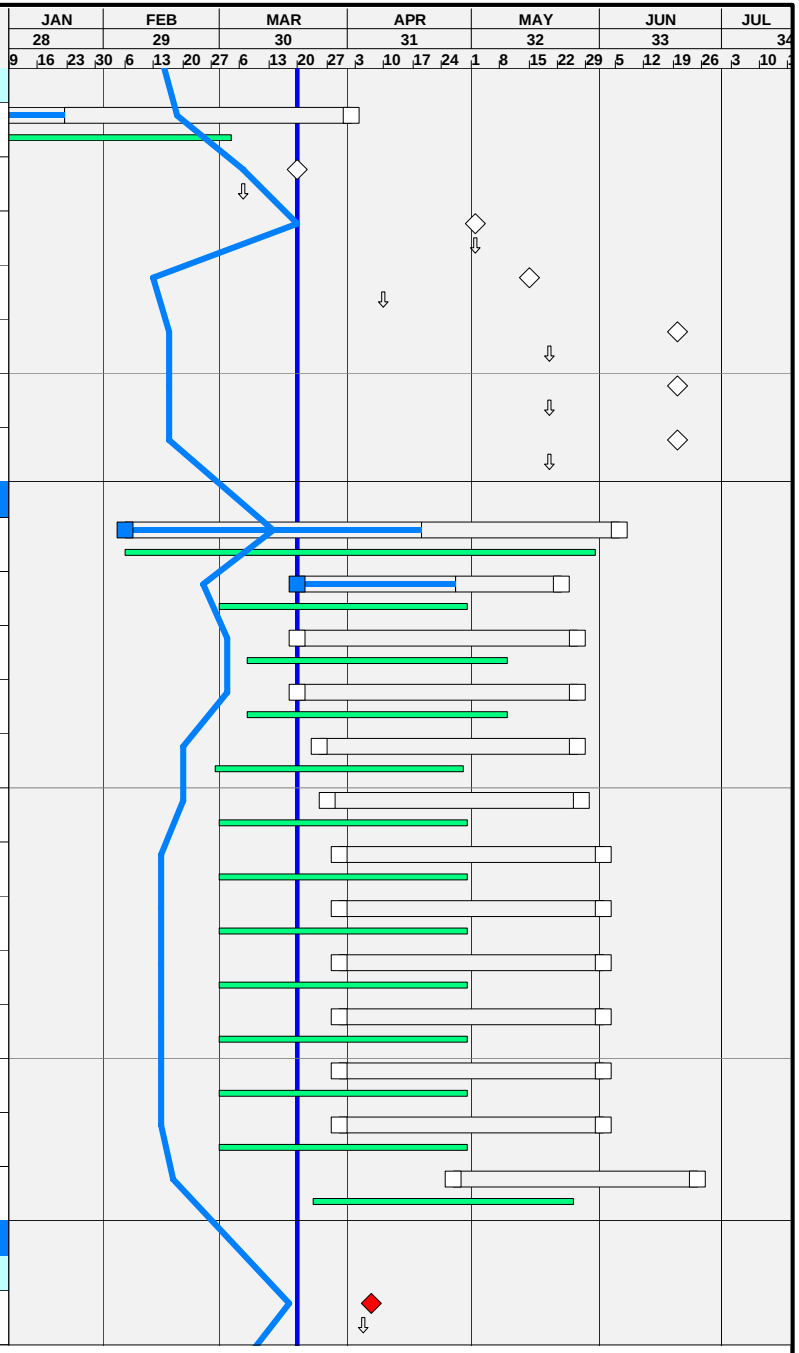
ABWF WORKS									
1951	SP.Bldg. - Procure aluminium cladding	180	19APR05A	01APR06	80	80	12	424	-25
2030	SP.Bldg. - Initial deliver balust & metal works	0	20MAR06		0	0	0	496	-11
2018	SP.Bldg. - Initial deliver fall arrest system	0	02MAY06		0	0	0	464	0
1977	SP.Bldg. - Initial deliver doors & windows	0	15MAY06		0	0	0	454	-25
2017	SP.Bldg. - Initial delivery louvres	0	20JUN06		0	0	0	424	-25
2019	SP.Bldg. - Initial deliver slate cladding	0	20JUN06		0	0	0	424	-25
2029	SP.Bldg. - Initial deliver aluminium cladding	0	20JUN06		0	0	0	424	-25
MAJOR EQUIPMENT DELIVERY									
7617	EntSpBldg-Del. HV/LV main & submain cable	48	06FEB06A	05JUN06	60	0	50	436	-4
6037	EntSpBldg-Del. LV power dist. equip't to 3/F	48	20MAR06A	22MAY06	60	0	40	447	-17
6050	EntSpBldg-Del. building vent. fans	48	20MAR06	26MAY06	0	0	48	443	-15
6133	EntSpBldg-Del. Package AC Units	48	20MAR06	26MAY06	0	0	48	443	-15
8493	EntSpBldg-Del. building related luminaires	48	25MAR06	26MAY06	0	0	48	443	-22
6752	EntSpBldg-Del. MVAC /TVF pneumatic sys to 1/F	48	27MAR06	27MAY06	0	0	48	442	-22
6032	EntSpBldg-Del. HV power dist. equip't to 2/F	48	30MAR06	01JUN06	0	0	48	439	-25
6033	EntSpBldg-Del. PD pump & tank to G/F	48	30MAR06	01JUN06	0	0	48	439	-25
6038	EntSpBldg-Del. FS pumps & tank to G/F	48	30MAR06	01JUN06	0	0	48	439	-25
6744	EntSpBldg-Del. MVAC MCC, & control sys to 3/F	48	30MAR06	01JUN06	0	0	48	439	-25
6762	EntSpBldg-Del. TVS to Plenum & 3/F	48	30MAR06	01JUN06	0	0	48	439	-25
6778	EntSpBldg-Del. ENT Tunnel (Hyd/HR) pumps to G/F	48	30MAR06	01JUN06	0	0	48	439	-25
6034	EntSpBldg-Del. PD irrig. pump & tank to G/F	48	27APR06	24JUN06	0	0	48	419	-25
CONSTRUCTION									
SP Building TCSS Access									
T2620	NB carriageway OHVD slab TCSS initial access	0		06APR06	0	0	0	-2	-2



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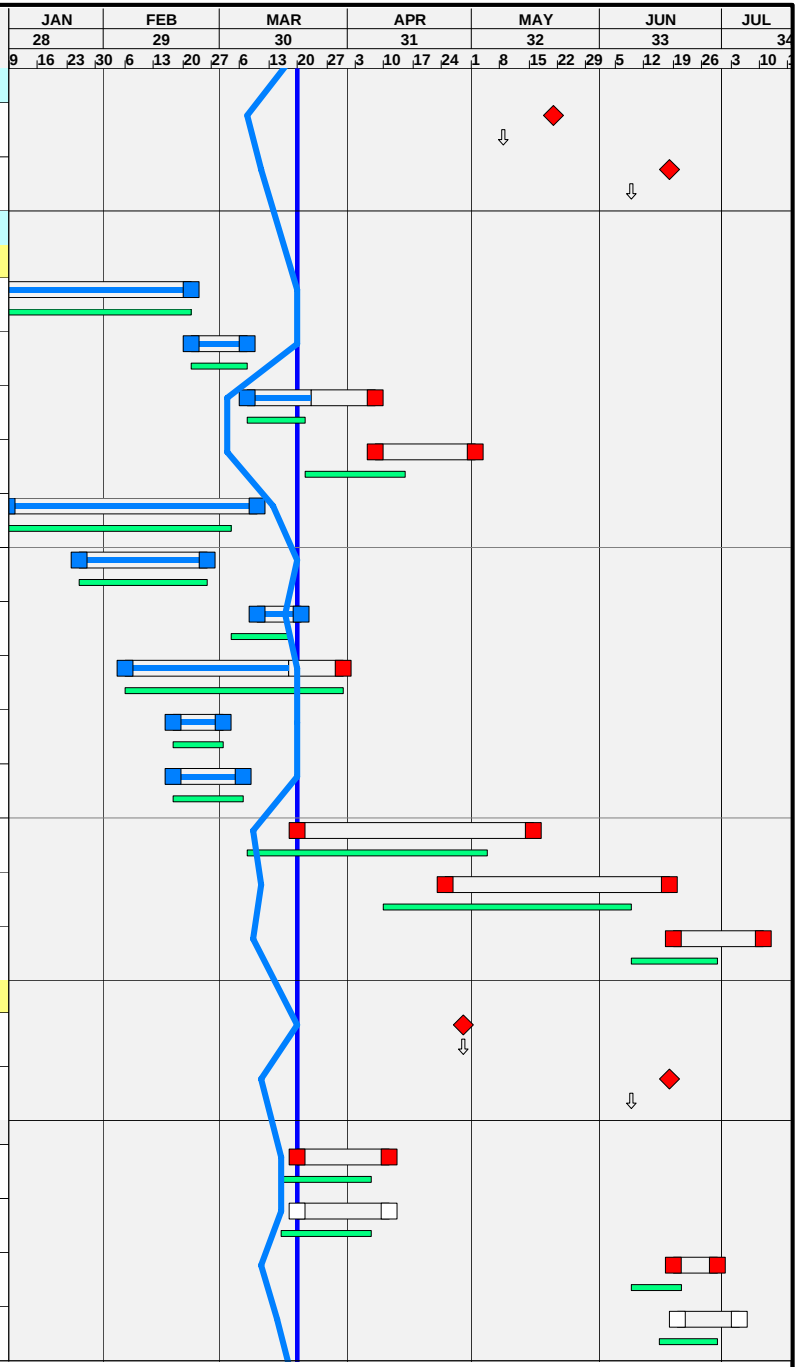
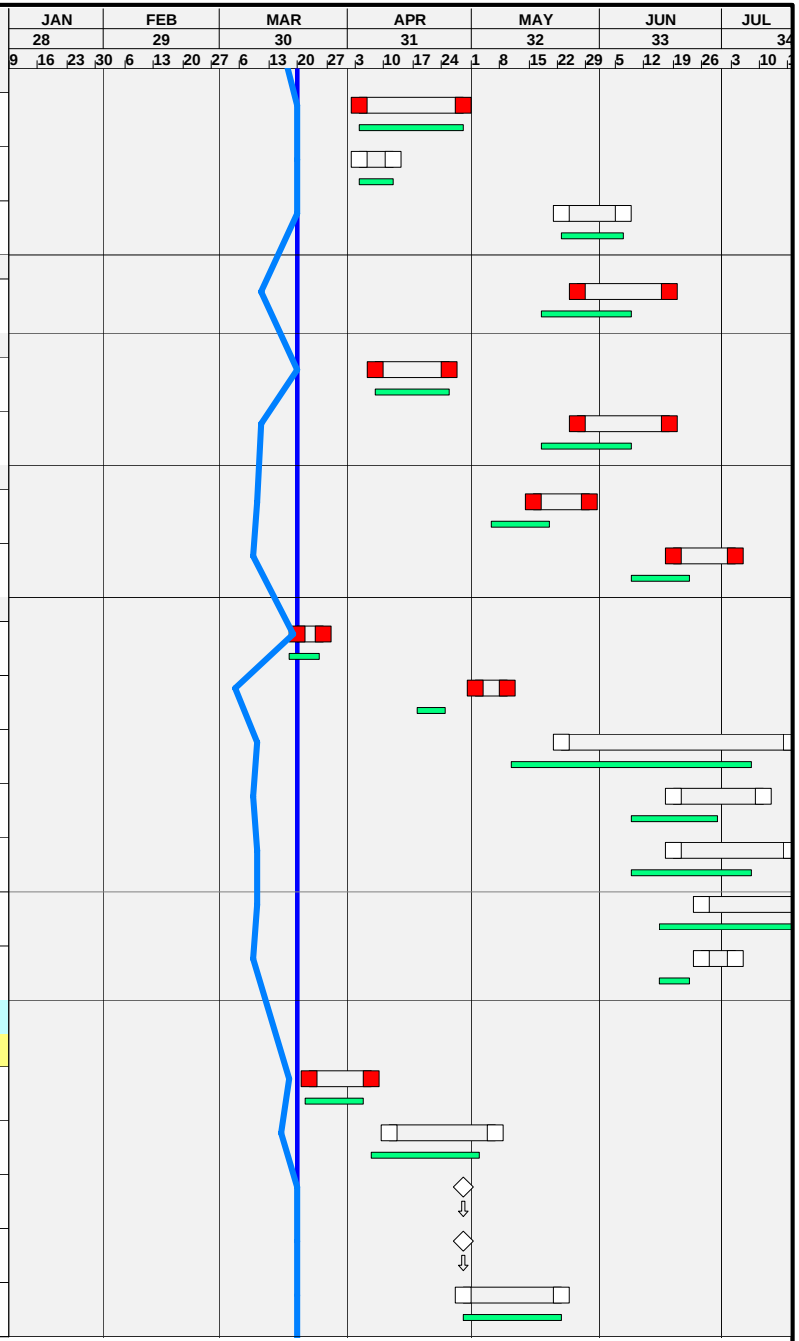
SP Building TCSS Access									
T2640	SB carriageway OHVD slab TCSS initial access	0		20MAY06	0	0	0	-26	-12
T2720	SP Bldg - TCSS Access Entire Structure	0		17JUN06	0	0	0	-44	-8
CIVIL & ABWF WORKS									
RC Superstructure									
T2520	SP Bldg SB carriageway transfer slab +80	34	30DEC05A	21FEB06A	100	91	0		0
T2560	SP Bldg SB carriageway transfer slab - curing	14	22FEB06A	07MAR06A	100	0	0		0
T2500	SB carriageway OHVD slab +74	12	08MAR06A	07APR06	50	0	16	-26	-14
T2570	SB carriageway OHVD slab +74 cure/strike	24	08APR06	01MAY06	0	0	24	-31	-17
T2490	SP Bldg NB carriageway OHVD slab + 74	15	08JAN06A	09MAR06A	100	70	0		-5
T2550	SP Bldg NB carriageway transfer slab - curing	14	26JAN06A	25FEB06A	100	43	0		0
T2590	NB carriageway OHVD slab +74 - cure/strike	14	10MAR06A	20MAR06A	100	0	0		-3
T2420	2nd Flr Walls & Cols & 3rd Flr Slab (+87.4mPD)	44	06FEB06A	30MAR06	75	25	10	-72	0
T2470	NP Bldg Upper 2nd Flr Slab (+81.2mPD)	10	18FEB06A	01MAR06A	100	0	0		0
T2810	Damper Slab (Core Transfer Slab) - cure/strike	14	18FEB06A	06MAR06A	100	0	0		0
T2480	3rd Flr Walls & Cols & 4th Flr Slab (+95.3mPD)	43	20MAR06	15MAY06	0	0	43	-72	-8
T2740	4th Flr Walls & Cols & Roof Slab (+102.3mPD)	34	25APR06	17JUN06	0	0	34	-72	-8
T2750	Exhaust Shaft (+111.85mPD)	18	19JUN06	10JUL06	0	0	18	-72	-8
ABWF									
T2370	Below Transf slab- Available for BB deliveries	0		28APR06	0	0	0	-53	0
T2380	Above Transf slab - Available for BB delivery	0		17JUN06	0	0	0	-60	-8
SB Bldg - Internal Works GF									
T2650	ABWF Initial finishes & Doors to CLP Rm & GF	18	20MAR06	10APR06	0	0	18	-40	-3
T3290	CLP Rm, Scrd, Tile, Paint and Doors	18	20MAR06	10APR06	0	0	18	22	-3
T3300	Complete Works to HV & LV Cable Risers	10	19JUN06	29JUN06	0	0	10	-53	-8
T2760	GF - Paint touch up & Doors	12	20JUN06	04JUL06	0	0	12	121	-3



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
SP Bldg - Internal Works 1F & LP									
T2670	ABWF Initial finishes LP & 1F	18	04APR06	28APR06	0	0	18	-53	0
T3310	110V DC Battery Rm	6	04APR06	11APR06	0	0	6	46	0
T2770	1F & LP - Paint touch up & Doors	12	23MAY06	06JUN06	0	0	12	144	0
SP Bldg - Internal Works 2F									
T2660	ABWF Initial finishes 2F	18	27MAY06	17JUN06	0	0	18	-62	-8
SP Bldg - Internal Works 3/F									
T3160	Installation of Crane beam to underside of 3FL	12	08APR06	25APR06	0	0	12	1	0
T2680	ABWF Initial finishes 3F	18	27MAY06	17JUN06	0	0	18	-72	-8
SP Bldg - Internal Works 4F & Above									
T3170	Installation of Crane beam to underside of 4FL	12	16MAY06	29MAY06	0	0	12	-26	-8
T3150	Intallation of Crane beam to underside of 5FL	12	19JUN06	03JUL06	0	0	12	-42	-8
Roof & External Facade									
T2600	NB carriageway OHVD slab + 74 - finishes	6	20MAR06	25MAR06	0	0	6	-1	-1
T2580	SB carriageway OHVD slab +74 finishes	6	02MAY06	09MAY06	0	0	6	-21	-11
T2390	Install Expanded metal cladding	36	23MAY06	17JUL06	0	0	36	110	-8
T2540	Install Slate Cladding above NB Carriageway	18	19JUN06	10JUL06	0	0	18	98	-8
T2820	Waterproofing - External Walls	24	19JUN06	17JUL06	0	0	24	50	-8
T2410	Painting	42	26JUN06	14AUG06	0	0	42	86	-8
T2530	Roofing Works	6	26JUN06	03JUL06	0	0	6	104	-8
E&M - GENERAL									
ELECTRICAL WORKS									
T2610	NB carriageway OHVD slab + 74 - BB 1st fix	12	23MAR06	06APR06	0	0	12	-1	-1
EM1290	BB Work to CLP Room	18	11APR06	06MAY06	0	0	18	22	-3
EM1020	E&M Access to 1/F	0	29APR06*		0	0	0	144	0
EM1280	E&M Access to G/F	0	29APR06		0	0	0	144	0
EM1300	Installation of FS Pumps and Pipework at GF	18	29APR06	22MAY06	0	0	18	144	0



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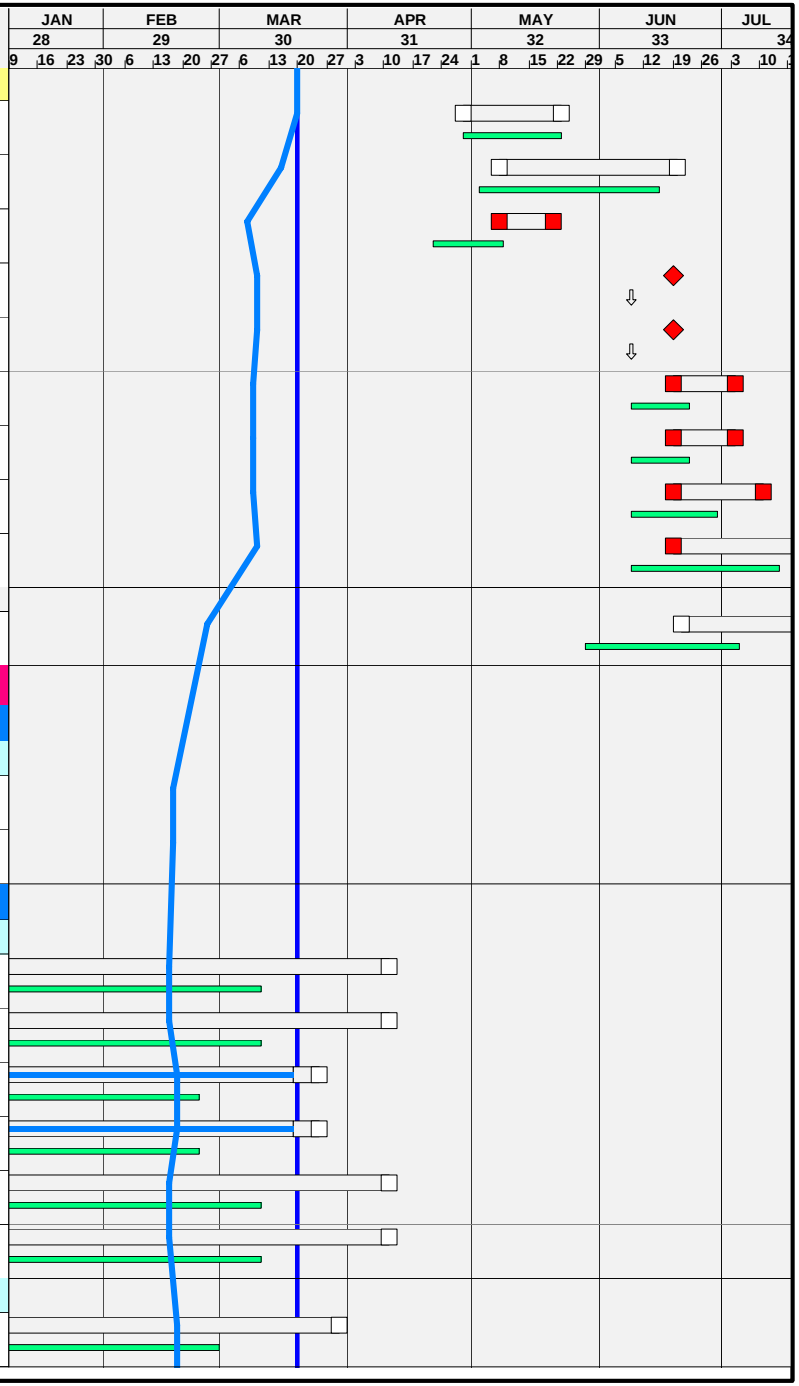
ELECTRICAL WORKS									
EM1310	Installation of Compressor	18	29APR06	22MAY06	0	0	18	144	0
T2310	CLP work in CLP room	36	08MAY06	19JUN06	0	0	36	22	-3
T2630	SB Carriageway OHVD slab +74 BB 1st Fix	12	08MAY06	20MAY06	0	0	12	-21	-11
EM1000	E&M access to 3/F	0	19JUN06*		0	0	0	-72	-8
EM1010	E&M access to 2/F	0	19JUN06*		0	0	0	-62	-8
EM1030	BS Works for HV Sw + Tx	12	19JUN06	03JUL06	0	0	12	-48	-8
EM1060	BS Works for LV Sw, MCC, UPS, LCC	12	19JUN06	03JUL06	0	0	12	-49	-8
EM1110	BS Works for Genset	18	19JUN06	10JUL06	0	0	18	-24	-8
EM1175	BS Works for TVS Plenums	30	19JUN06	24JUL06	0	0	30	-62	-8
Statutory Inspections & Certs									
EM1320	Submit Form WWO46 for Water Supply to WSD	30	21JUN06	26JUL06	0	0	30	62	-19
EAGLES NEST TUNNEL									
Contract defined dates, stages & sections									
Area access & vacation dates									
ACS_F1	Access to Portions - F1 (U/Gnd Sth Portal)	0	20OCT03A		100	100	0		-30
ACS_F2	Access to Portions - F2 (U/Gnd Sth Tunnel)	0	20OCT03A		100	100	0		-30
Submittals & Approvals									
E&M Equip't / Mat'l Detail Submittal									
8217	EntRtNb-Sub.TVS control sys	54	02JUL04A	10APR06	67	67	18	351	-25
8220	EntRtSb&VA-Sub.TVS control sys	54	02JUL04A	10APR06	67	67	18	351	-25
8215	EntRtNb-Sub.FS AFA & Linear sys	54	05JUL04A	24MAR06	99	99	5	364	-25
8219	EntRtSb&VA-Sub.FS AFA & Linear sys	54	05JUL04A	24MAR06	99	99	5	364	-25
8213	EntRtNb-Sub.CMCS & ELV sys	78	26AUG04A	10APR06	77	77	18	351	-25
8221	EntRtSb&VA-Sub.CMCS & ELV sys	78	26AUG04A	10APR06	77	77	18	351	-25
E&M Equip't/Mat'l Approval by Engineer									
6808	EntRtSb&VA-App. Tunnel Lgt sys	18	05AUG04A	29MAR06	50	50	9	439	-25



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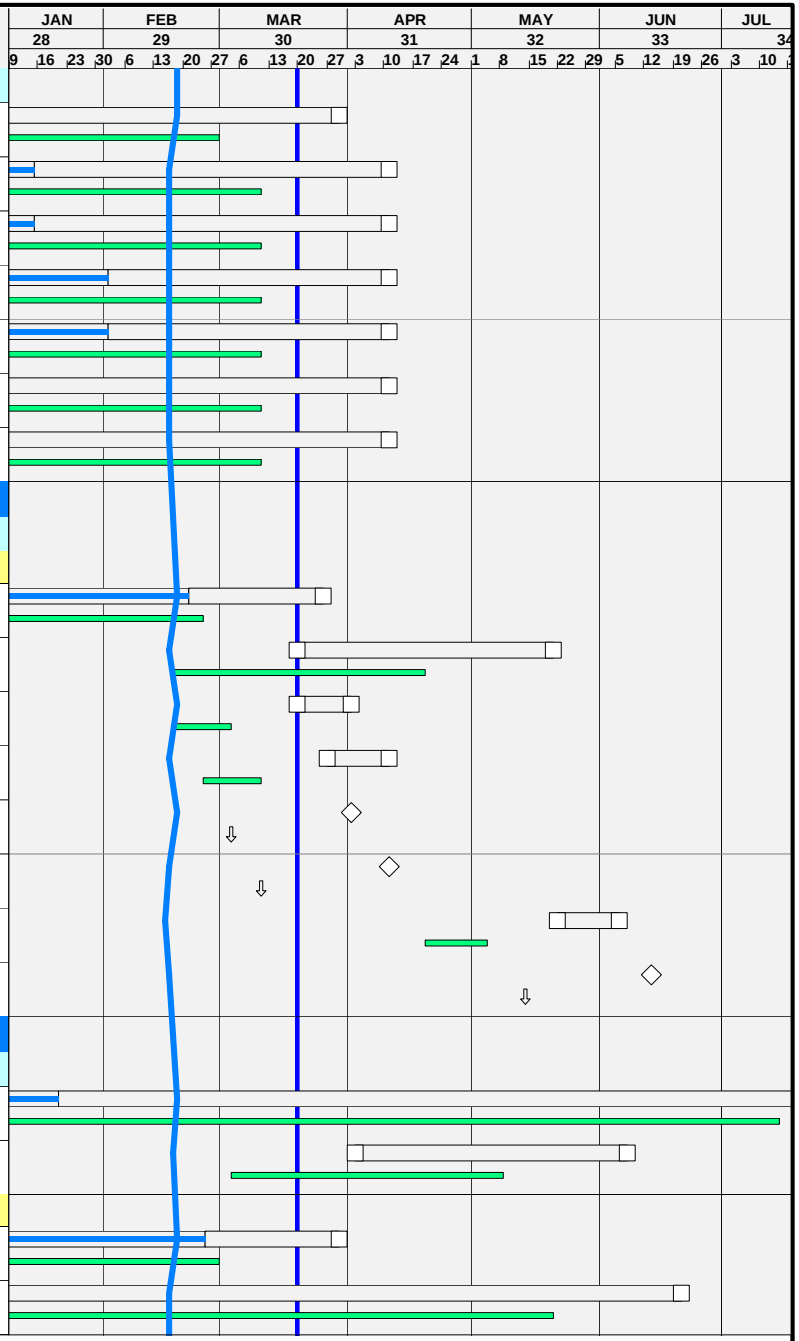
E&M Equip't/Mat'l Approval by Engineer									
6878	EntRtNb-App. Tunnel Lgt sys	18	05AUG04A	29MAR06	50	50	9	439	-25
6785	EntRtSb&VA-App. FS AFA & Linear sys	18	14SEP04A	10APR06	85	85	18	364	-25
6880	EntRtNb-App. FS AFA & Linear sys	18	14SEP04A	10APR06	85	85	18	364	-25
6798	EntRtSb&VA-App. CMCS & ELV sys	18	20SEP04A	10APR06	88	88	18	351	-25
6877	EntRtNb-App. CMCS & ELV sys	18	20SEP04A	10APR06	88	88	18	351	-25
6795	EntRtSb&VA-App. TVS control sys	18	12NOV04A	10APR06	70	70	18	351	-25
6884	EntRtNb-App. TVS control sys	18	12NOV04A	10APR06	70	70	18	351	-25
Design & Engineering - Temporary Works									
Permanent Works									
Tunnel									
1657	Design/ICE Check Tunnel Clading	24	03JAN06A	25MAR06	60	60	6	378	-25
1662	Design/ICE Check Niche Cabinets	48	20MAR06	20MAY06	0	0	48	429	-25
1668	Eng Approve Dsg X-passage/Adit Fire Doors	12	20MAR06	01APR06	0	0	12	434	-25
1659	Eng Approve Dsg Tunnel Clading	12	27MAR06	10APR06	0	0	12	378	-25
1669	Issue Constr Dwgs X-passage/Adit Fire Doors	0		01APR06	0	0	0	434	-25
1658	Issue Constr Dwgs Tunnel Clading	0		10APR06	0	0	0	378	-25
1663	Eng Approve Dsg Niche Cabinets	12	22MAY06	05JUN06	0	0	12	429	-25
1664	Issue Constr Dwgs Niche Cabinets	0		13JUN06	0	0	0	429	-25
Procurement - Material									
Tunnelling Project Wide									
1660	Order/Manufact/Del Tunnel Cladding	200	29DEC05A	12AUG06	10	10	40	378	-25
1685	Order/Manufact/Del Fire Doors	50	03APR06	07JUN06	0	0	50	434	-25
NB Tunnel									
6881	EntRtNb-Proc & Manuf. Tunnel Lgt sys	120	20JAN05A	29MAR06	93	93	9	439	-25
6879	EntRtNb-Proc & Manuf. CMCS & ELV sys	180	29MAR05A	20JUN06	59	59	73	351	-25



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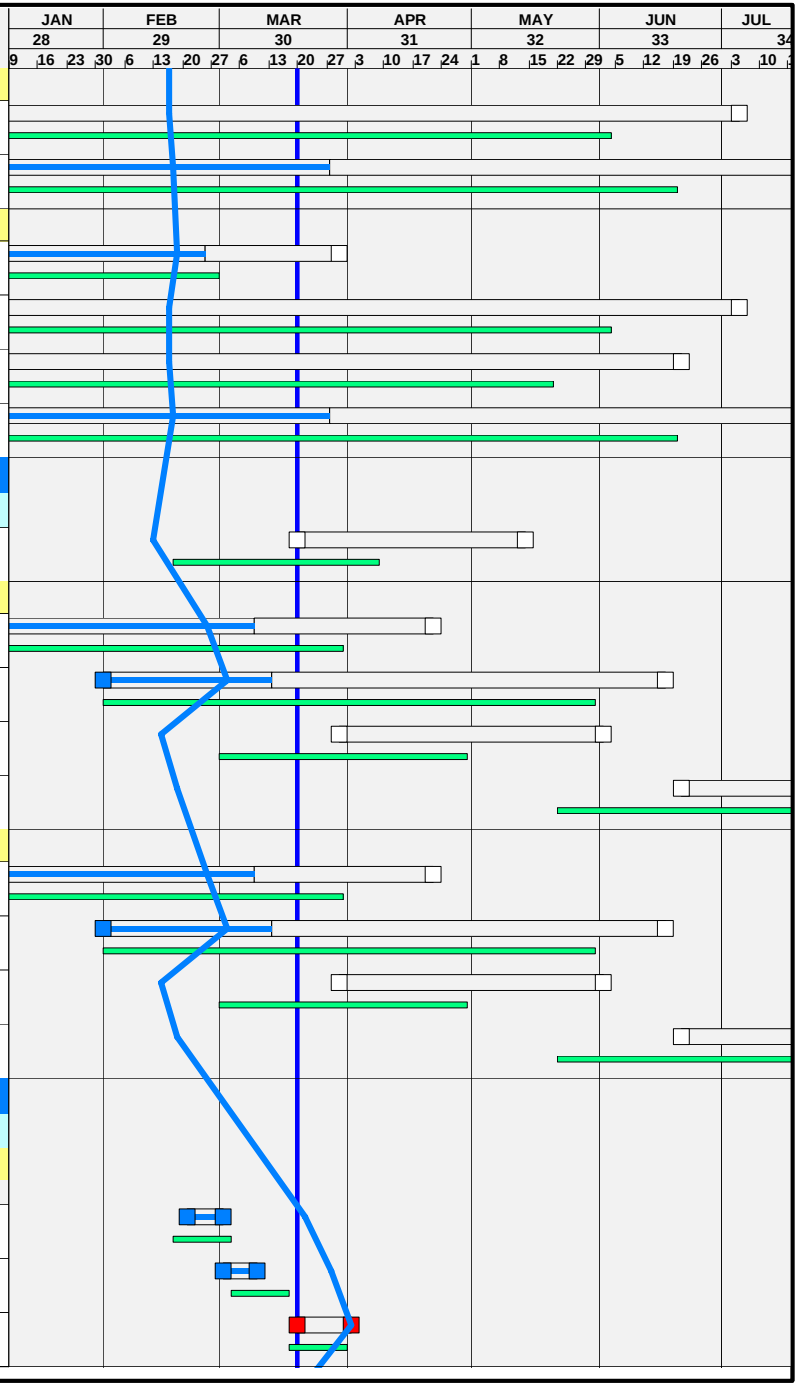
NB Tunnel									
6883	EntRtNb-Proc & Manuf. FS AFA & Linear sys	180	29MAR05A	04JUL06	53	53	84	364	-25
6887	EntRtNb-Proc & Manuf. TVS control sys	180	01NOV05A	19JUL06	56	56	79	351	-25
SB Tunnel									
6809	EntRtSb&VA-Proc & Manuf. Tunnel Lgt sys	120	20JAN05A	29MAR06	93	93	9	439	-25
6786	EntRtSb&VA-Proc & Manuf. FS AFA & Linear sys	180	29MAR05A	04JUL06	53	53	84	364	-25
6799	EntRtSb&VA-Proc & Manuf. CMCS & ELV sys	180	29MAR05A	20JUN06	59	59	73	351	-25
6796	EntRtSb&VA-Proc & Manuf. TVS control sys	180	01NOV05A	19JUL06	56	56	79	351	-25
Major Equipemnt Delivery									
Tunnelling Project Wide									
2027	T/W Procure Pipe Roof SubCon for N.Portal works	42	20MAR06	13MAY06	0	0	42	454	-25
NB Tunnel									
7623	EntRtNb-Del. TVS in Tunnel	72	28NOV05A	21APR06	70	51	25	471	-15
6890	EntRtNb-Del. LV main & submain dist. sys	96	01FEB06A	16JUN06	30	16	70	426	-14
6889	EntRtNb-Del. Tunnel Lgt	48	30MAR06	01JUN06	0	0	48	439	-25
6886	EntRtNb-Del. CMCS & ELV sys	72	21JUN06	13SEP06	0	0	72	351	-25
SB Tunnel									
7620	EntRtSb&VA-Del. TVS in Tunnel	72	28NOV05A	21APR06	70	51	25	471	-15
6804	EntRtSb&VA-Del. LV main & submain dist. sys	96	01FEB06A	16JUN06	30	16	70	426	-14
6810	EntRtSb&VA-Del. Tunnel Lgt	48	30MAR06	01JUN06	0	0	48	439	-25
6801	EntRtSb&VA-Del. CMCS & ELV sys	72	21JUN06	13SEP06	0	0	72	351	-25
Construction Works									
ENT NORTH PORTAL - ADVANCED WORKS									
Tunnel Lining									
South Portal									
103321	Demobilise lining form NB (from SP) at VA/CP7	12	21FEB06A	01MAR06A	100	0	0		2
103736	Demobilise lining form SB (from NP) at VA/CP7	12	02MAR06A	09MAR06A	100	0	0		7
103735	Demobilise lining form SB (from SP) at VA/CP7	12	20MAR06	18MAR06	0	0	0	-1	11



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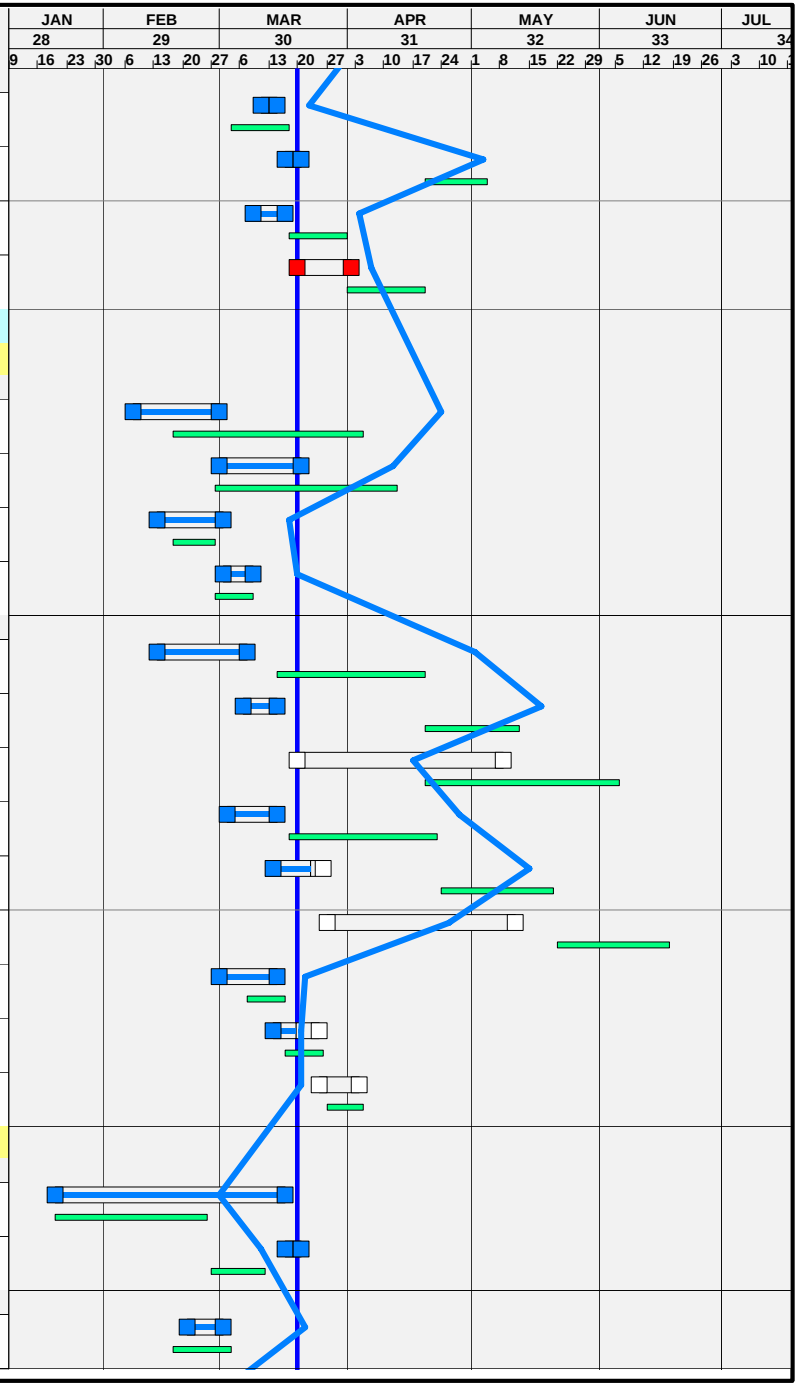
South Portal									
103323	Demobilise OHVD form NB (from SP) at VA/CP7	12	11MAR06A	14MAR06A	100	0	0		3
103322	Demobilise OHVD form NB (from NP) at VA/CP7	12	17MAR06A	20MAR06A	100	0	0		34
103739	Demobilise OHVD form SB (from NP) at VA/CP7	12	09MAR06A	16MAR06A	100	0	0		13
103738	Demobilise OHVD form SB (from SP) at VA/CP7	12	20MAR06	01APR06	0	0	12	-1	11
Tunnel Drive North Bound									
Tunnel Invert									
Works progressed from North Portal									
103188	NB exc.grnd/foul water drain trough Ch1980->1862	39	08FEB06A	28FEB06A	100	0	0		30
103198	NB Invert Cleaning (fr. NP Ch1980->1862)	20	01MAR06A	20MAR06A	100	0	0		19
5588	NB Invert Drainage fr NP CP10->CP9	8	14FEB06A	01MAR06A	100	0	0		-2
5589	NB Invert Drainage fr NP CP9->CP8	0	02MAR06A	08MAR06A	100	0	0		0
Works progressed from South Portal									
103212	NB exc.grnd/foul water drain trough Ch1407->1553	27	14FEB06A	07MAR06A	100	0	0		33
103213	NB exc.grnd/foul water drain trough Ch1553->1653	18	07MAR06A	14MAR06A	100	0	0		45
103214	NB exc.grnd/foul water drain trough Ch1653->1862	37	20MAR06	08MAY06	0	0	37	33	23
103218	NB Invert Cleaning Ch1407->1553	24	03MAR06A	14MAR06A	100	0	0		30
103219	NB Invert Cleaning Ch1553->1653	22	14MAR06A	25MAR06	75	0	6	44	42
103220	NB Invert Cleaning Ch1653->1862	23	27MAR06	11MAY06	0	0	23	33	31
5592	NB Invert Drainage fr SP CP5->CP6	8	01MAR06A	14MAR06A	100	0	0		2
5591	NB Invert Drainage fr SP CP6->CP7	8	14MAR06A	24MAR06	50	0	2	54	1
5590	NB Invert Drainage fr SP CP7->CP8	8	25MAR06	03APR06	0	0	8	60	1
Tunnel Lining									
Works progressed from North Portal									
3253	NB NP OHVD 157m Tch.1+830 to 1+673 (VA)	26	20JAN06A	16MAR06A	100	75	0		-16
3322	Demobilise OHVD form NB from NP	12	17MAR06A	20MAR06A	100	0	0		-7
Works progressed from South Portal									
3321	Demobilise lining form NB from SP	12	21FEB06A	01MAR06A	100	0	0		2



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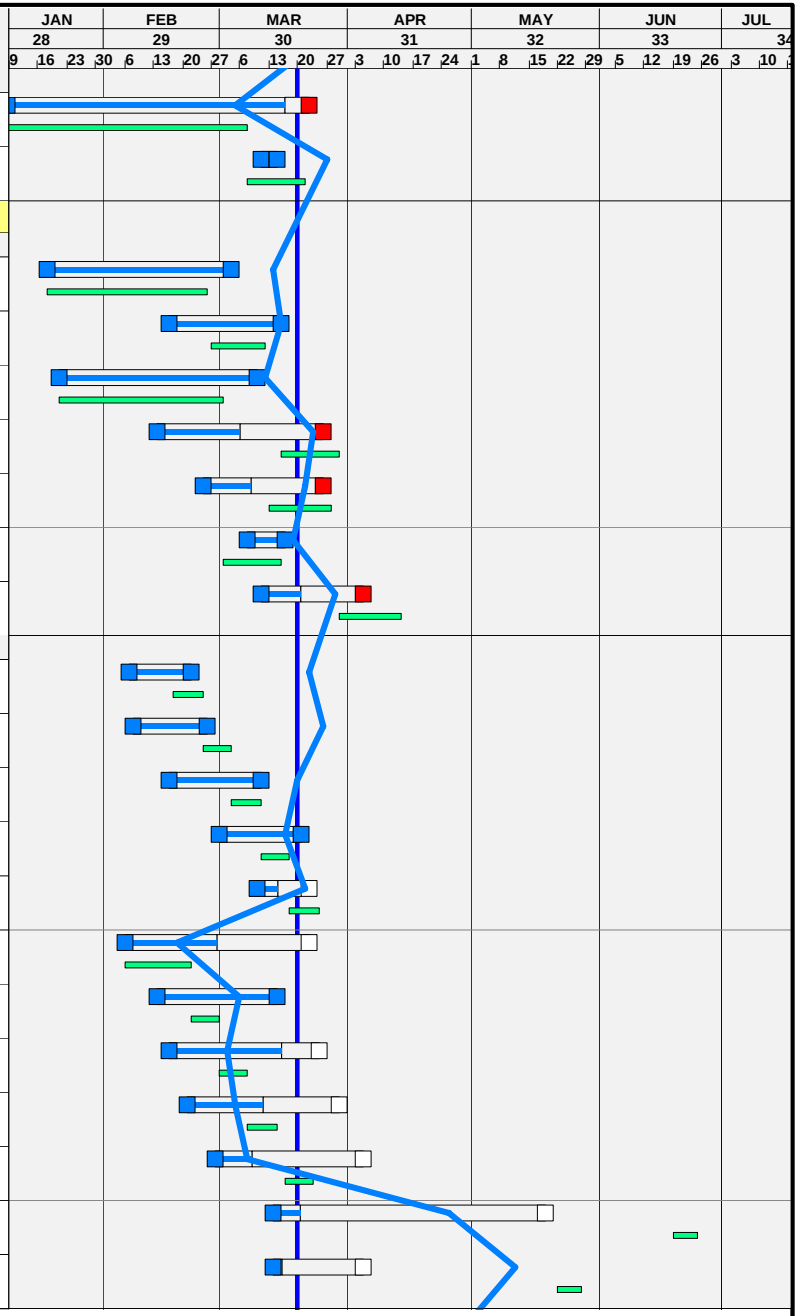
Works progressed from South Portal									
3317	NB NP OHVD 160m Tch.1+513 to 1+673 (VA)	26	08JAN06A	22MAR06	92	75	3	-64	-13
3323	Demobilise OHVD form NB from SP	12	11MAR06A	14MAR06A	100	0	0		6
Tunnel Finishing Works									
TCSS, FS & Works Within Trough									
3533	NB Cable/Svc trough 170m Ch.2130 to 2000 fr.NP	13	18JAN06A	03MAR06A	100	50	0		-5
3534	NB Cable/Svc trough 150m Ch.1980 to 1830 fr.NP	12	17FEB06A	15MAR06A	100	0	0		-3
3537	NB Cable/Svc trough 150m Ch.1063 to 1213 fr.SP	12	21JAN06A	09MAR06A	100	15	0		-7
3539	NB Cable/Svc trough 150m Ch.1363 to 1513 fr.SP	12	14FEB06A	25MAR06	50	0	6	-8	3
3535	NB Cable/Svc trough 175m Ch.1830 to 1673 fr.NP	13	25FEB06A	25MAR06	40	0	6	0	1
3538	NB Cable/Svc trough 150m Ch.1213 to 1363 fr.SP	12	08MAR06A	16MAR06A	100	0	0		-1
3540	NB Cable/Svc trough 160m Ch.1513 to 1673 fr.SP	12	11MAR06A	04APR06	39	0	8	-8	7
Sub-base & Concrete Pavement									
5563	NB Sub-base & conc pavement fr NP CP13->CP12	6	07FEB06A	21FEB06A	100	0	0		3
5564	NB Sub-base & conc pavement fr NP CP12->CP11	6	08FEB06A	25FEB06A	100	0	0		5
5565	NB Sub-base & conc pavement fr NP CP11->CP10	6	17FEB06A	10MAR06A	100	0	0		0
5566	NB Sub-base & conc pavement fr NP CP10->CP9	6	01MAR06A	20MAR06A	100	0	0		-2
5567	NB Sub-base & conc pavement fr NP CP9->CP8	6	10MAR06A	22MAR06	40	0	3	50	2
5573	NB Sub-base & conc pavement fr SP S Portal->CP2	6	06FEB06A	22MAR06	50	50	3	36	-25
5570	NB Sub-base & conc pavement fr SP CP2->CP3	6	14FEB06A	14MAR06A	100	0	0		-12
5574	NB Sub-base & conc pavement fr SP CP3->CP4	6	17FEB06A	24MAR06	75	0	2	36	-15
5572	NB Sub-base & conc pavement fr SP CP4->CP5	6	21FEB06A	29MAR06	50	0	4	36	-13
5571	NB Sub-base & conc pavement fr SP CP5->CP6	6	28FEB06A	04APR06	25	0	5	45	-10
5568	NB Sub-base & conc pavement fr SP CP7->CP8	6	14MAR06A	18MAY06	10	0	6	33	31
5569	NB Sub-base & conc pavement fr SP CP6->CP7	6	14MAR06A	04APR06	10	0	0	45	40



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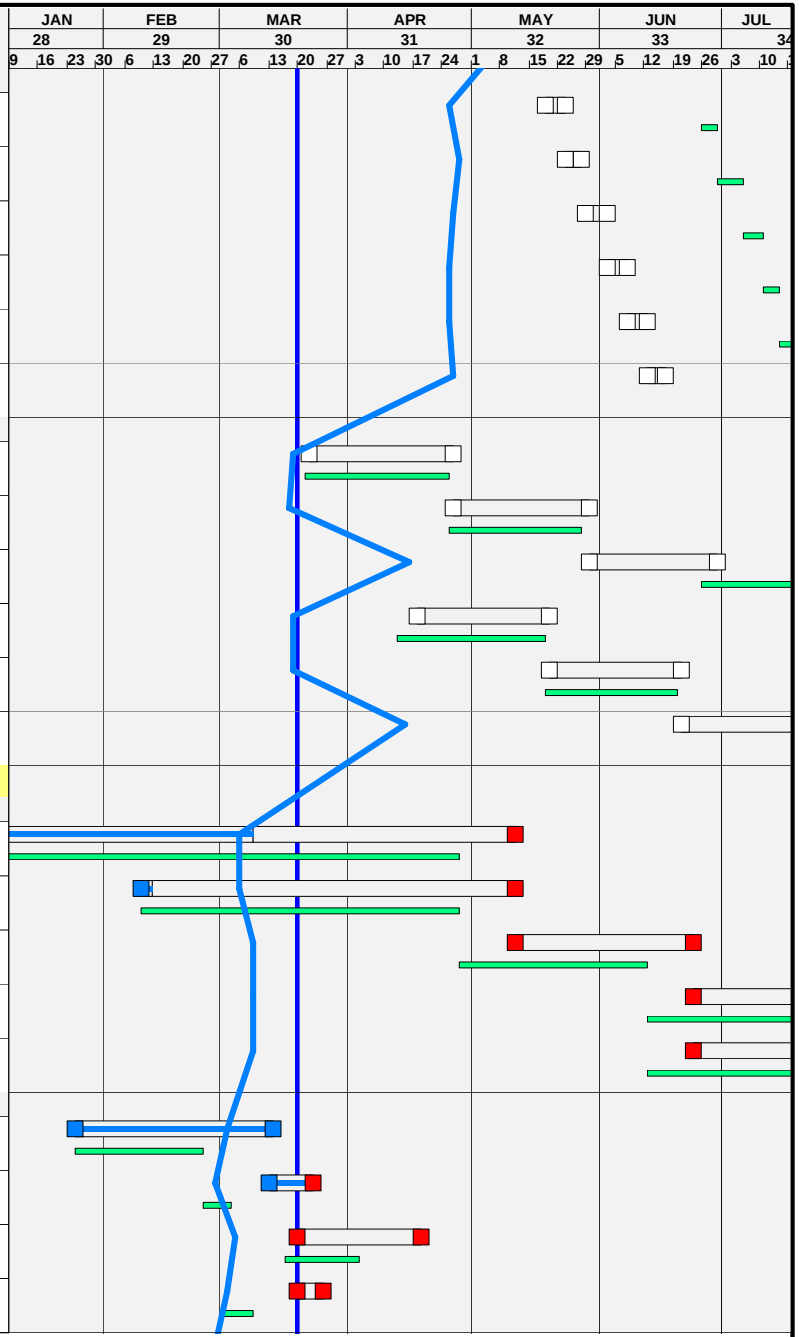
Bituminous Pavement									
3599	NB Base Course - RHS 650m Ch 3030->2380	4	19MAY06	23MAY06	0	0	4	111	31
3600	NB Base Course - RHS 650m Ch 2380->1730	4	24MAY06	27MAY06	0	0	4	111	31
3601	NB Base Course - RHS 650m Ch 1730->1080	4	29MAY06	02JUN06	0	0	4	111	31
3603	NB Base Course - LHS 650m Ch 3030->2380	4	03JUN06	07JUN06	0	0	4	111	31
3604	NB Base Course - LHS 650m Ch 2380->1730	4	08JUN06	12JUN06	0	0	4	111	31
3605	NB Base Course - LHS 650m Ch 1730->1080	4	13JUN06	16JUN06	0	0	4	111	31
VE Panel Installation									
3606	NB - VE Panel Supt Sys RHS @ CH3030-2380 (650m)	26	23MAR06	26APR06	0	0	26	24	-1
3607	NB - VE Panel Supt Sys RHS @ CH2380-1730 (650m)	26	27APR06	29MAY06	0	0	26	24	-1
3608	NB - VE Panel Supt Sys RHS @ CH1730-1080 (650m)	26	30MAY06	29JUN06	0	0	26	24	22
3627	NB - VE Panel Claddings RHS @ CH3030-2380 (650m)	26	18APR06	19MAY06	0	0	26	24	-1
3628	NB - VE Panel Claddings RHS @ CH2380-1730 (650m)	26	20MAY06	20JUN06	0	0	26	24	-1
3629	NB - VE Panel Claddings RHS @ CH1730-1080 (650m)	26	21JUN06	21JUL06	0	0	26	24	22
ENT NB TUNNEL - (E&M) BUILDING SERVICES									
MVAC / Tunnel Ventilation Syst Above OHVD									
277963	Ent NB - Install Motorised Smoke & Fire Dampers	72	04JAN06A	11MAY06	50	24	40	-77	-10
277964	Ent NB - Comp Air Pipes/Condts to E/P16 to E/P21	36	10FEB06A	11MAY06	3	3	36	-77	-10
277965	Ent NB - Comp Air Pipes/Condts to E/P15 to E/P8	36	12MAY06	23JUN06	0	0	36	-77	-10
277966	Ent NB - Comp Air Pipes/ Condts to E/P1to E/P7	36	24JUN06	05AUG06	0	0	36	-65	-10
277967	Ent NB - Cabling, Wiring and Termination	72	24JUN06	16SEP06	0	0	72	-77	-10
Plumbing and Drainage									
277974	Ent NB - 200d W.Main/Brackt @ Ch2450-2280 (170m)	7	25JAN06A	13MAR06A	100	10	0		-14
277975	Ent NB - 200d W.Main/Brackt @ Ch2280-2130 (150m)	6	13MAR06A	23MAR06	84	0	4	-16	-17
277978	Ent NB - 200d W.Main/Brackt @ Ch1830-1673 (157m)	6	20MAR06	18APR06	0	0	6	-10	-9
277979	Ent NB - 200d W.Main/Brackt @ Ch1063-1213 (150m)	6	20MAR06	25MAR06	0	0	6	-18	-15



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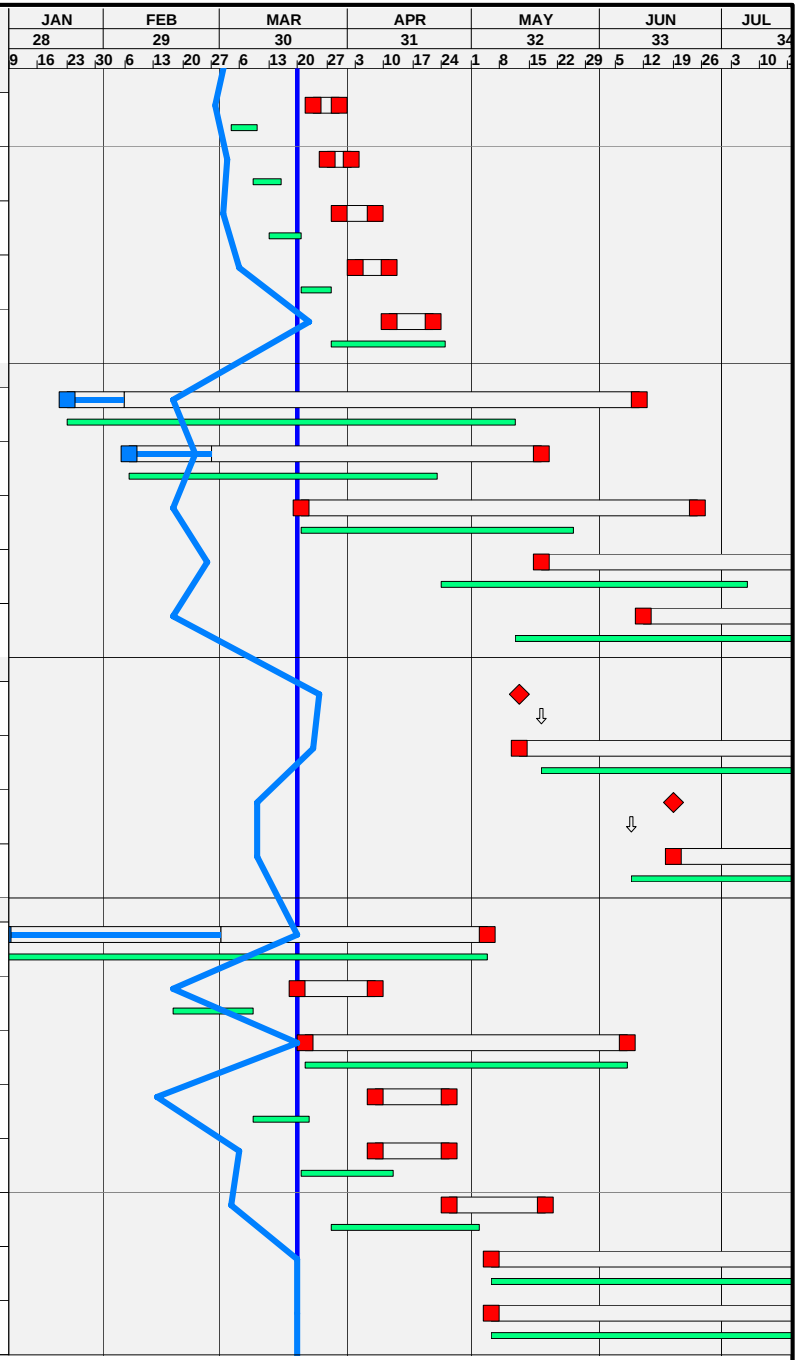
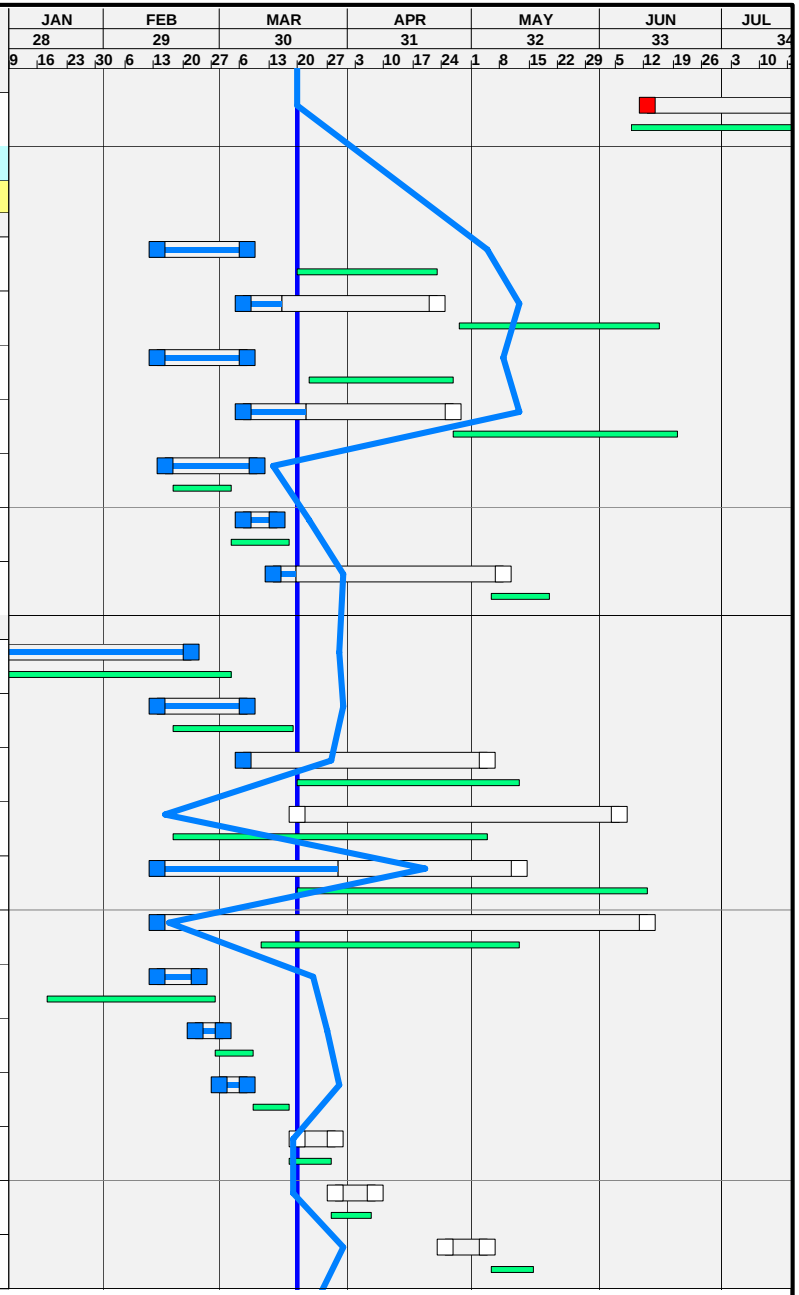
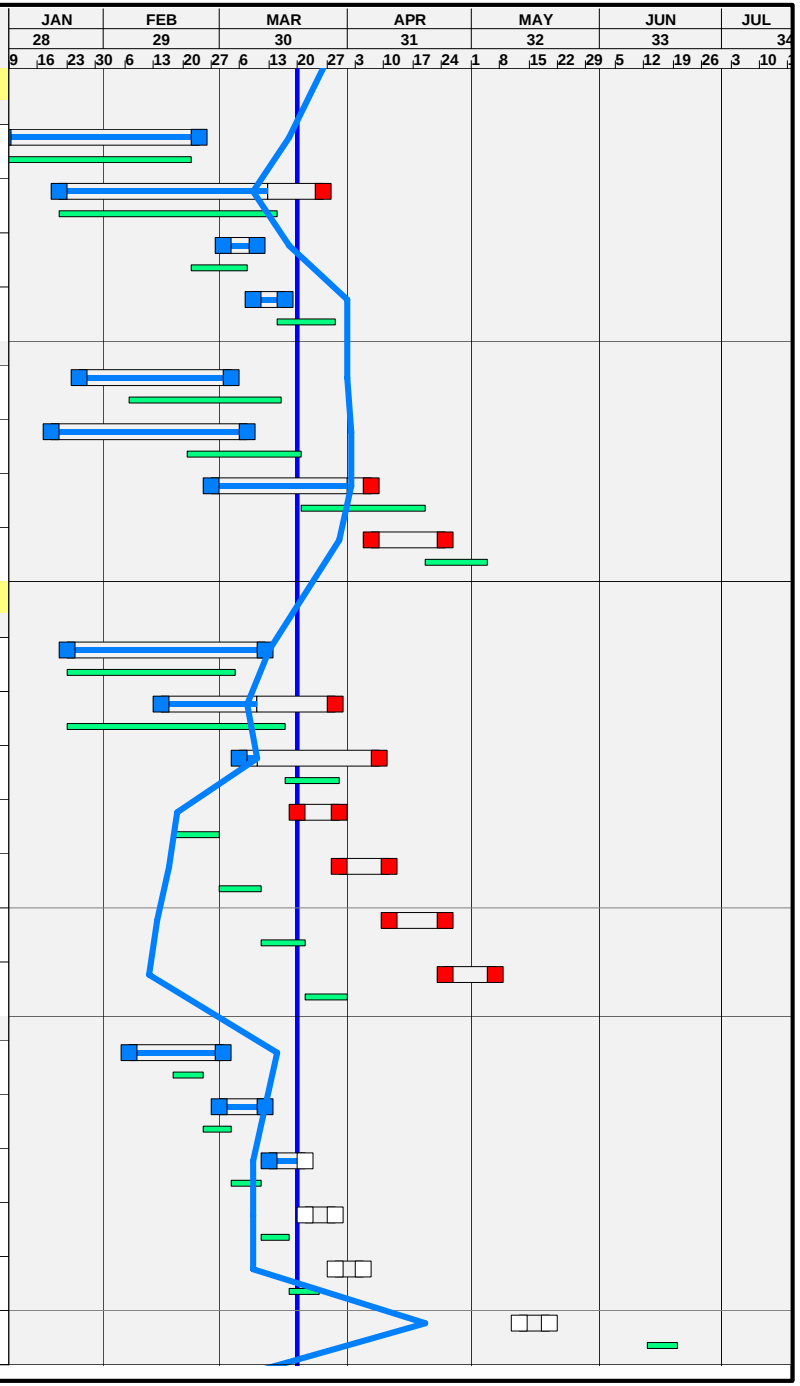
Plumbing and Drainage									
277976	Ent NB - 200d W.Main/Brackt @ Ch2130-2000 (130m)	5	24MAR06	29MAR06	0	0	5	-15	-17
277980	Ent NB - 200d W.Main/Brackt @ Ch1213-1363 (150m)	6	27MAR06	01APR06	0	0	6	-18	-15
277977	Ent NB - 200d W.Main/Brackt @ Ch2000-1830 (170m)	7	30MAR06	07APR06	0	0	7	-10	-15
277981	Ent NB - 200d W.Main/Brackt @ Ch1363-1513 (150m)	6	03APR06	10APR06	0	0	6	-18	-11
277982	Ent NB - 200d W.Main/Brackt @ Ch1513-1673 (160m)	7	11APR06	21APR06	0	0	7	-13	2
Fire Protection System									
277993	Ent NB - 150d FS Main pipeworks / brackets @ G/L	72	23JAN06A	10JUN06	10	10	65	-24	-25
277990	Ent NB - Install FS Conduit @ C/L to AFA Panels	54	07FEB06A	17MAY06	20	5	45	-18	-19
277994	Ent NB - Install Hose Reel Cabinets & Eqpt @ G/L	48	21MAR06	24JUN06	0	0	48	10	-25
277991	Ent NB - Install brckts/ Supt for FS dectn @ C/L	60	18MAY06	28JUL06	0	0	60	-18	-19
277995	Ent NB - 100d FH / HR Pipeworks & Fittings @ G/L	60	12JUN06	21AUG06	0	0	60	-14	-25
Electrical Works Above OHVD									
277998	Ent NB - E&M Access to 3/F UPS Room (NPVB)	0	13MAY06		0	0	0	-48	4
278000	Ent NB - HV & LV Mn/submain Cables to CP21-CP11	72	13MAY06	07AUG06	0	0	72	-48	4
277999	Ent NB - E&M Access to 3/F UPS Room (SPVB)	0	19JUN06		0	0	0	-72	-8
278001	Ent NB - HV & LV Mn/submain Cables to CP01-CP10	72	19JUN06	11SEP06	0	0	72	-72	-8
Electrical Works Below OHVD									
278008	Ent NB - Brkts for Lights,CCTV,Camera,Eqpt @ C/L	96	07JAN06A	04MAY06	45	38	35	-36	0
278004	Ent NB - TCSS Brkt @ C.Trough Ch3030-2450 (580m)	16	20MAR06	07APR06	0	0	16	-28	-25
278009	Ent NB - Conduit Works @ Ceiling Lvl	60	22MAR06	07JUN06	0	0	60	-15	0
278005	Ent NB - TCSS Brkt @ C.Trough Ch2450-2000 (450m)	12	08APR06	25APR06	0	0	12	-28	-25
278007	Ent NB - TCSS Brkt @ C.Trough Ch2000-1673 (327m)	9	08APR06	25APR06	0	0	9	-10	-9
278006	Ent NB - TCSS Brkt @ C.Trough Ch1010-1673 (663m)	18	26APR06	18MAY06	0	0	18	-28	-13
278010	Ent NB - Earthing & Lighting Fixture @ C/Lvl	72	06MAY06	31JUL06	0	0	72	-36	0
278011	Ent NB - Install CCTV, Camera, Equipt @ C/Lvl	72	06MAY06	31JUL06	0	0	72	-36	0



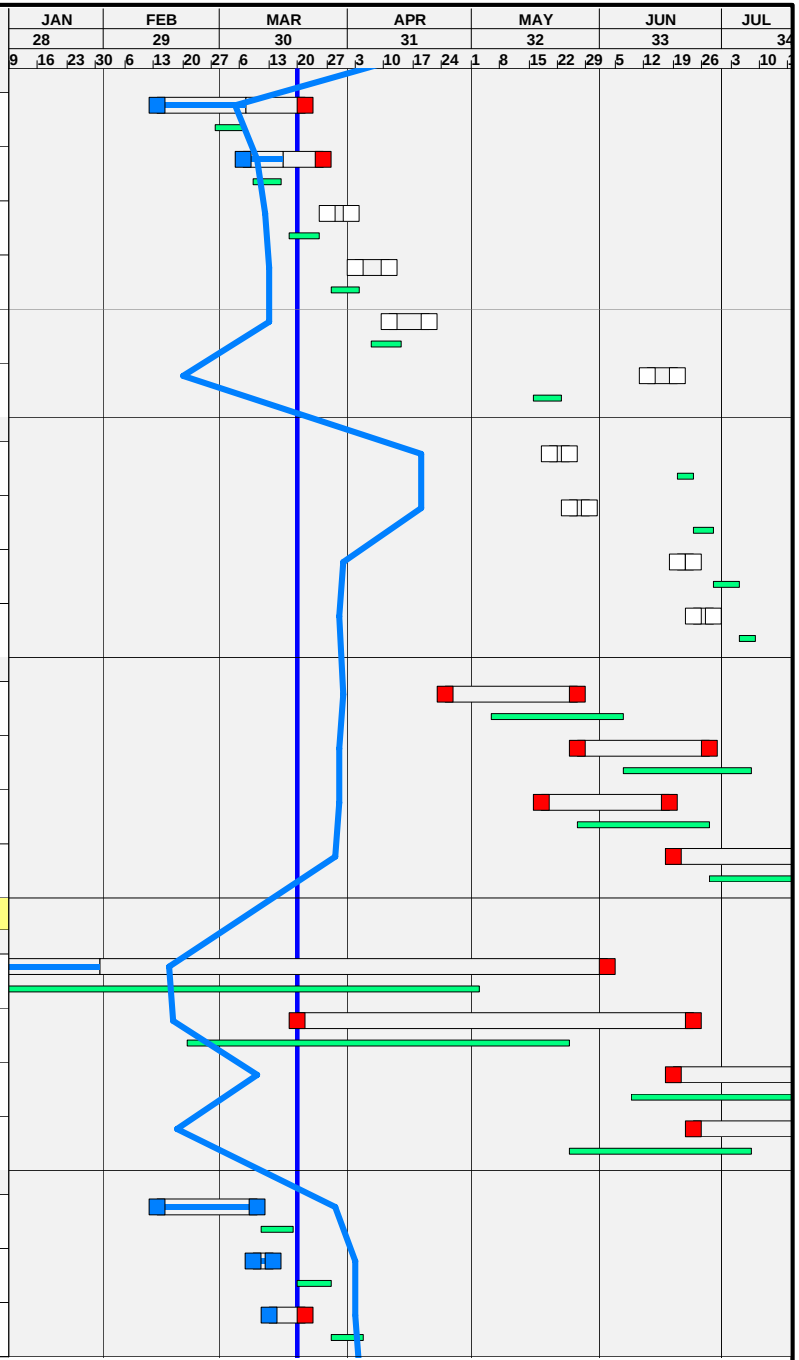
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
Electrical Works Below OHVD									
278012	Ent NB - Cabling,Wirings&Term @ Ceiling/ Grd Lvl	48	13JUN06	21AUG06	0	0	48	-36	0
Tunnel Drive South Bound									
Tunnel Invert									
Works progressed from North Portal									
101582	SB exc.grnd/foul water drain trough 142m(fr.NP)	26	14FEB06A	07MAR06A	100	0	0		36
103150	SB exc.grnd/foul water drain trough 213m(fr.NP)	39	07MAR06A	22APR06	20	0	25	467	43
101600	SB Invert Cleaning (fr.NP) 142m	16	14FEB06A	07MAR06A	100	0	0		39
101601	SB Invert Cleaning (fr.NP) 213m	30	07MAR06A	26APR06	30	0	25	467	43
5611	SB Invert Drainage fr NP CP10 -> CP9	12	16FEB06A	09MAR06A	100	0	0		-5
5612	SB Invert Drainage fr NP CP9 -> CP8	12	07MAR06A	14MAR06A	100	0	0		3
5613	SB Invert Drainage fr NP CP8 -> CP7	12	14MAR06A	08MAY06	10	0	10	24	10
Works progressed from South Portal									
3744	SB Kckr & Pt Svc Trough fr.SP 192m Ch1452->1644	27	23DEC05A	21FEB06A	100	56	0		9
101583	SB exc.grnd/foul water drain trough 89m(fr.SP)	25	14FEB06A	07MAR06A	100	0	0		10
101584	SB exc.grnd/foul water drain trough 150m(fr.SP)	41	07MAR06A	04MAY06	0	0	35	20	6
101586	SB exc.grnd/foul water drain trough 342m	60	20MAR06	05JUN06	0	0	60	87	-25
101311	SB Invert Cleaning (fr.SP) 239m	66	14FEB06A	12MAY06	50	0	40	20	25
103166	SB Invert Cleaning (fr.SP 342m)	48	14FEB06A	12JUN06	0	0	25	87	-25
5620	SB Invert Drainage fr SP -> CP2	8	14FEB06A	23FEB06A	100	0	0		3
5619	SB Invert Drainage fr SP CP2 -> CP3	8	23FEB06A	01MAR06A	100	0	0		6
5618	SB Invert Drainage fr SP CP3 -> CP4	8	01MAR06A	07MAR06A	100	0	0		9
5617	SB Invert Drainage fr SP CP4 -> CP5	8	20MAR06	28MAR06	0	0	8	37	-1
5616	SB Invert Drainage fr SP CP5 -> CP6	8	29MAR06	07APR06	0	0	8	37	-1
5615	SB Invert Drainage fr SP CP6 -> CP7	8	25APR06	04MAY06	0	0	8	118	8



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
Tunnel Lining									
Works progressed from North Portal									
2194	SB NP Arch Lining 175m Tch.1+835 to 1+660 VA	21	07JAN06A	23FEB06A	100	86	0		-2
3161	SB NP OHVD 175m Tch.1+835 to 1+660 VA	30	21JAN06A	25MAR06	79	50	6	3	-10
3736	Demobilise lining form SB from NP	12	02MAR06A	09MAR06A	100	0	0		-2
3739	Demobilise OHVD form SB from NP	12	09MAR06A	16MAR06A	100	0	0		10
Works progressed from South portal									
3168	SB SP Arch Lining 130m Ch.1513 to 1643	18	26JAN06A	03MAR06A	100	18	0		10
3174	SB SP OHVD 150m Ch.1363 to 1513	24	19JAN06A	07MAR06A	100	0	0		11
3175	SB SP OHVD 130m Ch.1513 to 1643	22	27FEB06A	06APR06	85	0	15	-16	8
3738	Demobilise OHVD form SB from SP	12	07APR06	24APR06	0	0	12	-16	8
Tunnel Finishing Works									
TCSS, FS & Works Within Trough									
3566	SB Cable/Svc trough 135m Ch.2135 to 2000 fr.NP	8	23JAN06A	11MAR06A	100	32	0		-6
3567	SB Cable/Svc trough 165m Ch.2000 to 1835 fr.NP	10	15FEB06A	28MAR06	55	0	8	1	-10
3568	SB Cable/Svc trough 175m Ch.1835 to 1660 fr.NP	11	06MAR06A	08APR06	13	0	9	1	-8
3570	SB Cable/Svc trough 150m Ch.1063 to 1213 fr.SP	9	20MAR06	29MAR06	0	0	9	-84	-25
3571	SB Cable/Svc trough 150m Ch.1213 to 1363 fr.SP	9	30MAR06	10APR06	0	0	9	-84	-25
3572	SB Cable/Svc trough 150m Ch.1363 to 1513 fr.SP	9	11APR06	24APR06	0	0	9	-84	-25
3573	SB Cable/Svc trough 150m Ch.1513 to 1660 fr.SP	9	25APR06	06MAY06	0	0	9	-26	-25
Sub-base & Concrete Pavement									
5629	SB Sub-base & conc pavement fr NP CP13 -> CP12	6	07FEB06A	01MAR06A	100	0	0		-4
5630	SB Sub-base & conc pavement fr NP CP12 -> CP11	6	01MAR06A	11MAR06A	100	0	0		-7
5631	SB Sub-base & conc pavement fr NP CP11 -> CP10	6	13MAR06A	21MAR06	90	0	2	27	-9
5632	SB Sub-base & conc pavement fr NP CP10 -> CP9	6	22MAR06	28MAR06	0	0	6	27	-9
5633	SB Sub-base & conc pavement fr NP CP9 -> CP8	6	29MAR06	04APR06	0	0	6	27	-9
5634	SB Sub-base & conc pavement fr NP CP8 -> CP7	6	13MAY06	19MAY06	0	0	6	20	25



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
Sub-base & Concrete Pavement									
5641	SB Sub-base & conc pavement fr SP S Portal->CP2	6	14FEB06A	21MAR06	60	0	2	9	-13
5640	SB Sub-base & conc pavement fr SP CP2 -> CP3	6	07MAR06A	25MAR06	50	0	4	9	-9
5639	SB Sub-base & conc pavement fr SP CP3 -> CP4	6	27MAR06	01APR06	0	0	6	35	-7
5638	SB Sub-base & conc pavement fr SP CP4 -> CP5	6	03APR06	10APR06	0	0	6	35	-5
5637	SB Sub-base & conc pavement fr SP CP5 -> CP6	6	11APR06	20APR06	0	0	6	35	-3
5636	SB Sub-base & conc pavement fr NP CP6 -> CP7	6	13JUN06	19JUN06	0	0	6	87	-23
Bituminous Pavement									
3591	SB Base Course - RHS 650m Ch 3030->2380	4	20MAY06	24MAY06	0	0	4	104	25
3592	SB Base Course - RHS 650m Ch 2380->1730	4	25MAY06	29MAY06	0	0	4	104	25
3593	SB Base Course - RHS 650m Ch 1730->1080	4	20JUN06	23JUN06	0	0	4	87	8
3595	SB Base Course - LHS 650m Ch 3030->2380	4	24JUN06	28JUN06	0	0	4	87	8
VE Panel Installation									
3613	SB - VE Panel Supt Sys RHS @ CH3030-2380 (650m)	26	25APR06	26MAY06	0	0	26	-12	8
3614	SB - VE Panel Supt Sys RHS @ CH2380-1730 (650m)	26	27MAY06	27JUN06	0	0	26	-12	8
3620	SB - VE Panel Claddings RHS @ CH3030-2380 (650m)	26	18MAY06	17JUN06	0	0	26	-12	8
3621	SB - VE Panel Claddings RHS @ CH2380-1730 (650m)	26	19JUN06	19JUL06	0	0	26	-12	8
ENT SB TUNNEL - (E&M) BUILDING SERVICES									
MVAC / Tunnel Ventillation System Above OHVD									
278014	Ent SB - Install Motorised Smoke & Fire Dampers	72	31DEC05A	02JUN06	20	20	58	-91	-25
278015	Ent SB - Comp Air Pipes/Condts to E/P16 to E/P21	36	20MAR06	23JUN06	0	0	36	-91	-25
278017	Ent SB - Comp Air Pipes/ Condts to E/P1to E/P7	36	19JUN06	31JUL06	0	0	36	-42	-8
278016	Ent SB - Comp Air Pipes/Condts to E/P15 to E/P8	36	24JUN06	05AUG06	0	0	36	-91	-25
Plumbing and Drainage									
278023	Ent SB - 200d W.Main/Brackt @ Ch2600-2450 (150m)	7	14FEB06A	09MAR06A	100	0	0		8
278024	Ent SB - 200d W.Main/Brackt @ Ch2430-2285 (165m)	7	09MAR06A	13MAR06A	100	0	0		12
278025	Ent SB - 200d W.Main/Brackt @ Ch2285-2135 (150m)	7	13MAR06A	21MAR06	20	0	2	-10	12



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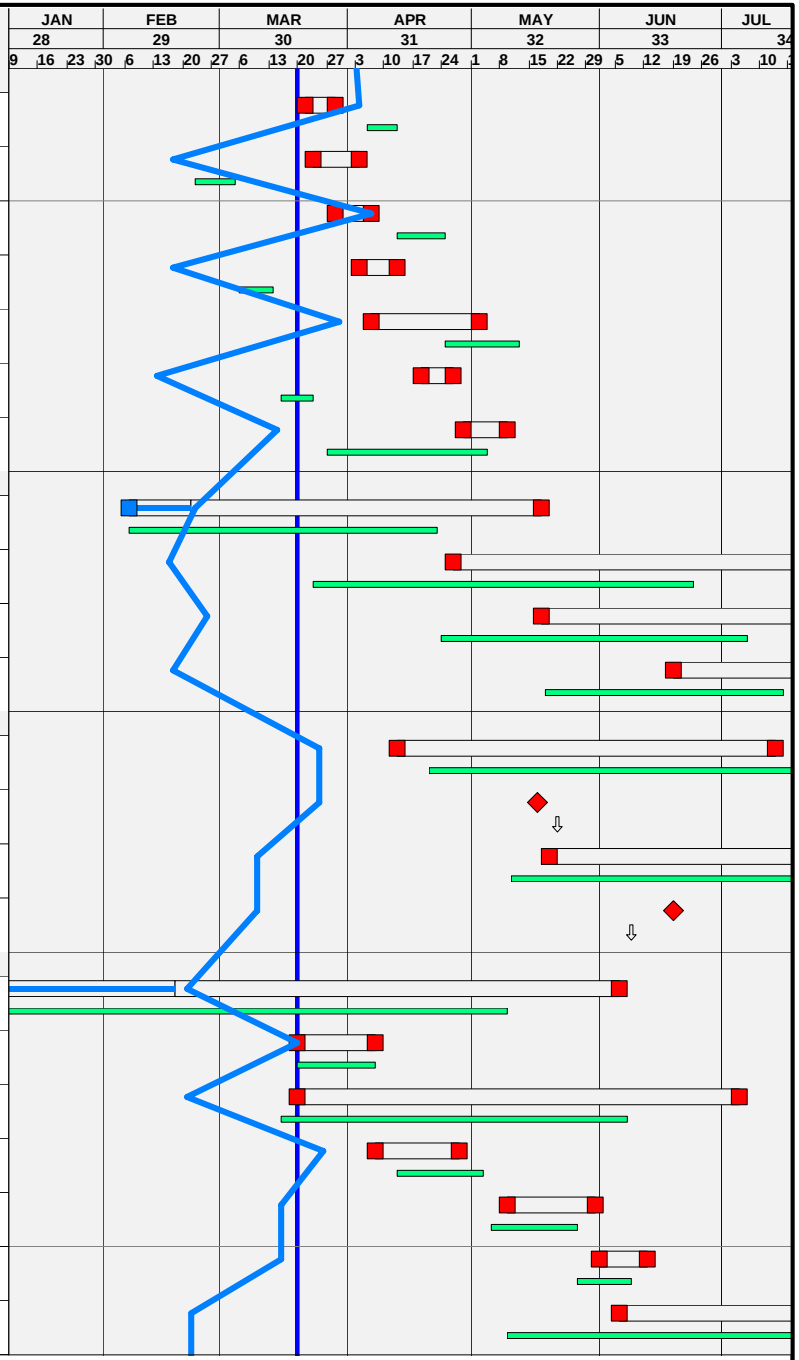
Plumbing and Drainage									
278026	Ent SB - 200d W.Main/Brackt @ Ch2135-2000 (135m)	6	22MAR06	28MAR06	0	0	6	-10	12
278029	Ent SB - 200d W.Main/Brackt @ Ch1063-1213 (150m)	7	24MAR06	03APR06	0	0	7	-82	-25
278027	Ent SB - 200d W.Main/Brackt @ Ch2000-1835 (150m)	7	29MAR06	06APR06	0	0	7	-6	12
278030	Ent SB - 200d W.Main/Brackt @ Ch1213-1363 (150m)	7	04APR06	12APR06	0	0	7	-82	-25
278028	Ent SB - 200d W.Main/Brackt @ Ch1835-1660 (175m)	8	07APR06	02MAY06	0	0	8	-16	8
278031	Ent SB - 200d W.Main/Brackt @ Ch1363-1513 (150m)	7	19APR06	26APR06	0	0	7	-84	-25
278032	Ent SB - 200d W.Main/Brackt @ Ch1513-1660 (150m)	7	29APR06	09MAY06	0	0	7	-26	-3
Fire Protection System									
278033	Ent SB - Install FS Conduit @ C/L to AFA Panels	54	07FEB06A	17MAY06	15	5	45	-70	-19
278036	Ent SB - 150d FS Main pipeworks / brackets @ G/L	72	27APR06	24JUL06	0	0	72	-84	-25
278034	Ent SB - Install brcts/ Supt for FS detecn @ C/L	60	18MAY06	28JUL06	0	0	60	-70	-19
278037	Ent SB - Install Hose Reel Cabinets & Eqpt @ G/L	48	19JUN06	14AUG06	0	0	48	-84	-25
Electrical Works Above OHVD									
278043	Ent SB - HV & LV Mn/submain Cables to CP21-CP11	72	13APR06	13JUL06	0	0	72	-51	4
278041	Ent SB - E&M Access to 2/F LV Switch Room (NPVB)	0	17MAY06		0	0	0	-51	4
278044	Ent SB - HV & LV Mn/submain Cables to CP01-CP10	72	20MAY06	14AUG06	0	0	72	-54	-8
278042	Ent SB - E&M Access to 3/F LV Switch Room (SPVB)	0	19JUN06		0	0	0	-54	-8
Electrical Works Below OHVD									
278051	Ent SB - Brkts for Lights,CCTV,Camera,Eqpt @ C/L	96	19DEC05A	05JUN06	36	34	60	-67	-22
278047	Ent SB - TCSS Brkt @ C.Trough Ch3035-2450 (585m)	16	20MAR06	07APR06	0	0	16	-18	0
278052	Ent SB - Conduit Works @ Ceiling Lvl	60	20MAR06	04JUL06	0	0	60	-43	-22
278048	Ent SB - TCSS Brkt @ C.Trough Ch2450-2000 (450m)	14	08APR06	27APR06	0	0	14	-18	4
278049	Ent SB - TCSS Brkt @ C.Trough Ch1010-1660 (650m)	18	10MAY06	30MAY06	0	0	18	-26	-3
278050	Ent SB - TCSS Brkt @ C.Trough Ch2000-1660 (340m)	10	01JUN06	12JUN06	0	0	10	-26	-3
278053	Ent SB - Earthing & Lighting Fixture @ C/Lvl	72	06JUN06	29AUG06	0	0	72	-67	-22



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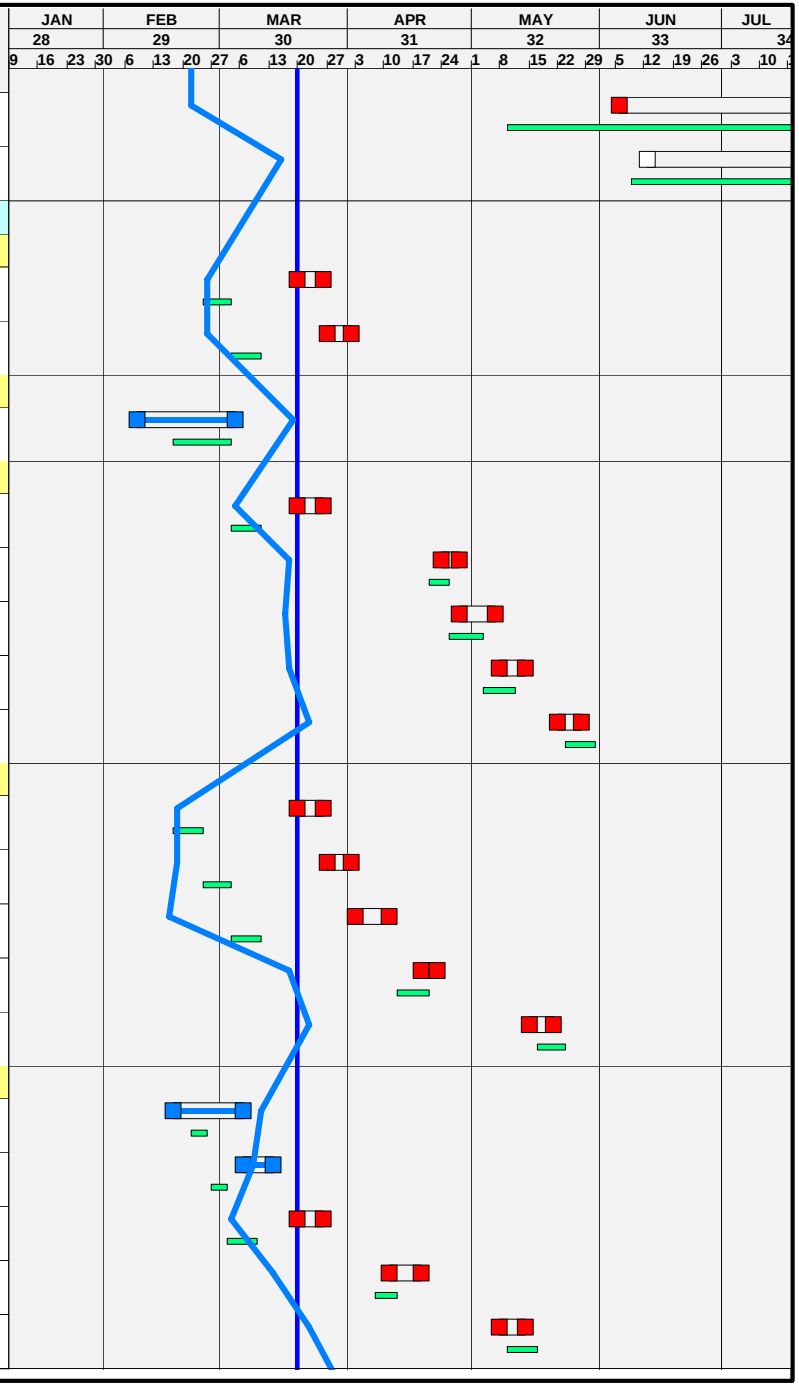
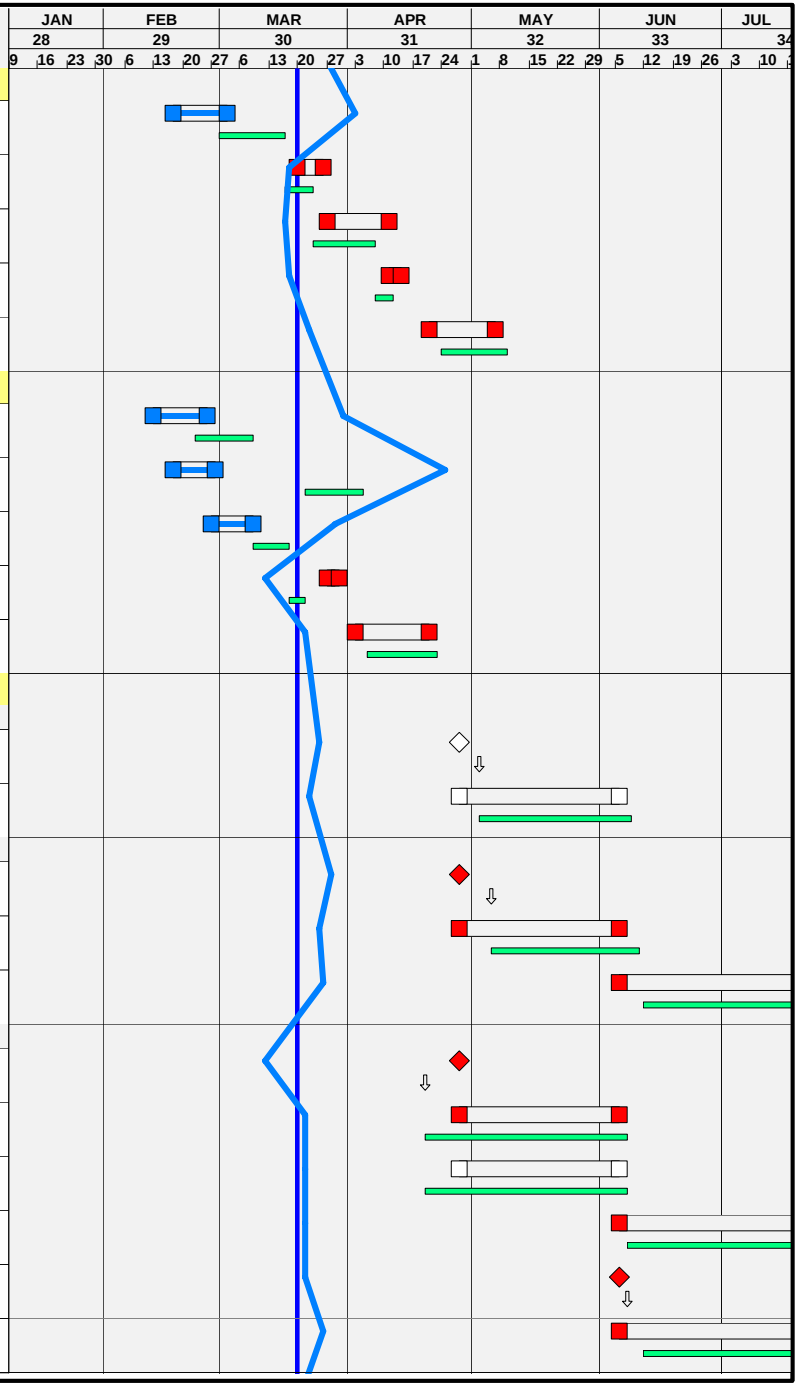
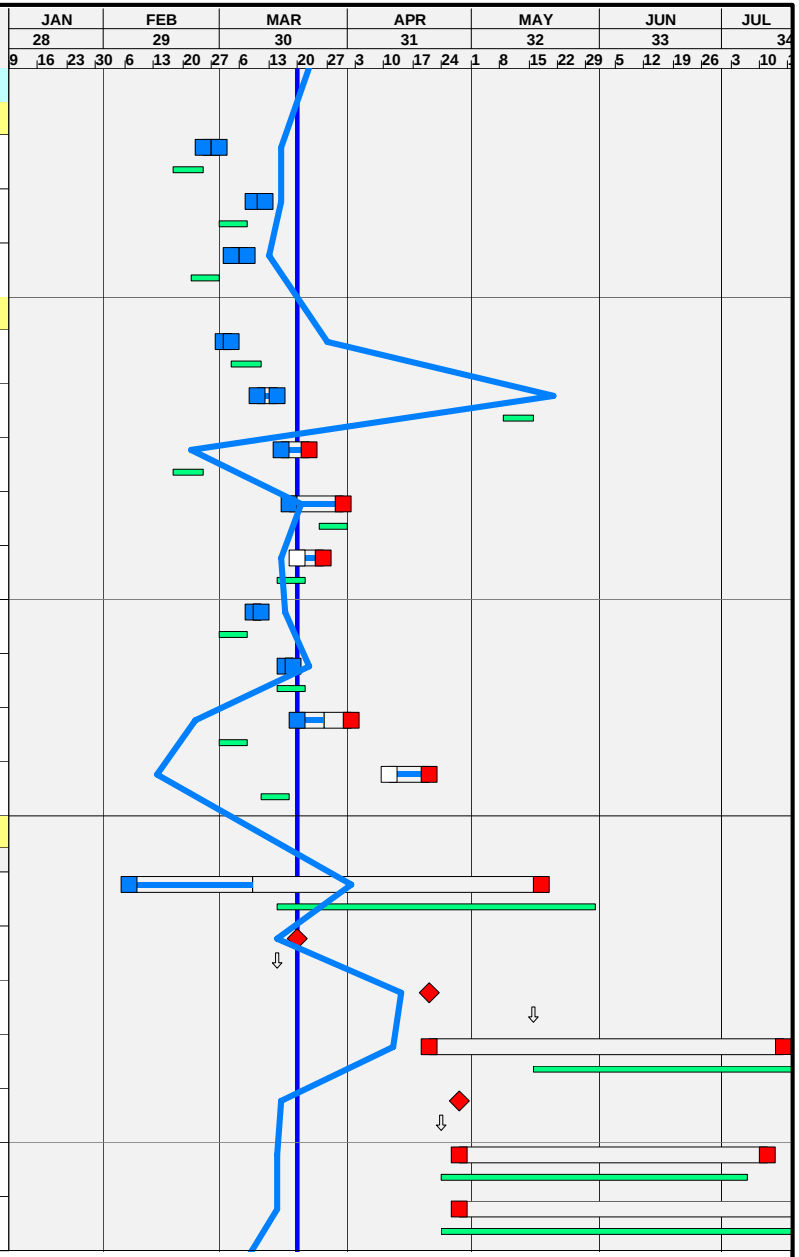
Electrical Works Below OHVD									
278054	Ent SB - Install CCTV, Camera, Equipt @ C/Lvl	72	06JUN06	29AUG06	0	0	72	-67	-22
278086	HGC - Cabling	42	13JUN06	01AUG06	0	0	42	31	-3
Cross Passage 7									
Type N4- Straight Section									
0586	CP7 - Type N4 - SFRC Arch concrete	6	20MAR06	25MAR06	0	0	6	-42	-19
0587	CP7 - Type N4 - Maint Acc Walls & Roof	6	27MAR06	01APR06	0	0	6	-42	-19
Type O									
0569	CP7 - Type O - O6 ~ O7	12	09FEB06A	04MAR06A	100	0	0		-1
Type N3 - Northbound Tunnel									
0361	CP7 - Type N3 (NB) - Wall above arch lining	6	20MAR06	25MAR06	0	0	6	-16	-13
0360	CP7 - Type N3 (NB) - SFRC arch (4 bays @ 1d/bay)	4	24APR06	27APR06	0	0	4	-36	-2
0372	CP7 - Type N3 (NB) - Arch formwork dismantle	6	28APR06	06MAY06	0	0	6	-36	-2
0374	CP7 - Type N3 (NB) - Maint Acc end wall	6	08MAY06	13MAY06	0	0	6	-36	-2
0362	CP7 - Type N3 (NB) - Maint Acc side wall & roof	6	22MAY06	27MAY06	0	0	6	-42	2
Type N2									
0575	CP7 - Type N2 - LV Switch room	6	20MAR06	25MAR06	0	0	6	-32	-25
0591	CP7 - Type N2 - W/Proof & Re-bar fixing	6	27MAR06	01APR06	0	0	6	-32	-25
0572	CP7 - Type N2 - N2-6 (L&R)	6	03APR06	10APR06	0	0	6	-32	-25
0573	CP7 - Type N2 - SFRC arch (4 bays @ 1d/bay)	4	19APR06	22APR06	0	0	4	-36	-2
0574	CP7 - Type N2 - Maint Acc Walls & Roof	6	15MAY06	20MAY06	0	0	6	-42	2
Type N3 - Southbound Tunnel									
0363	CP7 - Type N3 (SB) - Lower Half	4	18FEB06A	06MAR06A	100	0	0		-7
0331	CP7 - Type N3 (SB) - Upper Half	4	07MAR06A	13MAR06A	100	0	0		-9
0383	CP7 - Type N3 (SB) - Wall above lining	6	20MAR06	25MAR06	0	0	6	-24	-14
0364	CP7 - Type N3 (SB) - SFRC arch (4 bays @ 1d/bay)	4	11APR06	18APR06	0	0	4	-36	-2
0367	CP7 - Type N3 (SB) - Maint Acc Walls & Roof	6	08MAY06	13MAY06	0	0	6	-42	2



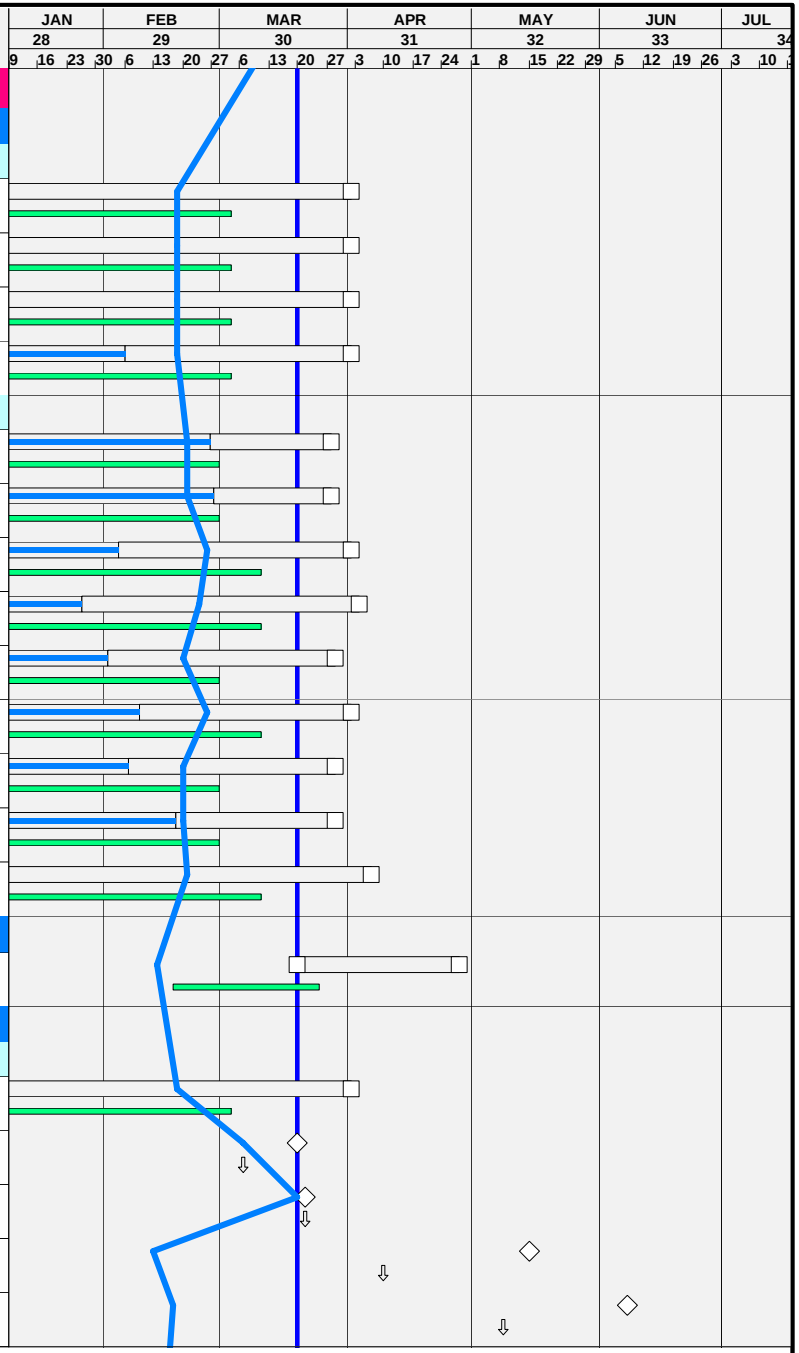
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
Type N4 - Combined Section									
0577	CP7 - Type N4-CS - Suspended Slabs	14	18FEB06A	02MAR06A	100	0	0		12
0578	CP7 - Type N4-CS - Arch falsework	6	20MAR06	25MAR06	0	0	6	-39	-2
0579	CP7 - Type N4-CS - SFRC Arch (6 bays @ 2d/bay)	12	27MAR06	10APR06	0	0	12	-39	-2
0595	CP7 - Type N4-CS - Arch falsework dismantle	3	11APR06	13APR06	0	0	3	-39	-2
0580	CP7 - Type N4-CS - Maint Acc Walls & Roof	12	21APR06	06MAY06	0	0	12	-42	2
Type T - Transition									
0582	CP7 - Type N4-T - Arch falsework	12	13FEB06A	25FEB06A	100	0	0		9
0584	CP7 - Type N4-T - Columns & Suspended Slabs	12	18FEB06A	27FEB06A	100	0	0		31
0583	CP7 - Type N4-T - SFRC Arch (4 bays @ 2d/bay)	8	27FEB06A	08MAR06A	100	0	0		8
0596	CP7 - Type N4-T - Arch falsework dismantle	3	27MAR06	29MAR06	0	0	3	-39	-7
0585	CP7 - Type N4-T - Maint Acc Walls & Roof	12	03APR06	20APR06	0	0	12	-42	2
ENT CROSS PASSAGE CP07 - (E&M) BUILDING SERVICES									
MVAC / Tunnel Ventillation System Above OHVD									
278057	E&M Access to 1/F of Ventilation Adit Bldg.	0	28APR06		0	0	0	23	3
278058	CP7 - Comp Air Pipes / Conduits to ENT NB & SB	30	28APR06	05JUN06	0	0	30	23	3
Fire Protection System									
278060	E&M Access to CP7 Cable & Maintence Access Ducts	0	28APR06		0	0	0	-19	5
278061	CP7 - FS Conduit @ Ceiling Lvl	30	28APR06	05JUN06	0	0	30	-19	5
278062	CP7 - Cabling, Wiring, FS detectn & Alarm Bell	48	06JUN06	01AUG06	0	0	48	-19	5
Electrical Works									
278064	E&M Access to CP7 Cable & Maintence Access Ducts	0	28APR06		0	0	0	-19	-7
278065	CP7 - HV / LV Cable Brackets & Containment	30	28APR06	05JUN06	0	0	30	-19	2
278088	HGC - Cable Containment	30	28APR06	05JUN06	0	0	30	37	2
278066	CP7 - Install Conduit, lighting & switches @ C/L	48	06JUN06	01AUG06	0	0	48	-19	2
278068	E&M Access to Vent Adit Bldg 1/F LV Switch Rm	0	06JUN06		0	0	0	-19	2
278069	CP7 - HV/ LV Cabling, Wiring & Term to CP7 LV Rm	48	06JUN06	01AUG06	0	0	48	-19	5



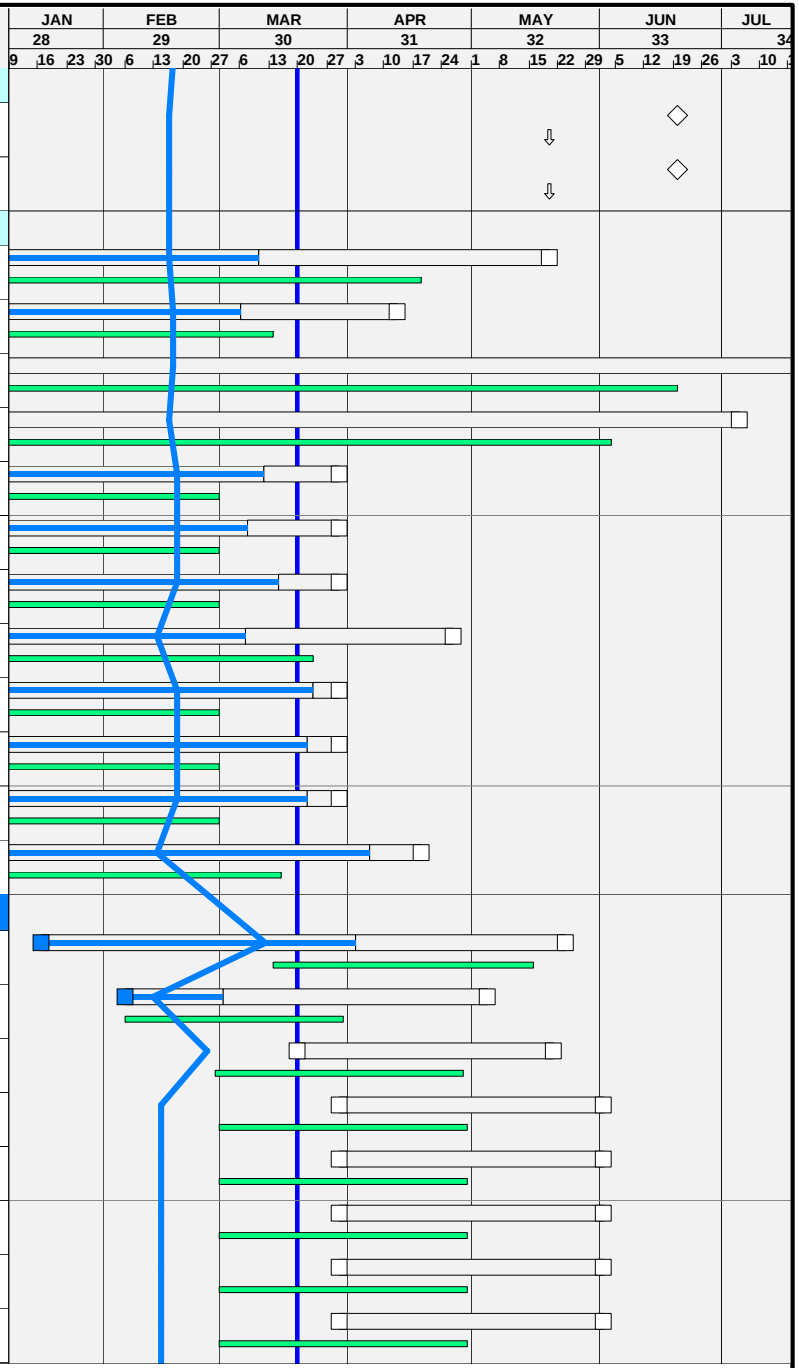
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
ENT Cross Passages									
X-Passages Invert									
2623	Invert Lining to CP.2	6	25FEB06A	28FEB06A	100	0	0		-3
2627	Invert Lining to CP.6	6	09MAR06A	11MAR06A	100	0	0		-4
2626	Invert Lining to CP.5	6	04MAR06A	07MAR06A	100	0	0		-6
X-Passages Finishing Works									
2643	Construct Rooms at CP.2	36	02MAR06A	03MAR06A	100	83	0		6
2642	Construct Rooms at CP.8	36	10MAR06A	14MAR06A	100	83	0		47
2640	Construct Rooms at CP.10	36	16MAR06A	22MAR06	95	83	3	-28	-22
2645	Construct Rooms at CP.4	36	18MAR06A	30MAR06	95	83	3	-17	1
2647	Construct Rooms at CP.6	36	20MAR06	25MAR06	83	83	6	-13	-4
2646	Construct Rooms at CP.5	36	09MAR06A	10MAR06A	100	83	0		-3
2644	Construct Rooms at CP.3	36	17MAR06A	18MAR06A	100	83	0		2
2641	Construct Rooms at CP.9	36	20MAR06A	01APR06	50	83	4	-28	-22
5700	Construct Rooms at CP.7	36	11APR06	20APR06	83	83	6	-31	-25
CROSS PASSAGES (CP1-CP6 & CP8-CP21) - (E&M) WORK									
Electrical Works									
278074	(CP1-CP21) - Cable Containment & Equipt Support	60	07FEB06A	17MAY06	30	0	45	-10	11
278071	(CP1-CP21) - E&M Access to Cross Passages	0	20MAR06*		0	0	0	-49	-4
278073	(CP1-CP10) - MS Doors Installed & Secured	0	21APR06		0	0	0	-31	19
278078	(CP1-CP10) - MCCB/ MCB Brd,CMCS,Busbar,Switches	70	21APR06	15JUL06	0	0	70	-31	19
278072	(CP21-CP11) - MS Doors Installed & Secured	0	28APR06		0	0	0	-49	-4
278075	(CP1-CP21) - Conduit,light,Signage fixt,Switches	60	28APR06	11JUL06	0	0	60	-31	-4
278077	(CP21-CP11) - MCCB/ MCB Brd,CMCS,Busbar,Switches	72	28APR06	25JUL06	0	0	72	-49	-4



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
VENTILATION ADIT & BUILDING									
Submittals & Approvals									
ABWF & Builders Works									
1974	VA Bldg. - Approve louvre details	24	07APR05A	01APR06	50	50	12	424	-25
1972	VA Bldg. - Approve door & window details	24	07MAY05A	01APR06	50	50	12	454	-25
1991	VA Bldg. - Approve slate cladding	24	15JUN05A	01APR06	50	50	12	424	-25
1988	VA Bldg. - Approve aluminium cladding	24	13DEC05A	01APR06	50	50	12	454	-25
E&M Equip't/Mat'l Approval by Engineer									
8495	VaBldg-App. building related luminaires	18	18AUG04A	27MAR06	95	50	7	439	-23
6581	VaBldg-App. FS wet sys	18	04SEP04A	27MAR06	95	50	7	439	-23
6590	VaBldg-App. FS AFA & FM200 sys	18	14SEP04A	01APR06	90	85	12	364	-19
6587	VaBldg-App. of CMCS & ELV sys	18	20SEP04A	03APR06	88	88	13	351	-20
6582	VaBldg-App. MVAC mech.vent. sys	18	23SEP04A	28MAR06	90	50	8	448	-24
6580	VaBldg-App. PD all fresh & flush water sys	18	04NOV04A	01APR06	90	85	12	419	-19
6864	V6aBldg-App. MVAC MCC, power & control sys	18	12NOV04A	28MAR06	90	50	8	440	-24
6857	VaBldg-App. MVAC / TVF pneumatic sys	18	07MAR05A	28MAR06	90	50	8	440	-24
7590	VaBldg-App. PD irrig. sys	18	05MAY05A	06APR06	50	30	15	448	-22
DESIGN & ENGINEERING									
2276	Design Temp Ventilation Adit	30	20MAR06	27APR06	0	0	30	466	-25
PROCUREMENT									
ARCHITECTURAL									
1995	VA Bldg. - Procure aluminium cladding	30	19APR05A	01APR06	60	60	12	434	-25
2035	VA Bldg. - Initial delivery balust & metal works	0	20MAR06		0	0	0	496	-11
2034	VA Bldg. - Initial delivery fall arrest system	0	22MAR06		0	0	0	494	0
2032	VA Bldg. - Initial delivery doors & windows	0	15MAY06		0	0	0	454	-25
2038	VA Bldg. - Initial delivery aluminium cladding	0	08JUN06		0	0	0	434	-25



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
ARCHITECTURAL									
2031	VA Bldg. - Initial delivery slate cladding	0	20JUN06		0	0	0	424	-25
2033	VA Bldg. - Initial delivery louvres	0	20JUN06		0	0	0	424	-25
E&M MATERIALS									
7591	VaBldg-Proc & Manuf. PD irrig. sys	346	17DEC04A	19MAY06	86	86	47	401	-25
6583	VaBldg-Proc. & Manuf. of HV dist. equip't	180	29MAR05A	12APR06	90	90	20	446	-25
6591	VaBldg-Proc. & Manuf. of CMCS & ELV sys	180	29MAR05A	19JUL06	46	46	97	351	-25
6636	VaBldg-Proc & Manuf. FS AFA & FM200 sys	120	29MAR05A	04JUL06	30	30	84	364	-25
6865	VaBldg-Proc & Manuf. MCC, power & control sys	180	29MAR05A	29MAR06	95	95	9	439	-25
6586	VaBldg-Proc & Manuf. FS wet sys	120	06JUN05A	29MAR06	93	93	9	439	-25
6851	VaBldg-Proc & Manuf. TVF, Ductwks & Cont'l sys	180	09JUN05A	29MAR06	95	95	9	439	-25
6585	VaBldg-Proc & Manuf. PD fresh & flush water sys	120	30SEP05A	26APR06	76	76	29	419	-25
8496	VaBldg-Proc & Manf bldg related luminaires	180	23NOV05A	29MAR06	95	95	9	439	-25
6858	VaBldg-Proc & Manuf. MVAC / TVF pneumatic sys	120	16DEC05A	29MAR06	93	93	9	439	-25
8516	VaBldg-Proc & Manuf. MVAC Package AC Units	120	16DEC05A	29MAR06	93	93	9	439	-25
6588	VaBldg-Proc & Manuf. MVAC mech.vent. sys	180	06JAN06A	18APR06	88	88	22	448	-25
MAJOR EQUIPMENT DELIVERY									
6592	VaBldg-Del. HV power dist. equip't to 2/F	48	17JAN06A	23MAY06	60	0	30	446	-7
6593	VaBldg-Del. LV power dist. equip't to 2/F	48	06FEB06A	04MAY06	27	27	35	461	-25
6619	VaBldg-Del. building vent. fans	48	20MAR06	20MAY06	0	0	48	448	-17
6609	VaBldg-Del. FS pumps & tank to G/F	48	30MAR06	01JUN06	0	0	48	439	-25
6852	VaBldg-Del. TVS to Plenum & 3/F	48	30MAR06	01JUN06	0	0	48	439	-25
6859	VaBldg-Del. MVAC /TVF pneumatic sys to 1/F	48	30MAR06	01JUN06	0	0	48	439	-25
6866	VaBldg-Del. MVAC MCC, & control sys to 3/F	48	30MAR06	01JUN06	0	0	48	439	-25
8497	VaBldg-Del. building related luminaires	48	30MAR06	01JUN06	0	0	48	439	-25



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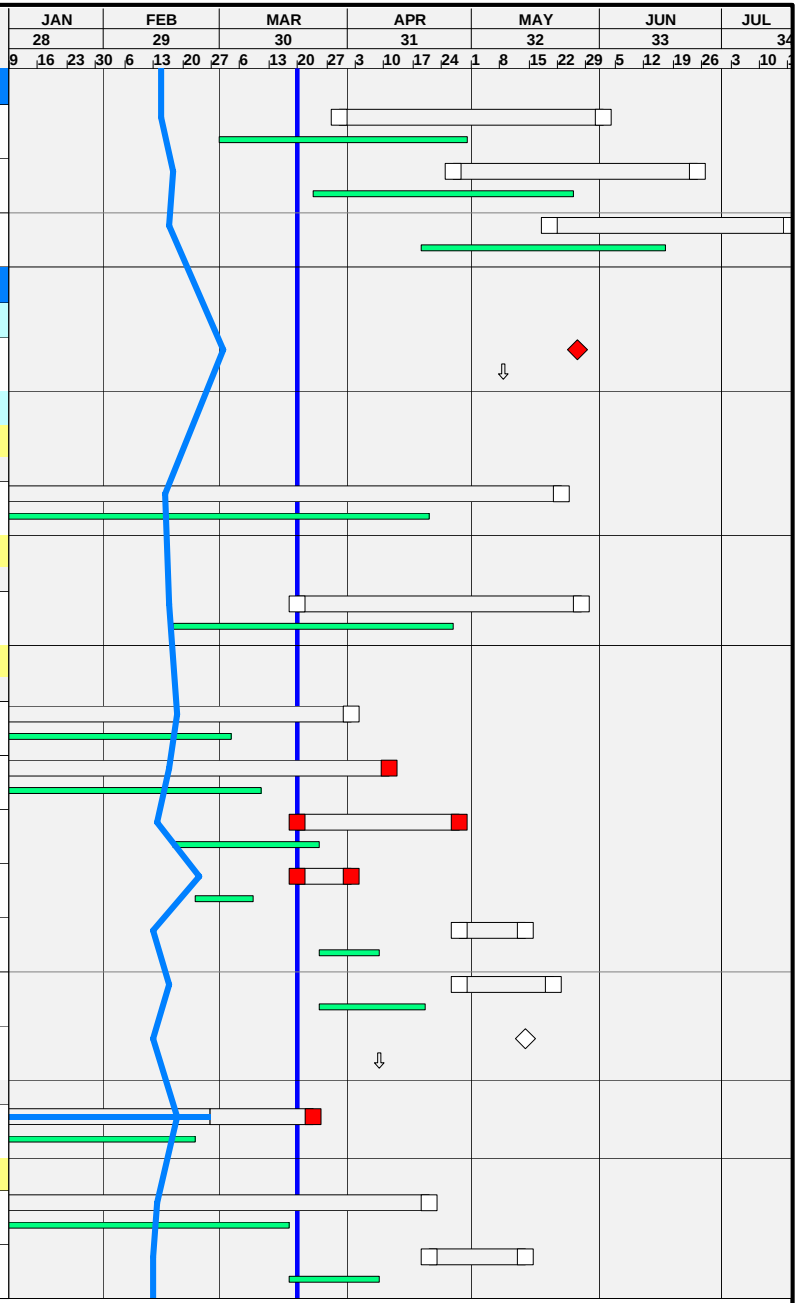
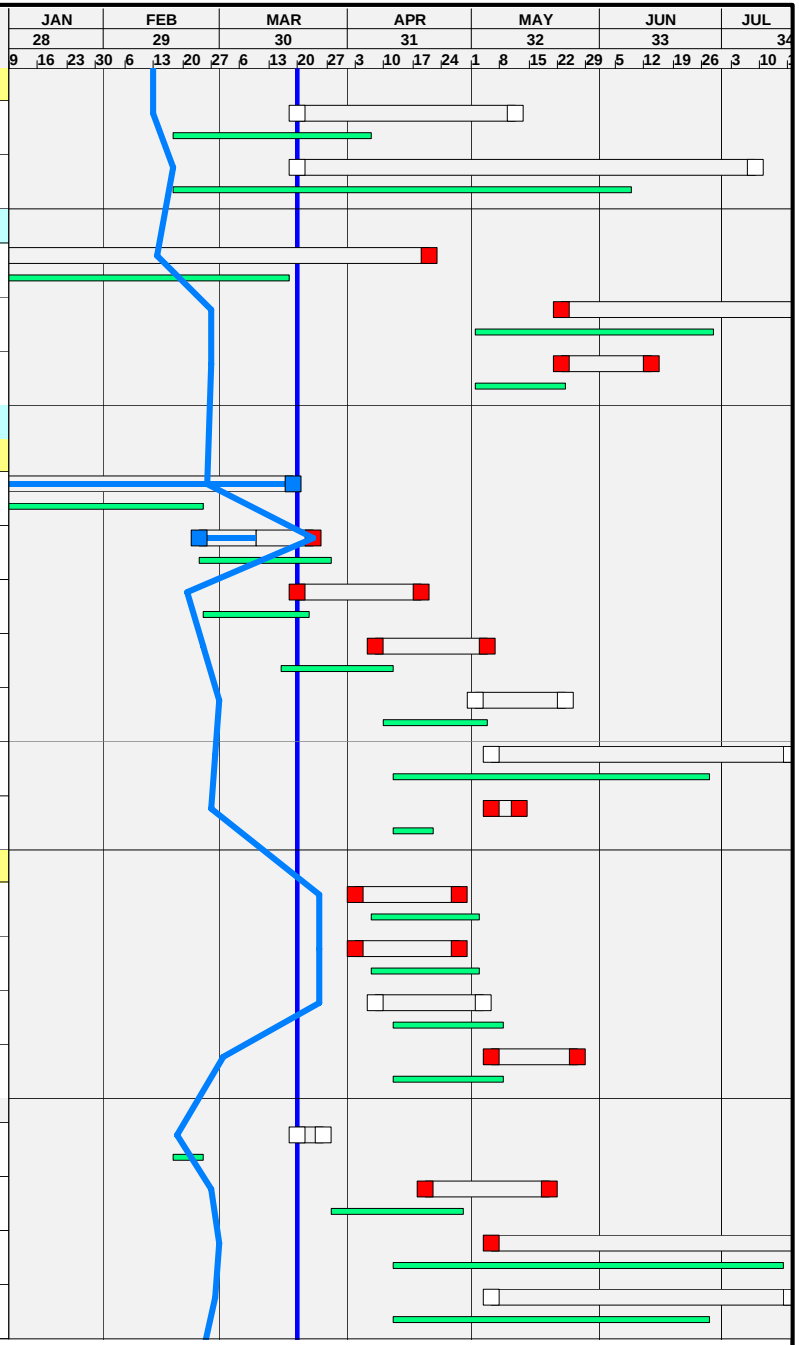
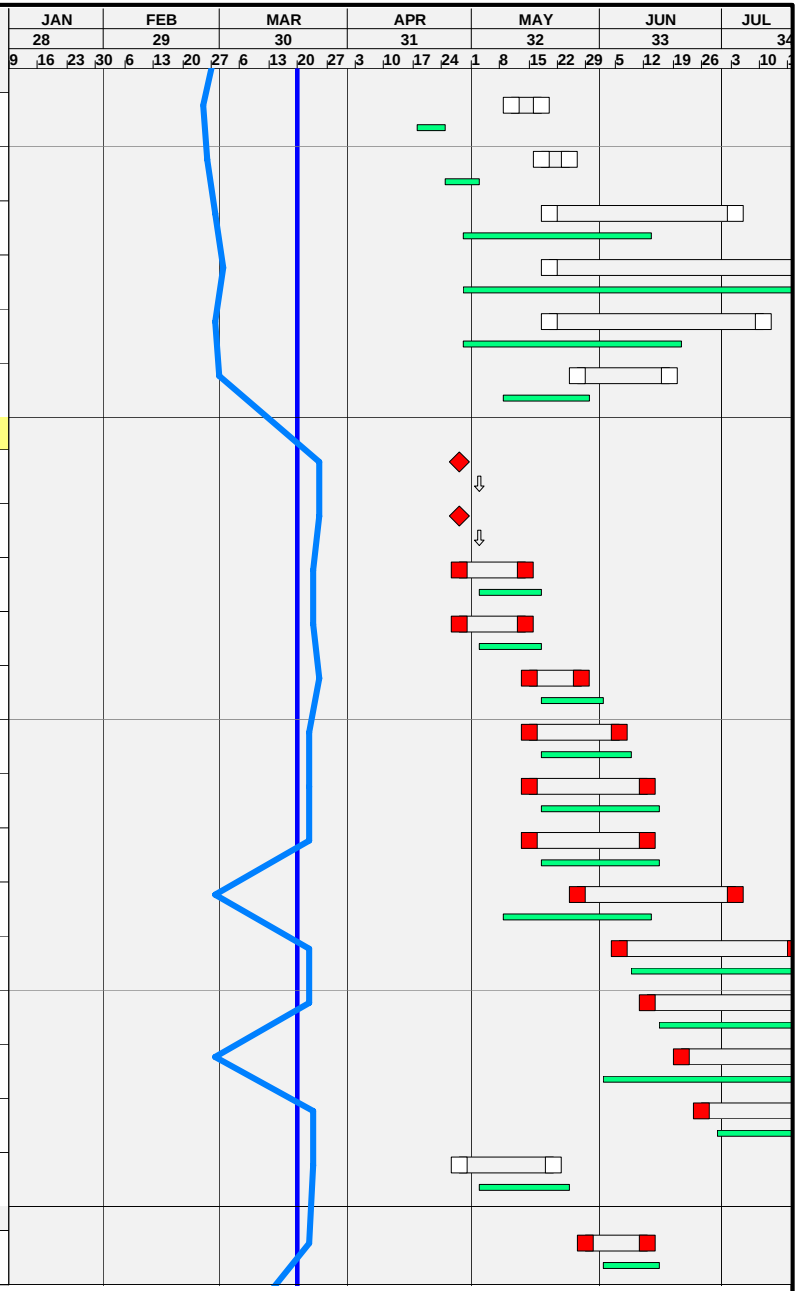
MAJOR EQUIPMENT DELIVERY									
8517	VaBldg-Del. Package AC Units	48	30MAR06	01JUN06	0	0	48	439	-25
6608	VaBldg-Del. PD pump & tank to G/F	48	27APR06	24JUN06	0	0	48	419	-25
7592	VaBldg-Del. PD irrig. pump & tank to G/F	48	20MAY06	17JUL06	0	0	48	401	-25
CONSTRUCTION WORKS									
Vent Bldg & Adit TCSS Access									
0295	Vent Bldg & Adt - TCSS Access	0		26MAY06	0	0	0	13	-16
ADIT TUNNEL									
North Bound from South Portal									
Arch Lining									
0334	NB fr SP - Tunnel Lining standard section -> CP7	54	18NOV05A	22MAY06	5	5	49	447	-25
South Bound from South Portal									
Arch Lining									
0284	SB fr NP - Tunnel Lining standard section -> CP7	54	20MAR06	27MAY06	0	0	54	442	-25
Vent Adit									
Type M									
0358	Vent Adit - Kicker reo & concrete, first 20m	12	06OCT05A	01APR06	0	0	12	484	-25
0326	Vent Adit - Drainage & Invert slab VAB -> CP7	36	07OCT05A	10APR06	50	50	18	7	-25
0324	Vent Adit - Maintenance access part 1	30	20MAR06	27APR06	0	0	30	-19	-25
0328	Vent Adit - Maintenance access part 2	12	20MAR06	01APR06	0	0	12	-42	-21
0325	Vent Adit - Cable Bracket Installation	12	28APR06	13MAY06	0	0	12	454	-25
0379	Vent Adit - HGC Cable Containment	18	28APR06	20MAY06	0	0	18	49	-25
0359	Vent Adit - E&M Access	0		13MAY06	0	0	0	454	-25
Type P - RC Lining									
0357	Vent Adit - Arch lining to first 20m from VAB	18	01DEC05A	23MAR06	78	78	4	7	-25
TUNNEL LINING									
101535	VA Portal Lining (20m) Bldg.	24	06OCT05A	20APR06	20	20	24	454	-25
101536	VA Form Portal Transition Structure VA Bldg.	18	21APR06	13MAY06	0	0	18	454	-25



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
VA TRANSITION STRUCTURE									
101923	VA RC Tnl Interface Lower part	40	20MAR06	11MAY06	0	0	40	456	-25
101924	VA RC Tnl Interface upper part	88	20MAR06	08JUL06	0	0	88	408	-25
EXTERNAL WORKS									
106589	VaBldg Drainage & Earth mat	48	23APR05A	20APR06	60	60	24	-55	-25
S1900	Storm Drainage & petrol interceptor	48	23MAY06	19JUL06	0	0	48	-39	-17
S1940	Foul Drainage	18	23MAY06	13JUN06	0	0	18	-9	-17
VENTILATION BUILDING									
VA Building - Structure									
T2070	Slab at +116.7mpd (1FL)	24	29DEC05A	18MAR06A	100	75	0		-19
T2090	Roof slab at +121.8mPD	18	24FEB06A	23MAR06	50	0	4	-55	3
T2100	Walls/Columns and slab to +124.95 (2FL/UP)	22	20MAR06	18APR06	0	0	22	-52	-19
T2080	Roof at +131.65mPD	27	08APR06	04MAY06	0	0	27	-64	-23
T2130	Installation of Exhaust Shaft Steelwork	18	02MAY06	23MAY06	0	0	18	446	-15
T3130	Installation of Earth mat	60	06MAY06	17JUL06	0	0	60	85	-16
T3330	Completion of Cable Riser at Grid D3	6	06MAY06	12MAY06	0	0	6	-18	-16
VA Building - ABWF									
T2200	ABWF Initial finishes GL	18	03APR06	27APR06	0	0	18	-55	3
T2210	ABWF Initial Finishes 1FL	18	03APR06	27APR06	0	0	18	-31	3
T3190	Installation of Hoist Beam at 1/F	18	08APR06	03MAY06	0	0	18	37	3
T2290	ABWF Initial Finishes Fan Rooms & Plemums	18	06MAY06	26MAY06	0	0	18	-50	-16
VA Building - External Finishes									
T2050	Transition Structure - waterproof	6	20MAR06	25MAR06	0	0	6	156	-25
T3060	Waterproofing - External Walls	24	20APR06	19MAY06	0	0	24	3	-16
T3110	Install louvres	75	06MAY06	03AUG06	0	0	75	3	-16
T3120	Install composite cladding panels	60	06MAY06	17JUL06	0	0	60	109	-16



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
VA Building - External Finishes									
T3080	Roofing Works	6	11MAY06	17MAY06	0	0	6	141	-18
T3090	Waterproofing - Roof	6	18MAY06	24MAY06	0	0	6	153	-18
T2110	Install Expanded Metal Cladding	36	20MAY06	03JUL06	0	0	36	121	-16
T2140	Install Slate Cladding	65	20MAY06	05AUG06	0	0	65	92	-16
T3070	Render & Paint	42	20MAY06	10JUL06	0	0	42	115	-16
T3100	Install GMS, S/S channels, balustraids & railing	18	27MAY06	17JUN06	0	0	18	133	-16
ELECTRICAL WORKS									
EM2000	E&M access to G/F	0	28APR06*		0	0	0	-55	3
EM2020	E&M access to 1/F	0	28APR06*		0	0	0	-31	3
EM2040	BS Works for HV Sw + Tx	12	28APR06	13MAY06	0	0	12	-55	3
EM2100	BS Works for LV Sw, MCC, UPS, LCC	12	28APR06	13MAY06	0	0	12	-31	3
EM2160	BS Works for 110V Charger Rm	12	15MAY06	27MAY06	0	0	12	-25	3
EM2200	BS Works for Genset	18	15MAY06	05JUN06	0	0	18	-37	3
EM2260	E&M Works in Corridors G/F	24	15MAY06	12JUN06	0	0	24	-31	3
EM2280	E&M Works in Corridors 1/F	24	15MAY06	12JUN06	0	0	24	-43	3
EM2310	BS Works in TVS Plenums	30	27MAY06	03JUL06	0	0	30	-50	-16
EM2220	Genset Installation	36	06JUN06	18JUL06	0	0	36	-37	3
EM2300	E&M Works in Risers	48	13JUN06	08AUG06	0	0	48	-43	3
EM2320	TVS Installation	90	21JUN06	05OCT06	0	0	90	-50	-16
EM2120	LV Sw, MCC, UPS, LCC Installation	30	26JUN06	31JUL06	0	0	30	-54	4
EM2050	HGC - Cable Containment	18	28APR06	20MAY06	0	0	18	49	3
Testing & Commissioning									
EM2180	110V Charger Rm Installation + T&C	12	29MAY06	12JUN06	0	0	12	-25	3



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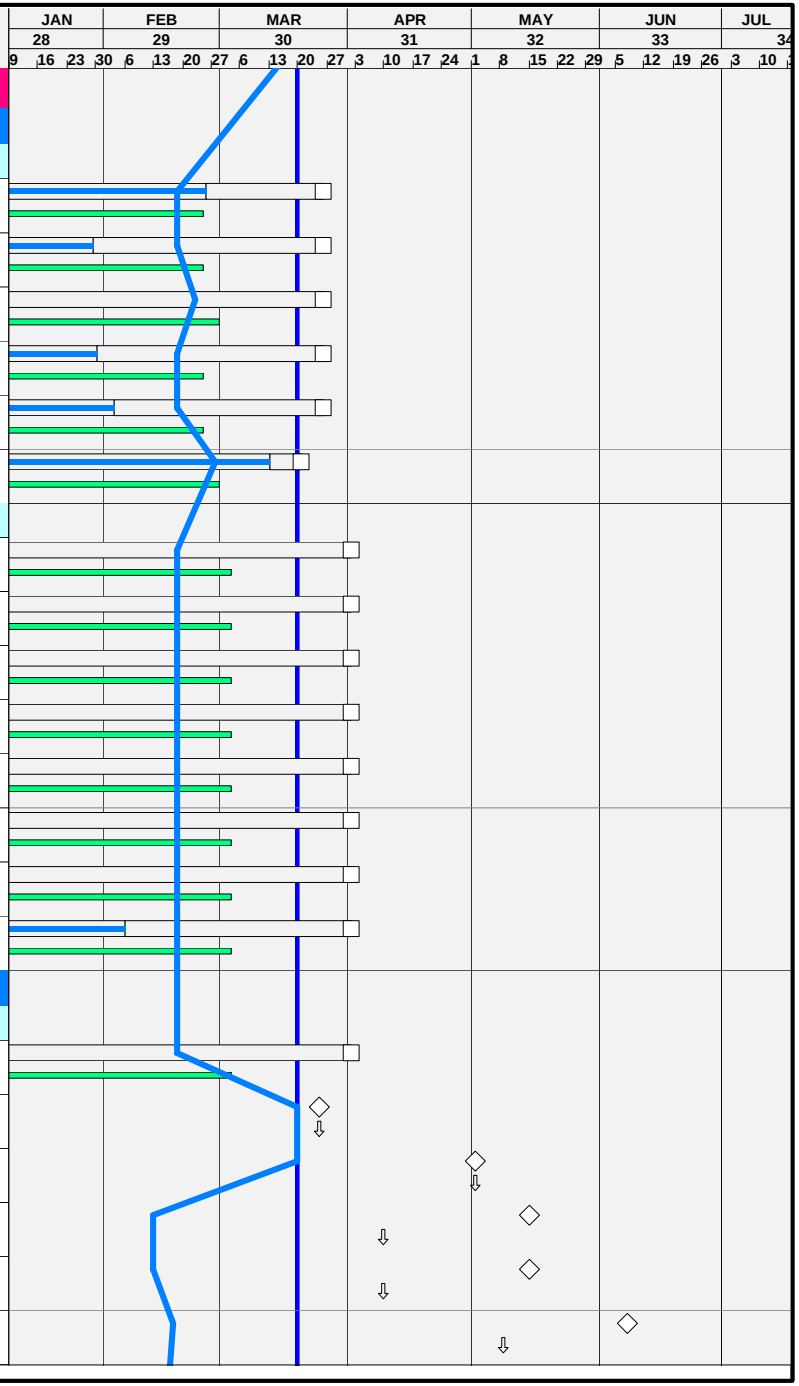
ENT NORTH PORTAL VENTILATION BUILDING									
SUBMITTALS & APPROVALS									
E&M EQPT.& MATERIAL APPROVALS									
6199	EntNpBldg-App. FS wet sys	18	04SEP04A	25MAR06	95	80	6	439	-25
6210	EntNpBldg-App. FS AFA & FM200 sys	18	14SEP04A	25MAR06	90	85	6	364	-25
6203	EntNpBldg-App. CMCS & ELV sys	18	20SEP04A	25MAR06	80	88	6	351	-22
6200	EntNpBldg-App. MVAC mech.vent. sys	18	23SEP04A	25MAR06	90	80	6	442	-25
6198	EntNpBldg-App. PD cleans. & flush water sys	18	04NOV04A	25MAR06	90	85	6	401	-25
6830	EntNpBldg-App. MVAC / TVF pneumatic sys	18	07MAR05A	20MAR06	98	98	0	439	-17
ABWF & Builders Works									
1955	NP.Bldg. - Prep & submit louvre details	24	19NOV04A	01APR06	50	50	12	454	-25
1959	NP.Bldg. - Prep & sub aluminium cladding	24	19NOV04A	01APR06	50	50	12	434	-25
1970	NP.Bldg. - Prep & submit slate cladding	24	19NOV04A	01APR06	50	50	12	424	-25
1946	NP.Bldg. - Prep & submit door & window detail	24	17FEB05A	01APR06	50	50	12	484	-25
1954	NP.Bldg. - Approve door & window details	24	06APR05A	01APR06	50	50	12	454	-25
1956	NP.Bldg. - Approve louvre details	24	08APR05A	01APR06	50	50	12	454	-25
1963	NP.Bldg. - Approve slate cladding	24	15JUN05A	01APR06	50	50	12	424	-25
1960	NP.Bldg. - Approve aluminium cladding	24	13DEC05A	01APR06	50	50	12	434	-25
PROCUREMENT - MATERIAL									
ABWF WORKS									
1967	NP.Bldg. - Procure aluminium cladding	180	18JAN05A	01APR06	50	50	12	434	-25
2052	NP.Bldg. - Initial delivery balust & metal works	0	25MAR06		0	0	0	491	0
2053	NP.Bldg. - Initial delivery fall arrest system	0	02MAY06		0	0	0	464	0
2039	NP.Bldg. - Initial delivery doors & windows	0	15MAY06		0	0	0	454	-25
2049	NP.Bldg. - Initial delivery louvre	0	15MAY06		0	0	0	454	-25
2050	NP.Bldg. - Initial delivery aluminium cladding	0	08JUN06		0	0	0	434	-25



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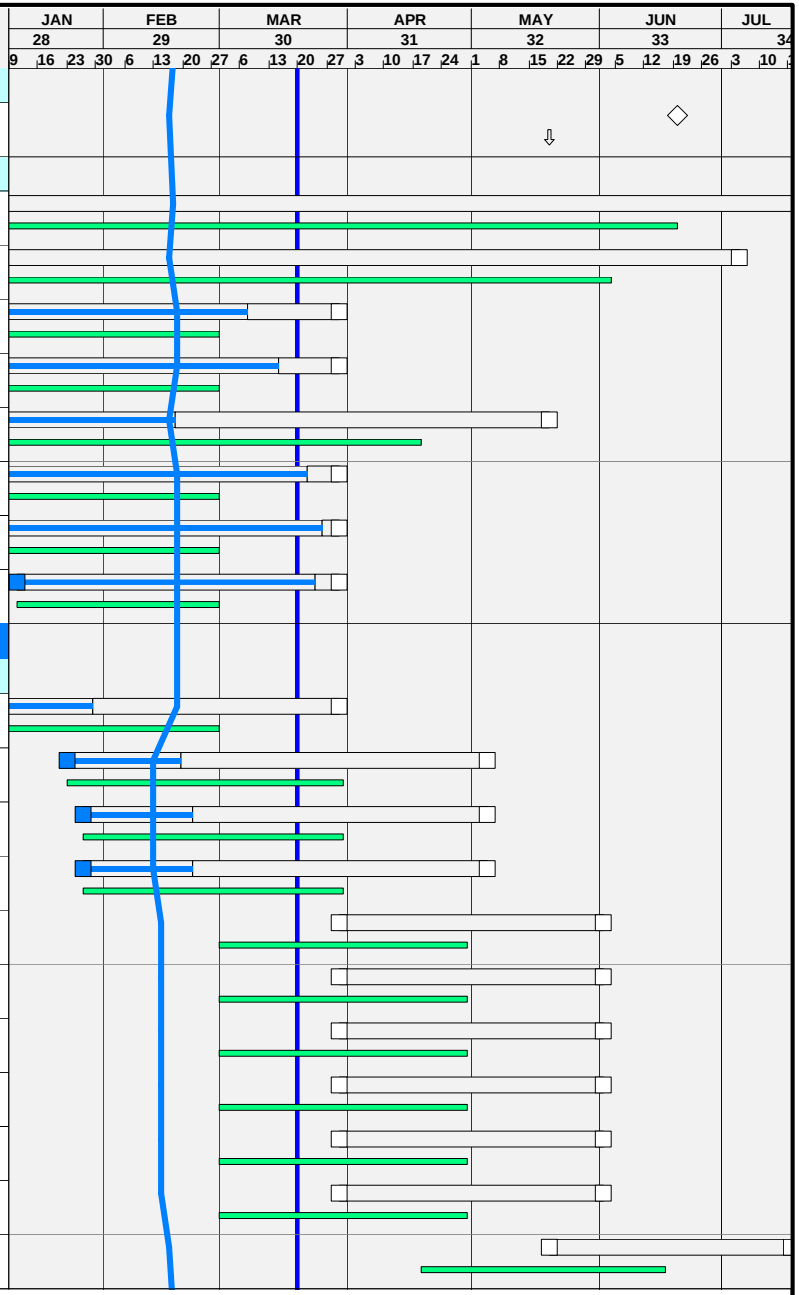
ABWF WORKS									
2051	NP.Bldg. - Initial delivery slate cladding	0	20JUN06		0	0	0	424	-25
E&M WORKS									
6208	EntNpBldg-Proc. & Manuf. of CMCS & ELV sys	180	29MAR05A	19JUL06	46	46	97	351	-25
6269	EntNpBldg-Proc & Manuf. FS AFA & FM200 sys	120	29MAR05A	04JUL06	35	35	78	364	-25
6205	EntNpBldg-Proc & Manuf. FS wet sys	120	06JUN05A	29MAR06	93	93	9	439	-25
6824	EntNpBldg-Proc & Manuf. TVF, Ductwks&Cont'l sys	180	09JUN05A	29MAR06	95	95	9	439	-25
6204	EntNpBldg-Proc & Manuf. Cleans & flush water sys	120	30SEP05A	19MAY06	61	61	47	401	-25
6831	EntNpBldg-Proc & Manuf. MVAC / TVF pneumatic sys	120	16DEC05A	29MAR06	93	93	9	439	-25
6206	EntNpBldg-Proc & Manuf. MVAC mech.vent. sys	180	06JAN06A	29MAR06	95	95	9	439	-25
6230	EntNpBldg-Proc & Manuf. MVAC Package AC Units	120	11JAN06A	29MAR06	93	93	9	439	-25
MAJOR EQUIPMENT DELIVERY									
ENT NORTH PORTAL BUILDING									
6212	EntNpBldg-Del. LV power dist. equip't to 1/F	52	03JAN06A	29MAR06	30	83	9	487	-25
6211	EntNpBldg-Del. HV power dist. equip't to 2/F	48	23JAN06A	04MAY06	27	27	35	461	-25
6839	EntNpBldg-Del. MVAC MCC, & control sys to 3/F	48	27JAN06A	04MAY06	27	27	35	461	-25
8501	EntNpBldg-Del. building related luminaires	48	27JAN06A	04MAY06	27	27	35	461	-25
6231	EntNpBldg-Del. FS pumps & tank to G/F	48	30MAR06	01JUN06	0	0	48	439	-25
6242	EntNpBldg-Del. building vent. fans	48	30MAR06	01JUN06	0	0	48	439	-25
6327	EntNpBldg-Del. Package AC Units	48	30MAR06	01JUN06	0	0	48	439	-25
6825	EntNpBldg-Del. TVS to Plenum & 3/F	48	30MAR06	01JUN06	0	0	48	439	-25
6832	EntNpBldg-Del. MVAC /TVF pneumatic sys to 1/F	48	30MAR06	01JUN06	0	0	48	439	-25
6845	EntNpBldg-Del. ENT Tunnel (Hyd/HR) pumps to G/F	48	30MAR06	01JUN06	0	0	48	439	-25
6229	EntNpBldg-Del. PD pump & tank to G/F	48	20MAY06	17JUL06	0	0	48	401	-25



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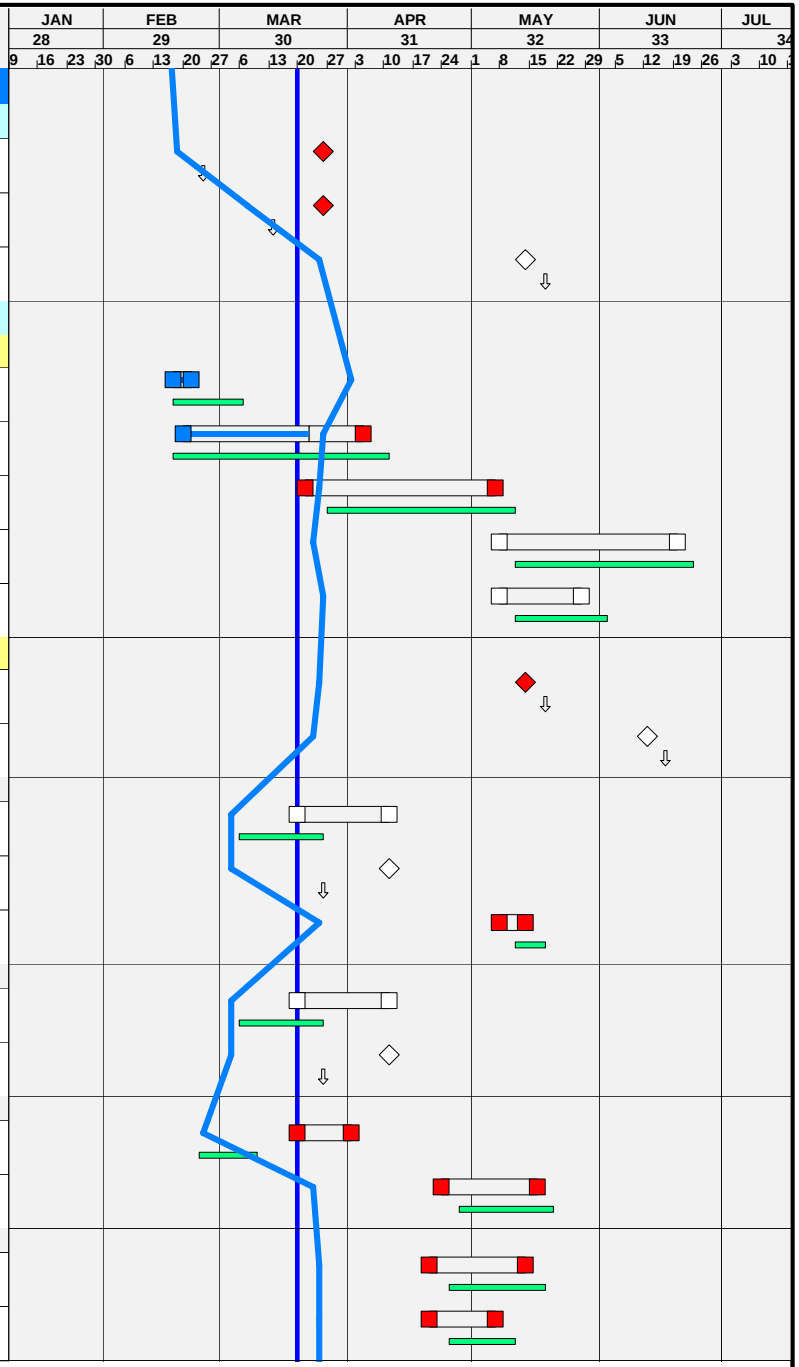
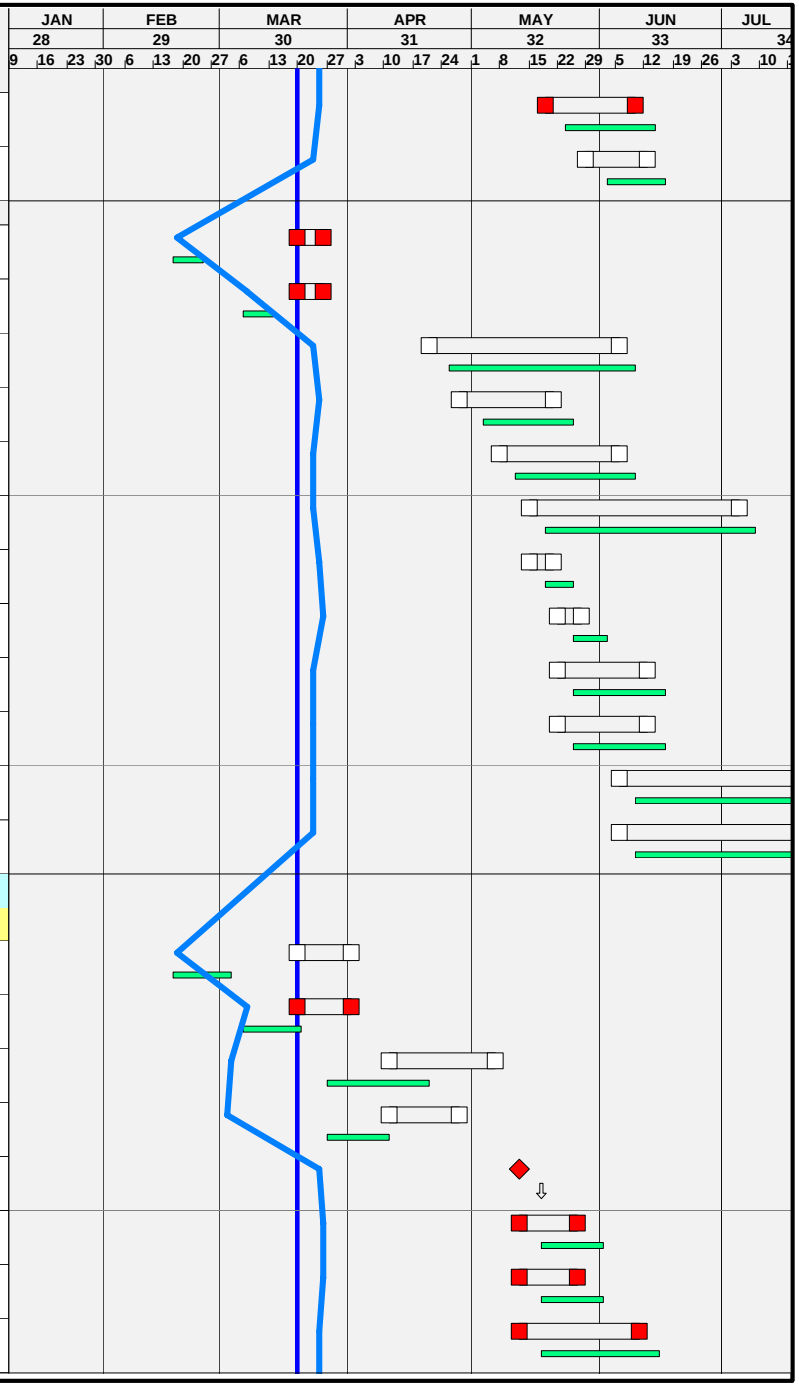
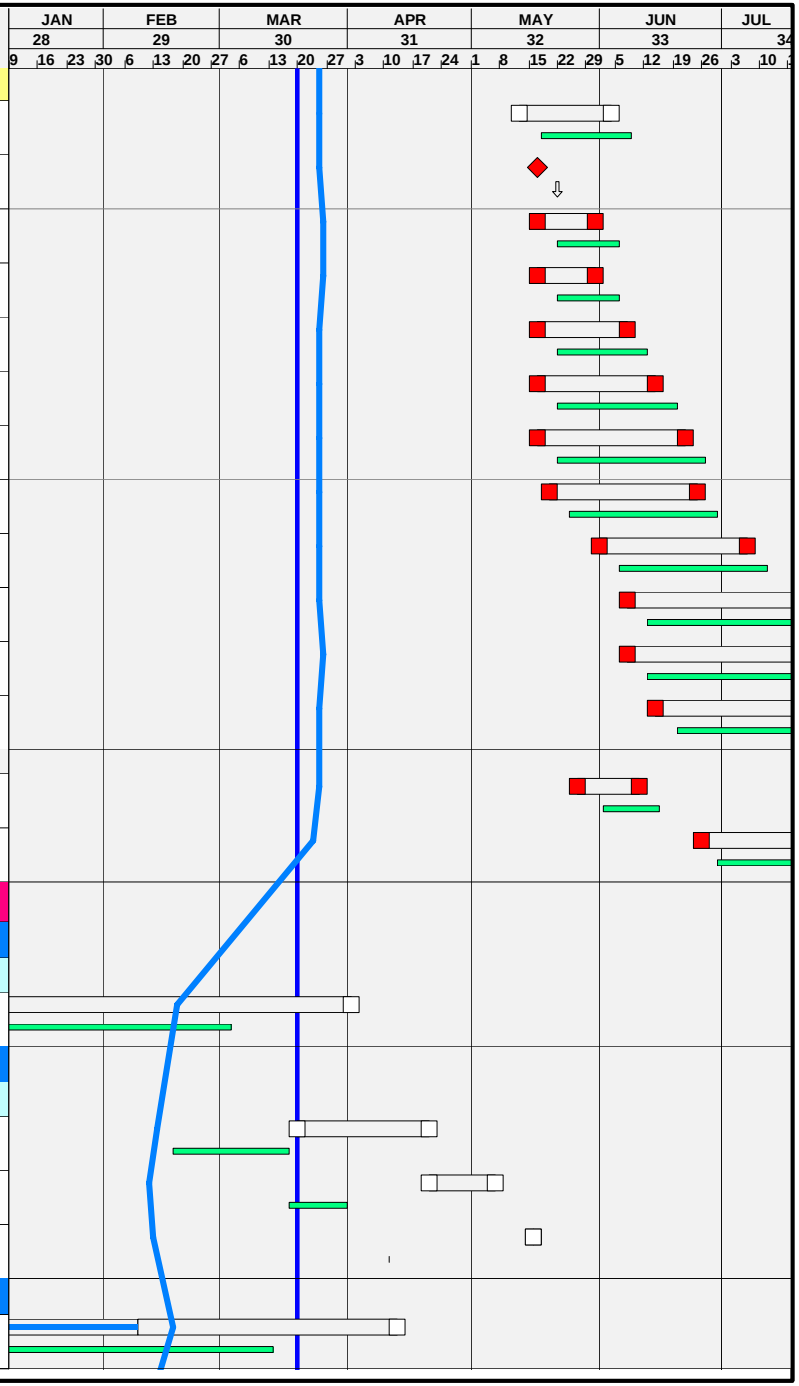
CONSTRUCTION									
TCSS Access at NP Bldg									
T1550	NB Below NP Bldg TCSS initial Access	0		25MAR06	0	0	0	-25	-29
T1580	SB Below NP Bldg TCSS initial Access	0		25MAR06	0	0	0	2	-12
T1400	NP Bldg - TCSS Access within entire structure	0		13MAY06	0	0	0	454	4
CIVIL & ABWF WORKS									
RC Superstructure									
T1640	NP Bldg - OHVD Slab SB - cure strike	14	18FEB06A	21FEB06A	100	0	0		11
T1300	NP Bldg - 3rdF walls and 4th Flr Slab(+93.83mPD)	43	20FEB06A	04APR06	70	0	14	-54	4
T1310	NP Bldg - 4th Floor - walls and Roof(+100.63mPD)	34	22MAR06	06MAY06	0	0	34	-41	4
S1370	Construct earth mat	36	08MAY06	19JUN06	0	0	36	23	4
T1390	NP Bldg - Exhaust Shaft (+110.38mPD)	18	08MAY06	27MAY06	0	0	18	41	4
ABWF Works									
T1350	BB Access 3rd Floor - critical rooms	0		13MAY06	0	0	0	-48	4
T1360	BB Access 4th Floor/Roof - critical rooms	0		12JUN06	0	0	0	49	4
Internal Works GF									
T1650	GF ABWF Initial finishes	18	20MAR06	10APR06	0	0	18	99	-12
T1320	GF BB Access grnd Floor	0		10APR06*	0	0	0	99	-12
T3320	Complete Works to Cable Risers	6	08MAY06	13MAY06	0	0	6	-13	4
NP Bldg - Internal Works 1F									
T1590	1F & LP ABWF Initial finishes	18	20MAR06	10APR06	0	0	18	135	-12
T1330	1F BB access 1st Floor/LPL - critical rooms	0		10APR06	0	0	0	135	-12
NP Bldg - Internal Works 2F									
T1990	Installation of Crane beam to underside of 3FL	12	20MAR06	01APR06	0	0	12	-1	-20
T1600	2F ABWF Initial Finishes	18	24APR06	16MAY06	0	0	18	-54	4
NP Bldg Internal Works 3/F									
T1610	3F ABWF initial finishes	18	21APR06	13MAY06	0	0	18	-48	4
T2000	Installation of Crane beam to underside of 4FL	12	21APR06	06MAY06	0	0	12	-25	4



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
NP Building - Internal Works									
T2430	Installation of Crane beam to underside of 5FL	18	19MAY06	09JUN06	0	0	18	-41	4
T1620	4F ABWF initial finishes	12	29MAY06	12JUN06	0	0	12	41	4
NP Bldg - Roofing & External Facade									
T1530	NP Bldg - OHVD Slab NB - Finishes	6	20MAR06	25MAR06	0	0	6	-22	-25
T1560	NP Bldg - OHVD Slab SB - Finishes	6	20MAR06	25MAR06	0	0	6	1	-11
T1770	Install Expanded metal cladding	36	21APR06	05JUN06	0	0	36	144	4
T1760	Install Slate Cladding above NB carriageway	18	28APR06	20MAY06	0	0	18	138	4
T2240	Waterproofing - External Walls	24	08MAY06	05JUN06	0	0	24	84	4
T1730	Painting	42	15MAY06	04JUL06	0	0	42	120	4
T1800	Roofing works	6	15MAY06	20MAY06	0	0	6	138	4
T1700	Waterproofing - Roof	6	22MAY06	27MAY06	0	0	6	150	4
T1780	Install Slate Cladding above SB carriageway	18	22MAY06	12JUN06	0	0	18	138	4
T1790	Install GMS, S/S channels, balustrades & railing	18	22MAY06	12JUN06	0	0	18	138	4
T1740	Install louvres	90	06JUN06	19SEP06	0	0	90	54	4
T1750	Install composite cladding Panels	60	06JUN06	15AUG06	0	0	60	84	4
E&M - GENERAL									
ELECTRICAL WORKS									
T1540	NP Bldg - OHVD Slab NB - BB 1st fix	12	20MAR06	01APR06	0	0	12	484	-25
T1570	NP Bldg - OHVD Slab SB - BB 1st Fix	12	20MAR06	01APR06	0	0	12	-5	-11
T1720	Installation of FS Pumps & Pipework at GF	18	11APR06	06MAY06	0	0	18	99	-12
T1810	Installation of FM200 at 1F	12	11APR06	27APR06	0	0	12	135	-12
EM2540	E&M access to 3/F (rev C Access date 08Oct05)	0	13MAY06*		0	0	0	-48	4
EM2640	BS Works for MCC, UPS, LCC	12	13MAY06	26MAY06	0	0	12	-30	4
EM2760	BS Works for 110V Charger Rm	12	13MAY06	26MAY06	0	0	12	-18	4
EM2880	E&M Works in Corridors 3/F	24	13MAY06	10JUN06	0	0	24	-36	4



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
ELECTRICAL WORKS									
EM2890	Compressor Room Installation	18	13MAY06	03JUN06	0	0	18	133	4
EM2560	E&M access to 2/F	0	17MAY06*		0	0	0	-54	4
EM2580	BS Works for HV Sw + Tx	12	17MAY06	30MAY06	0	0	12	-33	4
EM2700	BS Works for LV Sw	12	17MAY06	30MAY06	0	0	12	-54	4
EM2800	BS Works for Genset	18	17MAY06	07JUN06	0	0	18	-45	4
EM2860	E&M Works in Corridors 2/F	24	17MAY06	14JUN06	0	0	24	-39	4
EM2930	BS Works for TVS Plenums	30	17MAY06	21JUN06	0	0	30	-51	4
EM2660	MCC, UPS, LCC Installation	30	20MAY06	24JUN06	0	0	30	-30	4
EM2720	LV Sw Installation	30	01JUN06	06JUL06	0	0	30	-54	4
EM2820	Genset Installation	36	08JUN06	20JUL06	0	0	36	-45	4
EM2940	TVS Installation	100	08JUN06	04OCT06	0	0	100	-51	4
EM2900	E&M Works in Risers	48	15JUN06	10AUG06	0	0	48	-39	4
Testing & Commissioning									
EM2780	110V Charger Rm Installation + T&C	12	27MAY06	10JUN06	0	0	12	-18	4
EM2680	MCC, LCC Termination + T&C	30	26JUN06	31JUL06	0	0	30	-30	4
TOLL PLAZA & ANCILLIARY STRUCTURES									
SUBMITTALS & APPROVALS									
ABWF & BW SUBMITTALS									
1522	TP/FB - Approve footbridge details	24	28JUL05A	01APR06	50	50	12	466	-25
Design & Engineering - Temporary Works									
50.030.020									
1244	Design/ICE Check Tool Booth Canopy	24	20MAR06	20APR06	0	0	24	453	-25
1341	Eng Approve Dsg Tool Booth Canopy	12	21APR06	06MAY06	0	0	12	453	-25
1358	Issue Constr Dwgs Tool Booth Canopy	0	16MAY06	15MAY06	0	0	0	453	-25
Procurement - Major Material									
2184	Order/Fabricate/Deliver FBridge Structural Steel	120	01APR05A	12APR06	83	83	20	476	-25



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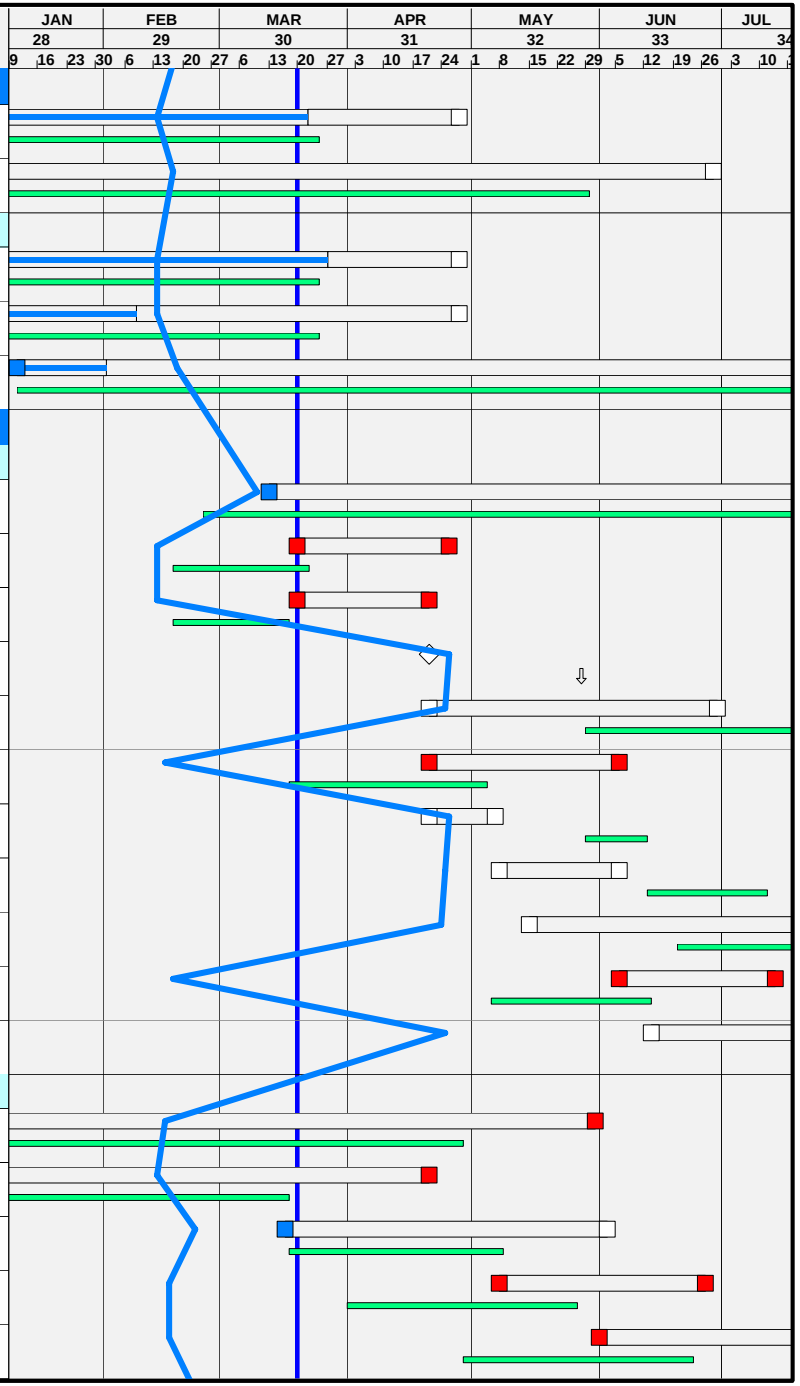
Procurement - Major Material									
1518	Admin Bldg - Procure & maunfacture lift	270	01JUN05A	27APR06	89	89	30	466	-25
2185	Order/Fabricate/Deliver Tool Booth Canopy	90	01DEC05A	28JUN06	11	11	80	416	-25
Toll Plaza									
1512	TP/FB - Procure & maunfacture lifts (x2)	270	15JUL05A	27APR06	89	89	30	466	-25
1521	TP/FB - Procure & fabricate footbridge	110	15JUL05A	27APR06	73	73	30	466	-25
7548	TP-Proc & Manuf. MVAC Package AC Units	120	11JAN06A	15AUG06	10	10	120	328	-25
Construction Works									
TOLL PLAZA EAST SIDE									
K1282	Provision of micro-satelite-office at East Loop	186	13MAR06A	21OCT06	0	0	170	-8	-9
K1182	East Loop Road - Drainage	28	20MAR06	25APR06	0	0	28	-8	-25
K1202	Remove/relocate - Workshop & Offices	24	20MAR06*	20APR06	0	0	24	-10	-25
S1360	Remove stockpile (all used within tunnel)	0		20APR06	0	0	0	35	30
K1212	Main Carid'way Drain (D3 & D4) - after stockpile	57	21APR06	29JUN06	0	0	57	37	30
K1232	Carriageway Drainage Prior to TCSS	36	21APR06	05JUN06	0	0	36	-10	-25
K1262	HML Bases (2no. Loop rd, Admin bldg)	12	21APR06	06MAY06	0	0	12	82	30
K1252	BB lighting works	24	08MAY06	05JUN06	0	0	24	144	30
K1222	Main carriageway Ducting & Drawpits	54	15MAY06	02AUG06	0	0	54	37	30
S1160	Installation of Ducting and Drawpits for TCSS	32	06JUN06	13JUL06	0	0	32	-10	-25
K1242	Main carriageway - East Subbase and kerbs	53	14JUN06	31AUG06	0	0	53	37	30
TOLL PLAZA WEST SIDE									
K1161	CSJV, Remove TAR1, drainage, formation (RE Wall)	56	24SEP05A	30MAY06	0	0	56	-61	-25
K1231	CSJV Complete Drainage & Vacate part	24	31DEC05A	20APR06	0	0	24	-38	-25
K1201	West Loop Drainage Works	38	17MAR06A	02JUN06	0	0	34	35	-21
K1181	Main Carriageway - West side drainage - NP-FB	42	08MAY06	26JUN06	0	0	42	-38	-25
K1241	Main Carriageway - West side drainage - FB-SHT	45	01JUN06	24JUL06	0	0	45	-61	-25



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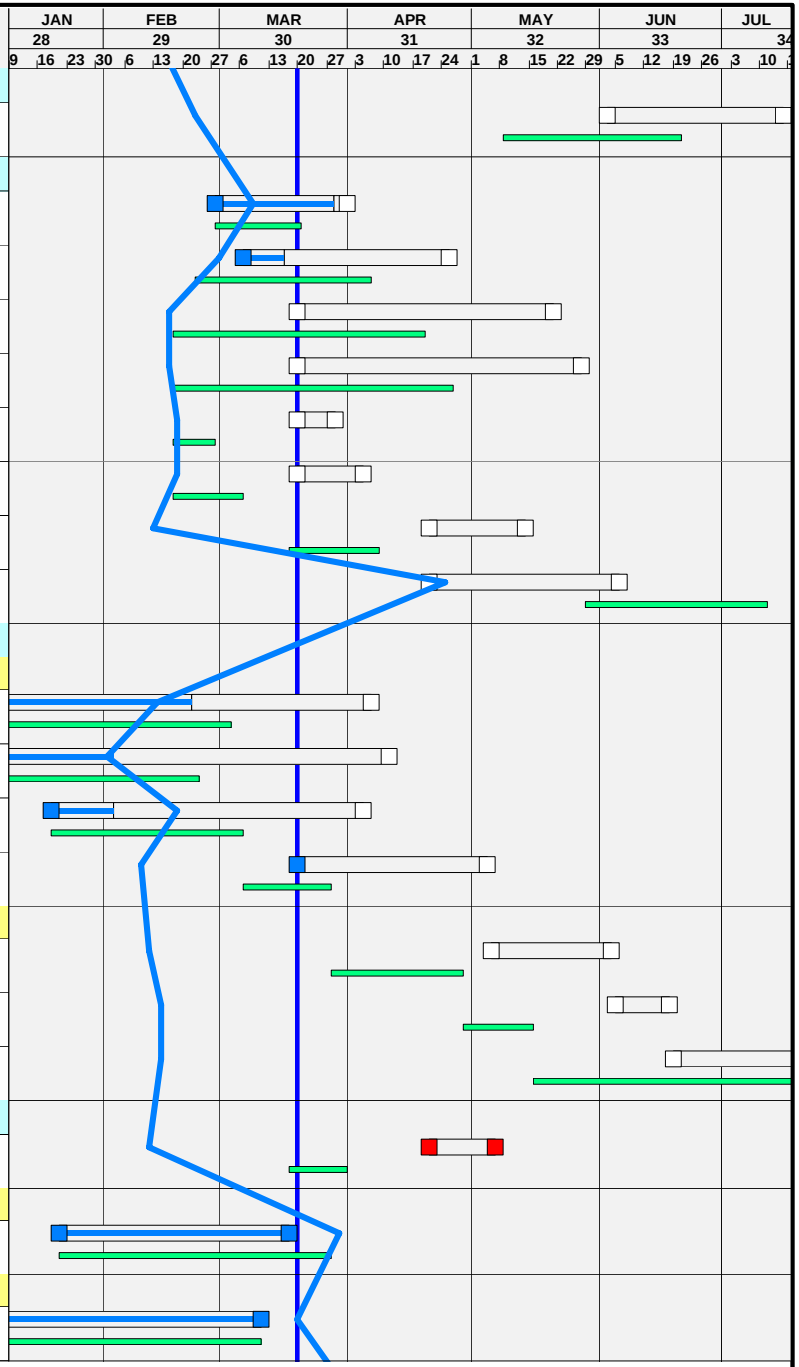
TOLL PLAZA WEST SIDE									
K1171	West Loop road - Roadworks	36	03JUN06	15JUL06	0	0	36	35	-21
TOLL PLAZA - works adjacent to building									
S1415	SHT SPB - Drainage & Ducting	18	28FEB06A	31MAR06	90	0	3	193	-10
S1427	Admin Blg & Wshop - Drainage & ducting	36	07MAR06A	25APR06	20	0	28	146	-13
S1390	ENT NPB - HML Base	8	20MAR06	20MAY06	0	0	8	150	-25
S1400	ENT NPB - Kerbs & Rwks & misc Finishes	12	20MAR06	27MAY06	0	0	12	150	-25
S1416	SHT SPB - HML Base	8	20MAR06	28MAR06	0	0	8	190	-25
S1417	SHT SPB - Kerbs & Rwks & misc finishes	12	20MAR06	04APR06	0	0	12	190	-25
S1380	ENT NPB - Drainage & Ducting	18	21APR06	13MAY06	0	0	18	150	-25
S1440	Install Earth Mat for Admin Bldg & SHT NP Bldg	36	21APR06	05JUN06	0	0	36	35	30
TOLL PLAZA COLLECTOR'S SUBWAY									
STRUCTURE									
101719	TP/CS - Waterproof & backfill - Ptn B	18	14OCT05A	06APR06	75	25	15	79	-28
101720	TP/CS - Waterproof & backfill - Ptn C	18	20DEC05A	10APR06	40	70	15	79	-38
101717	TP/CS - Substructure construction - Ptn D	18	19JAN06A	04APR06	20	20	14	83	-25
101721	TP/CS - Waterproof & backfill - Ptn D	18	20MAR06A	04MAY06	0	0	17	79	-28
ABWF									
101471	TP/CS - Internal Finishes Ptn A, B & C	24	06MAY06	03JUN06	0	0	24	79	-28
101472	TP/CS - Internal Finishes Ptn D	12	05JUN06	17JUN06	0	0	12	79	-28
S1290	Toll Subway - E&M	54	19JUN06	21AUG06	0	0	54	79	-28
TOLL PLAZA FOOTBRIDGE									
S1274	Excavate & Construct Butress	12	21APR06	06MAY06	0	0	12	-38	-25
FOUNDATIONS									
S1284	Construct Footing & Pier FT1 (inc machin Rm)	45	21JAN06A	17MAR06A	100	30	0		8
STRUCTURAL STEELWORKS									
S1230	Bidge deck - Fabrication & 1st delivery	48	31DEC05A	10MAR06A	100	56	0		0



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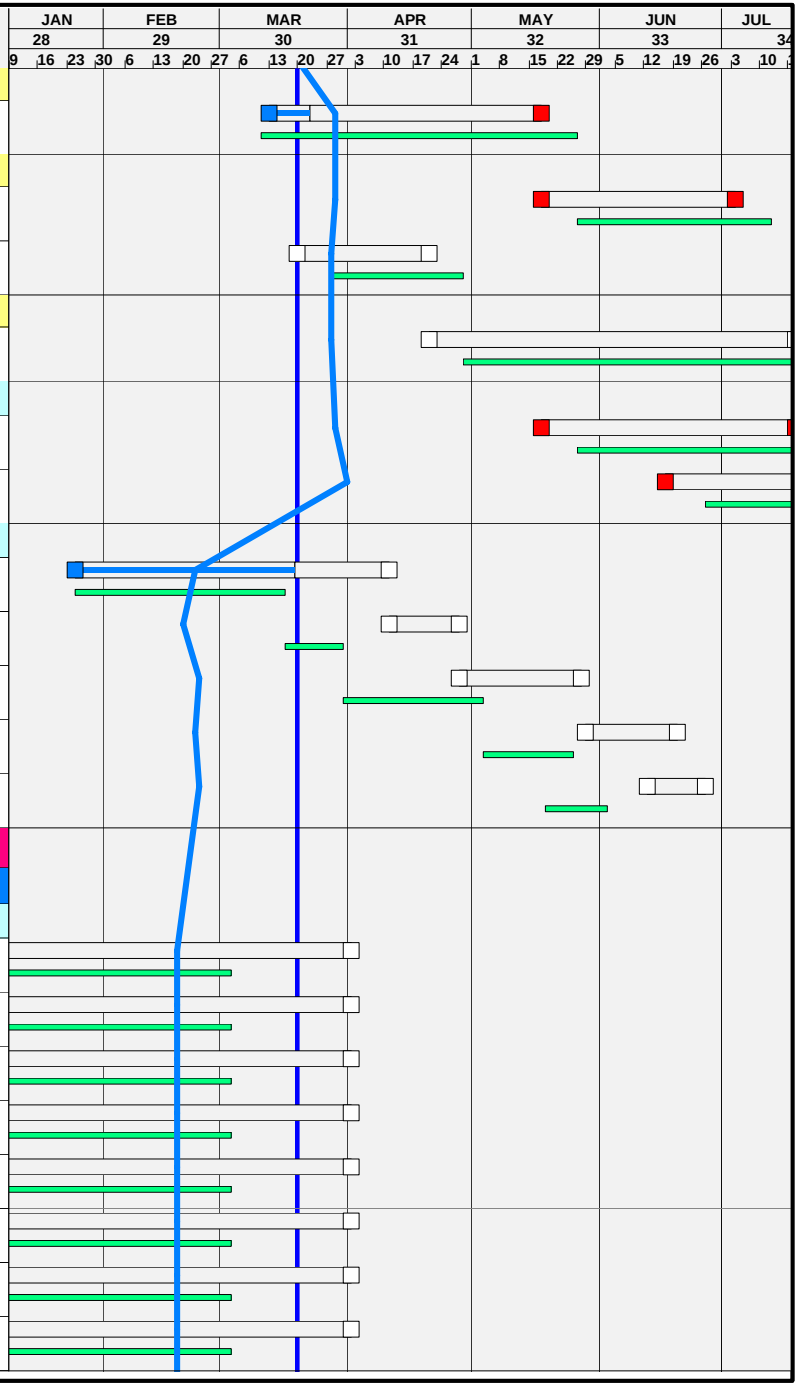
STRUCTURAL STEELWORKS									
S1330	Toll Ftbridge - Erection(Inc weld prior to lift)	60	13MAR06A	17MAY06	15	0	45	-6	8
ABWF									
S1264	Installation of Aluminium Cladding	38	18MAY06	03JUL06	0	0	38	-1	8
S1340	Toll Plaza - Erection of Lift Steel Work	24	20MAR06	20APR06	0	0	24	84	7
E & M WORKS									
S1200	Toll Plaza Footbridge - Lift Installation	72	21APR06	18JUL06	0	0	72	84	7
TOLL PLAZA BOOTHS									
S1210	Construct Toll Islands 17 No.	51	18MAY06	18JUL06	0	0	51	-6	8
S1220	Construct Toll Booths - 22No.	88	17JUN06	28SEP06	0	0	88	-6	8
ADMIN.BLDG. - WORKSHOP									
S1060	Workshop - Exc, Footings, Drainage & Services	30	25JAN06A	10APR06	70	25	18	66	-20
S1120	Workshop - Base slab	12	11APR06	27APR06	0	0	12	66	-20
S1130	Workshop - Walls	24	28APR06	27MAY06	0	0	24	66	-20
S1240	Workshop - Roof Slab +70.0mPD	18	29MAY06	19JUN06	0	0	18	66	-20
S1430	Workshop Roof Slab +73.0mPD	12	13JUN06	26JUN06	0	0	12	66	-20
ADMINISTRATION BUILDING									
SUBMITTALS & APPROVALS									
ABWF. MTRL SUBMiTTALS									
1883	Admin.Bldg. - Prep & sub sheet decking details	24	13NOV04A	01APR06	12	12	12	454	-25
1885	Admin.Bldg. - Prep & submit wood ceiling details	24	20NOV04A	01APR06	50	50	12	436	-25
1881	Admin.Bldg. - Prep & sub GRP water tank details	24	12JAN05A	01APR06	50	50	12	430	-25
1892	Admin.Bldg. - Approve door & window details	24	06APR05A	01APR06	50	50	12	460	-25
1894	Admin.Bldg. - Approve louvre details	24	07APR05A	01APR06	50	50	12	454	-25
1819	Admin.Bldg. - Approve stone cladding design	24	15JUN05A	01APR06	50	50	12	424	-25
1820	Admin.Bldg. - Approve slate cladding design	24	15JUN05A	01APR06	50	50	12	424	-25
1887	Admin.Bldg. - Prep & sub suspend ceiling details	24	12AUG05A	01APR06	50	50	12	400	-25



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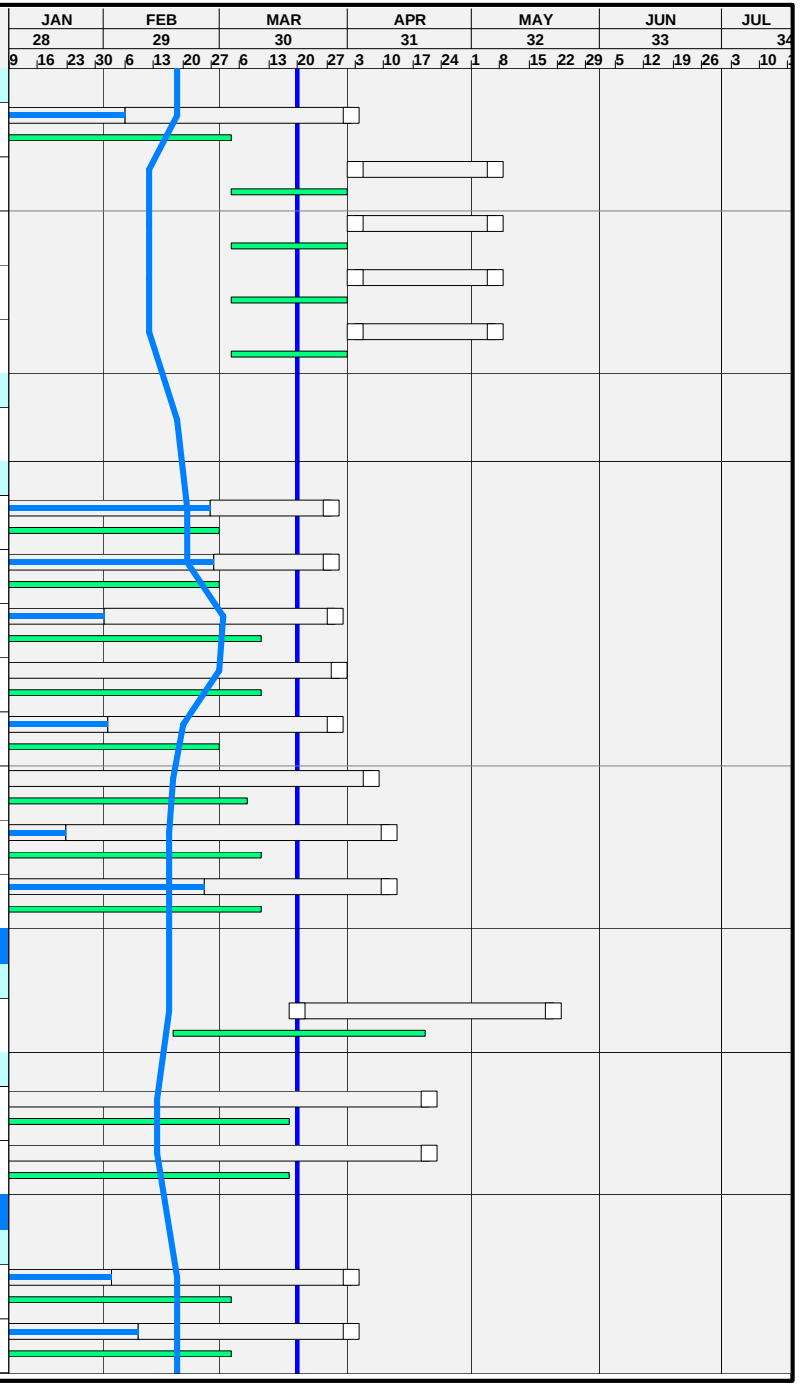
ABWF. MTRL SUBMiTTALS									
1898	Admin.Bldg. - Approve aluminium cladding	24	13DEC05A	01APR06	50	50	12	424	-25
1882	Admin.Bldg. - Approve GRP water tank details	24	03APR06	06MAY06	0	0	24	430	-25
1884	Admin.Bldg. - Approve sheet decking details	24	03APR06	06MAY06	0	0	24	454	-25
1886	Admin.Bldg. - Approve wood ceiling details	24	03APR06	06MAY06	0	0	24	436	-25
1888	Admin.Bldg. - Approve suspended ceiling details	24	03APR06	06MAY06	0	0	24	400	-25
E&M EQPT. / MTRL. SUBMITTALS									
8248	AdmBldg-Engineer to provide Cater'g equip detail	0	07APR05A		100	100	0		-25
E&M EQPT. / MTRL. APPROVALS									
8503	AdmBldg-App. building related luminaires	18	18AUG04A	27MAR06	95	50	7	439	-23
6388	AdmBldg-App. FS wet sys	18	04SEP04A	27MAR06	95	50	7	439	-23
6399	AdmBldg-App. FS AFA & FM200 sys	18	14SEP04A	28MAR06	90	85	8	364	-15
6392	AdmBldg-App. of CMCS, TCS & ELV sys	18	20SEP04A	29MAR06	80	80	9	351	-16
6389	AdmBldg-App. MVAC mech.vent. sys	18	23SEP04A	28MAR06	90	50	8	439	-24
6396	AdmBldg-App. FCUs & PAUs	18	23SEP04A	06APR06	80	80	15	364	-25
6387	AdmBldg-App. PD all fresh & flush water sys	18	04NOV04A	10APR06	85	85	18	401	-25
6478	AdmBldg-App. Chiller & Pumps	18	17JAN05A	10APR06	90	90	18	402	-25
DESIGN & ENGINEERING									
TEMPORARY WORKS									
1373	Design/ICE Temp False/Formwork Admin Bldg	48	20MAR06	20MAY06	0	0	48	448	-25
ABWF WORKS									
1802	Admin.Bldg. - Design stone cladding	36	04APR05A	20APR06	50	50	24	424	-25
1803	Admin.Bldg. - Design slate cladding	36	04APR05A	20APR06	50	50	24	424	-25
PROCUREMENT - MATERIAL									
ABWF WORKS									
1904	Admin.Bldg. - Procure wood ceiling	90	19JAN05A	01APR06	87	87	12	434	-25
1909	Admin.Bldg. - Procure balustrade & metal works	90	09MAR05A	01APR06	87	87	12	472	-25



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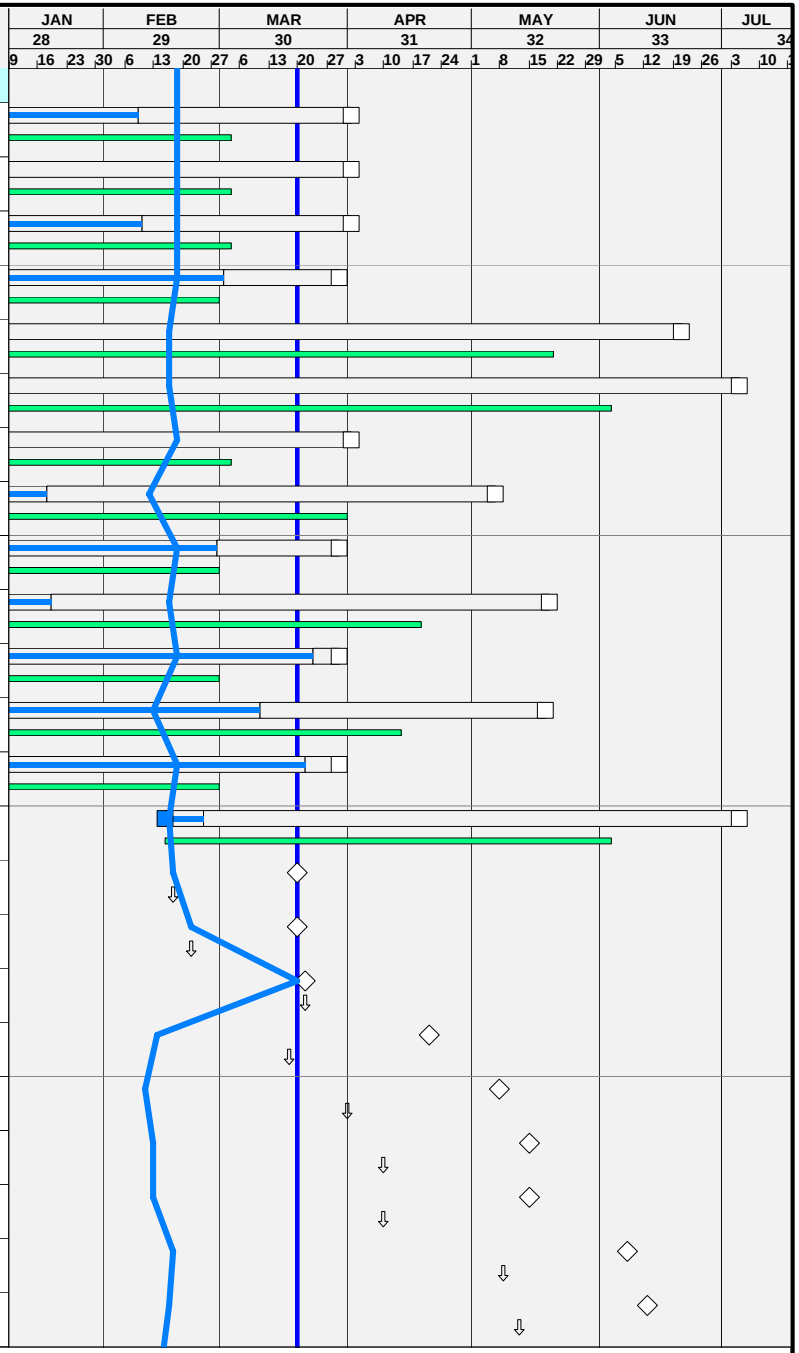
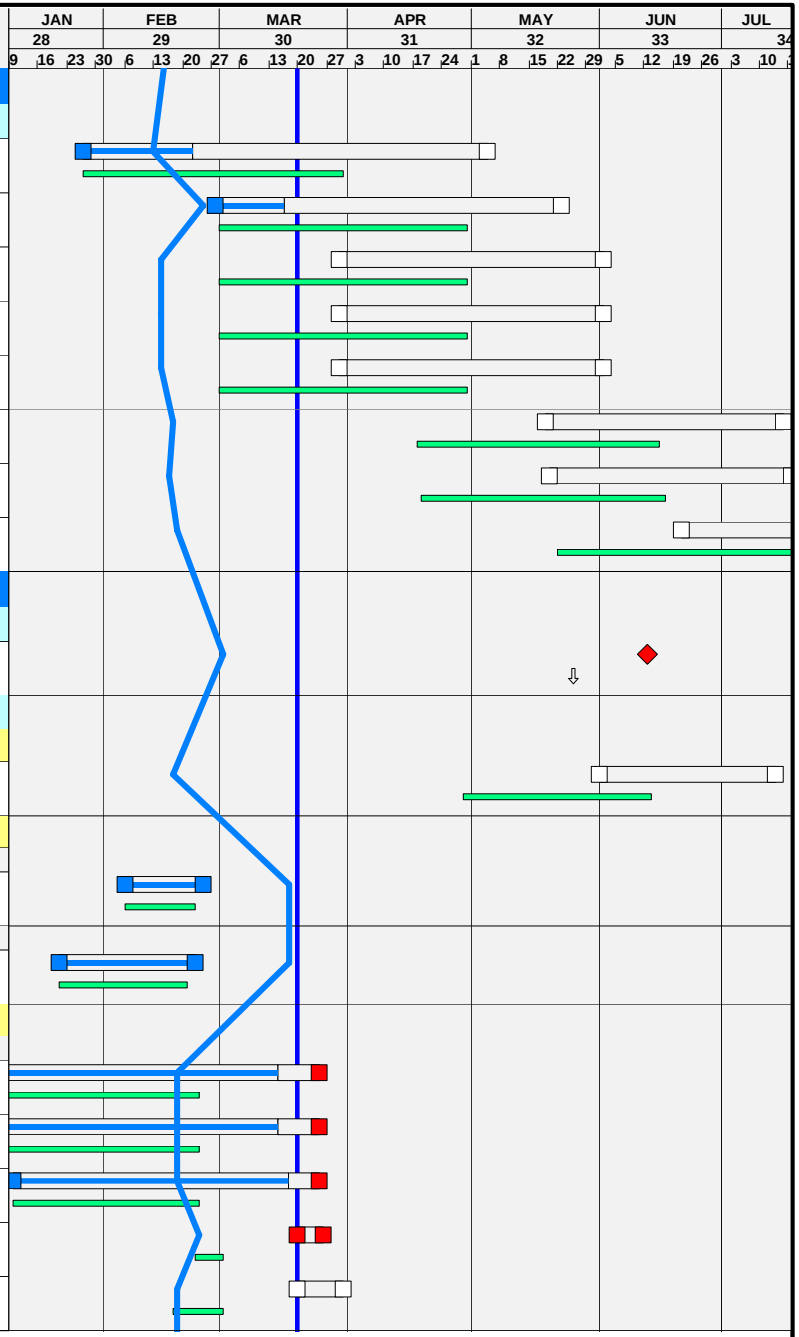
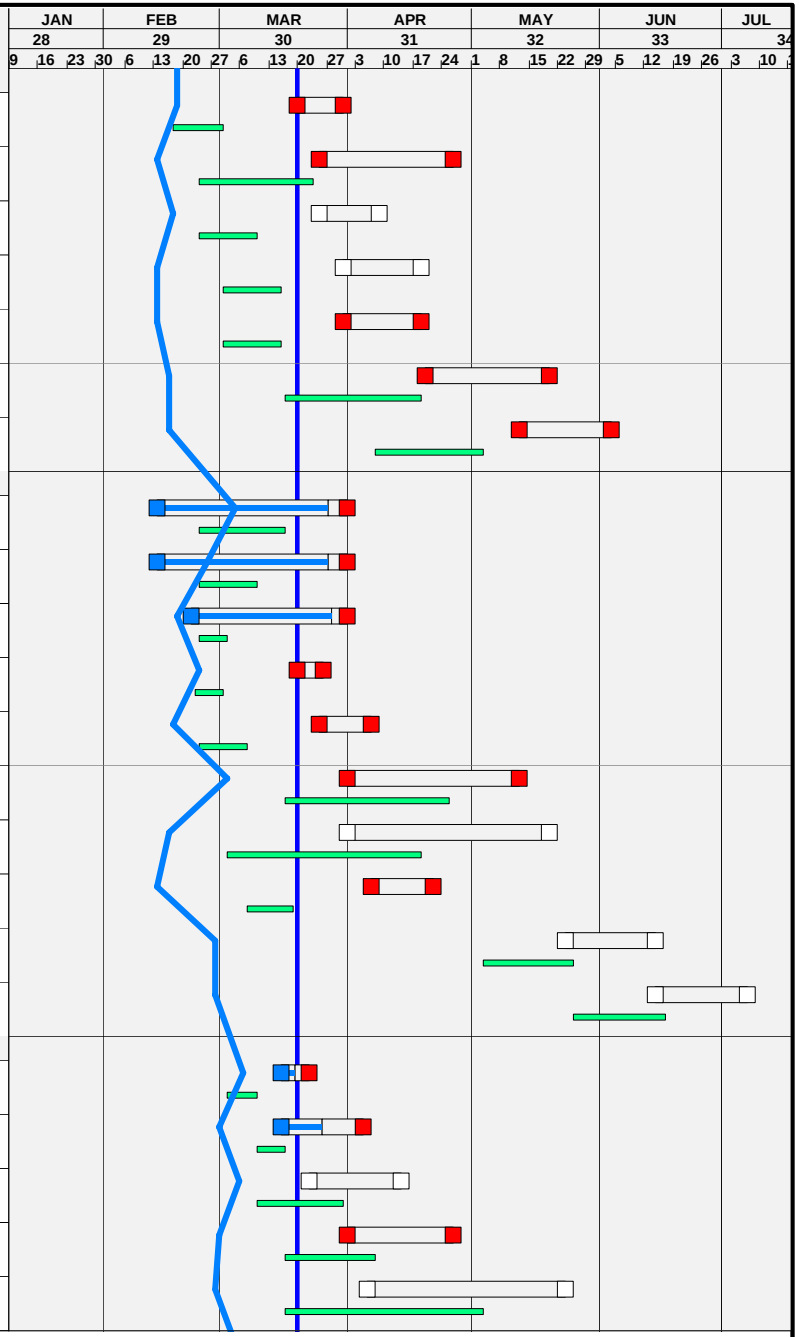
ABWF WORKS									
1910	Admin.Bldg. - Procure aluminium cladding	90	09MAR05A	01APR06	87	87	12	394	-25
1916	Admin.Bldg. - Procure slate cladding	90	14MAR05A	01APR06	50	50	12	394	-25
1902	Admin.Bldg. - Procure GRP water tank	90	16MAR05A	01APR06	87	87	12	454	-25
6391	AdmBldg-Proc & Manuf. LV power dist. equip't	120	21MAR05A	29MAR06	93	93	9	447	-25
6397	AdmBldg-Proc & Manuf. of CMCS, ELV & TCS sys	180	29MAR05A	20JUN06	59	59	73	351	-25
6444	AdmBldg-Proc & Manuf. FS AFA & FM200 sys	120	29MAR05A	04JUL06	30	30	84	364	-25
1917	Admin.Bldg. - Procure stone cladding	90	03MAY05A	01APR06	50	50	12	394	-25
1905	Admin.Bldg. - Procure suspended ceiling	120	09MAY05A	06MAY06	70	70	36	370	-25
6394	AdmBldg-Proc & Manuf. FS wet sys	90	06JUN05A	29MAR06	90	90	9	439	-25
6393	AdmBldg-Proc & Manuf. PD fresh & flush water sys	90	30SEP05A	19MAY06	48	48	47	401	-25
8504	AdmBldg-Proc & Manf bldg related luminaires	180	23NOV05A	29MAR06	95	95	9	439	-25
6479	AdmBldg-Proc & Manuf. Chiller & Pumps	90	03JAN06A	18MAY06	49	49	46	402	-25
6395	AdmBldg-Proc & Manuf. MVAC mech.vent. sys	90	06JAN06A	29MAR06	90	90	9	439	-25
6415	AdmBldg-Proc & Manuf. FCUs & PAUs	90	16FEB06A	04JUL06	7	7	84	364	-25
1938	Admin.Bldg. - Initial delivey glass canopy	0	20MAR06		0	0	0	496	-25
2055	Admin.Bldg. - Initial delivery curtain wall	0	20MAR06		0	0	0	496	-22
2059	Admin.Bldg. - Initial delivery fall arrest syst	0	22MAR06		0	0	0	494	0
2060	Admin.Bldg. - Initial delivery balust & mtl wks	0	21APR06		0	0	0	472	-25
2057	Admin.Bldg. - Initial delivery doors & windows	0	08MAY06		0	0	0	460	-25
2054	Admin.Bldg. - Initial delivery louvres	0	15MAY06		0	0	0	454	-25
2056	Admin.Bldg. - Initial delivery sheet decking	0	15MAY06		0	0	0	454	-25
2058	Admin.Bldg. - Initial delivery wood ceiling	0	08JUN06		0	0	0	434	-25
2063	Admin.Bldg. - Initial delivery GRP water tank	0	13JUN06		0	0	0	430	-25



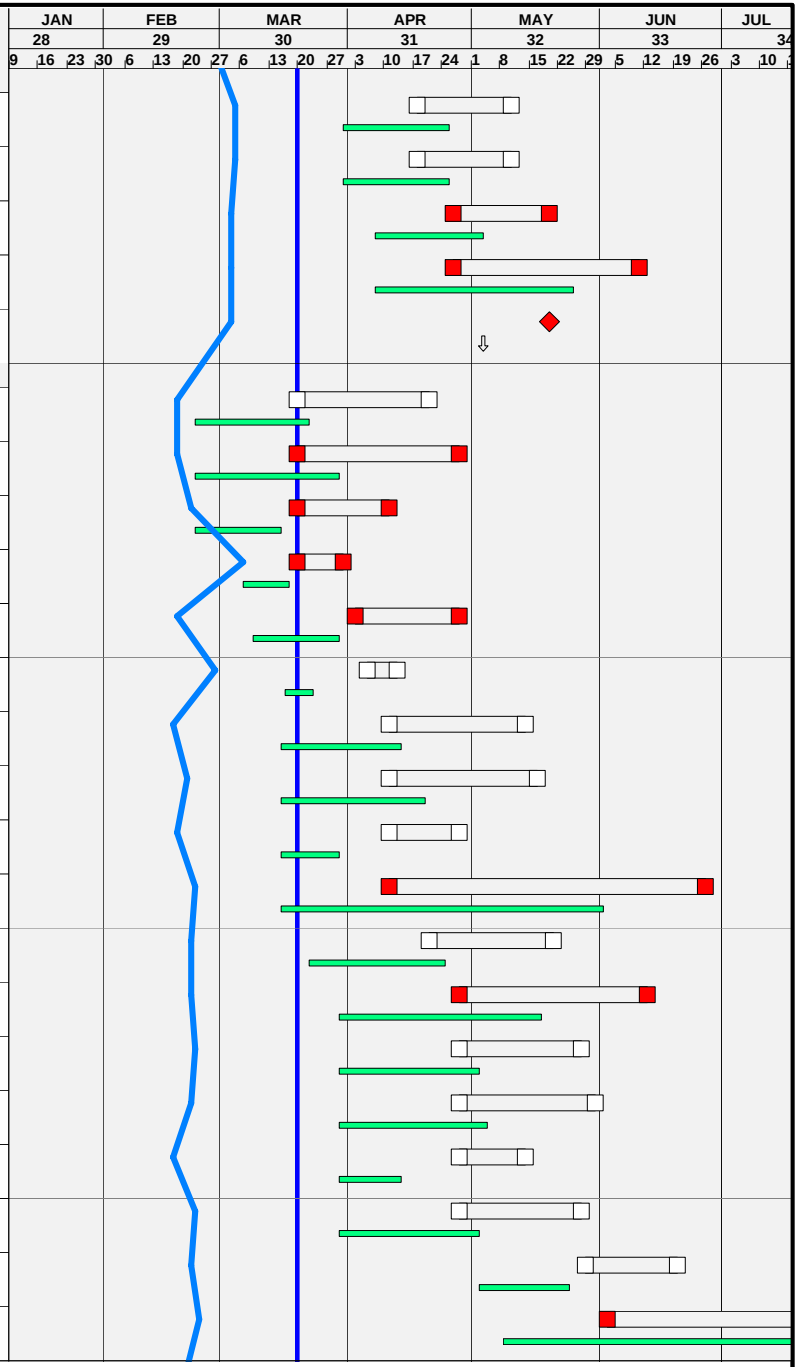
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
MAJOR EQUIPMENT DELIVERY									
ADMINISTRATION BUILDING									
6400	AdmBldg-Del. HV power dist. equip't to 2/F	48	27JAN06A	04MAY06	27	27	35	461	-25
6401	AdmBldg-Del. LV power dist. equip't to 2/F	48	28FEB06A	22MAY06	20	0	40	447	-17
6417	AdmBldg-Del. FS pumps & tank to G/F	48	30MAR06	01JUN06	0	0	48	439	-25
6428	AdmBldg-Del. building vent. fans	48	30MAR06	01JUN06	0	0	48	439	-25
8505	AdmBldg-Del. building related luminaires	48	30MAR06	01JUN06	0	0	48	439	-25
6480	AdmBldg-Del. Chiller & Pumps	48	19MAY06	15JUL06	0	0	48	402	-25
6416	AdmBldg-Del. PD pump & tank to G/F	48	20MAY06	17JUL06	0	0	48	401	-25
6476	AdmBldg-Del. CMCS, ELV & TCS equip't	72	21JUN06	13SEP06	0	0	72	351	-25
CONSTRUCTION									
TCSS Access at Admin Bldg									
T2910	TCSS Access at Administration Bldg (24JUN06)	0		12JUN06	0	0	0	11	-14
CIVIL & ABWF WORKS									
Substructure									
106398	Admin.Bldg. - Earth Mat & Rods - All in ptn D4	36	01JUN06	13JUL06	0	0	36	15	-25
RC Superstructure									
North (GL 1-11)									
T1480	Colls, Walls & Upper Roof Slab Grid 7-11	12	06FEB06A	24FEB06A	100	67	0		-2
South (GL 11-21)									
T2940	Cols, Walls & Upper Roof Slab Grid 11-16	12	21JAN06A	22FEB06A	100	85	0		-2
ABWF									
Admin Bldg - Internal Works GF									
T1660	Int. Blockwork GF Grid 1-9	18	15DEC05A	24MAR06	90	75	5	-75	-25
T1870	Int. Blockwork GF Grid 13-21	18	15DEC05A	24MAR06	90	75	5	-57	-25
T2950	Int Blockwork GF Grid 9-13	18	10JAN06A	24MAR06	90	75	5	-54	-25
T3210	Complete Cable Riser at Grid 9B	6	20MAR06	25MAR06	0	0	6	-37	-21
T3230	LV & HV Switch Rms (G39 & G40), BlockWork	10	20MAR06	30MAR06	0	0	10	474	-25



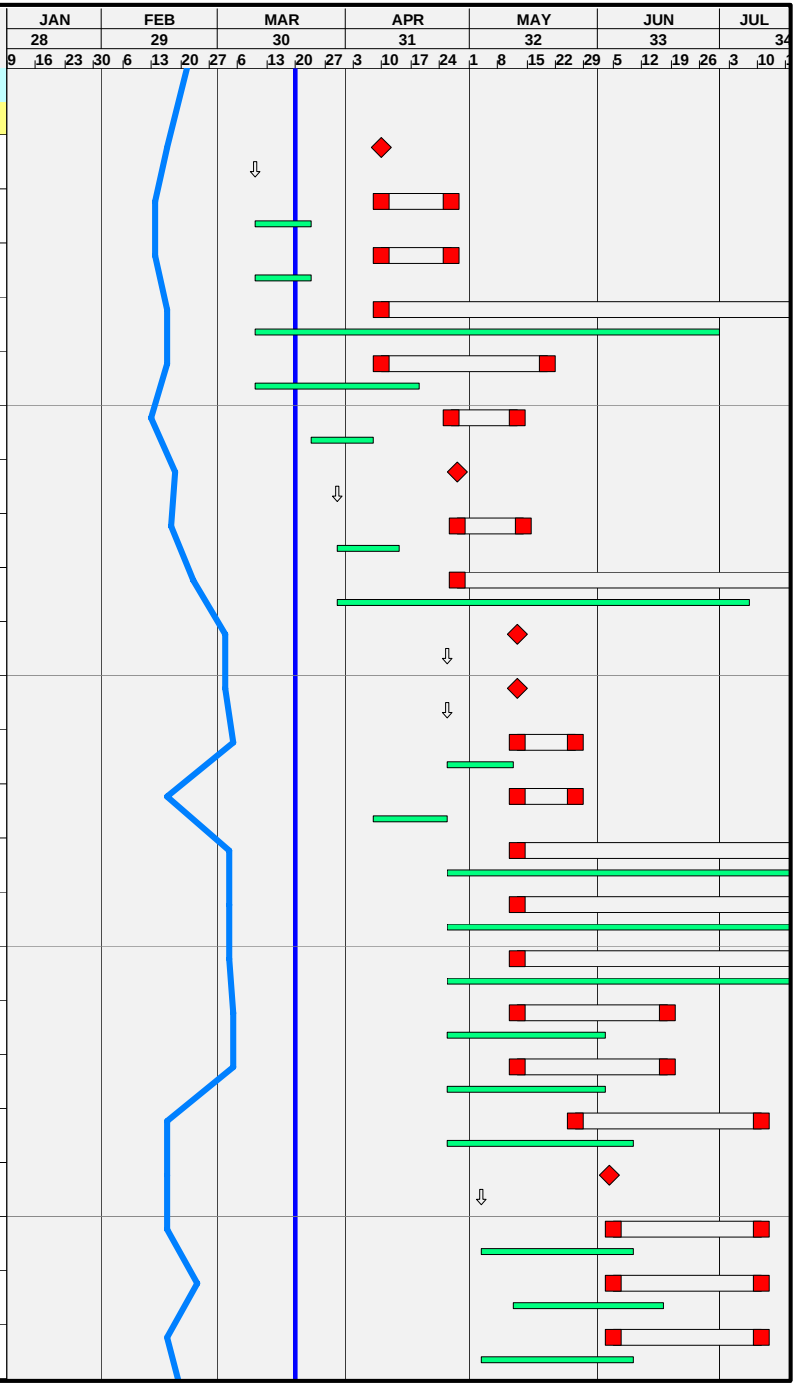
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
Admin Bldg - Internal Works GF									
T3240	Genset & Fuel Rms (G45 & G46), Blockwork	10	20MAR06	30MAR06	0	0	10	-23	-25
T1680	Scrd, paint, glaze, ceiling hanger - GF GL 1-9	24	25MAR06	26APR06	0	0	24	-75	-25
T3020	Installation of roller shutters	12	25MAR06	08APR06	0	0	12	187	-25
T3220	LV & HV Switch Rm (G39 & G40), Scrd & Paint	12	31MAR06	18APR06	0	0	12	474	-25
T3250	Genset & Fuel Rms (G45 & G46), Flr Tiles & Paint	12	31MAR06	18APR06	0	0	12	-23	-25
T2990	Scrd, paint, glaze, ceiling hanger - GF GL 13-21	24	20APR06	19MAY06	0	0	24	-75	-25
T1970	Scrd, paint, glaze, ceiling hanger - GF GL 9-13	18	13MAY06	03JUN06	0	0	18	-75	-25
Admin Bldg - Internal Works 1F									
T1670	Int. Blockwork 1F Grid 1-9	18	14FEB06A	31MAR06	90	0	6	-72	-13
T2960	Int. Blockwork 1F Grid 13-18	12	14FEB06A	31MAR06	90	0	6	-57	-19
T1820	Int. Blcokwork 1F Grid 9-13	6	22FEB06A	31MAR06	90	0	6	-54	-25
T3270	Complete Cable Riser at Grid 9B	6	20MAR06	25MAR06	0	0	6	-37	-21
T1690	UPS & UPS Battery Rms (112 & 115), Blockwork	10	25MAR06	06APR06	0	0	10	-50	-25
T1980	Scrd, paint, glaze, ceiling hanger - 1F GL 1-9	30	01APR06	12MAY06	0	0	30	-72	-13
T2010	Scrd, paint, glaze, ceiling hanger -1F GL9-13	36	01APR06	19MAY06	0	0	36	139	-25
T3260	UPs & UPS Battery Rms (112 & 115), Scrd & Paint	10	07APR06	21APR06	0	0	10	-50	-25
T3000	Scrd, paint, glaze, ceiling hanger - 1F GL13-18	18	24MAY06	14JUN06	0	0	18	118	-16
T2180	Final paint, doors & ceilings 1F GL11-18	18	15JUN06	06JUL06	0	0	18	118	-16
Admin Bldg - Internal Works 2F									
T1960	Int. Blockwork 2F Grid 9-13	6	16MAR06A	22MAR06	50	0	3	-46	-11
T2970	Int. Blockwork 2F Grid 13-18	6	16MAR06A	04APR06	50	0	3	-57	-16
T3010	Scrd, paint, glaze, ceiling hanger - 2F GL9-13	18	23MAR06	13APR06	0	0	18	38	-11
T1940	Int. Blockwork 2F Grid 1-9	18	01APR06	26APR06	0	0	18	-72	-13
T2060	Screed, paint, glaze, ceiling grid 2F GL 13-18	36	06APR06	23MAY06	0	0	36	118	-16



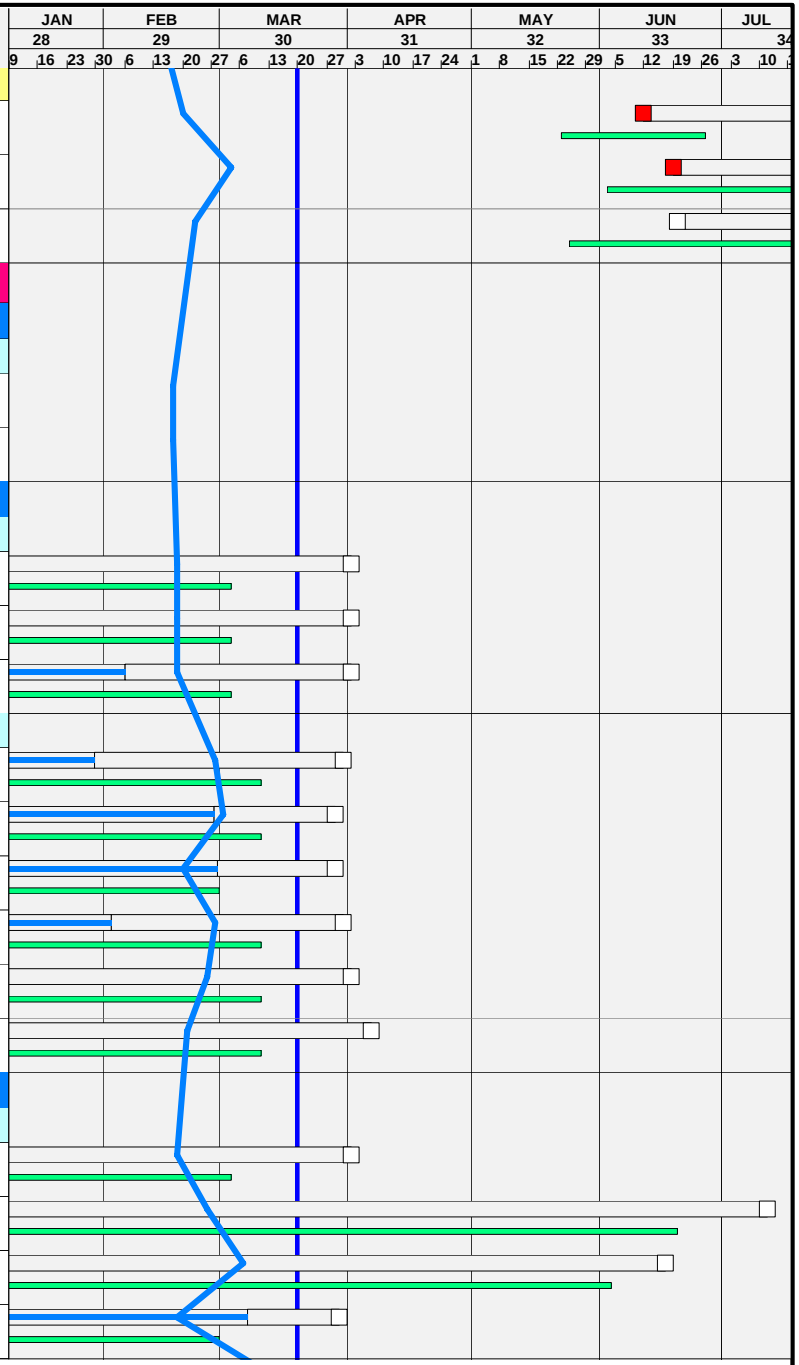
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
Admin Bldg - Internal Works 2F									
T2190	Final paint, doors & ceilings 2F GL1-11	18	18APR06	10MAY06	0	0	18	38	-11
T2220	Final paint, doors & ceilings 2F GL11-18	18	18APR06	10MAY06	0	0	18	38	-11
T1860	Complete control rm finishes (incl raised floor)	18	27APR06	19MAY06	0	0	18	-26	-13
T2020	Scrd, paint, glaze, ceiling hanger - 2F GL 1-9	36	27APR06	10JUN06	0	0	36	12	-13
T1850	Control room available for BB deliveries	0		19MAY06	0	0	0	-26	-13
Admin Bldg - Roofing & External Facade									
T2270	Expanded Metal Mesh Cladding GL1-11	24	20MAR06	20APR06	0	0	24	156	-21
T2870	Roofing Works - Incl Structural Steel	30	20MAR06	27APR06	0	0	30	-49	-21
T2880	Wall Waterproofing GL1-11	18	20MAR06	10APR06	0	0	18	-5	-21
T3280	MCC Room (R03), Scrd & Paint	10	20MAR06	30MAR06	0	0	10	-11	-11
T2890	Wall Waterproofing GL11-21	18	03APR06	27APR06	0	0	18	11	-21
T2980	Int. Blockwork Roof Grid 10-12	6	06APR06	12APR06	0	0	6	70	-16
T2250	Render & Painting GL1-11	24	11APR06	13MAY06	0	0	24	162	-21
T2330	Slate Cladding GL1-11	26	11APR06	16MAY06	0	0	26	160	-21
T2350	Ceramic Tile GL1-11	12	11APR06	27APR06	0	0	12	174	-21
T2850	Installation of Louvres GL 1-11	60	11APR06	26JUN06	0	0	60	-5	-21
T2280	Expanded Metal Mesh Cladding GL11-21	24	21APR06	20MAY06	0	0	24	156	-21
T2230	Curtain Wall Installation GL6-18	36	28APR06	12JUN06	0	0	36	11	-21
T2260	Render & Painting GL11-21	24	28APR06	27MAY06	0	0	24	150	-21
T2340	Slate Cladding GL11-21	26	28APR06	30MAY06	0	0	26	148	-21
T2830	Ceramic Tile GL11-21	12	28APR06	13MAY06	0	0	12	162	-21
T2840	Install GMS, channels, balustrades & railing	24	28APR06	27MAY06	0	0	24	36	-21
T2900	Roof Waterproofing	18	29MAY06	19JUN06	0	0	18	36	-21
T2860	Installation of Louvres GL11-21	60	03JUN06	12AUG06	0	0	60	-5	-21



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
E&M - GENERAL									
ELECTRICAL WORKS									
EM3180	E&M access to G/F (rev C Access date 04Jul05)	0	10APR06*		0	0	0	-54	-25
EM3220	BS Works for HV Sw + Tx	12	10APR06	26APR06	0	0	12	-48	-25
EM3340	BS Works for 110V Charger Rm	12	10APR06	26APR06	0	0	12	-54	-25
EM3540	BS Works in G/F	90	10APR06	31JUL06	0	0	90	-48	-25
EM3660	PAU in G/F <Require Temp Opening>	30	10APR06	19MAY06	0	0	30	-6	-25
EM3280	BS Works for LV Sw	12	27APR06	12MAY06	0	0	12	-42	-25
EM3140	E&M access to R/F (rev C Access date 29Nov05)	0	28APR06*		0	0	0	-49	-21
EM3480	BS Works for MCC	12	28APR06	13MAY06	0	0	12	-43	-21
EM3600	BS Works in R/F	78	28APR06	01AUG06	0	0	78	-49	-21
EM3160	E&M access to 2/F (rev C Access date 12Aug05)	0	13MAY06*		0	0	0	-72	-13
EM3200	E&M access to 1/F (rev C Access date 15Jul05)	0	13MAY06*		0	0	0	-72	-13
EM3380	BS Works for UPS Rm (2x)	12	13MAY06	26MAY06	0	0	12	-66	-13
EM3420	BS Works for Genset	12	13MAY06	26MAY06	0	0	12	-42	-25
EM3560	BS Works in 1/F	90	13MAY06	28AUG06	0	0	90	-72	-13
EM3580	BS Works in 2/F	90	13MAY06	28AUG06	0	0	90	-72	-13
EM3620	E&M Works in Risers	90	13MAY06	28AUG06	0	0	90	-72	-13
EM3680	PAU in 1/F <Require Temp Opening>	30	13MAY06	17JUN06	0	0	30	-30	-13
EM3700	PAU in 2/F <Require Temp Opening>	30	13MAY06	17JUN06	0	0	30	-30	-13
EM3440	Genset Installation	36	27MAY06	10JUL06	0	0	36	-42	-25
T1830	Bldg available for BB deliveries excl cont room	0		03JUN06*	0	0	0	-75	-25
EM3300	LV Sw Installation	30	05JUN06	10JUL06	0	0	30	-60	-25
EM3400	UPS (2x) Installation	30	05JUN06	10JUL06	0	0	30	-72	-19
EM3500	MCC Installation <Require Temp Opening>	30	05JUN06	10JUL06	0	0	30	-60	-25



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
ELECTRICAL WORKS									
EM3240	HV Sw + Tx Installation	29	12JUN06	24JUL06	0	0	29	-84	-23
EM3720	Chiller System in R/F (inc. All AC Units)	72	19JUN06	11SEP06	0	0	72	-30	-13
EM3190	Admin Bldg - Lift Installation	72	20JUN06	12SEP06	0	0	72	36	-21
SHATIN HEIGHTS SOUTH PORTAL BUILDING									
CONTRACT DEFINED DATES & SECTIONS									
AREA ACCESS & VACATION DATES									
ACS_J2	Access to - J2 (T.Plate & above) SH-S.Vent.Bldg.	0	10DEC05A		100	100	0		-30
ACS_D8	Access to Portion - D8	0	03JAN06A		100	100	0		-30
SUBMITTALS & APPROVALS									
ABWF & BW SUBMITTALS									
2000	SHT SPB - Approve door & window details	24	03JUN05A	01APR06	50	50	12	484	-25
2006	SHT SPB - Prep & sub balustrade & metal wks	24	13JUL05A	01APR06	50	50	12	484	-25
2007	SHT SPB - Approve balustrade & metal works	24	13DEC05A	01APR06	50	50	12	484	-25
E&M EQPT. / MTRL. APPROVALS									
7209	ShtSpBldg-App. PD cleans. & flush water sys	18	04AUG04A	30MAR06	90	85	10	423	-17
8507	ShtSpBldg-App. building related luminaires	18	18AUG04A	28MAR06	95	90	8	461	-15
7155	ShtSpBldg-App. FS wet sys	18	04SEP04A	28MAR06	95	50	8	439	-24
7205	ShtSpBldg-App. FS AFA & FM200 sys	18	14SEP04A	30MAR06	90	85	10	378	-17
7085	ShtSpBldg-App. of CMCS & ELV sys	18	20SEP04A	01APR06	80	88	12	358	-19
7229	ShtSpBldg-App. PD irrig. sys	18	05MAY05A	06APR06	50	30	15	418	-22
PROCUREMENT - MATERIAL									
E & M WORKS									
2024	SHT SPB - Procure balustrade & metal works	120	24MAR05A	01APR06	50	50	12	484	-25
7086	ShtSpBldg-Proc. & Manuf. of CMCS & ELV sys	180	29MAR05A	11JUL06	46	46	90	358	-18
7206	ShtSpBldg-Proc & Manuf. FS AFA & FM200 sys	120	29MAR05A	16JUN06	40	30	70	378	-11
7156	ShtSpBldg-Proc & Manuf. FS wet sys	120	06JUN05A	29MAR06	93	93	9	439	-25



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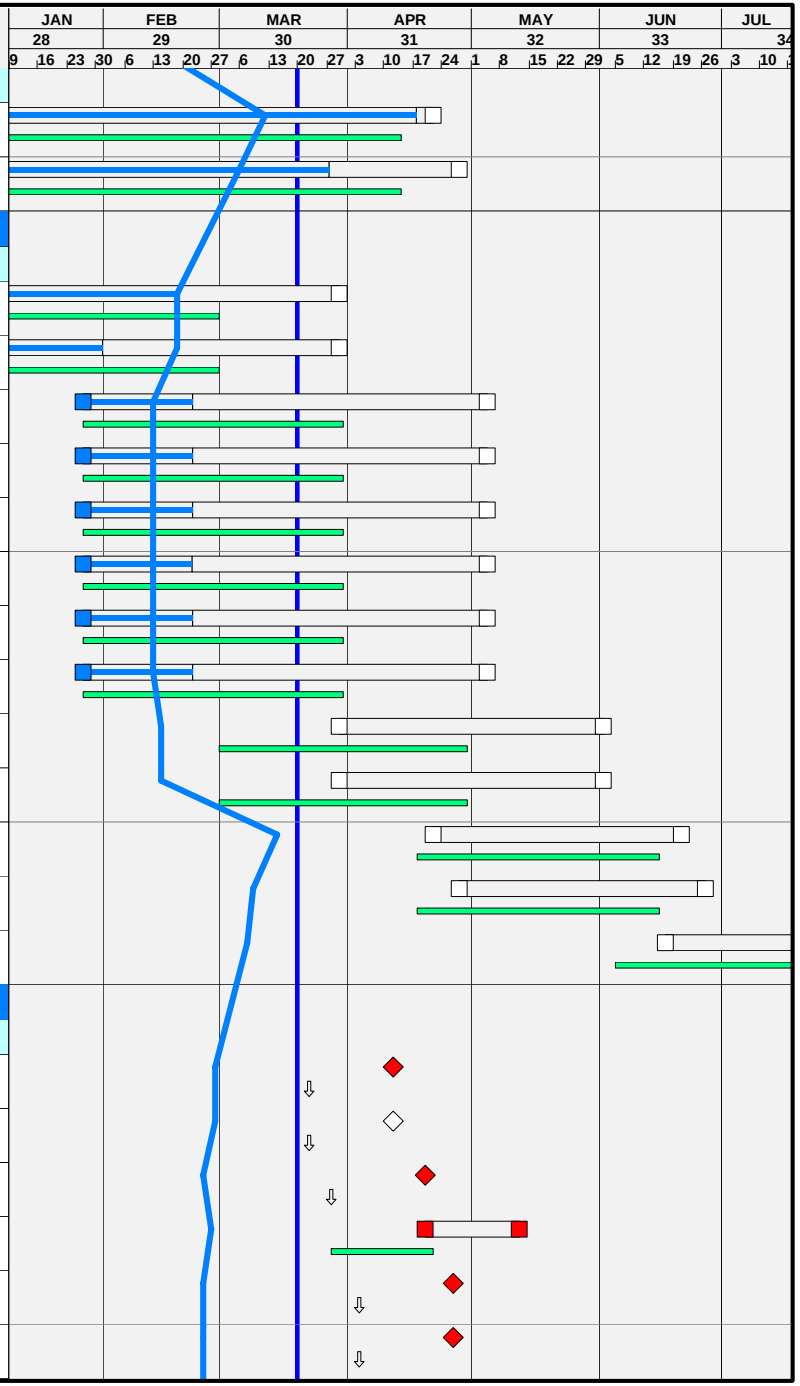
E & M WORKS									
7210	ShtSpBldg-Proc & Manuf. Cleans & flush water sys	120	30SEP05A	21APR06	98	62	25	423	-4
7230	ShtSpBldg-Proc & Manuf. PD irrig. sys	120	17DEC05A	27APR06	76	62	30	418	-9
MAJOR EQUIPMENT DELIVERY									
E&M WORKS									
7048	ShtSpBldg-Del. LV power dist. equip't to 2/F	48	22DEC05A	29MAR06	60	81	9	487	-25
7042	ShtSpBldg-Del. HV power dist. equip't to 2/F	48	24DEC05A	29MAR06	40	81	9	487	-25
7103	ShtSpBldg-Del. Package AC Units	48	27JAN06A	04MAY06	27	27	35	461	-25
7118	ShtSpBldg-Del. building vent. fans	48	27JAN06A	04MAY06	27	27	35	461	-25
7135	ShtSpBldg-Del. TVS to Plenum & 3/F	48	27JAN06A	04MAY06	27	27	35	461	-25
7142	ShtSpBldg-Del. MVAC /TVF pneumatic sys to 1/F	48	27JAN06A	04MAY06	27	27	35	461	-25
7149	ShtSpBldg-Del. MVAC MCC, & control sys to 3/F	48	27JAN06A	04MAY06	27	27	35	461	-25
8509	ShtSpBldg-Del. building related luminaires	48	27JAN06A	04MAY06	27	27	35	461	-25
7157	ShtSpBldg-Del. FS pumps & tank to G/F	48	30MAR06	01JUN06	0	0	48	439	-25
7162	ShtSpBldg-Del. ENT Tunnel (Hyd/HR) pumps to G/F	48	30MAR06	01JUN06	0	0	48	439	-25
7211	ShtSpBldg-Del. PD pump & tank to G/F	48	22APR06	20JUN06	0	0	48	423	-4
7231	ShtSpBldg-Del. PD irrig. pump & tank to G/F	48	28APR06	26JUN06	0	0	48	418	-9
7207	ShtSpBldg-Del. AFA & FM200 sys	48	17JUN06	12AUG06	0	0	48	378	-11
CONSTRUCTION									
TCSS Access to SHT Sout Portal Bldg									
AB6014	TCSS ACCESS 4F (Room 401,404)	0		11APR06*	0	0	0	-67	-20
AB6024	TCSS ACCESS 4F (Room 402,403)	0		11APR06*	0	0	0	592	-20
AB6044	TCSS ACCESS ROOF	0		19APR06	0	0	0	-36	-16
EM6704	TCSS Containment in Lower Plenum	18	20APR06	12MAY06	0	0	18	-121	-16
AB6021	TCSS ACCESS 3F(Room 307)	0		26APR06	0	0	0	-109	-16
EM6050	TCSS ACCESS 2F(Room 201-203,205,207,209,212)	0		26APR06	0	0	0	-82	-23



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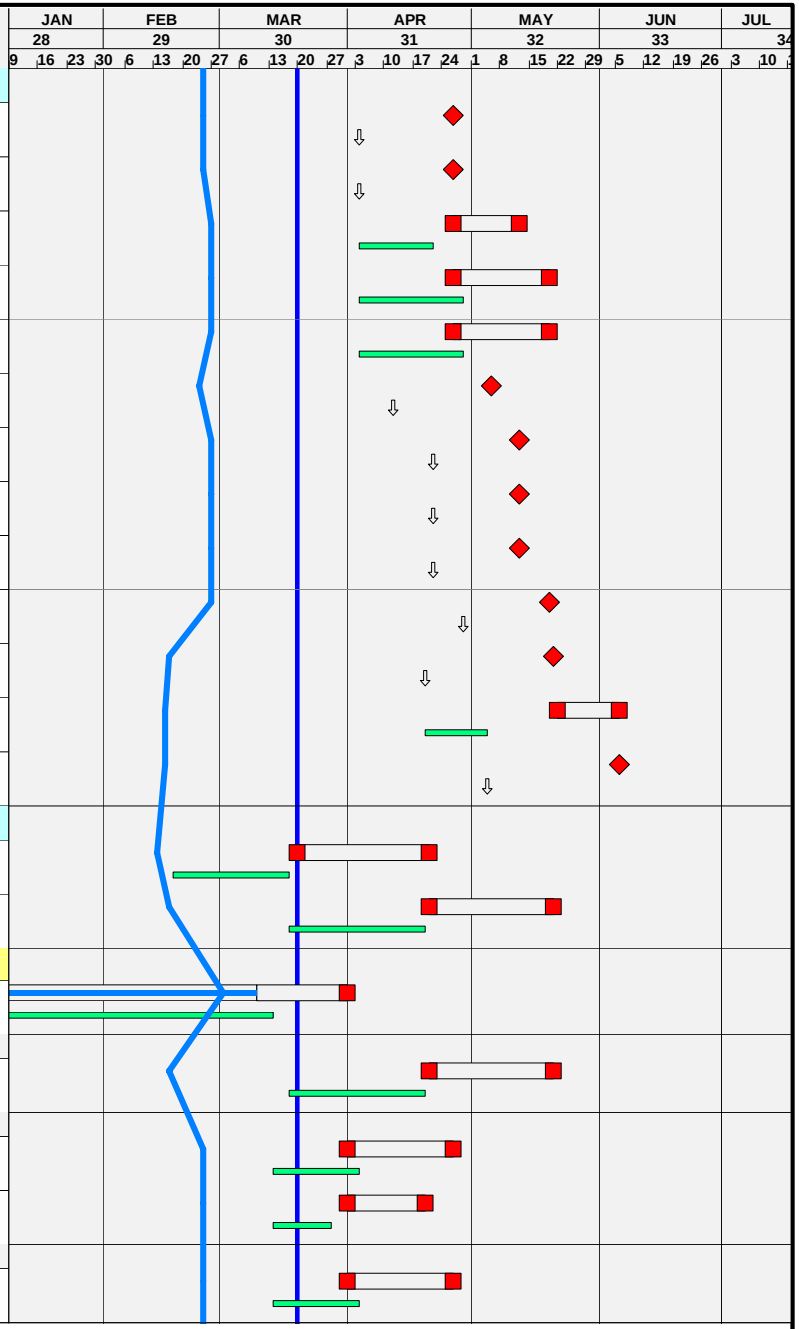
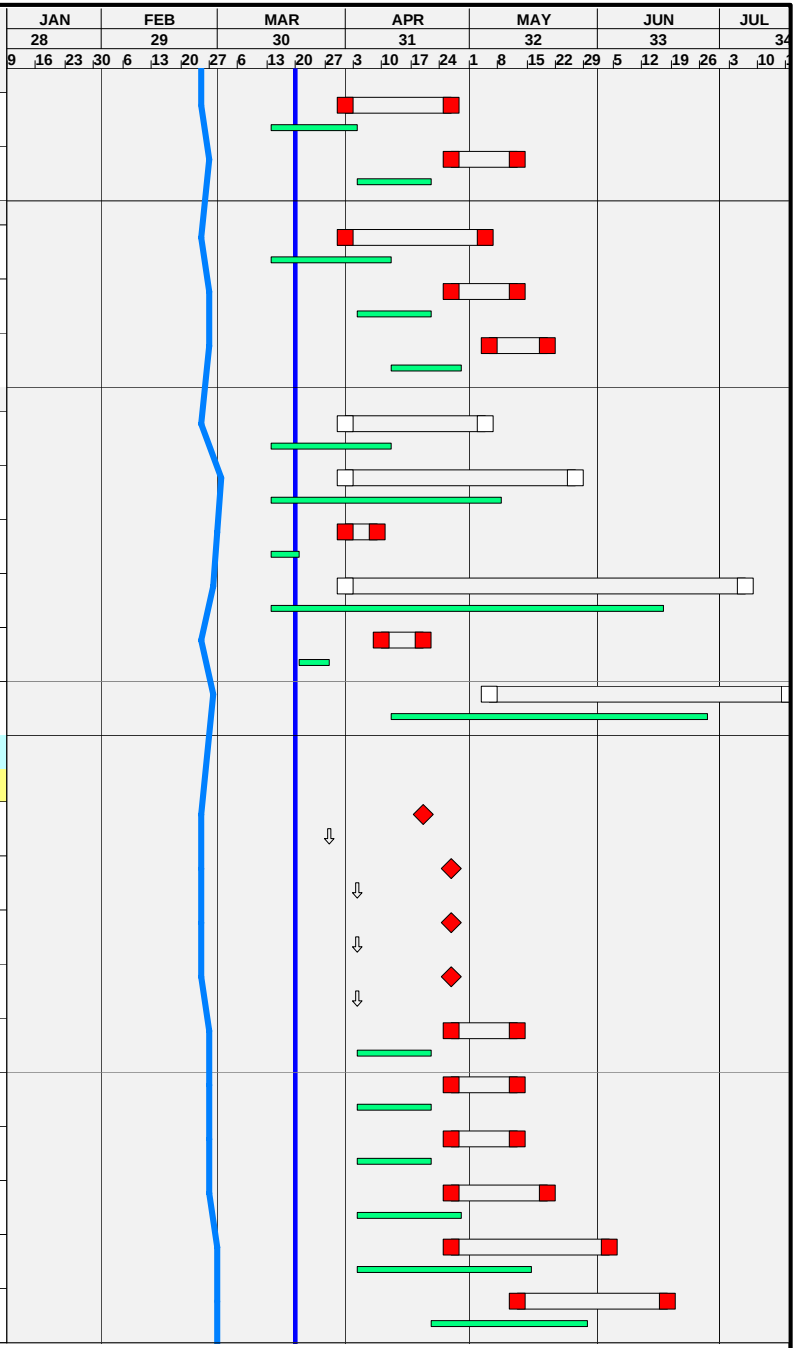
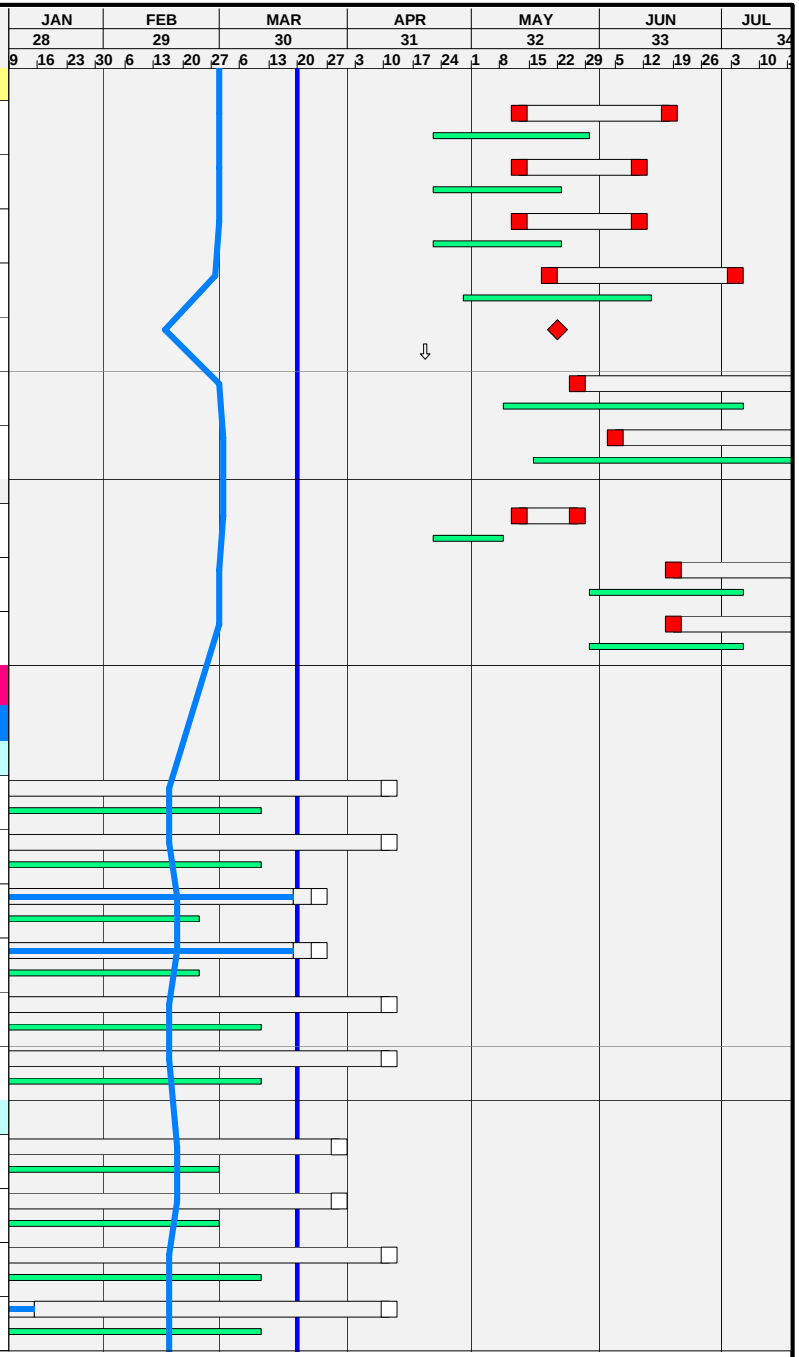
TCSS Access to SHT Sout Portal Bldg									
EM6110	TCSS ACCESS 2F(Room 204)	0		26APR06	0	0	0	-109	-16
EM6712	TCSS ACCESS 1F(Room 101,103,104,108-109)	0		26APR06	0	0	0	-65	-16
EM6702	TCSS Containment in 1/F	12	27APR06	12MAY06	0	0	12	-54	-16
EM6706	TCSS Containment in 2/F	18	27APR06	19MAY06	0	0	18	-60	-16
EM6708	TCSS Containment in 3/F and above	18	27APR06	19MAY06	0	0	18	-71	-16
AB6011	TCSS ACCESS 3F(Room 301-304,309-310,312-314)	0		05MAY06	0	0	0	-91	-24
EM6714	TCSS ACCESS LP(Room L01-L02)	0		12MAY06	0	0	0	-121	-16
EM6722	TCSS ACCESS 1F(Room 107)	0		12MAY06	0	0	0	-54	-16
EM6732	TCSS ACCESS 1F(Room 105)	0		12MAY06	0	0	0	-28	-16
EM6090	TCSS ACCESS 2F(Room 206,210)	0		19MAY06	0	0	0	-60	-16
EM6710	TCSS ACCESS GF (Room G01-G05, G08-G10)	0		20MAY06	0	0	0	-35	-25
EM6700	TCSS Containment in G/F	12	22MAY06	05JUN06	0	0	12	-73	-25
EM6720	TCSS ACCESS GF(Room G07,G11,G12)	0		05JUN06	0	0	0	-73	-25
CIVIL & ABWF WORKS									
AB5983	U/G Drainages and Utilities under bldg	24	20MAR06	20APR06	0	0	24	-73	-25
AB5986	Backfill, G/F Slabs and Walls	24	21APR06	20MAY06	0	0	24	-73	-25
ABWF									
AB6022	Remedy SHT Contractor Defects	25	12DEC05A	31MAR06	80	20	11	-121	-16
ABWF at GF									
AB5989	Initial Finishes to G/F	18	21APR06	20MAY06	0	0	18	-73	-25
ABWF at 1F & LP									
AB5992	Initial Finishes to 1/F	18	01APR06	26APR06	0	0	18	-65	-16
AB5995	Initial Finishes to Lower Plenum	12	01APR06	19APR06	0	0	12	-121	-16
ABWF at 2F									
AB5998	Initial Finishes to 2/F	18	01APR06	26APR06	0	0	18	-109	-16



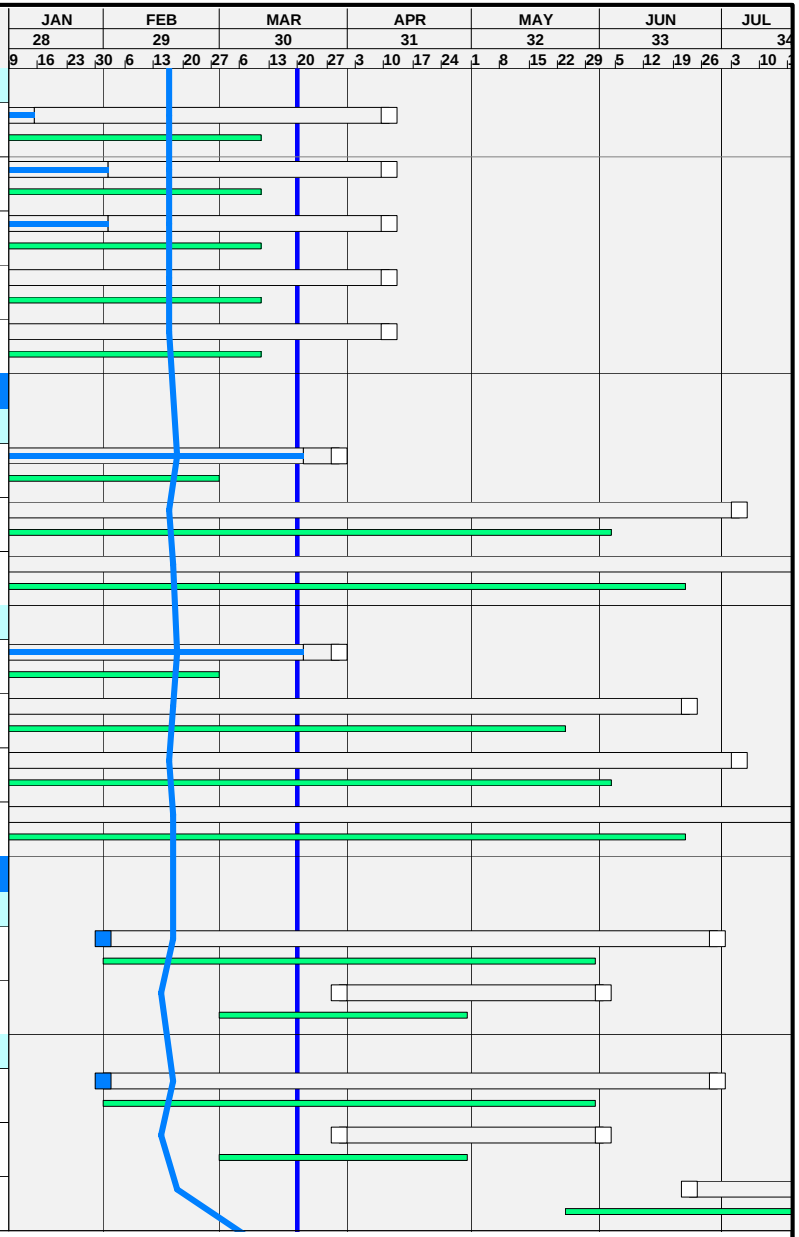
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
ABWF at 3F									
AB6001	Initial Finishes to 3/F	18	01APR06	26APR06	0	0	18	-109	-16
AB6002	Installation of Crane Beam beneath 3rd FL	12	27APR06	12MAY06	0	0	12	-28	-16
ABWF at 4F and above									
AB6004	Initial Finishes to 4/F and above	24	01APR06	04MAY06	0	0	24	-55	-16
AB6012	Installation of Crane Beam beneath 4th FL	12	27APR06	12MAY06	0	0	12	-28	-16
AB6005	Installaton of Crane Beam beneath 5th FL	12	06MAY06	19MAY06	0	0	12	-34	-16
Roof & External Facade									
AB6017	Waterproofing - External Walls	24	01APR06	04MAY06	0	0	24	37	-16
AB6027	Painting	42	01APR06	26MAY06	0	0	42	151	-16
AB6037	Roofing Works	6	01APR06	08APR06	0	0	6	-36	-16
AB6067	Install Louvres	75	01APR06	06JUL06	0	0	75	118	-16
AB6057	Waterproofing - Roof	6	10APR06	19APR06	0	0	6	-36	-16
AB6077	Install Composite Cladding Panels	60	06MAY06	17JUL06	0	0	60	37	-16
E&M - GENERAL									
ELECTRICAL WORKS									
EM6066	E&M Access to Lower Plenum	0	20APR06		0	0	0	-121	-16
EM6020	E&M access to 3/F	0	27APR06		0	0	0	-71	-16
EM6040	E&M access to 2/F	0	27APR06		0	0	0	-84	-16
EM6060	E&M Access to 1/F	0	27APR06		0	0	0	-54	-16
EM6080	BS Works for HV Sw + Tx	12	27APR06	12MAY06	0	0	12	-84	-16
EM6140	BS Works for LV Sw, MCC, UPS, LCC	12	27APR06	12MAY06	0	0	12	-42	-16
EM6200	BS Works for 110V Charger Rm	12	27APR06	12MAY06	0	0	12	-6	-16
EM6240	BS Works for Genset	18	27APR06	19MAY06	0	0	18	-30	-16
EM6380	BS Works for TVS Plenums	30	27APR06	03JUN06	0	0	30	-46	-16
EM6100	HV Sw + Tx Installation	30	13MAY06	17JUN06	0	0	30	-84	-16



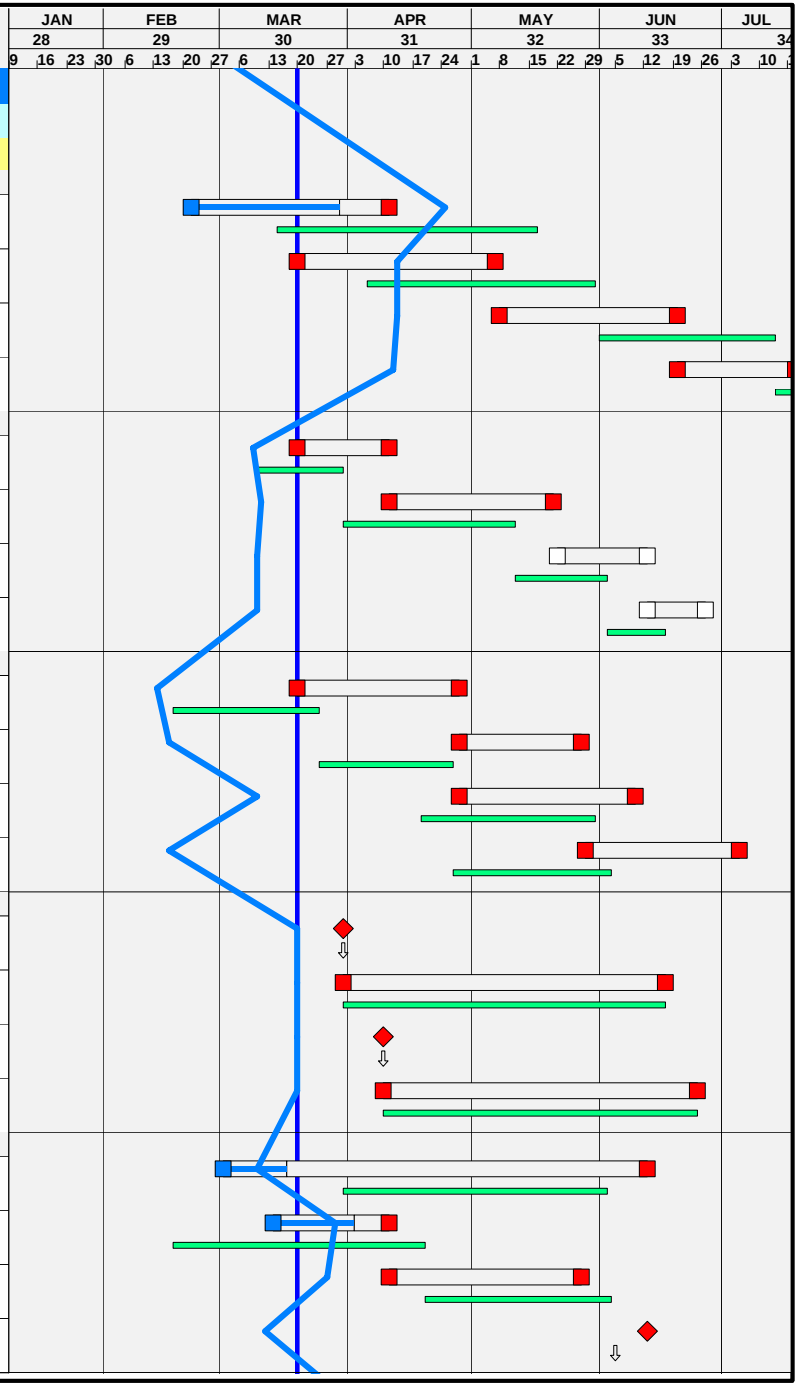
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
ELECTRICAL WORKS									
EM6160	LV Sw, MCC, UPS, LCC Installation	30	13MAY06	17JUN06	0	0	30	-42	-16
EM6300	E&M Works in Corridors 2/F	24	13MAY06	10JUN06	0	0	24	-36	-16
EM6320	E&M Works in Corridors 3/F	24	13MAY06	10JUN06	0	0	24	-36	-16
EM6260	Genset Installation	36	20MAY06	03JUL06	0	0	36	-30	-16
EM6063	E&M Access to G/F	0	22MAY06		0	0	0	-73	-25
EM6340	E&M Works in Risers	48	27MAY06	24JUL06	0	0	48	-36	-16
EM6400	TVS Installation	100	05JUN06	29SEP06	0	0	100	-46	-16
Testing & Commissioning									
EM6220	110V Charger Rm Installation + T&C	12	13MAY06	26MAY06	0	0	12	-6	-16
EM6120	HV Sw + Tx Termination + T&C	30	19JUN06	24JUL06	0	0	30	-24	-16
EM6180	LV Sw, MCC, UPS, LCC Termination + T&C	30	19JUN06	24JUL06	0	0	30	-24	-16
SHT TUNNEL									
SUBMITTALS & APPROVALS									
E&M EQPT. / MTRL. SUBMITTALS									
8281	ShtRtNb-Sub.TVS control sys	54	02JUL04A	10APR06	67	67	18	349	-25
8287	ShtRtSb-Sub.TVS control sys	54	02JUL04A	10APR06	67	67	18	350	-25
8282	ShtRtNb-Sub.FS AFA & Linear sys	54	05JUL04A	24MAR06	99	99	5	364	-25
8288	ShtRtSb-Sub.FS AFA & Linear sys	54	05JUL04A	24MAR06	99	99	5	364	-25
8280	ShtRtNb-Sub.CMCS & ELV sys	78	26AUG04A	10APR06	77	77	18	478	-25
8286	ShtRtSb-Sub.CMCS & ELV sys	78	26AUG04A	10APR06	77	77	18	349	-25
E&M EQPT. / MTRL. APPROVALS									
6938	ShtRtSb-App. Tunnel Lgt sys	18	05AUG04A	29MAR06	50	50	9	439	-25
6991	ShtRtNb-App. Tunnel Lgt sys	18	05AUG04A	29MAR06	50	50	9	439	-25
6932	ShtRtSb-App. HV/LV main & submain dist. sys	18	13AUG04A	10APR06	80	80	18	415	-25
6969	ShtRtSb-App. FS AFA & Linear sys	18	14SEP04A	10APR06	85	85	18	364	-25



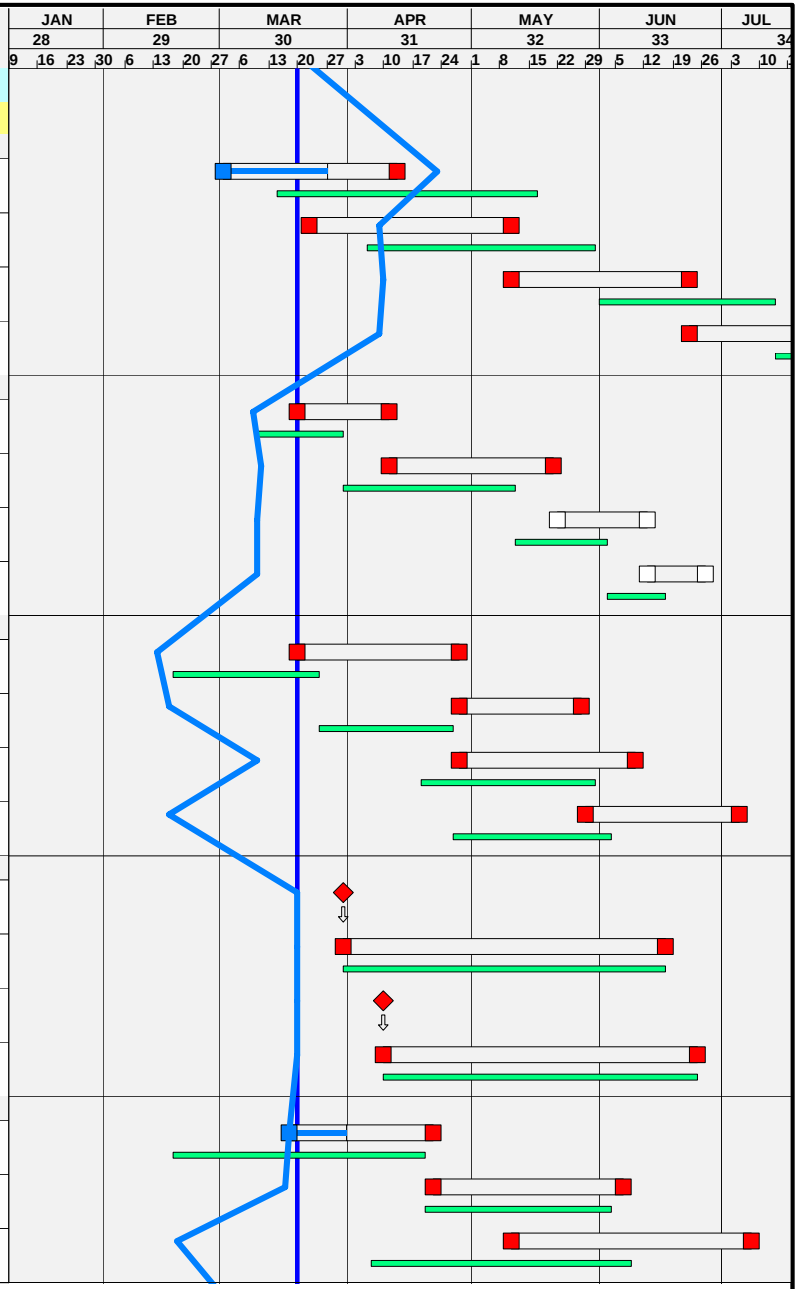
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
E&M EQPT. / MTRL. APPROVALS									
7022	ShtRtNb-App. FS AFA & Linear sys	18	14SEP04A	10APR06	85	85	18	364	-25
6945	ShtRtSb-App. CMCS & TCS & ELV sys	18	20SEP04A	10APR06	88	88	18	349	-25
6998	ShtRtNb-App. CMCS & ELV sys	18	20SEP04A	10APR06	88	88	18	478	-25
6957	ShtRtSb-App. TVS control sys	18	12NOV04A	10APR06	70	70	18	350	-25
7010	ShtRtNb-App. TVS control sys	18	12NOV04A	10APR06	70	70	18	349	-25
PROCUREMENT - MATERIAL									
SHT TUNNEL NORTHBOUND									
6992	ShtRtNb-Proc & Manuf. Tunnel Lgt sys	180	20JAN05A	29MAR06	98	98	4	439	-25
7023	ShtRtNb-Proc & Manuf. FS AFA & Linear sys	180	29MAR05A	04JUL06	53	53	84	364	-25
7011	ShtRtNb-Proc & Manuf. TVS control sys	180	25MAY05A	21JUL06	45	45	99	349	-25
SHT TUNNEL SOUTHBOUND									
6939	ShtRtSb-Proc & Manuf. Tunnel Lgt sys	180	20JAN05A	29MAR06	98	98	4	439	-25
6946	ShtRtSb-Proc & Manuf. CMCS & ELV sys	180	29MAR05A	22JUN06	58	58	75	349	-25
6970	ShtRtSb-Proc & Manuf. FS AFA & Linear sys	180	29MAR05A	04JUL06	53	53	84	364	-25
6958	ShtRtSb-Proc & Manuf. TVS control sys	180	25MAY05A	21JUL06	45	45	99	350	-25
MAJOR EQUIPMENT DELIVERY									
SHT TUNNEL NORTHBOUND									
6987	ShtRtNb-Del. HV/LV main & submain dist. sys	48	01FEB06A	29JUN06	0	0	81	415	-25
6993	ShtRtNb-Del. Tunnel Lgt	48	30MAR06	01JUN06	0	0	48	439	-25
SHT TUNNEL SOUTH BOUND									
6934	ShtRtSb-Del. HV/LV main & submain dist. sys	72	01FEB06A	29JUN06	0	0	81	415	-25
6940	ShtRtSb-Del. Tunnel Lgt	48	30MAR06	01JUN06	0	0	48	439	-25
6947	ShtRtSb-Del. CMCS & ELV sys	72	23JUN06	15SEP06	0	0	72	349	-25



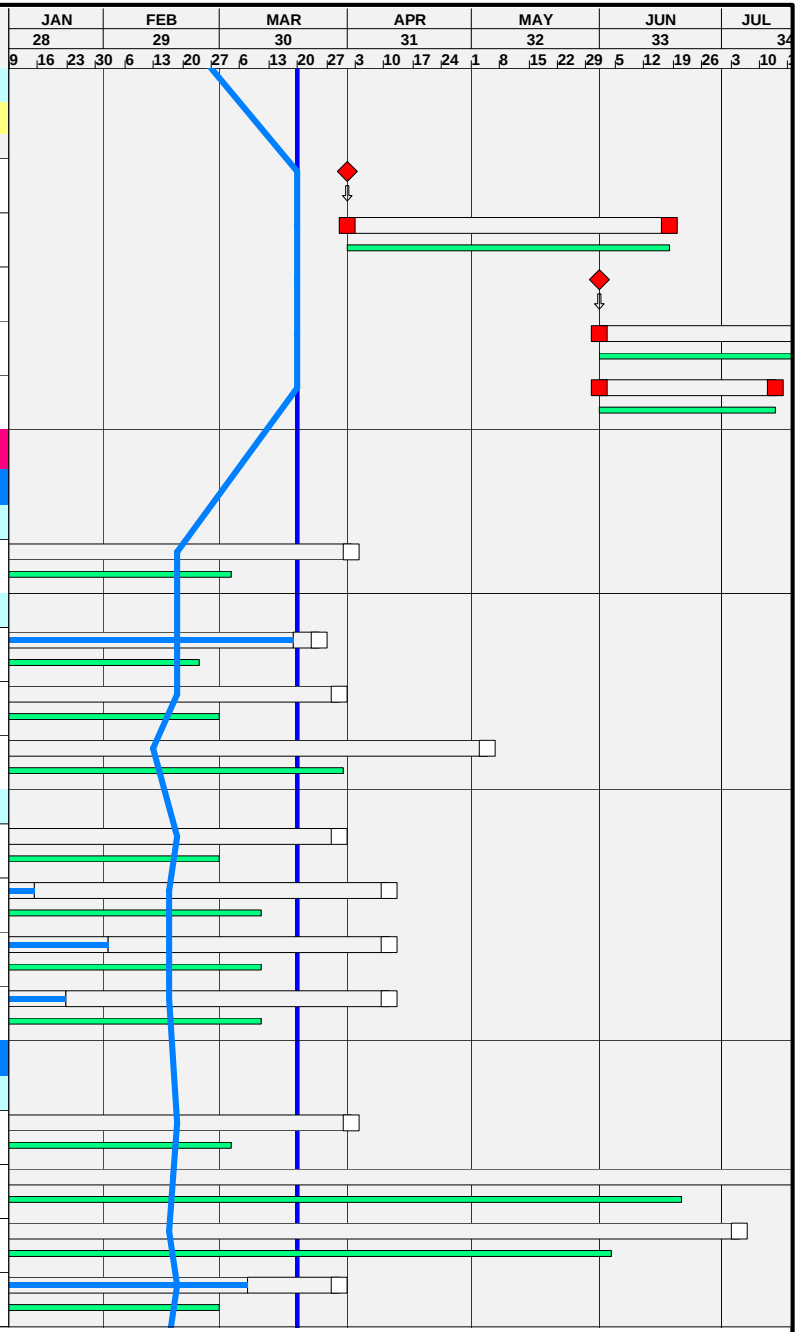
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
CONSTRUCTION									
SHT NORTHBOUND TUNNEL									
(E & M) BUILDING SERVICES									
MVAC / Tunnel Ventillation System Above OHVD									
207004	Sht NB - Install Motorized Smoke & Fire Damper	48	22FEB06A	10APR06	75	0	18	-31	26
207005	Sht NB - Comp Air Pipes/Condts to E/P10 to E/P6	36	20MAR06	06MAY06	0	0	36	-31	20
207006	Sht NB - Comp Air Pipes/Condts to E/P1 to E/P5	36	08MAY06	19JUN06	0	0	36	-31	20
207007	Sht NB - Cabling, wiring and termination	24	20JUN06	18JUL06	0	0	24	-31	20
Plumbing and Drainage									
214026	Sht NB - Watermain & Cable brackets @ G/L	18	20MAR06*	10APR06	0	0	18	-29	-8
214027	Sht NB - (150d) Water Supply Pipeworks @ G/L	30	11APR06	20MAY06	0	0	30	-29	-8
214028	Sht NB - Pipe Connectn, pumps, tanks to SP / NP	18	22MAY06	12JUN06	0	0	18	35	-8
214030	Sht NB - Pipe Testing & T&C	12	13JUN06	26JUN06	0	0	12	35	-8
Fire Protection System									
221052	Sht NB - Install brckt / supt for FS dectn @ C/L	30	20MAR06	27APR06	0	0	30	-49	-25
221053	Sht NB - Install fire alarm detection @ C/L	24	28APR06	27MAY06	0	0	24	-49	-25
221055	Sht NB - (150d) FS Main pipeworks @ G/L	34	28APR06	09JUN06	0	0	34	-29	-8
221054	Sht NB - Install FS Conduits to AFA Panels	30	29MAY06	04JUL06	0	0	30	-49	-25
Electrical Works Above OHVD									
228103	Sht NB - E&M Access to 3/F LV Switch Rm (SPB)	0	31MAR06*		0	0	0	-41	0
228105	Sht NB - HV & LV Mn/Sub-main Cables to CP1-CP05	60	31MAR06	16JUN06	0	0	60	-41	0
228104	Sht NB - E&M Access to 3/F LV Switch Rm (NPB)	0	10APR06*		0	0	0	-48	0
228108	Sht NB - HV & LV Mn/Sub-main Cables to CP6-CP10	60	10APR06	24JUN06	0	0	60	-48	0
Electrical Works Below OHVD									
235161	Sht NB - Conduits Works @ Ceiling Level	48	02MAR06A	12JUN06	15	0	36	-73	-8
235160	Sht NB - Brackets for Lights, CCTV & Eqpt @ C/L	48	14MAR06A	10APR06	70	0	18	-73	5
235162	Sht NB - Tunnel Earthing & Bonding to CP1-CP10	36	11APR06	27MAY06	0	0	36	-61	5
235163	Stn NB Access to Civil Contractr for Rd Pavement	0	13JUN06		0	0	0	-73	-7



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
SHT SOUTHBOUND TUNNEL									
(E & M) BUILDING SERVICES									
MVAC / Tunnel Ventilation System Above OHVD									
242270	Sht SB - Install Motorized Smoke & Fire Damper	48	02MAR06A	12APR06	60	0	20	-22	24
242271	Sht SB - Comp Air Pipes/Condts to E/P10 to E/P6	36	23MAR06	10MAY06	0	0	36	-22	17
242272	Sht SB - Comp Air Pipes/Condts to E/P1 to E/P5	36	11MAY06	22JUN06	0	0	36	-22	17
242273	Sht SB - Cabling, wiring and termination	24	23JUN06	21JUL06	0	0	24	-22	17
Plumbing and Drainage									
249390	Sht SB - Watermain & Cable brackets @ G/L	18	20MAR06*	10APR06	0	0	18	-17	-8
249391	Sht SB - (50d) Water Supply Pipeworks @ G/L	30	11APR06	20MAY06	0	0	30	-29	-8
249392	Sht SB - Pipe Connectn, pumps, tanks to SP / NP	18	22MAY06	12JUN06	0	0	18	35	-8
249393	Sht SB - Pipe Testing and T&C	12	13JUN06	26JUN06	0	0	12	35	-8
Fire Protection System									
256514	Sht SB - Install brckt / Supt for FS dectn @ C/L	30	20MAR06	27APR06	0	0	30	-49	-25
256515	Sht SB - Install fire alarm detection @ C/L	24	28APR06	27MAY06	0	0	24	-49	-25
256517	Sht SB - (150d) FS Main pipeworks @ G/L	34	28APR06	09JUN06	0	0	34	-29	-8
256516	Sht SB - Install FS Conduits to AFA Panels	30	29MAY06	04JUL06	0	0	30	-49	-25
Electrical Works Above OHVD									
263653	Sht SB - E&M Access to 3/F UPS Room (SPB)	0	31MAR06*		0	0	0	-41	0
263655	Sht SB - HV & LV Mn/Sub-main Cables to CP1 - CP5	60	31MAR06	16JUN06	0	0	60	-41	0
263654	Sht SB - E&M Access to 3/F UPS Room (NPB)	0	10APR06*		0	0	0	-48	0
263658	Sht SB - HV & LV Mn/Sub-main Cables to CP6-CP10	60	10APR06	24JUN06	0	0	60	-48	0
Electrical Works Below OHVD									
270798	Sht SB - Brackets for Lights, CCTV & Eqpt @ C/L	48	18MAR06A	21APR06	40	0	25	-94	-2
270800	Sht SB - Tunnel Earthing & Bonding to CP1-CP10	36	22APR06	06JUN06	0	0	36	-68	-2
270799	Sht SB - Conduits Works @ Ceiling Level	48	11MAY06	07JUL06	0	0	48	-94	-24



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
SHT CROSS PASSAGES (CP1 to CP10)									
(E & M) BUILDING SERVICES									
Electrical Works									
277956	E&M Access to Cross Passage Area (CP1-CP10)	0	01APR06*		0	0	0	-68	0
277957	(CP1-CP10) - Cable Containment & Equipt Support	60	01APR06	17JUN06	0	0	60	-68	0
277958	MS Doors Installed and Secured	0	01JUN06*		0	0	0	-69	0
277959	(CP1-CP10) - MCCB / MCB Bd,CMCS,Busbar,Switches	72	01JUN06	24AUG06	0	0	72	-69	0
277960	(CP1-CP10) - Conduit, light Fixture, Swt & Test	36	01JUN06	13JUL06	0	0	36	-63	0
SHT NORTH PORTAL BUILDING									
SUBMITTALS & APPROVALS									
ABWF & BUILDERS WORKS									
2001	SHT NPB - Approve door & window details	24	03JUN05A	01APR06	50	50	12	484	-25
E&M EQPT. / MTRL. SUBMITTALS									
8299	ShtNpBldg-Sub.FS AFA & FM200 sys	54	05JUL04A	24MAR06	99	99	5	364	-25
8298	ShtNpBldg-Sub.FS wet sys	54	05AUG04A	29MAR06	83	83	9	439	-25
8292	ShtNpBldg-Sub.of CMCS & ELV sys	78	26AUG04A	04MAY06	55	55	35	350	-25
E&M EQPT. / MTRL. APPROVALS									
7377	ShtNpBldg-App. FS wet sys	18	02SEP04A	29MAR06	50	50	9	439	-25
7427	ShtNpBldg-App. FS AFA & FM200 sys	18	14SEP04A	10APR06	85	85	18	364	-25
7307	ShtNpBldg-App. of CMCS & ELV sys	18	20SEP04A	10APR06	88	88	18	350	-25
7431	ShtNpBldg-App. PD cleans. & flush water sys	18	04NOV04A	10APR06	85	85	18	401	-25
PROCUREMENT - MATERIAL									
ABWF WORKS									
2016	SHT NPB - Procure doors & windows	120	12JAN05A	01APR06	50	50	12	484	-25
7308	ShtNpBldg-Proc. & Manuf. of CMCS & ELV sys	180	29MAR05A	20JUL06	46	46	98	350	-25
7428	ShtNpBldg-Proc & Manuf. FS AFA & FM200 sys	120	29MAR05A	04JUL06	30	30	84	364	-25
7378	ShtNpBldg-Proc & Manuf. FS wet sys	120	06JUN05A	29MAR06	93	93	9	439	-25



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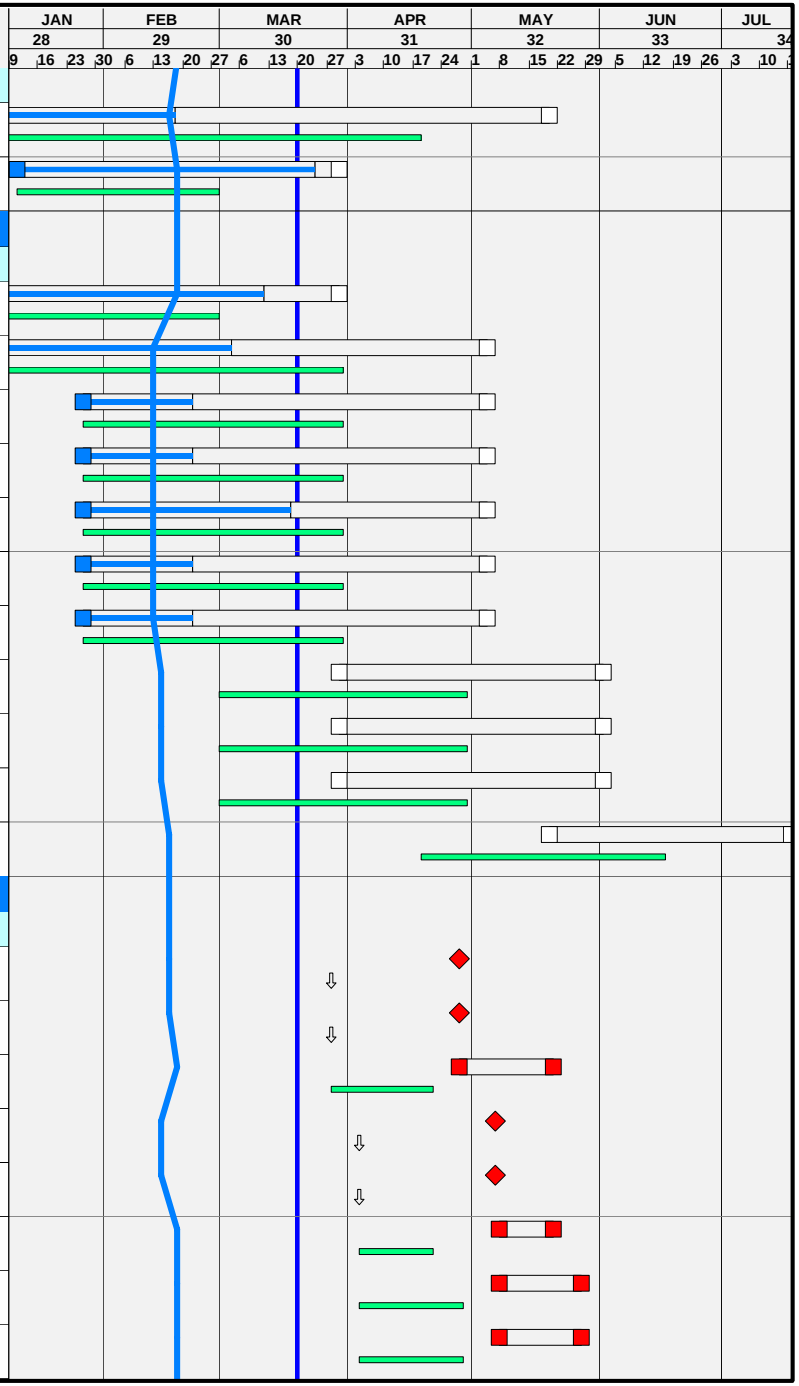
ABWF WORKS									
7432	ShtNpBldg-Proc & Manuf. Cleans & flush water sys	120	30SEP05A	19MAY06	61	61	47	401	-25
7324	ShtNpBldg-Proc & Manuf. MVAC Package AC Units	120	11JAN06A	29MAR06	93	93	9	439	-25
MAJOR EQUIPMENT DELIVERY									
SHT NORTH PORTAL BUILDING									
7270	ShtNpBldg-Del. LV power dist. equip't to 1/F	48	22DEC05A	29MAR06	81	81	9	487	-25
7371	ShtNpBldg-Del. MVAC MCC, & control sys to 3/F	72	28DEC05A	04MAY06	51	51	35	461	-25
7264	ShtNpBldg-Del. HV power dist. equip't to 2/F	48	27JAN06A	04MAY06	27	27	35	461	-25
7340	ShtNpBldg-Del. building vent. fans	48	27JAN06A	04MAY06	27	27	35	461	-25
7357	ShtNpBldg-Del. TVS to Plenum & 3/F	72	27JAN06A	04MAY06	51	51	35	461	-25
7364	ShtNpBldg-Del. MVAC /TVF pneumatic sys to 1/F	48	27JAN06A	04MAY06	27	27	35	461	-25
8513	ShtSpBldg-Del. building related luminaires	48	27JAN06A	04MAY06	27	27	35	461	-25
7325	ShtNpBldg-Del. Package AC Units	48	30MAR06	01JUN06	0	0	48	439	-25
7379	ShtNpBldg-Del. FS pumps & tank to G/F	48	30MAR06	01JUN06	0	0	48	439	-25
7384	ShtNpBldg-Del. ENT Tunnel (Hyd/HR) pumps to G/F	48	30MAR06	01JUN06	0	0	48	439	-25
7433	ShtNpBldg-Del. PD pump & tank to G/F	48	20MAY06	17JUL06	0	0	48	401	-25
CONSTRUCTION									
TCSS Access to SHT North Portal Bldg									
AB7210	TCSS ACCESS Roof	0		27APR06	0	0	0	-18	-23
EM7299	TCSS ACCESS LPL (Room L03)	0		27APR06	0	0	0	-61	-23
EM7289	TCSS Containment in Lower Plenum	18	28APR06	20MAY06	0	0	18	-70	-23
AB7110	TCSS ACCESS 1F (Room 101,103-105-111)	0		06MAY06	0	0	0	-67	-23
AB7190	TCSS ACCESS 4F (Room 401,402,403,404)	0		06MAY06	0	0	0	-40	-23
EM7286	TCSS Containment in 1/F	12	08MAY06	20MAY06	0	0	12	-55	-23
EM7292	TCSS Containment in 2/F	18	08MAY06	27MAY06	0	0	18	-58	-23
EM7295	TCSS Containment in 3/F and above	18	08MAY06	27MAY06	0	0	18	-58	-23



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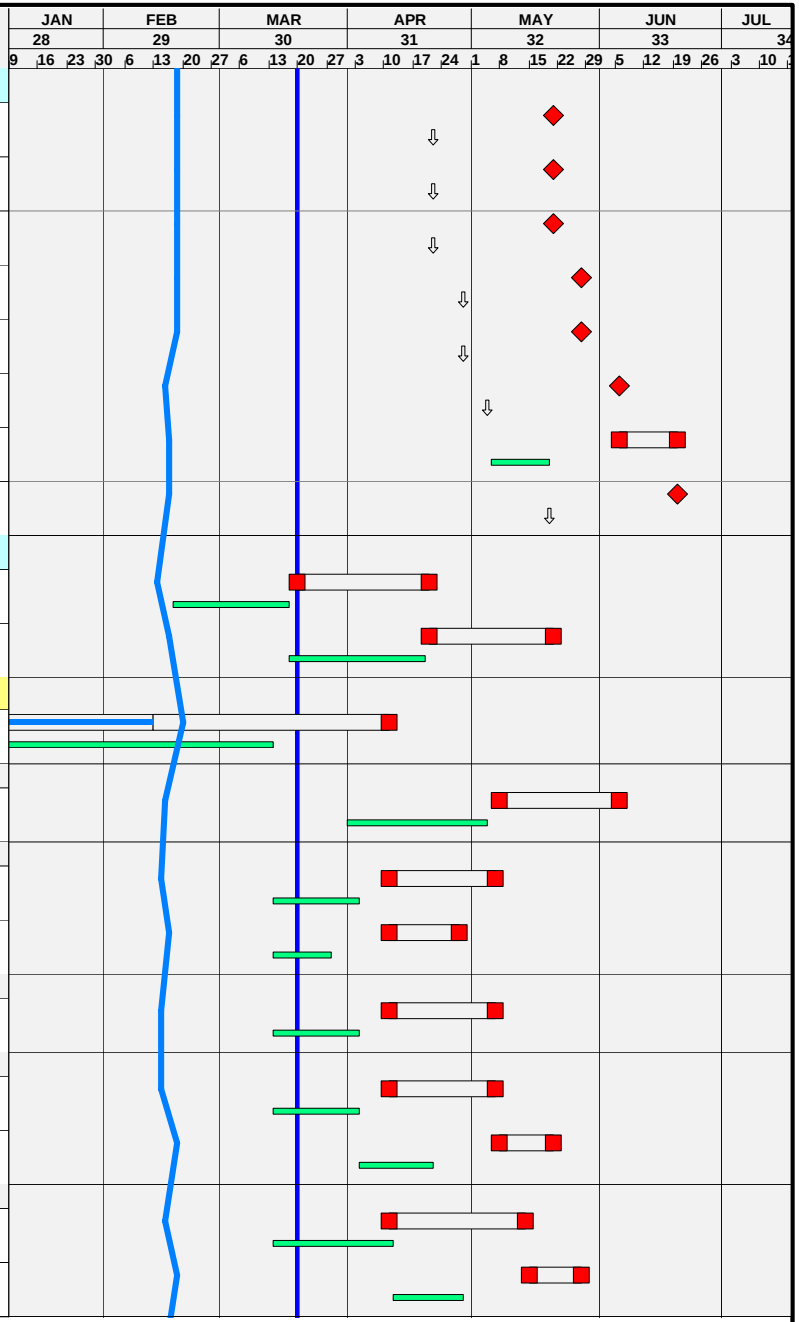
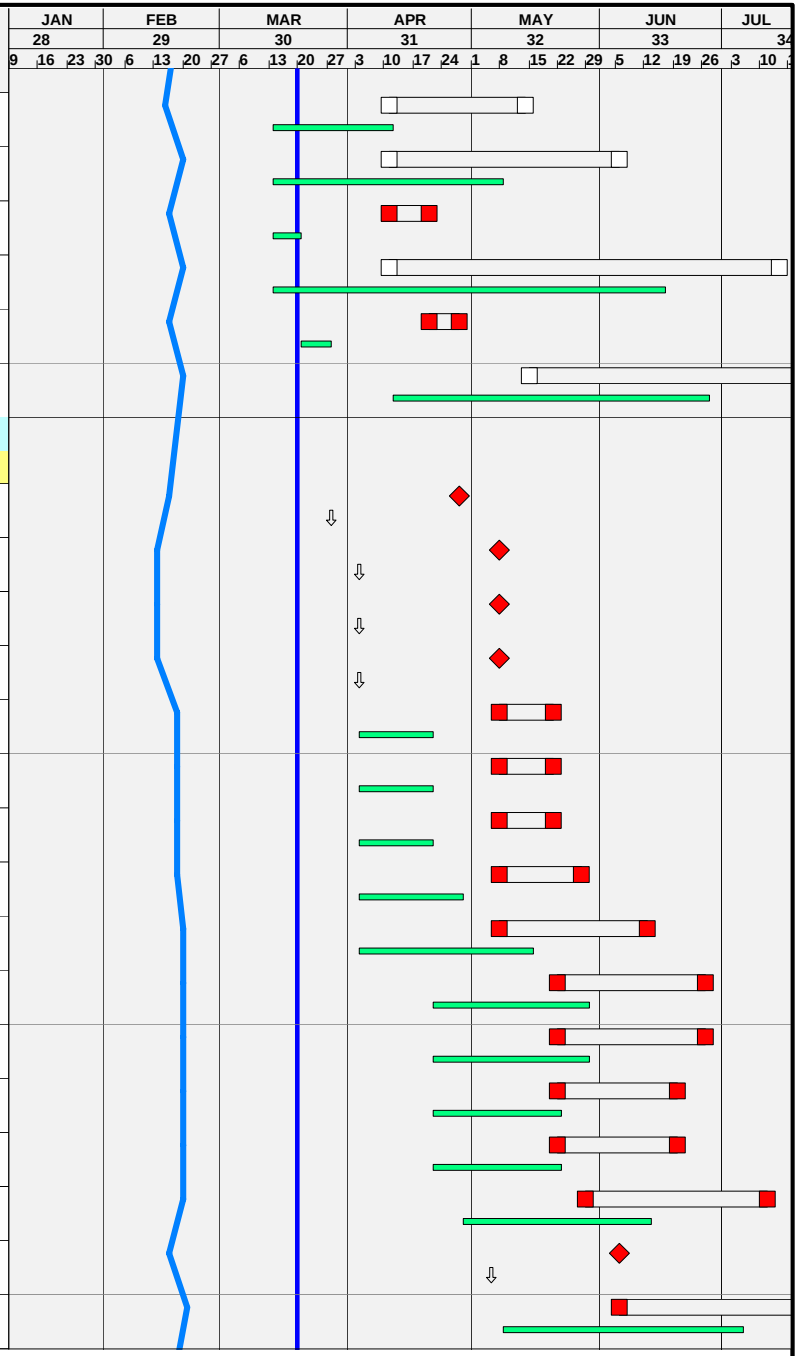
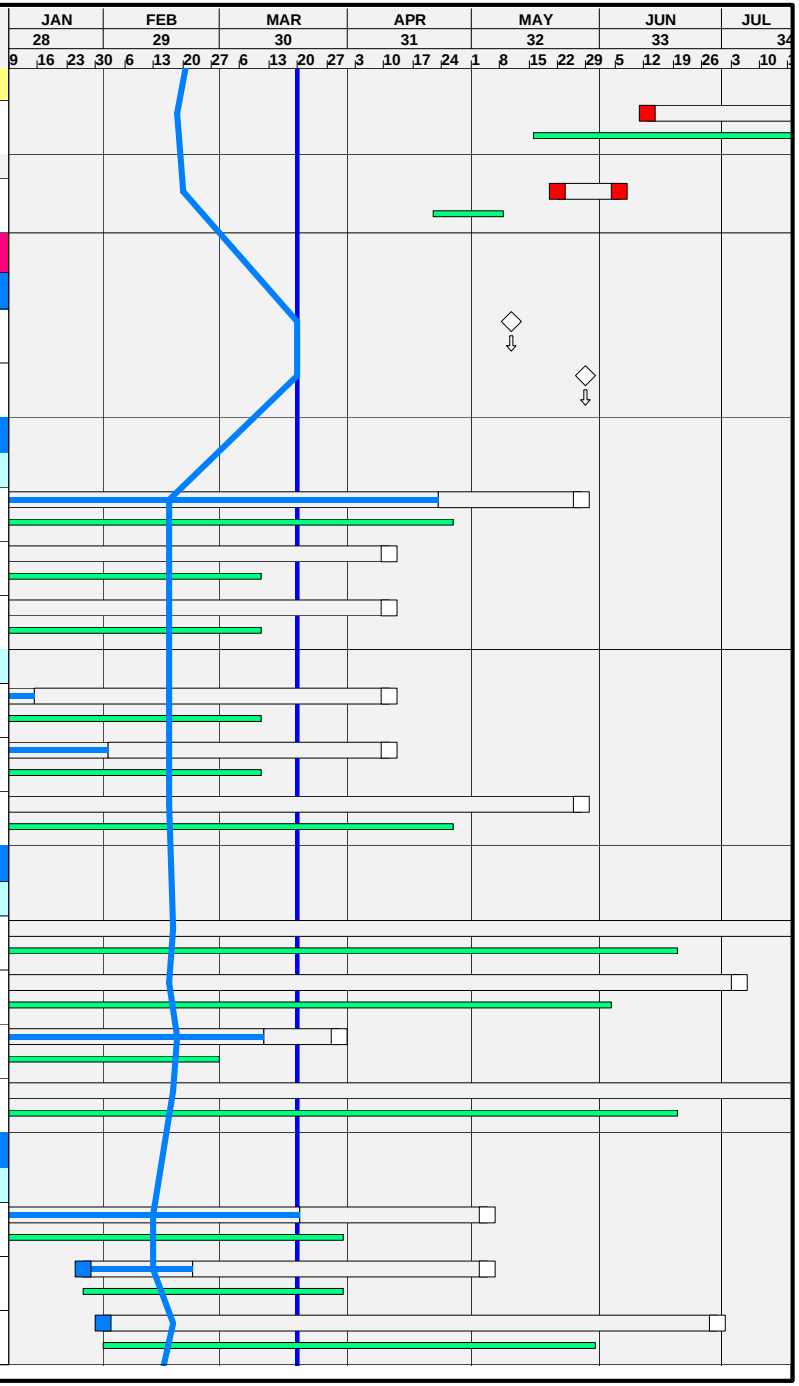
TCSS Access to SHT North Portal Bldg									
EM7296	TCSS ACCESS - 1F (Room 107,109,104)	0		20MAY06	0	0	0	-55	-23
EM7306	TCSS ACCESS - 1F (Room 108)	0		20MAY06	0	0	0	-30	-23
EM7309	TCSS ACCESS LPL (Room L04,L05)	0		20MAY06	0	0	0	-70	-23
AB7150	TCSS ACC 2F(201,204,205,207-212,214,215,ST1,ST2)	0		27MAY06	0	0	0	-58	-23
AB7170	TCSS ACC 3F(301,303-305,307-309,311,313-315,317)	0		27MAY06	0	0	0	-58	-23
EM7290	TCSS ACCESS - GF (Room G02-G03, G04-G08)	0		05JUN06	0	0	0	-42	-25
EM7283	TCSS Containment in G/F	12	06JUN06	19JUN06	0	0	12	-46	-25
EM7293	TCSS ACCESS - GF (Room G09,G15)	0		19JUN06	0	0	0	-46	-25
CIVIL & ABWF WORKS									
AB7040	U/G Drainages and Utilities under bldg	24	20MAR06	20APR06	0	0	24	-46	-25
AB7060	Backfill, G/F Slabs and Walls	24	21APR06	20MAY06	0	0	24	-46	-25
ABWF Works									
AB7130	Remedy defects to SHT Buildings	24	17DEC05A	10APR06	50	17	18	-91	-23
ABWF at GF									
AB7080	Initial Finishes to G/F	18	08MAY06	05JUN06	0	0	18	-46	-25
ABWF at 1F & LP									
AB7100	Initial Finishes to 1/F	18	11APR06	06MAY06	0	0	18	-67	-23
AB7120	Initial Finishes to Lower Plenum	12	11APR06	27APR06	0	0	12	-70	-23
ABWF at 2F									
AB7140	Initial Finsihes to 2/F	18	11APR06	06MAY06	0	0	18	-91	-23
ABWF at 3F									
AB7160	Initial Finishes to 3/F	18	11APR06	06MAY06	0	0	18	-60	-23
AB7230	Installation of Crane Beam beneath 3rd FL Slab	12	08MAY06	20MAY06	0	0	12	-35	-23
ABWF at 4F									
AB7180	Initial Finishes to 4/F and above	24	11APR06	13MAY06	0	0	24	-41	-23
AB7240	Installation of Crane Beam beneath 4th FL Slab	12	15MAY06	27MAY06	0	0	12	-41	-23



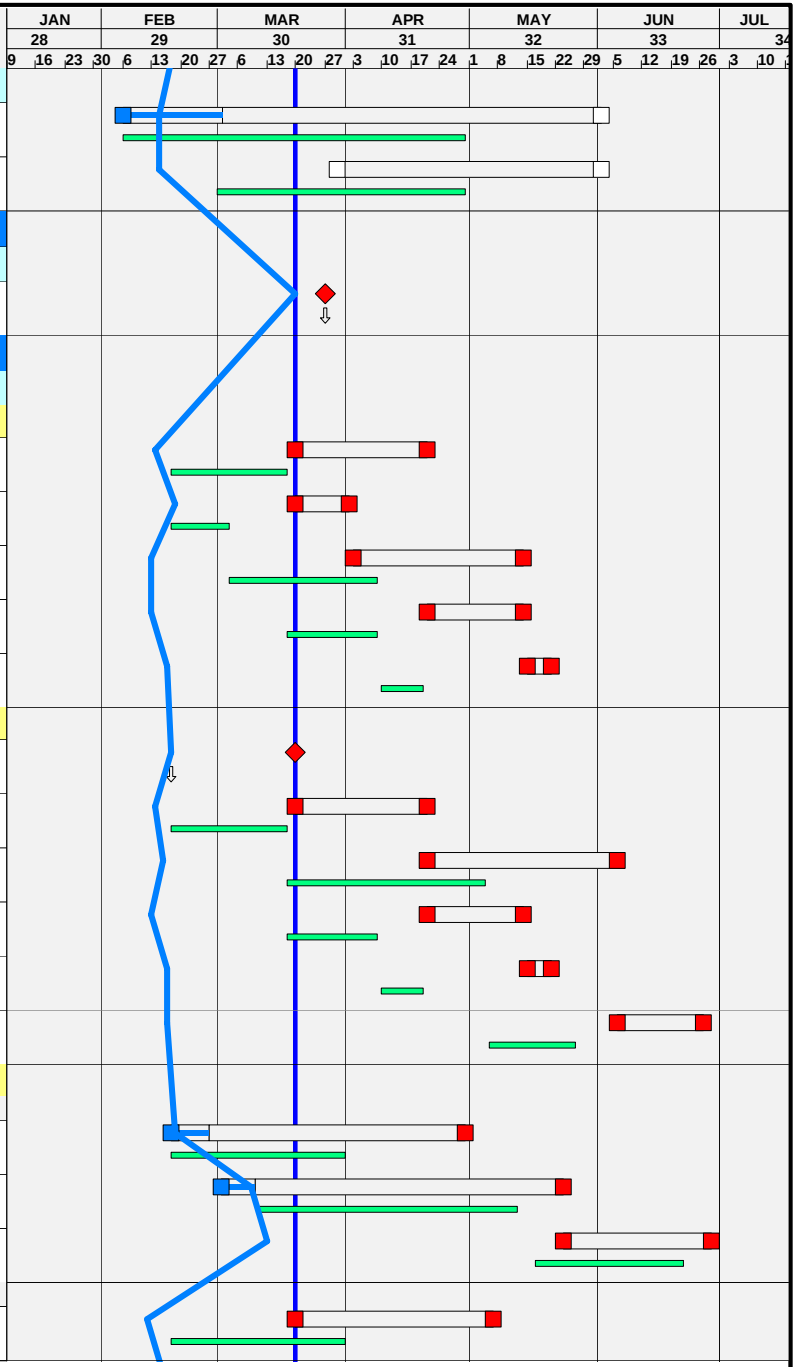
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
Roofing & External Facade									
AB7200	Waterproof External Walls	24	11APR06	13MAY06	0	0	24	30	-23
AB7260	Painting	42	11APR06	05JUN06	0	0	42	144	-23
AB7270	Roofing Works	6	11APR06	20APR06	0	0	6	-18	-23
AB7290	Install Louvres	75	11APR06	14JUL06	0	0	75	20	-23
AB7300	Waterproofing roof	6	21APR06	27APR06	0	0	6	-18	-23
AB7280	Install Composite Panels	60	15MAY06	25JUL06	0	0	60	30	-23
E&M - GENERAL									
ELECTRICAL WORKS									
EM7298	E&M Access to Lower Plenum	0	28APR06		0	0	0	-70	-23
EM7220	E&M access to 3/F	0	08MAY06		0	0	0	-60	-23
EM7240	E&M access to 2/F	0	08MAY06		0	0	0	-91	-23
EM7260	E&M Access to 1/F	0	08MAY06		0	0	0	-55	-23
EM7300	BS Works for HV Sw + Tx	12	08MAY06	20MAY06	0	0	12	-91	-23
EM7360	BS Works for LV Sw, MCC, UPS, LCC	12	08MAY06	20MAY06	0	0	12	-60	-23
EM7420	BS Works for 110V Charger Rm	12	08MAY06	20MAY06	0	0	12	-42	-23
EM7460	BS Works for Genset	18	08MAY06	27MAY06	0	0	18	-54	-23
EM7600	BS Works for TVS Plenums	30	08MAY06	12JUN06	0	0	30	-53	-23
EM7320	HV Sw + Tx Installation	30	22MAY06	26JUN06	0	0	30	-91	-23
EM7380	LV Sw, MCC, UPS, LCC Installation	30	22MAY06	26JUN06	0	0	30	-60	-23
EM7520	E&M Works in Corridors 2/F	24	22MAY06	19JUN06	0	0	24	-49	-23
EM7540	E&M Works in Corridors 3/F	24	22MAY06	19JUN06	0	0	24	-49	-23
EM7480	Genset Installation	36	29MAY06	11JUL06	0	0	36	-54	-23
EM7280	E&M Access to G/F	0	06JUN06		0	0	0	-46	-25
EM7560	E&M Works in Risers	48	06JUN06	01AUG06	0	0	48	-49	-23



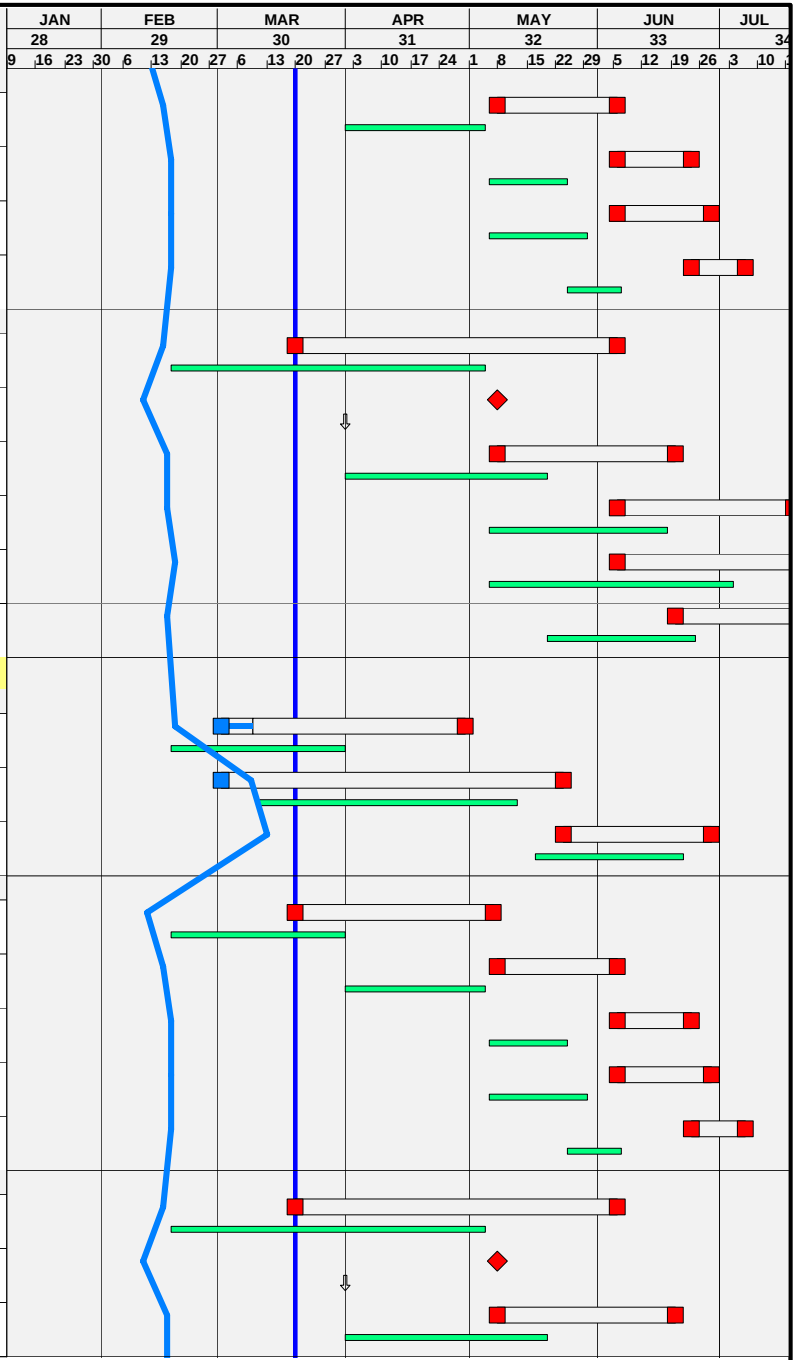
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
ELECTRICAL WORKS									
EM7620	TVS Installation	100	13JUN06	10OCT06	0	0	100	-53	-23
Testing & Commissioning									
EM7440	110V Charger Rm Installation + T&C	12	22MAY06	05JUN06	0	0	12	-42	-23
SHT RC ENCLOSURE & T3 UNDERPASS									
CONTRACT DEFINED DATES & SECTIONS									
ACS_J6	Access to Portion - J6 (SH-R9 Slip Rd.Over KCRC)	0		10MAY06*	0	0	0	563	0
ACS_L	Access to Portions - L	0		28MAY06*	0	0	0	545	0
SUBMITTALS & APPROVALS									
E&M EQPT./ MTRL.SUBMITTALS									
8304	Sht-N.R9-Sub.TVS control sys	54	02JUL04A	27MAY06	95	95	54	394	-25
8305	Sht-N.R9-Sub.FS AFA & Linear sys	54	05JUL04A	10APR06	67	67	18	364	-25
8303	Sht-N.R9-Sub.CMCS & ELV sys	78	26AUG04A	10APR06	77	77	18	351	-25
E&M EQP. / MTRL. APPROVALS									
7517	Sht-N.R9-App. FS AFA & Linear sys	18	14SEP04A	10APR06	85	85	18	364	-25
7494	Sht-N.R9-App. CMCS & ELV sys	18	20SEP04A	10APR06	88	88	18	351	-25
7505	Sht-N.R9-App. TVS control sys	18	12NOV04A	27MAY06	0	0	46	394	-25
PROCUREMENT - MATERIAL									
SHT RC FULL ENCLOSURE / T3 UNDERPASS									
7495	Sht-N.R9-Proc & Manuf. CMCS & ELV sys	180	29MAR05A	19JUL06	46	46	97	351	-25
7518	Sht-N.R9-Proc & Manuf. FS AFA & Linear sys	120	29MAR05A	04JUL06	30	30	84	364	-25
7613	Sht-N.R9-Proc & Manuf. MCC, power & control sys	180	29MAR05A	29MAR06	95	95	9	439	-25
7506	Sht-N.R9-Proc & Manuf. TVS control sys	180	25MAY05A	19JUL06	46	46	97	351	-25
MAJOR EQUIPMENT DELIVERY									
SHT RC FULL ENCLOSURE / T3 UNDERPASS									
7531	Sht-N.R9-Del. TVF, Duct & Control to Encl.	72	03JAN06A	04MAY06	63	63	27	461	-25
7606	Sht-N.R9-Del. LCC to S & N Sw/R	48	27JAN06A	04MAY06	27	27	35	461	-25
7483	Sht-N.R9-Del. HV/LV main & submain dist. sys	72	01FEB06A	29JUN06	0	0	81	415	-25



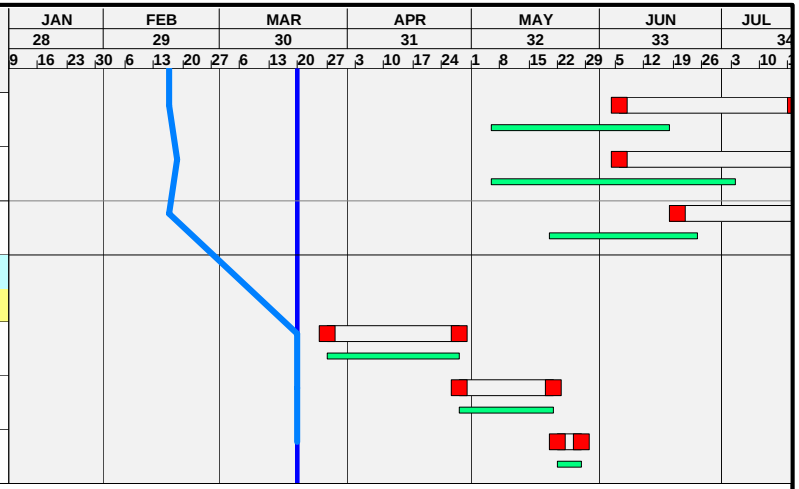
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
SHT RC FULL ENCLOSURE / T3 UNDERPASS									
7489	Sht-N.R9-Del. Tunnel Lgt	72	06FEB06A	01JUN06	21	21	57	439	-25
7614	Sht-N.R9-Del. MCC, & control sys to S LV S/R	48	30MAR06	01JUN06	0	0	48	439	-25
INTERFACE DATES									
SHT RC FULL ENCLOSURE / T3 UNDERPASS									
EM4020	LKJV - Posession of T3 Underpass	0	27MAR06*		0	0	0	-6	0
CONSTRUCTION WORKS									
SHT RC FULL ENCLOSURE / T3 UNDERPASS									
Koisk S1 at Shatin North Control Point									
EM3950	Kiosk S1 - Structure & Fittings	24	20MAR06	20APR06	0	0	24	0	-25
EM3960	Wighbridge S1 - Install	12	20MAR06	01APR06	0	0	12	6	-25
EM3970	Weighbirgde S1 - Test and T&C	30	03APR06	13MAY06	0	0	30	6	-25
EM3952	Kiosk S1 - Install E&M Works	18	21APR06	13MAY06	0	0	18	0	-25
EM3954	Kiosk S1 - E&M Testing and T&C	6	15MAY06	20MAY06	0	0	6	0	-25
RC Full Enclosure - LV Switch Room									
280070	E&M Access to Southern LV Switch Room	0	20MAR06		0	0	0	-47	-25
280072	LV SW Rm - Cable Containment & Equipt Supports	24	20MAR06	20APR06	0	0	24	-47	-25
280074	LV SW Rm - SWGR, MCCB/ MCB Board, FS Panels	36	21APR06	05JUN06	0	0	36	-47	-25
280076	LV SW Rm - Elect Lightings & Conduits	18	21APR06	13MAY06	0	0	18	0	-25
280078	LV SW Rm - Lightings wiring, term & test	6	15MAY06	20MAY06	0	0	6	0	-25
280079	LV SW Rm - MCCB,MCB,LV Sw,FS panels Term & Test	18	06JUN06	26JUN06	0	0	18	-47	-25
STN RC FULL ENCLOSURE (North Bound) - E&M WORKS									
MVAC / Tunnel Ventillation System									
280000	RCFE NB - Ductworks Supports / Containment @ C/L	36	18FEB06A	29APR06	13	0	32	-39	-21
280002	RCFE NB - MVAC Ducts, TVF & MSFD Units @ C/L	48	02MAR06A	23MAY06	10	0	43	-39	-9
280004	RCFE NB - MVAC Pipeworks & Conduits @ C/L	30	24MAY06	28JUN06	0	0	30	-39	-6
Fire Protection System									
280018	RCFE NB - Brackets/ Supt for TCSS @ Cable Trough	36	20MAR06	06MAY06	0	0	36	-59	-25



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
Fire Protection System									
280024	RCFE NB - (150d) FS Main pipeworks @ G/L	24	08MAY06	05JUN06	0	0	24	-39	-25
280026	RCFE NB - FS Conduit, Hose Reel Cabinets & Eqpt.	16	06JUN06	23JUN06	0	0	16	-39	-25
280028	RCFE NB - (100d) FH / HR Pipeworks & Fittings	18	06JUN06	28JUN06	0	0	18	-39	-25
280029	RCFE NB - Install Smoke detector @ N1-N3	10	24JUN06	06JUL06	0	0	10	-27	-25
Electrical Works									
280044	RCFE NB - Brackets for Lights, CCTV & Eqpt @ C/L	60	20MAR06	05JUN06	0	0	60	-65	-25
280034	RCFE NB - E&M Access to Southern LV Sw Room	0	08MAY06*		0	0	0	-59	-25
280038	RCFE NB - HV & LV Cabling Works @ C Trough	36	08MAY06	19JUN06	0	0	36	-59	-25
280046	RCFE NB - Conduits Works @ Ceiling Level	36	06JUN06	18JUL06	0	0	36	-53	-25
280048	RCFE NB - Earthing, Lighting, Equipt. @ C/L	48	06JUN06	01AUG06	0	0	48	-65	-25
280040	RCFE NB - Install Power Distn Panels & Test	30	20JUN06	25JUL06	0	0	30	-59	-25
STN RC FULL ENCLOSURE (South Bound) - E&M WORKS									
MVAC / Tunnel Ventillation System									
280082	RCFE SB - Ductworks Supports / Containment @ C/L	36	02MAR06A	29APR06	13	0	32	-39	-21
280084	RCFE SB - MVAC Ducts, TVF & MSFD Units @ C/L	48	02MAR06A	23MAY06	0	0	43	-39	-9
280086	RCFE SB - MVAC Pipeworks & Conduits @ C/L	30	24MAY06	28JUN06	0	0	30	-39	-6
Fire Protection System									
280092	RCFE SB - Brackets/ Supt for TCSS @ Cable Trough	36	20MAR06	06MAY06	0	0	36	-59	-25
280094	RCFE SB - (150d) FS Main pipeworks @ G/L	24	08MAY06	05JUN06	0	0	24	-39	-25
280096	RCFE SB - FS Conduit, Hose Reel Cabinets & Eqpt.	16	06JUN06	23JUN06	0	0	16	-39	-25
280098	RCFE SB - (100d) FH / HR Pipeworks & Fittings	18	06JUN06	28JUN06	0	0	18	-39	-25
280100	RCFE SB - Install Smoke detector @ S1-S4	10	24JUN06	06JUL06	0	0	10	-27	-25
Electrical Works									
280116	RCFE SB - Brackets for Lights, CCTV & Eqpt @ C/L	60	20MAR06	05JUN06	0	0	60	-65	-25
280110	RCFE SB - E&M Access to Southern LV Sw Room	0	08MAY06*		0	0	0	-59	-25
280112	RCFE SB - HV & LV Cabling Works @ C Trough	36	08MAY06	19JUN06	0	0	36	-59	-25



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish
Electrical Works									
280118	RCFE SB - Conduits Works @ Ceiling Level	36	06JUN06	18JUL06	0	0	36	-53	-25
280120	RCFE SB - Earthing, Lighting, Equipt. @ C/L	48	06JUN06	01AUG06	0	0	48	-65	-25
280114	RCFE SB - Install Power Distn Panels & Test	30	20JUN06	25JUL06	0	0	30	-59	-25
T3 UNDERPASS									
Kiosks S2 at T3 Underpass Portal									
EM3980	Kiosk S2 - Structure & Fittings	24	27MAR06	27APR06	0	0	24	-6	0
EM4000	Kiosk S2 - Install E&M Works	18	28APR06	20MAY06	0	0	18	-6	0
EM4002	Kiosk S2 - E&M Testing and T&C	6	22MAY06	27MAY06	0	0	6	-6	0



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,	<u>Environmental Permits</u> 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. <u>Blasting Works</u> 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: 1. 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. 2. 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.l</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. 30th August to 12th 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 30th August and 6th 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 30th August and 12th 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
				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.	
41021	Garden Villa	09-Oct-04 (by EPD) 21-Oct-04 (by ET Leader)	Environmental Protection Department (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: 1. Driving the vehicles too fast, which generated excessive engine noise; 2. Noise inside the vehicles (such as staff talking or radios) escaping through the open vehicle windows; and 3. 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: 1. to drive slowly in order to reduce the engine noise, especially when approaching Garden Villa; 2. to roll up the vehicle windows to contain any noise from talking or radios; and 3. to prohibit beeping the vehicle horn for gate opening; instead, to park the car and approach the guard on foot.	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 20th 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 23rd October 2004.	The complaint was considered valid based on: 1. ER's site observations; 2. ET's weekly site audit; and 3. 1-hr TSP exceedance record. Also, the sources of dust generation were identified as 1. 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. 2. 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 21st 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 24th November 2004.	According to the ER, the only construction activity at Butterfly Valley undertaken on 21st 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 21st and 28th 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 1st 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: 1. Noise from tunnel blasting work carrying out at around 7:30am and 10:00pm; and 2. 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

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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: 1. Nighttime & Sunday construction noise 2. Noise from tunnel blasting at early morning and nighttime 3. 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 non-compliance 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 <u>Conclusions</u> 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 30th 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 29th 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

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				criterion of 75 dB(A). Based on the results of routine noise monitoring and the ad-hoc 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 9th 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 15th 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 ad-hoc 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

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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 15th 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 19th 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 14th April 2005 and at 4am on 15th 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 11th and 15th 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 (11th to 15th April 2005) is justifiable or not.	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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). *Conclusion and Recommendation* 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.	*Environmental Monitoring* After receiving the complaint, the ET carried out a continuous noise measurement at Station NM6 (Government Quarters) from 29 to 30 September 2005. All the measured noise levels in term of Leq-5min are close to the baseline noise level. The noise levels after correction of baseline levels were all below the noise criterion of 50 dB(A). *Conclusion* The subjected blasting operations were carried out by the Contractor under a valid blasting permit. In addition, no noise exceedance was recorded for the ad-hoc noise monitoring. The complaint lodged is therefore considered not justifiable.	Closed
51025	Caldecott Hill (2 Caldecott Road)	25-Oct-05	A public complaint was received by the MWPMO of Highways Department on 25 October 2005. The complaint was subsequently refereed to the RSS and Environmental Team of Route 8 – Eagle's Nest Tunnel and Associated Works (R8-ENT) Project. The complaint was lodged by the management company of Caldecott Hill (No.2 Caldecott Road). It was about dust generation when construction vehicles, particularly dump trucks and concrete trucks, traveling along the Water Treatment Works (WTW) access road and its junction with Caldecott Road. According to the photos provided by the complainant, noticeable dust generation was observed during construction vehicles movement on the roads of concern.	*Site Observations* Ad-hoc site inspections were carried out on 25 and 26 Oct 05. On 26 Oct 05, the WTW access road was observed dry. Deposition of dusty materials was noted. Significant dust generation was identified during vehicle movement. *Contractor's Actions* Mitigation actions were taken by the Contractor: 1. One labour was appointed to water spray the concerned road junction and clear up of dusty materials deposited on the WTW access road. 2. Regular watering on access road by hose pipe was performed to keep the road wet. 3. All vehicles would be wheel-washed and loads of dusty materials would be covered before leaving the site. *Conclusions* Based on the site observations, this complaint was considered to be valid and related to the Project works. However, enhanced dust mitigation measures were taken by the Contractor and the situation was found improved.	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
51031	Po Leung Kuk Choi Kai Yau School	31-Oct-05	The resident site staff (MHJV) of R8-ENT received a complaint from the Principal of PLKCKY School. She commented that the blasting noise (nighttime and daytime) at Butterfly Valley became louder than before.	An ad-hoc noise measurement was taken by ET on 5 Nov 05 to evaluate the noise impact due to daytime surface blasting at the BV. The measurement results revealed that there has been no exceedance of noise level criteria. The complaint was therefore considered not justifiable.	Closed
51101	Butterfly Valley (Government Quarters)	1-Nov-05	On 1 Nov 05, the Resident Site Staff received a complaint from a resident of the Government Quarters. On 2 Nov 05, a complaint of similar natures and same location was received by the Environmental Protection Department. The complainant was concerned about the following environmental issues: 1. Noise nuisance due to tunnel blasting works undertaken at midnights and in early mornings (3am to 5am); 2. Noise nuisance due to operation of a generator after 11pm; 3. Construction dust and daytime noise due to processing and stockpiling of crushed rocks at Butterfly Valley; 4. Noise nuisance due to works outside tunnel in the early morning of 2 Nov 05.	*Item 1: Noise nuisance due to tunnel blasting* For carrying out the above-mentioned blasting operations, the Contractor has obtained a valid blasting permit from CEDD. Under this permit, the Contractor is allowed to carry out 24-hour blasting works. As advised by the Contractor, all the blasting operations had been completed by 12 Nov 05. *Item 2: Noise due to operation of a generator after 11pm* According to the Construction Noise Permit issued by EPD, one generator was allowed to be operated after 11pm at South Portal area outside the tunnel. In view of the provision of acoustic enclosure and the separation distance from the generator to Government Quarters (around 300m), the noise impact arising from this generator onto the residents of the Quarters was believed to be insignificant. During the ET's investigation on 11 Nov 05, no engine-like noise generated from the construction site could be identified. *Item 3: Dust and noise due to handling of crushed rocks* No noise exceedance was recorded. During the weekly site inspections, deficiencies regarding inadequate dust mitigation measures for the crushed rock processing and stockpiling were occasionally observed. Dry / uncovered stockpiles and dust emissions from crushed rocks handling were sometimes noted. *Item 4: Noise from works out of tunnel in morning of 2 Nov 05* According to the RSS's site records, there has been no activity outside the tunnel in the early morning of 2 November 2005. Work was undertaken deep inside the tunnel during the concerned period. The mentioned noise nuisance might not be related to R8-ENT Project. An ad-hoc noise measurement was carried out by ET from 8 to 10 November 2005 in order to evaluate the noise at Quarter's residents and no exceedance was recorded.	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				Conclusion Based on the information obtained, environmental monitoring results and site observations, this complaint was considered not justifiable, except for the concern of dust nuisance due to crushed rock processing.	
51205	Caldecott Road junction	5-Dec-05	The complaint was lodged by the management company of Villa Carlton. The complainant mentioned that several complaints from the occupants of Villa Carlton were received, against the dust emission when they drove to Kowloon via the Caldecott Road Junction. She also considered that the amount of water spraying by the Contractor was insufficient to suppress dust emission at Caldecott Road Junction.	*Complaint Record* A similar complaint (Log no. 51025) was received on 25 Oct 05 from Caldecott Hill. Significant dust emission was noted when construction vehicles traveling along the WTW access road and its junction with Caldecott Road. With implementation of enhanced dust mitigation measures, the situation was found improved and satisfactory. *Site Observations* Since Nov 05, in order to observe the Contractor's actions taken for the above-mentioned complaint, the area of interest was included during the weekly environmental audit. No deficiency had been noted at this area during the audit. After receiving this new complaint (Log no.51205), several ad-hoc site inspections were carried out on 6, 8 and 14 Dec 05. In addition, the RSS of the Project had carried out daily checking of the condition of the Caldecott Road Junction. Sufficient dust mitigation measures had been implemented by the Contractor. The condition was found satisfactory. Therefore, this complaint was considered not justifiable. However, it is noted that the Contractor had stepped up dust mitigation measures to further improve the condition at Caldecott Road junction.	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
60204	Garden Villa	4-Jan-06 (by ETL)	A public complaint was received by the Environmental Protection Department on 3 January 2006. The complaint was subsequently referred to the Environmental Team of Route 8 – Eagle's Nest Tunnel and Associated Works (R8-ENT) Project on 4 January 2006. According to EPD's information, the complaint was lodged by a complainant, who walked along Tai Po Road on 1-2 January 2006. The following information was given by EPD for our investigation: • Time of concern: 1-2 January 2006 (Daytime) • Suspected site area of concern: ENT's Toll Plaza and Administration Building. • Dust and noise nuisance was noted by the complainant when he passed Garden Villa. • Noise from wood saw and crane or alike was noted.	**A. Construction Noise Impact** According to the Contractor's information, construction activities were carried out on 1 and 2 Jan 06, including: • Erection and dismantling of formwork • Fixing water pipe All the equipment operated by the Contractor on 1-2 Jan 06 complied with the permissible equipment stated in the CNP. On 1 Jan 06, noise monitoring was carried out. All the results complied with the noise criterion. **B. Construction Dust Impact** Erection and dismantling of formwork and fixing water pipe were considered not dust emissive in nature. For stockpiles of materials in Toll Plaza area, dust mitigation measures had been implementing by the Contractor. The condition in term of dust control was found satisfactory during the audit sessions on 4 and 11 Jan 06. Since December 2005, all TSP monitoring results complied with the Action / Limit Level. **Conclusion** Based on the information given, site observations and environmental monitoring results, this complaint was considered not justifiable. Nevertheless, the Contractor was reminded to adopt good site practice to minimize the environmental impacts at the nearby sensitive receivers	Closed