Harbour Area Treatment Scheme Stage 2A

Contract No. DC/2007/23, DC/2009/10, DC/2009/17 and DC/2009/18

Consolidated Monthly Environmental Monitoring and Audit Report
July 2013

(Version 1.0)

Certified 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.

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CE/Harbour Area Treatment Scheme
Drainage Services Department
Sewage Services Branch
Harbour Area Treatment Scheme Division
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2A Pokfulam Road, Hong Kong

14 August 2013
By Post

Attn: Mr. Danny Tang

Dear Sir,

Agreement No. CE 8/2009(EP)
Harbour Area Treatment Scheme (HATS) Stage 2A
Independent Environmental Checker for Construction Phase – Investigation
Submission of Monthly EM&A Consolidated Report for Stonecutters Island Sewage Treatment Works for July 2013 (Issue No. 44) Version 1.0

We refer to the captioned report consolidating the individual ETL certified and IEC verified Monthly EM&A Reports for Contract Nos. DC/2007/23, DC/2009/10, DC/2009/17 and DC/2009/18 at Stonecutters Island works site for HATS Stage 2A. We hereby verify the consolidated report.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED

Dr. Anne F Kerr
Independent Environmental Checker

c.c. ARUP Mr. Ted Y F Tang Fax: 2370 4377

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ABBREVIATION AND ACRONYM

AL Levels	Action and Limit Levels
DSD	Drainage Services Department
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
QA/QC	Quality Assurance / Quality Control
SLM	Sound Level Meter
WMP	Waste Management Plan
SCISTW	Stonecutters Island Sewage Treatment Works
HATS 2A	Harbour Area Treatment Scheme Stage 2A

EXECUTIVE SUMMARY

Introduction

1. This is the 44th Consolidated Environmental Monitoring and Audit (EM&A) Report summaries the key information of EM&A monthly reports for the following construction contracts at the Stonecutters Island Sewage Treatment Works (SCISTW) under the Project of Harbour Area Treatment Scheme Stage 2A (the Project) and prepared by Cinotech Consultants Limited, the Environmental Team (ET) for Contract no. DC/2009/10.

    - Contract no. DC/2007/23 – Construction of Sewage Conveyance System from North Point to Stonecutters Island;
    - Contract no. DC/2009/17 – Upgrading Works at Stonecutters Island Sewage Treatment Works – Sludge Dewatering Facilities;
    - Contract no. DC/2009/10 – Upgrading Works at Stonecutters Island Sewage Treatment Works – Main Pumping Station, Sedimentation Tanks and Ancillary Facilities; and
    - Contract no. DC/2009/18 – Upgrading Works at Stonecutters Island Sewage Treatment Works –Effluent Tunnel and Disinfection Facilities.

2. The above-mentioned Contracts are under the same Environmental Permit (EP) No. EP-322/2008/F and separate ETs were appointed under each contract pursuant to Condition 2.1 of the EP.

3. This report is a contractual requirement under Contract No. DC/2009/10 to provide a consolidated monthly summary of the EM&A works at SCISTW for ease of reference. Each contract is administered under their respective contract by different project teams including the Engineer, the Engineer's Representatives, the Contractor, and the ET.

4. No amendment of the information in the EM&A reports for each individual contract was made in this consolidated monthly report.

5. This Report documents the findings of EM&A Works for the Project covering the period in July 2013.

6. The details of the EM&A for individual contracts can be found in the separate EM&A monthly reports. In case of ambiguity and discrepancy, the individual EM&A report shall prevail. The Executive Summaries and Web Sites for the individual contracts are shown below:

Table I Summary Table for Executive Summaries and Web Sites:

Contract no.	ES/Web Site	Details:
DC/2007/23	Executive Summary	At SCISTW, air quality monitoring station AM6 and noise monitoring station NM5 were monitored by ET for Contract no. DC/2007/23.
	Web Site	http://www.hats2a-ema.com/RP_EMA/DC200723/EM&A%20Report-DC200723.html
DC/2009/17	Executive Summary	The air quality and noise monitoring stations under this contract were covered by other contracts at SCISTW. The monitoring data would be summarized in this monthly EM&A report.

	Web Site	http://www.hats2a-ema.com/RP_EMA/DC%202009%2017/EM&A%20Report-DC200917.html
DC/2009/10	Executive Summary	At SCISTW, air quality monitoring station AM7, AM8 and noise monitoring station NM6 were monitored by ET for Contract no. DC/2009/10.
	Web Site	http://www.hats2a-ema.com/RP_EMA/DC200910/EM&A%20Report-DC200910.html
DC/2009/18	Executive Summary	At SCISTW, air quality monitoring station AM9 and noise monitoring station NM7 were monitored by ET for Contract no. DC/2009/18.
	Web Site	http://www.hats2a-ema.com/RP_EMA/DC200918/EM&A%20Report-DC200918.html

Environmental Monitoring and Audit Works

7. The environmental monitoring works in the Project were covered by the ETs for the Contracts: DC/2007/23, DC/2009/10 and DC/2009/18 and the site audits were conducted once per week for each contract by their ETs.

8. Summary of the non-compliance of the reporting month is tabulated in **Table II**.

Table II Summary Table for Non-compliance Recorded in the Reporting Month

Monitored By	Monitoring Station	Parameter	No. of Exceedance		No. of Exceedance Due to the Project		Action Taken
			Action Level	Limit Level	Action Level	Limit Level	
DC/2007/23	AM6	1-hr TSP	0	0	0	0	N/A
		24-hr TSP	0	0	0	0	
DC/2009/10	AM7	1-hr TSP	0	0	0	0	
		24-hr TSP	0	0	0	0	
	AM8	1-hr TSP	0	0	0	0	
		24-hr TSP	0	0	0	0	
DC/2009/18	AM9	1-hr TSP	0	0	0	0	
		24-hr TSP	0	0	0	0	
DC/2007/23	NM5	Noise	0	0	0	0	
DC/2009/10	NM6		0	0	0	0	
DC/2009/18	NM7		0	0	0	0	

1-hour TSP Monitoring

9. All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

24-hour TSP Monitoring

10. All 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

Construction Noise

11. All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance for normal working hours and restricted hours were recorded in the reporting month.

Key Information in the Reporting Month

12. Summary of key information in the reporting month is tabulated in **Table III**.

Table III Monthly Consolidated Summary Table for Key Information

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	0	---	N/A	N/A	---
Status of submissions under EP	1	Monthly Consolidated EM&A Report for Stonecutters Island Sewage Treatment Works for June 2013	Submitted to EPD	No comment	---
Notifications of any summons & prosecutions received	0	--	N/A	N/A	---

Key Information in the EIA Report

13. According to the EIA Report, air quality, noise, water quality, ecology and landscape and visual would be the key environmental issues during the construction of the project. Details of the implementation of mitigation measures for four contracts are provided in the **Appendix J**.

1. INTRODUCTION

Background

1.1 Harbour Area Treatment Scheme (HATS) Stage 2A is a designated project (Register No. : AEIAR-121/2008). The Environmental Permit (Permit No. EP-322/2008/F) for the Project was issued on 10th October 2012 to the Drainage Services Department (hereinafter called the DSD) as the Permit Holder.

1.2 The general location plan for the Contracts: DC/2007/23, DC/2009/10, DC/2009/17 and DC/2009/18 are shown in **Figures 1 to Figure 3**.

1.3 The environmental permit (EP) was issued for the whole HATS Stage 2A construction works. The ET for the Contract DC/2009/10 is contractually responsible for consolidating the key information from all monthly EM&A reports from the ETs of other Contracts at SCISTW into a single monthly summary for ease of reference.

1.4 The 1st to 11th consolidated monthly EM&A reports were prepared by Ove Arup & Partners Hong Kong Ltd (Arup) and submitted to EPD. From November 2010 onwards, the 12th and subsequent consolidated monthly EM&A report will be prepared and submitted by Cinotech Consultant Limited, the ET for the Contracts DC/2009/10, DC/2009/17 and DC/2009/18.

1.5 This is the 44th consolidated monthly EM&A report summarizing the EM&A works conducted for the Project at SCISTW in July 2013.

1.6 The monthly EM&A reports for each contract were prepared and certified by separate ETs and subsequently verified by the Independent Environmental Checker (IEC) for the Project. All individual monthly EM&A Reports are provided in the Project Website.

Current Contracts at SCISTW

1.7 The major Contracts at SCISTW and their scope of works are provided below:

Contract no. DC/2007/23

- Construction of sewage conveyance system between Sai Ying Pun junction shaft and Stonecutters Island Sewage Treatment Works;
- Construction of riser shaft at Stonecutters Island Sewage Treatment Works;
- Construction of Stage 2 Connecting Adit between the riser shaft and Stage 2 Main Pumping Station side chamber (by others) at Stonecutters Island Sewage Treatment Works.

Contract no. DC/2009/10

- Construction of a main pumping station;
- The extension of chemically enhanced primary treatment tanks; and
- The construction of other ancillary facilities at Stonecutters Island Sewage Treatment Works.

Contract no. DC/2009/17

- Demolition of the existing structures including vehicle washing facilities, Sludge Silo Building, Sludge Dewatering Building, process water storage tanks, polyelectrolyte storage tanks, ADF barging facilities and all associated plant and equipment;
- Construction of Sludge Dewatering Building, Sludge Cake Silos, Sludge Conveyor Bridges, Sludge Storage Tank, Deodourisation Units, Workshop Building, Process Water Storage Tanks and Pumping System;

- Construction of roof landscaping including irrigation system for the Sludge Dewatering Building and Workshop Building;
- Construction of chemical unloading facilities and the chemical pipe trench for the Disinfection Facilities; and
- Construction of associated Electrical, Mechanical, Building Services, Fire Services and Process Installation, Odour Control System and Temporary Vehicle Wash Facilities.

Contract no. DC/2009/18

- The Construction of an 880m long effluent tunnel at Stonecutters Island; and
- The Construction of disinfection facilities at Stonecutters Island Sewage Treatment Works (SCISTW).

Project Organizations

1.8 The key contacts of current contracts are provided in Table 1.1.

Table 1.1 Key Project Contacts

Contract No./ Position	DC/2007/23	DC/2009/10
Contract Title:	Construction of Sewage Conveyance System from North Point to Stonecutters Island;	Upgrading Works at SCISTW - Main Pumping Station, Sedimentation Tanks and Ancillary Facilities
Consultant	Metcalf & Eddy – AECOM JV	Ove Arup & Partners HK Ltd
The Engineer	Keith Tsang (Tel:2605 6262)	S.Y.Chan (Tel: 2528 3031)
The Engineer Representative	Y.H. Fung (Tel: 3713 3110)	Ted Tang (Tel: 2370 4311)
ER's Coordinator	Y.H. Fung (Tel: 3713 3110)	Natalie Kwok (Tel: 6794 8844)
Independent Environmental Checker	Dr. Anne Kerr (Tel:2828 5757)	Dr. Anne Kerr (Tel:2828 5757)
Contractor	Gammon Construction Ltd	Sun Fook Kong – Biwater Joint Venture
Site Agent	Mr. Max Ko (Tel: 9033 1292)	Mr. Ivan Tse (Tel: 6200 2149)
Environmental Officer	Mr. Leo Chow (Tel:9300 2013)	Ms. Connie Wong (Tel:2620 0070)
Environmental Team	Environmental Resources Management Ms.Winnie Ko (Tel: 2271 3000)	Cinotech Consultant Limited Dr. Priscilla Choy (Tel: 2151 2089)

Table 1.1(cont'd) Key Project Contacts

Contract No.	DC/2009/17	DC/2009/18
Contract Title:	Upgrading Works at Stonecutters Island Sewage Treatment Works – Sludge Dewatering Facilities	Upgrading Works at Stonecutters Island Sewage Treatment Works – Effluent Tunnel and Disinfection Facilities
Consultant	Ove Arup & Partners HK Ltd	Ove Arup & Partners HK Ltd
The Engineer	S.Y.Chan (Tel: 2528 3031)	S.Y.Chan (Tel: 2528 3031)

Contract No.	DC/2009/17	DC/2009/18
The Engineer Representative	Ted Tang (Tel: 2370 4311)	Ted Tang (Tel: 2370 4311)
ER's Coordinator	Natalie Kwok (Tel: 6794 8844)	Natalie Kwok (Tel: 6794 8844)
Independent Environmental Checker	Dr. Anne Kerr (Tel:2828 5757)	Dr. Anne Kerr (Tel:2828 5757)
Contractor	China State- ATAL Joint Venture	Chun Wo – CEC Joint Venture
Site Agent	Mr. Tony Wong (Tel: 2370 3166)	Mr. W.C. Lee (Tel: 6688 5680)
Environmental Officer	Mr. H.S.Lui (Tel: 9050 2212)	Mr. Shelton Chan (Tel: 5395 5470)
Environmental Team	Cinotech Consultant Limited Dr. Priscilla Choy (Tel: 2151 2089)	Cinotech Consultant Limited Dr. Priscilla Choy (Tel: 2151 2089)

Construction Programme

1.9 The construction program for the four Contracts at SCISTW are provided in **Appendix L**. Major construction works undertaken during the reporting month include:

Table 1.2 Construction Works in the Reporting Month

Contract No.	Construction Works in the Reporting Month
DC/2007/23	Riser Shaft: • Raise boring – reaming. Production Shaft (Tunnel L): • Pre-excavation grouting; and • Drilling and blasting.
DC/2009/17	Portion 3: • Installation of steelwork of cladding walls was in progress; • Modification of metal scaffolding working platform for construction of cladding wall was in progress; and • Installation of plastic wood plank to form panel at G/F for Linwood cladding wall was in progress. Portion 4: • Installation of green roof system was in progress; • Finishing working of staircases No. 1 & 2 were in progress; • Finishing working of external walls were in progress; • Installation of handrails on R/F of DG Store was in progress; • Installation of skylights on R/F of SDB was in progress; and • Dismantle of external metal scaffolding working platform at Grid Line 13 and between Grid Line 3 to 8/D was completed. Portion 5: • Injection grouting of stem walls of SST No. 7 was in progress. External Works: • SWAC / PMAC submission and implementation of TTA for the commencement of external works were in progress; • Laying of DN750 stormwater drain & watermains and construction of its manhole at Zone B1 were completed. Backfilling works were in progress; • The construction of sodium hypochlorite pipe trench at Zone B2a was completed. Backfilling works were in progress; • Reinstatement works at Zone B2b were in progress; • The construction of manhole C3A and trial panel for recycle glass paving at Zone

	B3a were in progress; • The construction of chemical pipe trench at Zone B3b was in progress; • Laying of DN350 centrate pipe and its related manholes near Northern Sludge Cake Silo at Zone B6 were completed. Backfilling works were in progress; • Reinstatement works at Zone C2 (Stage 3) were completed; • Backfilling works in between sludge storage tank nos. 6 & 7 at Zone C3 were in progress; • Cutting and capping the exposed existing DN200 & DN500 sludge pipes at Zone C5 were completed. Further ELS works were completed for pipe laying; • Laying of additional cable ducts and construction of cable draw pits at Zones C6 & C7 were in progress; • Laying of DN80, DN100 & DN150 watermains at Zone C7 was completed and the backfilling works were in progress; • Laying of DN80, DN100 & DN150 watermains at Zone E5 was completed and the backfilling works were in progress; • Laying of DN80, DN100 & DN150 wateramins at Zone E3 and backfilling works were completed; • Construction of pipe supports inside CEPT Tank at Zone G was in progress; • Installation of solid pump pipeworks on from Solid Pump to NSCS was completed; • Installation of solid pump drain pipe at G/F of NSCS was in progress; • Installation of pipeworks and ductworks for the following systems at SDB were in progress: Process water system, Deodourisation system, Solid pump system, BS - plumbing and drainage system, BS – fire service System, BS – MVAC andHydraulic System; • Installation of flexible chutes and hydraulic pipework in NSCS were in progress; • Installation of Vehicle Washing Machine was in progress; • Installation of FRP ducts for DOU 6 was in progress; • Installation of polymer system at G/F of SDB was in progress; • SAT of Polymer Storage Tank was in progress; • SAT of Polymer Mixing Tank was in progress; • Installation of chemical injection system at G/F of SDB was installed; • Cabling for DCS DP Cable of SDB was installed; • Cabling for DCS DP Cable of NSCS was in progress; • Cabling at G/F and 1/F of SDB was in progress; • Cable containment of NSCS was in progress; • Cable termination for Sludge Feed Pumps, Centrifuge was completed; • Installation of U/G pipeworks at Sludge Storage Tanks 4 & 6 was in progress; • Sludge Feed pipeworks at tops of Sludge Storage Tanks 4 & 7 was installed; • Installation of heat detectors and MCCB in SDB was in progress; • Installation of heat detectors in NSCS was in progress; • Installation of MVAC in Control Room at 1/F of SDB was in progress; • Installation of collecting conveyors at G/F of SDB was in progress; • Installation of divert chute at G/F of SDB was in progress; • Installation of DOU6A and ductwork was in progress; • SAT for LV switchboards was in completed; • Pressure test for pipework at G/F of SDB was in progress; • Pressure test for sludge feed pump discharge, polymer transfer suction and discharge pipework was completed; • Installation of lighting fittings at SDB and NSCS was in progress; and • Installation of LCP of Polymer System at SDB and NSCS was in progress.
DC/2009/10	• At MPS2, Ground Floor (Sector 1) constructed on 4 July 2013 (from +2.80mPD to +5.90mPD) and Construction of Ground Floor (Sector 2),Staircase ST-3 and lift shaft are in progress; • At Switchgear Building,handover of CLP Transformer Room “A” and Room “B” was completed on 16 July 2013; • At Switchgear Building , the construction of Roof Floor (Grid 1 and Grid 10) was in progress and the concreting scheduled on early of August 2013; • Widening of CLP cable trench and construction CLP cable trench are in progress; • At Portion 3, construction of pile cap G.L B-D/29-33_E was completed and Daido Piles extension at new PST was in progress. Erection of Tower Crane TC3 was completed; and

	• At Portion 8, Re-driving test of existing daido pile was in progress.
DC/2009/18	Portion 3: • Blasting and rock excavation at Riser Shaft Tunnel Extension; • Construction of Dechlorination Plant Structure; • Demolition of existing D-wall and; • Commence Entry Culvert Structure Works. • Portion 7: • Blasting and rock excavation at Drop Shaft Tunnel Extension.

Summary of EM&A Requirements

1.10 The EM&A programme requires construction phase monitoring for air quality and noise, as well as site audits covering environmental mitigation measures, including landscape and visual impact, waste/chemicals management, and general compliance with the EM&A Manual and relevant permits/licenses. 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.

1.11 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 4 of this report.

1.12 This report summarized the monitoring results, observations, locations, equipment, period, for required monitoring parameter namely dust, noise levels, and audit works conducted for the Project in July 2013, and the methodology and QA/QC procedures of the monitoring parameters.

2. AIR QUALITY

Monitoring Requirements

2.1 1-hour and 24-hour TSP monitoring were conducted to monitor the air quality. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

Monitoring Locations

2.2 Four designated monitoring stations, AM6, AM7, AM8 and AM9 were selected for impact dust monitoring. Table 2.1 describes the air quality monitoring locations, which are also depicted in **Figures 1 and 3**.

Table 2.1 Locations for Air Quality Monitoring

Monitoring Station	Responsible Contracts	Location of Measurement
AM6	DC/2007/23	Works site boundary of DC/2007/23
AM7	DC/2009/10	North West Kowloon Sewage Pumping Station
AM8		Block A of Government Dockyard
AM9	DC/2009/18	Work Site Boundary (Near Ngong Shuen Chau Barracks Group 2)

Monitoring Equipment

2.3 **Table 2.2** summarizes the equipment used in the impact air monitoring programme. Copies of calibration certificates were shown in **Appendix C**.

Table 2.2 Air Quality Monitoring Equipment

Contract No.	DC/2007/23	DC/2009/10	DC/2009/18
Laser Dust Monitor	N/A*	Met One Instruments: Model no. AEROCET-531 Sibata: LD-3, LD-3B	Met One Instruments:AEROCET-531, Sibata Model no. LD-3B, Sibata Model no. LD-3
HVS Sampler	GMW GS-2310	TISCH: Model no. TE-5170	TISCH: Model no. TE-5170
Calibrator	CM-AIR-43	TISCH: Model TE-5025A	TISCH: Model TE-5025A

N/A*: 1-hr TSP monitoring by DC/2007/23 was carried out by using HVS sampler.

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 B**.

Table 2.3 Impact Dust Monitoring Parameters, Frequency and Duration

Monitoring Station	Parameter	Period	Frequency
All monitoring	1-hour TSP	0700-1900 hrs	3 times/ every 6 days

locations	24-hour TSP	0000-2400 hrs	once in every 6 days

Monitoring Methodology and QA/QC Procedure

2.5 The monitoring methodology and QA/QC procedure for monitoring equipment are presented in the monthly reports for Contracts DC/2007/23, DC/2009/10 and DC/2009/18.

Results and Observations

2.6 **Table 2.4** summaries the air quality monitoring results at AM6, AM7, AM8 and AM9 in reporting month.

Table 2.4 Summary of 1-hour and 24-hour TSP Monitoring Results in Reporting Month

Air Quality Monitoring Station	Average μgm^{-3}	Range μgm^{-3}	Action Level μgm^{-3}	Limit Level μgm^{-3}
1 hour TSP				
AM6	168	114-223	346	500
AM7	57	32-77	322	
AM8	51	34-70	307	
AM9	76	46-101	318	
24 hours TSP				
AM6	94	85-108	196	260
AM7	58	38-85	207	
AM8	30	24-37	158	
AM9	46	37-60	169	

2.7 All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded. Summary of exceedance is presented in **Appendix G**.

2.8 All 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded. Summary of exceedance is presented in **Appendix G**.

2.9 The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix D**.

2.10 According to the field observations, the identified dust sources at the monitoring stations were mainly from loading of material, vehicles movement and construction works in site.

3. NOISE

Monitoring Requirements

3.1 Three noise monitoring stations, namely NM5, NM6 and NM7 were designated in the EM&A Manual for impact monitoring. **Appendix A** shows the established Action and Limit Levels for the environmental monitoring works.

Monitoring Locations

3.2 Noise monitoring was conducted at three designated monitoring stations as listed in Table 3.1. **Figures 1 and 3** shows the locations of these stations.

Table 3.1 Noise Monitoring Stations

Monitoring Station	Responsible Contracts	Location of Measurement
NM5	DC/2007/23	Near FSD Diving Rescue and Training Centre
NM6	DC/2009/10	Customs' Marine Base
NM7	DC/2009/18	Open Area near Naval Base Barrack

Monitoring Equipment

3.3 Table 3.2 summarizes the noise monitoring equipment. Copies of calibration certificates were shown in **Appendix C**.

Table 3.2 Noise Monitoring Equipment

Contract No.	DC/2007/23	DC/2009/10	DC/2009/18
Sound Level Meter	Rion NL-31	SVANTEK Model no: SVAN 955, 957	SVANTEK Model no: SVAN 955, 957
Calibrator	Rion NC-73	SVANTEK Model no: SV 30A	SVANTEK Model no: SV 30A

Monitoring Parameters, Frequency and Duration

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

Table 3.3 Noise Monitoring Parameters, Frequency and Duration

Monitoring Stations	Parameter	Period	Frequency
NM5 NM6 NM7	L_{eq}(30 min.) dB(A)	0700-1900 hrs on weekdays	Once per week
	L_{eq}(5 min.) dB(A)	During restricted hours	Weekly monitoring to be conducted during the construction works

Monitoring Methodology and QA/QC Procedures

3.5 The monitoring methodology and QA/QC procedure are presented in the monthly reports of the Contract DC/2007/23, DC/2009/10 and DC/2009/18.

Results and Observations

3.6 **Table 3.4** summaries the noise monitoring results at NM5, NM6 and NM7 in reporting month.

Table 3.4 Summary of Noise Monitoring Results in Reporting Month

For the time period 0700-1900 hrs. on weekdays		
Monitoring Station	Range, dB(A) L_{eq}(30 min.)	Limit Level ,dB(A) L_{eq}(30 min.)
NM5	59.0-65.0	75.0
NM6	64.1-67.2	
NM7	68.3-71.2	
For the time period 1900-2300 hrs. on Normal Weekdays, And 0700-2300 of Sundays and Public Holiday		
Monitoring Station	Range, dB(A) L_{eq}(5 min.)	Limit Level ,dB(A) L_{eq}(5 min.)
NM5	58.0-62.0	70.0
NM7	60.1-64.2	
All days during 2300 to 0700 hrs. of the next day		
NM7	58.6-59.4*	55.0

Remark:* Since the construction noise levels recorded in restricted hour from 23:00 to 07:00 of the next day were lower than the baseline level, the construction noise levels were considered non-valid exceedance of Limit Level.

3.7 All construction noise monitoring at three designated locations were conducted by their ETs as scheduled in the reporting month.

3.8 No Action/Limit Level exceedance for normal working hours and restricted hours was recorded in the reporting month. Summary of exceedance is presented in **Appendix G**.

3.9 Noise monitoring results and graphical presentations are shown in **Appendix E**.

3.10 The major noise sources identified at the designated noise monitoring stations during day time were the noise generated from trucks movement outside the noise enclosure, concreting work and the traffic noise from the Container Port Road South close to the site boundary of Contract No: DC/2009/18; while the major noise sources identified during the evening and night time was the traffic noise from the Container Port Road South and Stonecutters Bridge near to the Project area since the Construction works were mainly conducted within the noise enclosure during restricted hours.

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 each Project site.

4.2 Environmental site audits were conducted in the reporting month for each Contract is the following. No non-compliance was observed during the site audits.

Table 4.1 Summary of Date of Site Inspection

Contract No.	Date of Site Inspection
DC/2007/23	4, 11, 18 and 25 July 2013
DC/2009/10	5, 12, 17 and 26 July 2013
DC/2009/17	4, 11, 18 and 25 July 2013
DC/2009/18	3, 10, 18, 24 and 31 July 2013

4.3 Site inspections were undertaken to ensure and check that the implementation and maintenance of landscape and visual mitigation measures are being properly carried out in the reporting month in accordance to section 11.10 of the EM&A Manual. No non-compliance was observed during the site inspections.

4.4 The summaries of site audits for four contracts are attached in **Appendix H**.

Review of Environmental Monitoring Procedures

4.5 The monitoring works conducted by the monitoring teams of respective Contracts and were inspected regularly by their ETs.

Status of Environmental Licensing and Permitting

4.6 All permits/licenses obtained for the each Contract are summarized in **Appendix F**.

Status of Waste Management

4.7 The amount of wastes generated by the activities of four contracts in the reporting month is the following:

Table 4.2 Summary of Amount of Waste Generated in Reporting Month

Contract	Inert C&D[1] Materials	Other C&D[2] Waste	Chemical Waste	Marine Deposit		
				Type 1 (m^3)	Type 2 (m^3)	Type 3 (Tonnes)
DC/2007/23	19977*(m^3)	327*(m^3)	400(kg)	0*	0*	0*
DC/2009/10	293(m^3)	3424kg and 27m^3	72(kg)	0	0	0
DC/2009/17	322.05(m^3)	24.34 (Tonnes)	0	0	0	0
DC/2009/18	688(m^3)	52kg and 4(m^3)	528(kg)	0	0	0

Remark*: The amount of waste generated is from all sites in this Contract.
1: Inert C&D Materials includes Broken Concrete/Rock, Inert C&D waste reused in the

Contract/other Project and those disposed to Public Fill.
2: Other C&D Waste includes Metals, Paper Cardboard packaging, plastic and other General Refuse.

4.8 The disposal location of wastes generated by the activities of four contracts is the following:

Table 4.3 Summary of Disposal Location of Waste Generated in Reporting Month

Contract No.	Disposal Location of Wastes in Report Month
DC/2007/23	14009m^3 of Inert C&D have were reused in other project and 5968m^3 of Inert C&D were used in SENT landfill/ Lam Tei Quarry or disposed of in Tuen Mun Area 38 Fill Bank/Tseung Kwan O Area 137 Fill Bank/Chai Wan Barging Point. No plastics, but 4kg of steel and 145kg of paper/cardboard packaging were sent to recyclers for recycling during the reporting period. 400kg of chemical waste was collected by licensed Collector.
DC/2009/17	Tuen Mun Area 38 Fill Bank and NENT Landfill.
DC/2009/10	Tuen Mun Area 38 Fill Bank and NENT Landfill. 60kg paper/cardboard packaging, 4kg plastic and 3360kg of metals were sent to recyclers during the reporting period. 72kg of chemical waste was collected by licensed Collector.
DC/2009/18	Tuen Mun Area 38 Fill Bank and NENT Landfill and Tseung Kwan O Area 137 Fill Bank 51kg paper/cardboard packaging and 1kg of metal were sent to recycler during the reporting period. 528kg of chemical waste was collected by licensed Collector.

4.9 The summaries of amount of waste generated in four contracts could be referred to respective monthly report.

Implementation Status of Environmental Mitigation Measures

4.10 Details of the implementation of mitigation measures for four contracts are provided in the **Appendix J**.

4.11 During the weekly environmental site inspections in the reporting period, no non-conformance was identified. The observations and recommendations for the Projects are summarized in **Appendix H**.

Implementation Status of Event Action Plans

4.12 The Event Action Plans for air quality and noise are presented in **Appendix I.**

1-hr TSP

4.13 No Action/Limit Level exceedance was recorded.

24-hr TSP

4.14 No Action/Limit Level exceedance was recorded.

Construction Noise

4.15 No Action/Limit Level exceedance for normal working hours and restricted hours was

recorded in the reporting month. Summary of exceedance is presented in **Appendix G**.

Landscape and Visual

4.16 No non-compliance was recorded.

Summary of Complaints and Prosecutions

4.17 No environmental complaint and prosecution was received at SCISTW for four contracts in the reporting month.

4.18 There were no environmental complaint and prosecution received since the commencement of four contracts. The Complaint Log is presented in **Appendix K**.

5. FUTURE KEY ISSUES

Key Issues for the Coming Month

5.1 Key environmental issues in the coming month include:

- Generation of dust from stockpiles of excavated and dusty materials, unpaved site area and vehicle movement, roadworks, excavation works and loading and unloading dusty materials on-site;
- Noise from operation of equipment and machinery on-site;
- Storage of chemicals/fuel and chemical waste/waste oil on-site;
- Ponding water generated in pre-drillings;
- Drainage system should be well designed and maintained to prevent flooding and silty water getting into the public area;
- Oil leakage from equipment and spillage;
- Silty surface runoff generated from the site area during raining;
- Dust generation should be mitigated by adequate water spraying, especially in dry days;
- Stockpile should be covered by tarpaulin to reduce dust generation;
- Silt and dust getting into the public area by the leaving site vehicles at the site exits without adequate wheel washing facilities; and
- Proper tree and shrub protection works should be provided when carrying out works near existing trees and shrubs.

Monitoring Schedule for the Next Month

5.2 The tentative environmental monitoring schedules for the next month are shown in **Appendix B**.

Construction Program for the Next Month

5.3 The tentative construction programs are provided in **Appendix L**.

6. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

6.1 Environmental monitoring and audit works were performed in the reporting month and all monitoring results were checked and reviewed.

1-hour TSP Monitoring

6.2 All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

24-hour TSP Monitoring

6.3 All 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

Construction Noise Monitoring

6.4 No Action/Limit Level exceedance for normal working hours and restricted hours was recorded in the reporting month. Summary of exceedance is presented in **Appendix G**.

Environmental Audit

6.5 Environmental site audits were conducted on weekly basis in the reporting month. No non-compliance was recorded.

Complaint and Prosecution

6.6 No environmental complaint and prosecution was received in the reporting month.

Recommendations for the coming reporting month:

6.7 The following recommendations were made for the coming reporting month:

Air Quality

- To regularly maintain the machinery and vehicles on site;
- To mitigate the dust generation by adequate water spraying in dry days;
- To cover the stockpile with tarpaulin to reduce dust generation;
- To follow up any exceedance caused by the construction works; and
- To implement dust suppression measures on all haul roads, stockpiles, dried/unpaved surfaces and excavation/road breaking works.

Noise

- To inspect the noise sources inside the site;
- To follow up any exceedance caused by the construction works;
- To space out noisy equipment and position the equipment as far away as possible from

sensitive receivers;
- To provide temporary noise barriers for operations of noisy equipment near the noise sensitive receivers in an appropriate location;

Water Quality

- To identify any discharge of wastewater from the construction site;
- To avoid water from accumulation on site and carry out larviciding against mosquito breeding for stagnant water when mosquito larvae are observed;and
- To clear the sediment in the wastewater treatment tanks regularly.

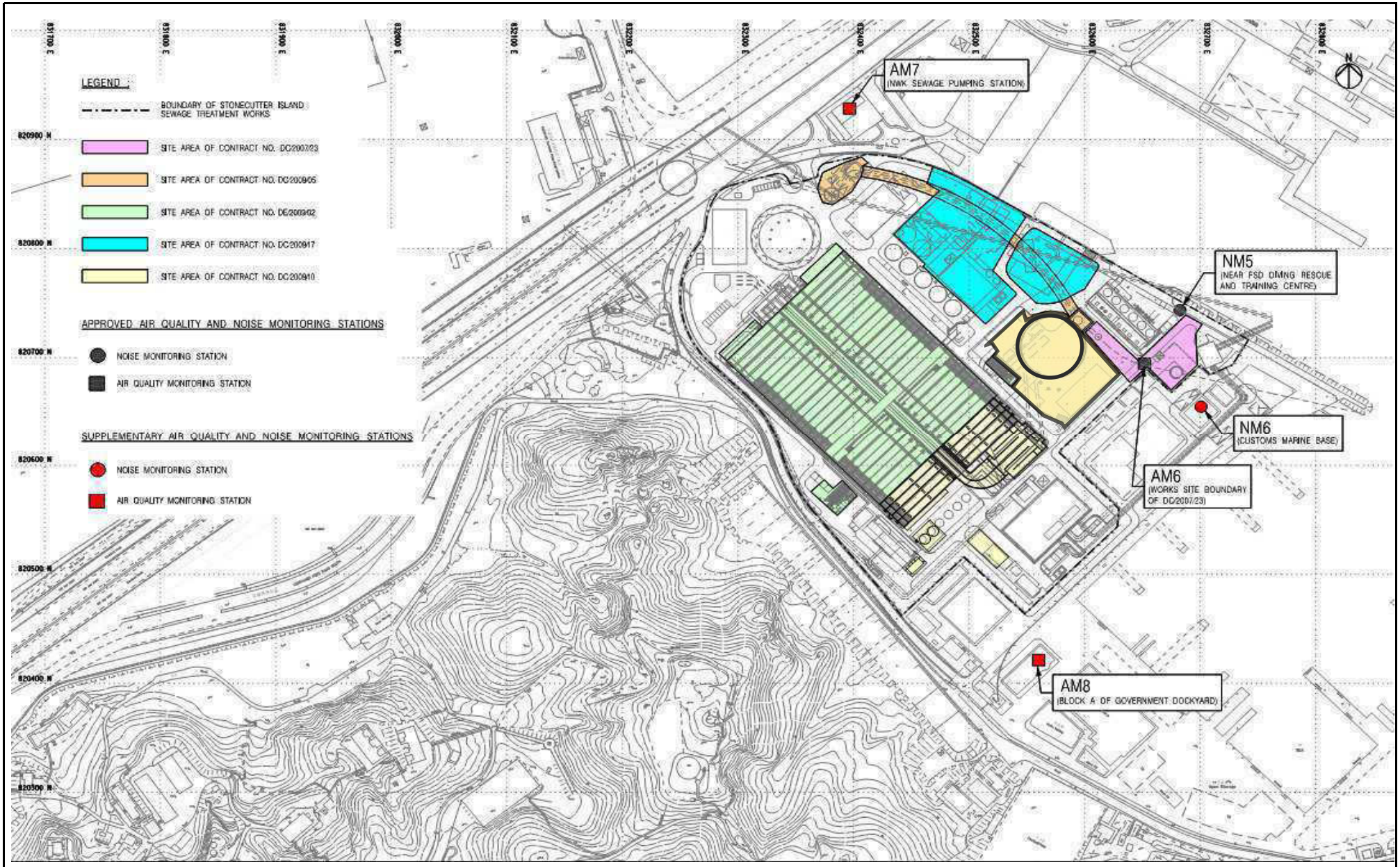
Waste/Chemical Management

- To provide proper rubbish bins / skips for waste collection;
- To check for any accumulation of wasted materials or rubbish on site;
- To provide proper storage area or drip trays for oil containers/ equipment on site;
- To avoid any discharge or accidental spillage of chemical waste or oil directly from the equipment;
- To well maintain the equipment and drip trays to avoid oil leakage; and
- To avoid improper handling or storage of oil drum on site.

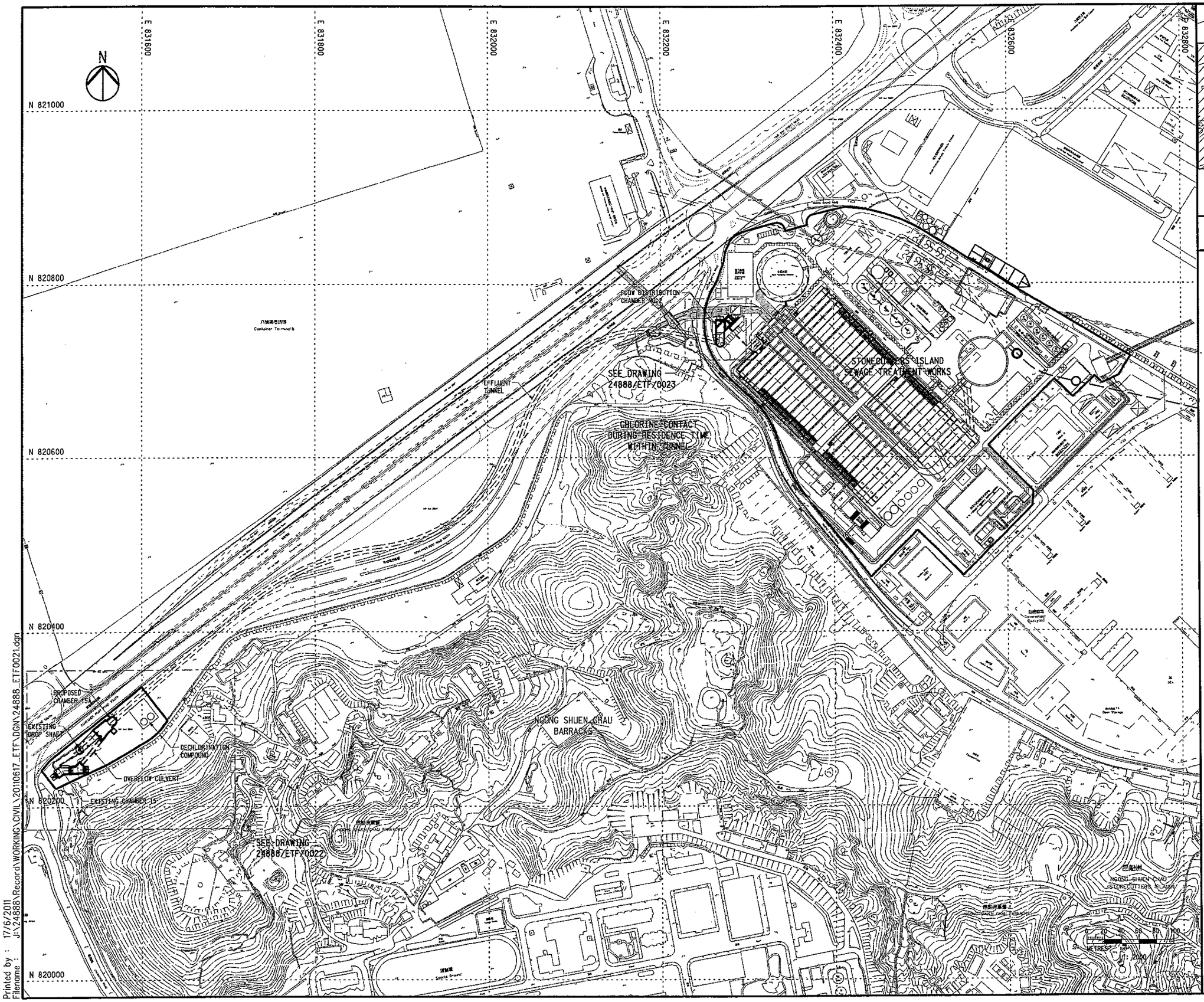
Landscape and Visual

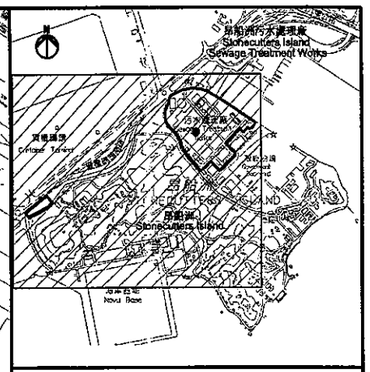
- To erect and maintain the protection fence around the retaining tree; and
- To avoid any heavy materials placed into tree protection zone.

FIGURES



Title	Contract No: DC/2009/10 HATS 2A - Upgrading Main Pumping Station,Sedimentation Tanks and Ancillary Facilities at SISTW	Scale N.T.S	Project No. MA11007	CINOTECH
	General Location Plan of the Project and Locations of Air Quality and Noise Monitoring Stations	Date 8/2011	Figure 1	





KEY PLAN

LEGEND:

BOUNDARY OF SCISTW

ALIGNMENT OF EFFLUENT TUNNEL

Rev	Description	By	Date
0	ISSUE FOR CONSTRUCTION	PW	06/11

Consultant

ARUP 奧雅納工程顧問 Ove Arup & Partners Hong Kong Limited

Project title

Contract No. DC/2009/18
Harbour Area Treatment Scheme Stage 2A-Upgrading Works at
Stonecutters Island Sewage Treatment Works-Effluent Tunnel and Disinfection Facilities

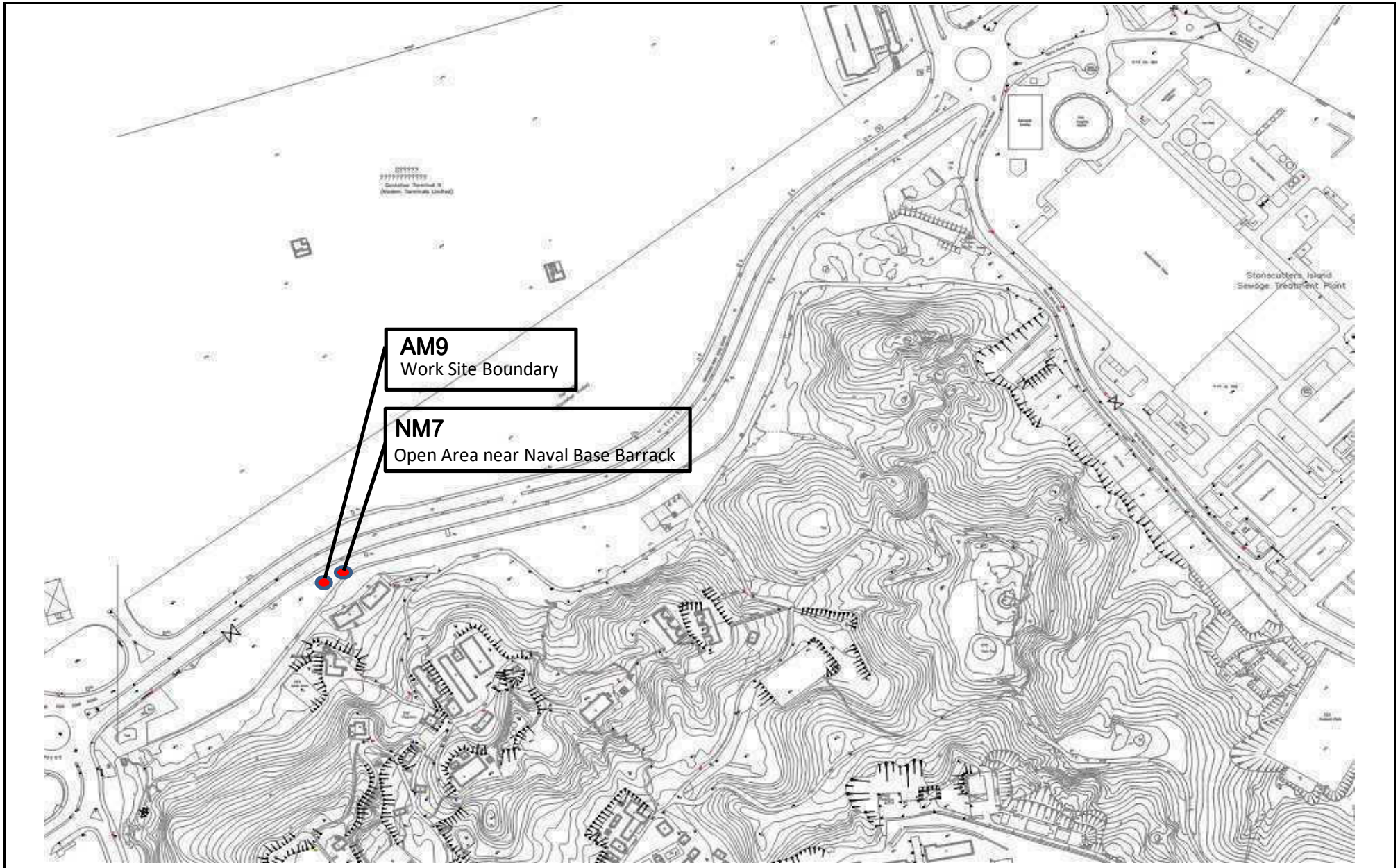
Drawing title

GENERAL LAYOUT
(SHEET 1)

Drawing no.			Rev.
24888/ETF/0021			0
Drawn WM	Date 08/10	Checked PW	Approved DP
Scale 1:2000 @A1		Status WORKING	

香港特別行政區政府渠務署
DRAINAGE SERVICES DEPARTMENT
GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION

Printed by : 17/6/2011
Filename : J:\24888\Record\WORKING\CIVIL\20110617_ETF\DGN\24888_ETF0021.dgn



Title	Contract No. DC/2009/18 HATS 2A -Upgrading Works at Stonecutters Island Sewage Treatment Works - Effluent Tunnel and Disinfection Facilities	Scale N.T.S	Project No. MA11043	CINOTECH
	Locations of Impact Air Quality and Noise Monitoring Stations	Date 12/2011	Figure 3	

APPENDIX A
ACTION AND LIMIT LEVELS FOR AIR QUALITY AND NOISE

Appendix A Action and Limit Levels

Table A-1 Action and Limit Levels for 1-Hour TSP and 24-Hour TSP

Monitoring Stations	Action Level ($\mu g/m^3$)		Limit Level ($\mu g/m^3$)	
	1-hour	24-hour	1-hour	24-hour
AM6	346	196	500	260
AM7	322	207	500	260
AM8	307	158	500	260
AM9	318	169	500	260

Table A-2 Action and Limit Level for Construction Noise

Monitoring Stations	Time Period	Action Level	Limit Level in dB(A)
NM5 **NM6** **NM7**	0700-1900 hours on normal weekdays	When one documented complaint is received	75
	Restricted Hours (Evening Time) All days during the evening (1900 to 2300 hours), and general holidays (including Sundays) during the day-time and evening (0700 to 2300 hours)	N/A	70(1)
	Restricted Hours (Night Time) All days during the night-time (2300 to 0700 hours)	N/A	55(1)

Note(1): Construction Noise Criteria for activity other than Percussive Pilling.

APPENDIX B
ENVIRONMENTAL MONITORING SCHEDULES

Annex G3 Monitoring Schedule of the Reporting Month and Next Month

DC/2007/23
Harbour Area Treatment Scheme Stage 2A
Construction of Sewage Conveyance System from North Point to Stonecutters Island
Impact Construction Air Quality Monitoring Schedule

AM6 - Works Site Boundary
Monitoring Month : July 2013

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-Jul	2-Jul	3-Jul	4-Jul	5-Jul	6-Jul
	Public Holiday			1-hr and 24-hr Monitoring		
7-Jul	8-Jul	9-Jul	10-Jul	11-Jul	12-Jul	13-Jul
			1-hr and 24-hr Monitoring			
14-Jul	15-Jul	16-Jul	17-Jul	18-Jul	19-Jul	20-Jul
		1-hr and 24-hr Monitoring				
21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul	27-Jul
	1-hr and 24-hr Monitoring				1-hr and 24-hr Monitoring	
28-Jul	29-Jul	30-Jul	31-Jul			

Monitoring Month : August 2013

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

Annex G3 Monitoring Schedule of the Reporting Month and Next Month

DC/2007/23
Harbour Area Treatment Scheme Stage 2A
Construction of Sewage Conveyance System from North Point to Stonecutters Island
Impact Construction Noise Quality Monitoring Schedule

NM5 - A Location near the FSD Diving Rescue and Diving Training Centre near the Site Boundary
Monitoring Month : July 2013

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-Jul	2-Jul	3-Jul	4-Jul	5-Jul	6-Jul
	Public Holiday			Daytime Noise Monitoring		
7-Jul	8-Jul	9-Jul	10-Jul	11-Jul	12-Jul	13-Jul
		Noise Monitoring	Daytime Noise Monitoring			
14-Jul	15-Jul	16-Jul	17-Jul	18-Jul	19-Jul	20-Jul
Noise Monitoring		Daytime Noise Monitoring				
21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul	27-Jul
	Noise Monitoring	Noise Monitoring (Nightime)				
28-Jul	29-Jul	30-Jul	31-Jul			
Noise Monitoring (Nightime)						

Monitoring Month : August 2013

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

Contract No. DC/2009/18

HATS 2A -Upgrading Works at Stonecutters Island Sewage Treatment Works - Effluent Tunnel and Disinfection Facilities

Tentative Impact Air Quality and Noise Monitoring Schedule (July 2013)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-Jul	2-Jul	3-Jul	4-Jul	5-Jul	6-Jul
			24 hr TSP	1hr TSP X 3 Noise (Daytime, Evening and Night Time)		
7-Jul	8-Jul	9-Jul	10-Jul	11-Jul	12-Jul	13-Jul
		24 hr TSP	1hr TSP X 3 Noise (Daytime, Evening and Night Time)			
14-Jul	15-Jul	16-Jul	17-Jul	18-Jul	19-Jul	20-Jul
	24 hr TSP	1hr TSP X 3 Noise (Daytime, Evening and Night Time)			24 hr TSP	
21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul	27-Jul
	1hr TSP X 3 Noise (Daytime, Evening and Night Time)			24 hr TSP	1hr TSP X 3	
28-Jul	29-Jul	30-Jul	31-Jul			
			24 hr TSP			

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

Air Quality Monitoring Location:
AM9 - Work Site Boundary (Near Ngong Shuen Chau Barracks Group 2)

Noise Monitoring Location:
NM7 - Open Area near Naval Base Barrack

Contract No. DC/2009/18

HATS 2A -Upgrading Works at Stonecutters Island Sewage Treatment Works - Effluent Tunnel and Disinfection Facilities

Tentative Impact Air Quality and Noise Monitoring Schedule (August 2013)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-Aug	2-Aug	3-Aug
				1hr TSP X 3 Noise (Daytime, Evening and Night Time)		
4-Aug	5-Aug	6-Aug	7-Aug	8-Aug	9-Aug	10-Aug
		24 hr TSP	1hr TSP X 3 Noise (Daytime, Evening and Night Time)			
11-Aug	12-Aug	13-Aug	14-Aug	15-Aug	16-Aug	17-Aug
	24 hr TSP	1hr TSP X 3 Noise (Daytime, Evening and Night Time)			24 hr TSP	
18-Aug	19-Aug	20-Aug	21-Aug	22-Aug	23-Aug	24-Aug
	1hr TSP X 3 Noise (Daytime, Evening and Night Time)			24 hr TSP	1hr TSP X 3	
25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug
			24 hr TSP	1hr TSP X 3 Noise (Daytime, Evening and Night Time)		

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

Air Quality Monitoring Location:
AM9 - Work Site Boundary (Near Ngong Shuen Chau Barracks Group 2)

Noise Monitoring Location:
NM7 - Open Area near Naval Base Barrack

DC/2009/10 HATS 2A Upgrading Main Pumping Station, Sedimentation Tanks and Ancillary Facilities at SISTW
Impact Air Quality and Noise Monitoring Schedule (July 2013)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-Jul	2-Jul	3-Jul	4-Jul	5-Jul	6-Jul
			24 hr TSP	1hr TSP X 3 Noise (NM6)		
7-Jul	8-Jul	9-Jul	10-Jul	11-Jul	12-Jul	13-Jul
		24 hr TSP	1hr TSP X 3 Noise (NM6)			
14-Jul	15-Jul	16-Jul	17-Jul	18-Jul	19-Jul	20-Jul
	24 hr TSP	1hr TSP X 3 Noise (NM6)			24 hr TSP	
21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul	27-Jul
	1hr TSP X 3 Noise (NM6)			24 hr TSP	1hr TSP X 3	
28-Jul	29-Jul	30-Jul	31-Jul			
			24 hr TSP			

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

Air Quality Monitoring Station
AM7 - West Kowloon No.2 Sewage Pumping Station
AM8 - Block A of Government Dockyard

Noise Monitoring Station
NM6 - Customs' Marine Base (Block H of Government Dockyard) Rooftop

DC/2009/10 HATS 2A Upgrading Main Pumping Station, Sedimentation Tanks and Ancillary Facilities at SISTW
Tentative Impact Air Quality and Noise Monitoring Schedule (August 2013)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-Aug	2-Aug	3-Aug
				1hr TSP X 3 Noise (NM6)		
4-Aug	5-Aug	6-Aug	7-Aug	8-Aug	9-Aug	10-Aug
		24 hr TSP	1hr TSP X 3 Noise (NM6)			
11-Aug	12-Aug	13-Aug	14-Aug	15-Aug	16-Aug	17-Aug
	24 hr TSP	1hr TSP X 3 Noise (NM6)			24 hr TSP	
18-Aug	19-Aug	20-Aug	21-Aug	22-Aug	23-Aug	24-Aug
	1hr TSP X 3 Noise (NM6)			24 hr TSP	1hr TSP X 3	
25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug
			24 hr TSP	1hr TSP X 3 Noise (NM6)		

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

Air Quality Monitoring Station
AM7 - West Kowloon No.2 Sewage Pumping Station
AM8 - Block A of Government Dockyard

Noise Monitoring Station
NM6 - Customs' Marine Base (Block H of Government Dockyard) Rooftop

APPENDIX C
CALIBRATION CERTIFICATES OF THE ENVIRONMENTAL MONITORING EQUIPMENT

High-Volume TSP Sampler
5-Point Calibration Record9

Location	:	AM6
Calibrated by	:	P.F.Yeung
Date	:	18/07/2013

Sampler

Model	:	GMWS-2310 ACCU-VOL
Serial Number	:	S/N 1254

Calibration Orfice and Standard Calibration Relationship

Serial Number	:	2323
Service Date	:	26 Dec 2012
Slope (m)	:	2.09107
Intercept (b)	:	-0.02838
Correlation Coefficient(r)	:	0.99996

Standard Condition

Pstd (hpa)	:	1013
Tstd (K)	:	298.18

Calibration Condition

Pa (hpa)	:	1008
Ta(K)	:	301

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1	18 holes	10.2	3.170	1.530	63	62.5
2	13 holes	8.2	2.842	1.373	56	55.6
3	10 holes	6.3	2.4913	1.205	50	49.6
4	7 holes	4.2	2.034	0.986	42	41.7
5	5 holes	2.5	1.569	0.764	33	32.8

Sampler Calibration Relationship

Slope(m):38.270 Intercept(b): 3.602 Correlation Coefficient(r): 0.9994

Checked by: Magnum Fan Date: 23/07/2013

High-Volume TSP Sampler
5-Point Calibration Record9

Location	:	AM6
Calibrated by	:	P.F.Yeung
Date	:	18/05/2013

Sampler

Model	:	GMWS-2310 ACCU-VOL
Serial Number	:	S/N 1254

Calibration Orfice and Standard Calibration Relationship

Serial Number	:	2323
Service Date	:	26 Dec 2012
Slope (m)	:	2.09107
Intercept (b)	:	-0.02838
Correlation Coefficient(r)	:	0.99996

Standard Condition

Pstd (hpa)	:	1013
Tstd (K)	:	298.18

Calibration Condition

Pa (hpa)	:	1010
Ta(K)	:	301

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1	18 holes	9.3	3.030	1.463	61	60.6
2	13 holes	7.6	2.739	1.323	54	53.6
3	10 holes	6.4	2.513	1.216	48	47.7
4	7 holes	4.4	2.084	1.010	38	37.8
5	5 holes	2.7	1.6337	0.794	28	27.8

Sampler Calibration Relationship

Slope(m):49.191 Intercept(b): -11.617 Correlation Coefficient(r): 0.9995

Checked by: Magnum Fan Date: 23/05/2013

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

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Dec 26, 2012 Rootsmeter S/N 0438320 Ta (K) - 295
Operator Tisch Orifice I.D. - 2323 Pa (mm) - 753.11

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.4440	3.2	2.00
2	NA	NA	1.00	1.0240	6.4	4.00
3	NA	NA	1.00	0.9120	8.0	5.00
4	NA	NA	1.00	0.8720	8.8	5.50
5	NA	NA	1.00	0.7200	12.8	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)
0.9967	0.6902	1.4149
0.9925	0.9693	2.0010
0.9903	1.0858	2.2372
0.9893	1.1345	2.3464
0.9840	1.3666	2.8299

Qstd slope (m) = 2.09107
intercept (b) = -0.02838
coefficient (r) = 0.99996

y axis = SQRT[H2O(Pa/760)(298/Ta)]

Va	(x axis) Qa	(y axis)
0.9957	0.6896	0.8851
0.9915	0.9683	1.2517
0.9893	1.0847	1.3995
0.9883	1.1334	1.4678
0.9830	1.3652	1.7702

Qa slope (m) = 1.30939
intercept (b) = -0.01775
coefficient (r) = 0.99996

y axis = SQRT[H2O(Ta/Pa)]

CALCULATIONS

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

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

For subsequent flow rate calculations:

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

Certificate of Calibration
校正證書

Certificate No. : C133573
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC13-1422)

Description / 儀器名稱	:	Sound Level Meter
Manufacturer / 製造商	:	Rion
Model No. / 型號	:	NL-31
Serial No. / 編號	:	00410224
Supplied By / 委託者	:	Envirotech Services Co. Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

TEST CONDITIONS / 測試條件

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

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 14 June 2013

TEST RESULTS / 測試結果

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

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA
- Agilent Technologies, USA

Tested By 測試 : 
K C Lee

Certified By 核證 : 
K K Wong

Date of Issue 簽發日期 : 17 June 2013

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C133573
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration was performed before the test.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C130019
CL281	Multifunction Acoustic Calibrator	DC110233

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT	IEC 61672 Class 1
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Spec. (dB)
30 - 120	L_A	A	Fast	94.00	1	93.6	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)
30 - 120	L_A	A	Fast	94.00	1	93.6 (Ref.)
				104.00		103.6
				114.00		113.6

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

6.2 Time Weighting

UUT Setting				Applied Value		UUT	IEC 61672 Class 1
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Spec. (dB)
30 - 120	L_A	A	Fast	94.00	1	93.6	Ref.
			Slow			93.5	± 0.3

Certificate of Calibration
校正證書

Certificate No. : C133573
證書編號

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_A	A	Fast	94.00	63 Hz	67.3	-26.2 ± 1.5
					125 Hz	77.3	-16.1 ± 1.5
					250 Hz	84.9	-8.6 ± 1.4
					500 Hz	90.3	-3.2 ± 1.4
					1 kHz	93.6	Ref.
					2 kHz	94.9	+1.2 ± 1.6
					4 kHz	94.8	+1.0 ± 1.6
					8 kHz	92.6	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.7	-4.3 (+3.0 ; -6.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_C	C	Fast	94.00	63 Hz	92.7	-0.8 ± 1.5
					125 Hz	93.4	-0.2 ± 1.5
					250 Hz	93.6	0.0 ± 1.4
					500 Hz	93.7	0.0 ± 1.4
					1 kHz	93.7	Ref.
					2 kHz	93.5	-0.2 ± 1.6
					4 kHz	93.0	-0.8 ± 1.6
					8 kHz	90.7	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.9	-6.2 (+3.0 ; -6.0)

Remarks : - UUT Microphone Model No. : UC-53A & S/N : 307154

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value : 94 dB : 63 Hz - 125 Hz : ± 0.35 dB
  250 Hz - 500 Hz : ± 0.30 dB
  1 kHz : ± 0.20 dB
  2 kHz - 4 kHz : ± 0.35 dB
  8 kHz : ± 0.45 dB
  12.5 kHz : ± 0.70 dB
  104 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)
  114 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)

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

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
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Certificate of Calibration
校正證書

Certificate No. / 證書編號 : C124191

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC12-1770)

Description / 儀器名稱	:	Sound Level Meter
Manufacturer / 製造商	:	Rion
Model No. / 型號	:	NL-31
Serial No. / 編號	:	00603867
Supplied By / 委託者	:	Envirotech Services Co. Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

TEST CONDITIONS / 測試條件

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

Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 18 July 2012

TEST RESULTS / 測試結果

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

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies, USA
- Fluke Everett Service Center, USA
- Fluke Precision Measurement Ltd., UK
- Rohde & Schwarz Laboratory, Germany

Tested By / 測試 : L K Yeung

Certified By / 核證 : K C Lee

Date of Issue / 簽發日期 : 18 July 2012

Sun Creation Engineering Limited - Calibration & Testing Laboratory
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Certificate of Calibration
校正證書

Certificate No. : C124191
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration was performed before the test.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C120016
CL281	Multifunction Acoustic Calibrator	DC110233

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT	IEC 61672 Class 1
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Spec. (dB)
30 - 120	L_A	A	Fast	94.00	1	93.8	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)
30 - 120	L_A	A	Fast	94.00	1	93.8 (Ref.)
				104.00		103.8
				114.00		113.8

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

6.2 Time Weighting

UUT Setting				Applied Value		UUT	IEC 61672 Class 1
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Spec. (dB)
30 - 120	L_A	A	Fast	94.00	1	93.8	Ref.
			Slow			93.7	± 0.3

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Certificate of Calibration
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Certificate No. : C124191
證書編號

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_A	A	Fast	94.00	63 Hz	67.6	-26.2 ± 1.5
					125 Hz	77.6	-16.1 ± 1.5
					250 Hz	85.1	-8.6 ± 1.4
					500 Hz	90.6	-3.2 ± 1.4
					1 kHz	93.8	Ref.
					2 kHz	95.1	+1.2 ± 1.6
					4 kHz	95.0	+1.0 ± 1.6
					8 kHz	92.8	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.9	-4.3 (+3.0 ; -6.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_C	C	Fast	94.00	63 Hz	93.0	-0.8 ± 1.5
					125 Hz	93.6	-0.2 ± 1.5
					250 Hz	93.8	0.0 ± 1.4
					500 Hz	93.9	0.0 ± 1.4
					1 kHz	93.9	Ref.
					2 kHz	93.7	-0.2 ± 1.6
					4 kHz	93.2	-0.8 ± 1.6
					8 kHz	90.9	-3.0 (+2.1 ; -3.1)
					12.5 kHz	88.1	-6.2 (+3.0 ; -6.0)

Remarks : - Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value :

Level	Frequency	Uncertainty
94 dB	63 Hz - 125 Hz	± 0.35 dB
	250 Hz - 500 Hz	± 0.30 dB
	1 kHz	± 0.20 dB
	2 kHz - 4 kHz	± 0.35 dB
	8 kHz	± 0.45 dB
	12.5 kHz	± 0.70 dB
104 dB	1 kHz	± 0.10 dB (Ref. 94 dB)
114 dB	1 kHz	± 0.10 dB (Ref. 94 dB)

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

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

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輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C123580
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC12-1472)

Description / 儀器名稱	:	Sound Level Meter
Manufacturer / 製造商	:	Rion
Model No. / 型號	:	NL-31
Serial No. / 編號	:	00410224
Supplied By / 委託者	:	Envirotech Services Co. Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

TEST CONDITIONS / 測試條件

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

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 15 June 2012

TEST RESULTS / 測試結果

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

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Rohde & Schwarz Laboratory, Germany
- Fluke Precision Measurement Ltd., UK
- Fluke Everett Service Center, USA
- Agilent Technologies, USA

Tested By : L K Yeung
測試

Certified By : K C Lee   Date of Issue : 15 June 2012
核證   簽發日期

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Certificate of Calibration
校正證書

Certificate No. : C123580
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration was performed before the test.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C120016
CL281	Multifunction Acoustic Calibrator	DC110233

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT	IEC 61672 Class 1
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Spec. (dB)
30 - 120	L_A	A	Fast	94.00	1	93.7	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)
30 - 120	L_A	A	Fast	94.00	1	93.7 (Ref.)
				104.00		103.7
				114.00		113.7

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

6.2 Time Weighting

UUT Setting				Applied Value		UUT	IEC 61672 Class 1
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Spec. (dB)
30 - 120	L_A	A	Fast	94.00	1	93.7	Ref.
			Slow			93.6	± 0.3

Certificate of Calibration
校正證書

Certificate No. : C123580
證書編號

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_A	A	Fast	94.00	63 Hz	67.3	-26.2 ± 1.5
					125 Hz	77.4	-16.1 ± 1.5
					250 Hz	85.0	-8.6 ± 1.4
					500 Hz	90.4	-3.2 ± 1.4
					1 kHz	93.7	Ref.
					2 kHz	95.0	+1.2 ± 1.6
					4 kHz	94.8	+1.0 ± 1.6
					8 kHz	92.7	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.8	-4.3 (+3.0 ; -6.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_C	C	Fast	94.00	63 Hz	92.8	-0.8 ± 1.5
					125 Hz	93.5	-0.2 ± 1.5
					250 Hz	93.7	0.0 ± 1.4
					500 Hz	93.8	0.0 ± 1.4
					1 kHz	93.7	Ref.
					2 kHz	93.6	-0.2 ± 1.6
					4 kHz	93.1	-0.8 ± 1.6
					8 kHz	90.8	-3.0 (+2.1 ; -3.1)
					12.5 kHz	88.0	-6.2 (+3.0 ; -6.0)

Remarks : - Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value : 94 dB : 63 Hz - 125 Hz : ± 0.35 dB
  250 Hz - 500 Hz : ± 0.30 dB
  1 kHz : ± 0.20 dB
  2 kHz - 4 kHz : ± 0.35 dB
  8 kHz : ± 0.45 dB
  12.5 kHz : ± 0.70 dB
  104 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)
  114 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)

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

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

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輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. / 證書編號 : C133573

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC13-1422)

Description / 儀器名稱	:	Sound Level Meter
Manufacturer / 製造商	:	Rion
Model No. / 型號	:	NL-31
Serial No. / 編號	:	00410224
Supplied By / 委託者	:	Envirotech Services Co. Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

TEST CONDITIONS / 測試條件

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

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 14 June 2013

TEST RESULTS / 測試結果

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

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA
- Agilent Technologies, USA

Tested By / 測試 : K C Lee

Certified By / 核證 : K K Wong

Date of Issue / 簽發日期 : 17 June 2013

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
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Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C133573
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration was performed before the test.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C130019
CL281	Multifunction Acoustic Calibrator	DC110233

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT	IEC 61672 Class 1
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Spec. (dB)
30 - 120	L_A	A	Fast	94.00	1	93.6	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)
30 - 120	L_A	A	Fast	94.00	1	93.6 (Ref.)
				104.00		103.6
				114.00		113.6

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

6.2 Time Weighting

UUT Setting				Applied Value		UUT	IEC 61672 Class 1
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Spec. (dB)
30 - 120	L_A	A	Fast	94.00	1	93.6	Ref.
			Slow			93.5	± 0.3

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Certificate of Calibration
校正證書

Certificate No. : C133573
證書編號

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_A	A	Fast	94.00	63 Hz	67.3	-26.2 ± 1.5
					125 Hz	77.3	-16.1 ± 1.5
					250 Hz	84.9	-8.6 ± 1.4
					500 Hz	90.3	-3.2 ± 1.4
					1 kHz	93.6	Ref.
					2 kHz	94.9	+1.2 ± 1.6
					4 kHz	94.8	+1.0 ± 1.6
					8 kHz	92.6	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.7	-4.3 (+3.0 ; -6.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_C	C	Fast	94.00	63 Hz	92.7	-0.8 ± 1.5
					125 Hz	93.4	-0.2 ± 1.5
					250 Hz	93.6	0.0 ± 1.4
					500 Hz	93.7	0.0 ± 1.4
					1 kHz	93.7	Ref.
					2 kHz	93.5	-0.2 ± 1.6
					4 kHz	93.0	-0.8 ± 1.6
					8 kHz	90.7	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.9	-6.2 (+3.0 ; -6.0)

Remarks : - UUT Microphone Model No. : UC-53A & S/N : 307154

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value : 94 dB : 63 Hz - 125 Hz : ± 0.35 dB
  250 Hz - 500 Hz : ± 0.30 dB
  1 kHz : ± 0.20 dB
  2 kHz - 4 kHz : ± 0.35 dB
  8 kHz : ± 0.45 dB
  12.5 kHz : ± 0.70 dB
  104 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)
  114 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)

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

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

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輝創工程有限公司

Sun Creation Engineering Limited

Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. 證書編號 : C134307

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC13-1709)

Description / 儀器名稱	:	Sound Level Calibrator
Manufacturer / 製造商	:	Rion
Model No. / 型號	:	NC-73
Serial No. / 編號	:	10997142
Supplied By / 委託者	:	Envirotech Services Co. Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C

Relative Humidity / 相對濕度 : (55 ± 20)%

Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 12 July 2013

TEST RESULTS / 測試結果

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

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

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

Tested By 測試 : K C Lee

Certified By 核證 : K M Wu

Date of Issue 簽發日期 : 15 July 2013

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
Tel 電話: 2927 2606 Fax 傳真: 2744 8986 E-mail 電郵: callab@suncreation.com Website 網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C134307
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C133632
CL281	Multifunction Acoustic Calibrator	DC130171
TST150A	Measuring Amplifier	C120886

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	93.7	± 0.5	± 0.2

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	Uncertainty of Measured Value (Hz)
1	0.988	1 kHz ± 2 %	± 1

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

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
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輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C124011
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC12-1674)

Description / 儀器名稱	:	Sound Level Calibrator
Manufacturer / 製造商	:	Rion
Model No. / 型號	:	NC-73
Serial No. / 編號	:	10997142
Supplied By / 委託者	:	Envirotech Services Co. Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

TEST CONDITIONS / 測試條件

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

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 9 July 2012

TEST RESULTS / 測試結果

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

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA
- Agilent Technologies, USA

Tested By 測試 : L K Yeung

Certified By 核證 : K C Lee

Date of Issue 簽發日期 : 10 July 2012

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tung Shun Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里1號東順灣交易廣場4樓
Tel 電話: 2927 2606 Fax 傳真: 2744 8986 E-mail 電郵: callab@suncreation.com Website 網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C124011
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C123541
CL281	Multifunction Acoustic Calibrator	DC110233
TST150A	Measuring Amplifier	C120886

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	94.0	± 0.5	± 0.2

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	Uncertainty of Measured Value (Hz)
1	0.990	1 kHz ± 2 %	± 1

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

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
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輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C124184
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC12-1770)

Description / 儀器名稱	:	Sound Level Calibrator
Manufacturer / 製造商	:	Rion
Model No. / 型號	:	NC-73
Serial No. / 編號	:	10786708
Supplied By / 委託者	:	Envirotech Services Co. Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road, Hong Kong

TEST CONDITIONS / 測試條件

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

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 17 July 2012

TEST RESULTS / 測試結果

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

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies, USA
- Fluke Everett Service Center, USA
- Rohde & Schwarz Laboratory, Germany

Tested By : L K Yeung
測試

Certified By : K C Lee
核證

Date of Issue : 18 July 2012
簽發日期

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tung Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
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Certificate of Calibration
校正證書

Certificate No. : C124184
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C123541
CL281	Multifunction Acoustic Calibrator	DC110233
TST150A	Measuring Amplifier	C120886

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	93.9	± 0.5	± 0.2

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	Uncertainty of Measured Value (Hz)
1	0.990	1 kHz ± 2 %	± 1

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

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA11043/63/0012

Project No. AM9 - Work Site Boundary (Near Ngong Shuen Chau Barracks Group 2)

Operator: Hei

Date: 24-Jun-13 Next Due Date: 23-Aug-13

Equipment No.: A-01-63 Serial No. 2356

Ambient Condition			
Temperature, Ta (K)	301.7	Pressure, Pa (mmHg)	757.5

Orifice Transfer Standard Information					
Equipment No.:	A-04-04	Slope, mc	0.0574	Intercept, bc	-0.0478
Last Calibration Date:	3-Oct-12	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	2-Oct-13	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

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	11.7	3.39	59.96	8.3	2.86
2	9.5	3.06	54.11	6.7	2.57
3	6.9	2.61	46.24	5.1	2.24
4	4.6	2.13	37.91	3.7	1.91
5	2.4	1.54	27.61	1.9	1.37

By Linear Regression of Y on X

Slope , mw = 0.0451 **Intercept, bw =** 0.1517

Correlation coefficient* = 0.9986

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.44**

Remarks:

Conducted by: Hei Signature: Hei Date: 24/6/2013

Checked by: Wk Tang Signature: Kwan Date: 24/6/2013

WELLAB 匯力 Testing & Research

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
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Website: www.wellab.com.hk

TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/130629/1
Date of Issue:	2013-07-02
Date Received:	2013-06-29
Date Tested:	2013-06-29
Date Completed:	2013-07-02
Next Due Date:	2013-09-01
Page:	1 of 1

ATTN: **Mr. W.K. Tang**

Certificate of Calibration

Item for Calibration:

Description	: Laser Dust Monitor
Manufacturer	: Sibata
Model No.	: LD-3
Serial No.	: 251634
Sensitivity (K) 1 CPM	: 0.001 mg/m^3
Sen. Adjustment Scale Setting	: 550 CPM
Equipment No.	: A-02-01

Test Conditions:

Room Temperature	: 20 degree Celsius
Relative Humidity	: 59%

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

Correlation Factor (CF)	0.0030

****

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

PATRICK TSE
Laboratory Manager

WELLAB 匯力 Testing & Research

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
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Website: www.wellab.com.hk

TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/130629/2
Date of Issue:	2013-07-02
Date Received:	2013-06-29
Date Tested:	2013-06-29
Date Completed:	2013-07-02
Next Due Date:	2013-09-01
Page:	1 of 1

ATTN: **Mr. W. K. Tang**

Certificate of Calibration

Item for Calibration:

Description	: Laser Dust Monitor
Manufacturer	: Sibata
Model No.	: LD-3B
Serial No.	: 853944
Sensitivity (K) 1 CPM	: 0.001 mg/m^3
Sen. Adjustment Scale Setting	: 685 CPM
Equipment No.	: A-02-04

Test Conditions:

Room Temperature	: 20 degree Celsius
Relative Humidity	: 59%

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

Correlation Factor (CF)	0.0031

****

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

Patrick Tse

PATRICK TSE
Laboratory Manager

WELLAB 匯力 Testing & Research

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
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Website: www.wellab.com.hk

TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/130705/2
Date of Issue:	2013-07-08
Date Received:	2013-07-05
Date Tested:	2013-07-05
Date Completed:	2013-07-08
Next Due Date:	2013-09-07
Page:	1 of 1

ATTN: **Mr. W. K. Tang**

Certificate of Calibration

Item for Calibration:

Description	: Laser Dust Monitor
Manufacturer	: Sibata
Model No.	: LD-3B
Serial No.	: 095050
Sensitivity (K) 1 CPM	: 0.001 mg/m^3
Sen. Adjustment Scale Setting	: 577 CPM
Equipment No.	: A-02-09

Test Conditions:

Room Temperature	: 21 degree Celsius
Relative Humidity	: 63%

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

Correlation Factor (CF)	0.0030

****

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

Patrick Tse

PATRICK TSE
Laboratory Manager

WELLAB 匯力 Testing & Research

WELLAB LIMITED
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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/130705/1
Date of Issue:	2013-07-08
Date Received:	2013-07-05
Date Tested:	2013-07-05
Date Completed:	2013-07-08
Next Due Date:	2013-09-07
Page:	1 of 1

ATTN: **Mr. W. K. Tang**

Certificate of Calibration

Item for Calibration:

Description	: Laser Dust Monitor
Manufacturer	: Sibata
Model No.	: LD-3B
Serial No.	: 095039
Sensitivity (K) 1 CPM	: 0.001 mg/m^3
Sen. Adjustment Scale Setting	: 764 CPM
Equipment No.	: A-02-08

Test Conditions:

Room Temperature	: 21 degree Celsius
Relative Humidity	: 63%

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

Correlation Factor (CF)	0.0031

****

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

Patrick Tse
PATRICK TSE
Laboratory Manager

WELLAB 匯力 Testing & Research

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Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

ATTN: **Mr. W. K. Tang**

Test Report No.:	C/130705/3
Date of Issue:	2013-07-08
Date Received:	2013-07-05
Date Tested:	2013-07-05
Date Completed:	2013-07-08
Next Due Date:	2013-09-07
Page:	1 of 1

Certificate of Calibration

Item for Calibration:

Description	: Laser Dust Monitor
Manufacturer	: Sibata
Model No.	: LD-3B
Serial No.	: 095029
Sensitivity (K) 1 CPM	: 0.001 mg/m^3
Sen. Adjustment Scale Setting	: 551 CPM
Equipment No.	: A-02-10

Test Conditions:

Room Temperature	: 21 degree Celsius
Relative Humidity	: 63%

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

Correlation Factor (CF)	0.0030

****

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

Patrick Tse

PATRICK TSE
Laboratory Manager

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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

ATTN: **Mr. W.K. Tang**

Test Report No.:	C/130531/3
Date of Issue:	2013-06-03
Date Received:	2013-05-31
Date Tested:	2013-05-31
Date Completed:	2013-06-03
Next Due Date:	2013-08-02
Page:	1 of 1

Certificate of Calibration

Item for Calibration:

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-531
Serial No.	: N6732
Flow rate	:0.1 cfm
Zero Count Test	:0 mg (The result of the 2-minute sample)
Equipment No.	: A-02-11

Test Conditions:

Room Temperature	: 21 degree Celsius
Relative Humidity	: 67%

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Results:

Correlation Factor (CF)	1.065

****

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

Patrick Tse

PATRICK TSE
Laboratory Manager

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA11007/55/0007

Station: AM7 - North West Kowloon Sewage Pumping Station Operator: Hei

Date: 24-Jun-13 Next Due Date: 23-Aug-13

Equipment No.: A-01-55 Serial No. 2355

Ambient Condition			
Temperature, Ta (K)	301.1	Pressure, Pa (mmHg)	758.1

Orifice Transfer Standard Information					
Equipment No.:	A-04-04	Slope, mc	0.0574	Intercept, bc	-0.0478
Last Calibration Date:	3-Oct-12	**mc x Qstd + bc = $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$**			
Next Calibration Date:	2-Oct-13	**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	11.8	3.41	60.29	8.7	2.93
2	9.5	3.06	54.19	6.8	2.59
3	7.2	2.67	47.28	5.4	2.31
4	4.5	2.11	37.55	3.6	1.89
5	2.8	1.66	29.80	2.3	1.51

By Linear Regression of Y on X

Slope , mw = 0.0457 **Intercept, bw =** 0.1513

Correlation coefficient* = 0.9991

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.53**

Remarks:

Conducted by: Hei Signature: Hei Date: 24/6/2013

Checked by: Wk Tang Signature: Kwai Date: 24/6/2013

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA11007/68/0006

Station: AM8 - Block A of Government Dockyard Operator: Hei

Date: 24-Jun-13 Next Due Date: 23-Aug-13

Equipment No.: A-01-68 Serial No. 3219

Ambient Condition			
Temperature, Ta (K)	301.5	Pressure, Pa (mmHg)	757.8

Orifice Transfer Standard Information					
Equipment No.:	A-04-04	Slope, mc	0.0574	Intercept, bc	-0.0478
Last Calibration Date:	3-Oct-12	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	2-Oct-13	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

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	11.7	3.40	59.99	8.4	2.88
2	9.6	3.08	54.42	7.0	2.63
3	6.9	2.61	46.26	5.4	2.31
4	4.5	2.11	37.52	3.5	1.86
5	2.1	1.44	25.90	2.0	1.40

By Linear Regression of Y on X

Slope , mw = 0.0436 **Intercept, bw =** 0.2598

Correlation coefficient* = 0.9991

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.63**

Remarks:

Conducted by: Hei Signature: Hei Date: 24 / 6 / 2013

Checked by: Wh Tang Signature: Kwon Date: 24/6/2013

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WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

ATTN: **Mr. W.K. Tang**

Test Report No.:	C/130531/1
Date of Issue:	2013-06-03
Date Received:	2013-05-31
Date Tested:	2013-05-31
Date Completed:	2013-06-03
Next Due Date:	2013-08-02
Page:	1 of 1

Certificate of Calibration

Item for Calibration:

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-531
Serial No.	: N6733
Flow rate	:0.1 cfm
Zero Count Test	:0 mg (The result of the 2-minute sample)
Equipment No.	: A-02-12

Test Conditions:

Room Temperature	: 21 degree Celsius
Relative Humidity	: 67%

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Results:

Correlation Factor (CF)	1.080

****

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

PATRICK TSE
Laboratory Manager

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T. Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

ATTN: **Mr. W.K. Tang**

Test Report No.:	C/130531/2
Date of Issue:	2013-06-03
Date Received:	2013-05-31
Date Tested:	2013-05-31
Date Completed:	2013-06-03
Next Due Date:	2013-08-02
Page:	1 of 1

Certificate of Calibration

Item for Calibration:

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-531
Serial No.	: N6735
Flow rate	:0.1 cfm
Zero Count Test	:0 mg (The result of the 2-minute sample)
Equipment No.	: A-02-14

Test Conditions:

Room Temperature	: 21 degree Celsius
Relative Humidity	: 67%

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Results:

Correlation Factor (CF)	1.074

****

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

PATRICK TSE
Laboratory Manager

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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/N/130104
Date of Issue:	2013-01-05
Date Received:	2013-01-04
Date Tested:	2013-01-04
Date Completed:	2013-01-05
Next Due Date:	2014-01-04

ATTN: **Mr. W. K. Tang**

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 955
Serial No.	: 14303
Microphone No.	: 35222
Equipment No.	: N-08-05

Test conditions:

Room Temperatre	: 22 degree Celsius
Relative Humidity	: 59%

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

Remark: 1)This report supersedes the one dated 2012/01/21 with certificate number C/N/120120/1.

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

PATRICK TSE
Laboratory Manager

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Website: www.wellab.com.hk

TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

ATTN: **Mr. W.K. Tang**

Test Report No.:	C/N/120901/2
Date of Issue:	2012-09-02
Date Received:	2012-09-01
Date Tested:	2012-09-01
Date Completed:	2012-09-02
Next Due Date:	2013-09-01
Page:	1 of 1

Certificate of Calibration

Item for calibration:

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 957
Serial No.	: 21459
Microphone No.	: 43676
Equipment No.	: N-08-08

Test conditions:

Room Temperatre	: 22 degree Celsius
Relative Humidity	: 67%

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 Tse

PATRICK TSE
Laboratory Manager

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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/N/121204/1
Date of Issue:	2012-12-05
Date Received:	2012-12-04
Date Tested:	2012-12-04
Date Completed:	2012-12-05
Next Due Date:	2013-12-04

ATTN: **Mr. W.K. Tang**

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 957
Serial No.	: 23853
Microphone No.	: 48530
Equipment No.	: N-08-10

Test conditions:

Room Temperatre	: 22 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 Tse

PATRICK TSE
Laboratory Manager

WELLAB 匯力 Testing & Research

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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/N/120921/1
Date of Issue:	2012-09-22
Date Received:	2012-09-21
Date Tested:	2012-09-21
Date Completed:	2012-09-22
Next Due Date:	2013-09-21
Page:	1 of 1

ATTN: **Mr. W.K. Tang**

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 10929
Equipment No.	: N-09-01

Test conditions:

Room Temperatre	: 24 degree Celsius
Relative Humidity	: 56%

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 TSE
Laboratory Manager

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Website: www.wellab.com.hk

TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/N/121005/1
Date of Issue:	2012-10-07
Date Received:	2012-10-05
Date Tested:	2012-10-05
Date Completed:	2012-10-07
Next Due Date:	2013-10-06
Page:	1 of 1

ATTN: **Mr. W.K. Tang**

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24803
Equipment No.	: N-09-03

Test conditions:

Room Temperatre	: 23 degree Celsius
Relative Humidity	: 64%

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 TSE
Laboratory Manager

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TEST REPORT

APPLICANT: **Cinotech Consultants Limited**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/N/121005/3
Date of Issue:	2012-10-07
Date Received:	2012-10-05
Date Tested:	2012-10-05
Date Completed:	2012-10-07
Next Due Date:	2013-10-06
Page:	1 of 1

ATTN: **Mr. W.K. Tang**

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24780
Equipment No.	: N-09-05

Test conditions:

Room Temperatre	: 23 degree Celsius
Relative Humidity	: 64%

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 TSE
Laboratory Manager

APPENDIX D
1-HOUR AND 24-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

Annex G5 24-hour and 1-hour TSP Monitoring Results

1-hour TSP Monitoring Results

Station AM6

Date	Start Time	Finish Time	Weather	TSP Concentration ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)	Site Conditions / Observations / Remarks	Temperature (°C)	Wind Speed * (m/s)	Sampler ID	Filter ID
4-Jul-13	13:10	14:10	Sunny	223	346	500	Construction work in progress	31	<5	GMW GS-2310 (S/N 1254)	7765
	14:12	15:12	Sunny	205	346	500	Construction work in progress	31	<5	GMW GS-2310 (S/N 1254)	7766
	15:14	16:14	Sunny	211	346	500	Construction work in progress	31	<5	GMW GS-2310 (S/N 1254)	7767
10-Jul-13	9:30	10:30	Cloudy	196	346	500	Construction work in progress	30	<5	GMW GS-2310 (S/N 1254)	7769
	10:32	11:32	Cloudy	198	346	500	Construction work in progress	30	<5	GMW GS-2310 (S/N 1254)	7770
	11:34	12:34	Cloudy	180	346	500	Construction work in progress	30	<5	GMW GS-2310 (S/N 1254)	7771
16-Jul-13	8:40	9:40	Cloudy	153	346	500	Construction work in progress	27	<5	GMW GS-2310 (S/N 1254)	7625
	9:42	10:42	Cloudy	174	346	500	Construction work in progress	27	<5	GMW GS-2310 (S/N 1254)	7626
	10:44	11:44	Cloudy	178	346	500	Construction work in progress	27	<5	GMW GS-2310 (S/N 1254)	7627
22-Jul-13	9:00	10:00	Sunny	165	346	500	Construction work in progress	29	<5	GMW GS-2310 (S/N 1254)	7629
	10:02	11:02	Sunny	143	346	500	Construction work in progress	29	<5	GMW GS-2310 (S/N 1254)	7630
	11:04	12:04	Sunny	136	346	500	Construction work in progress	29	<5	GMW GS-2310 (S/N 1254)	7631
26-Jul-13	9:07	10:07	Rainy	129	346	500	Construction work in progress	27	<5	GMW GS-2310 (S/N 1254)	7633
	10:09	11:09	Rainy	121	346	500	Construction work in progress	27	<5	GMW GS-2310 (S/N 1254)	7634
	11:11	12:11	Rainy	114	346	500	Construction work in progress	27	<5	GMW GS-2310 (S/N 1254)	7635
			Min.	**114**							
			Max.	**223**							
			Average	**168**							

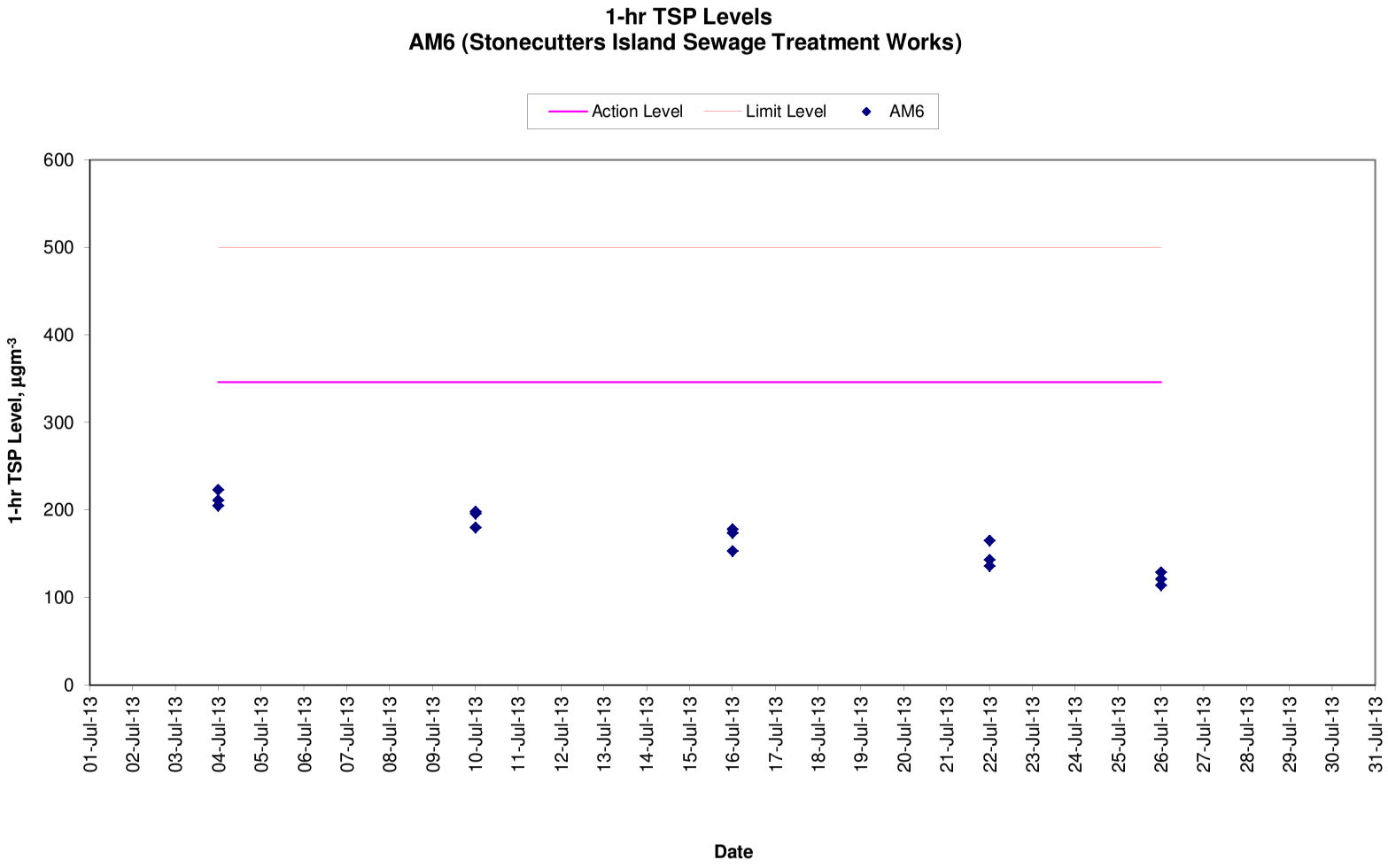
* Wind Speed data is presented in the Meteorological Data table

Annex G5 24-hour and 1-hour TSP Monitoring Results

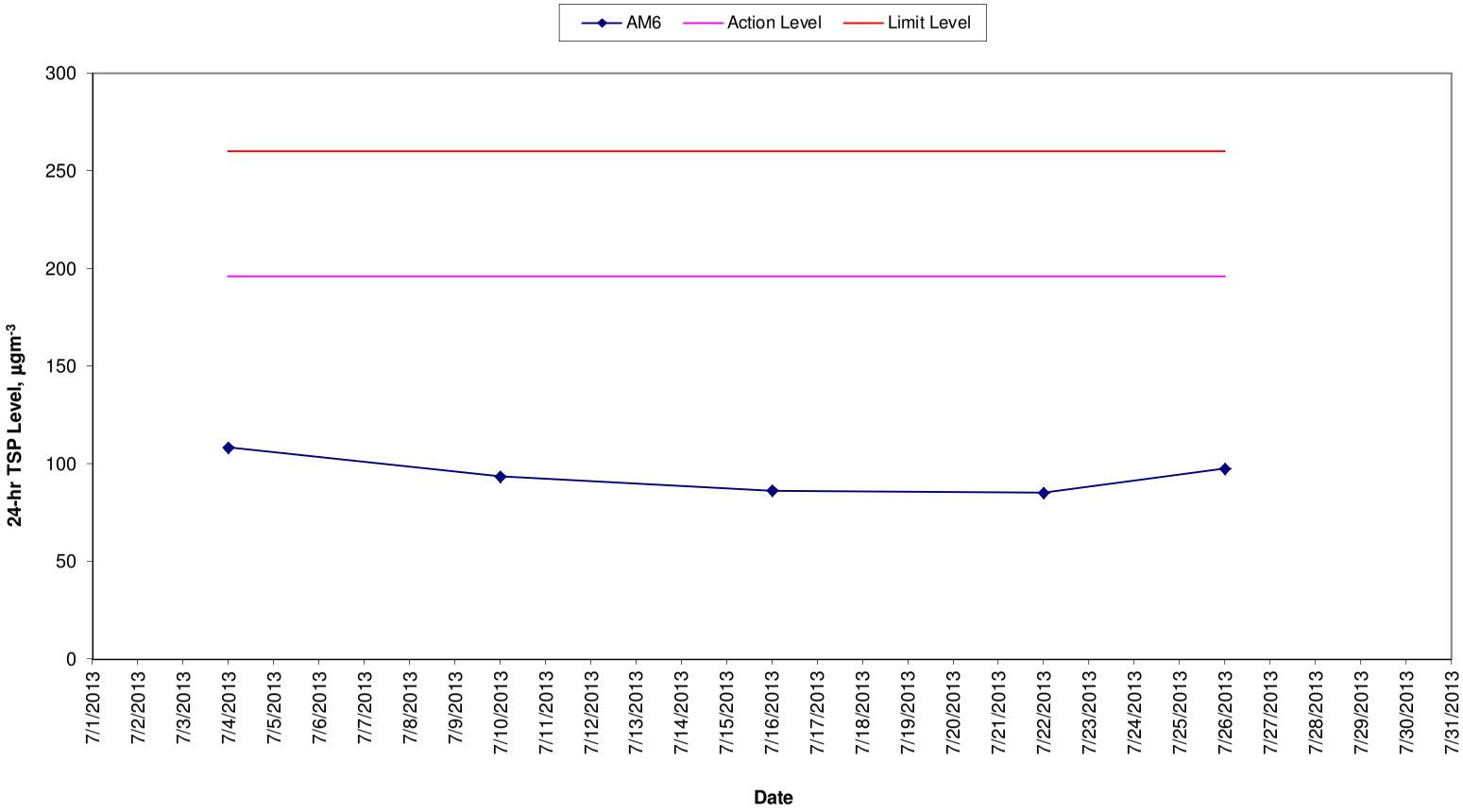
24-hour TSP Monitoring Results

Station AM6

Start		Finish		Weather	Filter Weight (g)		Elapsed Time Reading		Sampling Time	Flow Rate (m^3/min)			TSP Conc.	Action Level	Limit Level	Observations / Remarks	Sampler	Filter
Date	Time	Date	Time		Initial	Final	Initial	Final	(hrs)	Initial	Final	Average	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)		ID	ID
4-Jul-13	16:16	5-Jul-13	16:16	Sunny	2.9025	3.0911	11895.03	11919.03	24.00	1.21	1.21	1.21	108	196	260	Construction work in progress	GMW GS 2310 (S/N 1254)	7768
10-Jul-13	12:36	11-Jul-13	12:36	Cloudy	2.8793	3.0423	11922.03	11946.03	24.00	1.21	1.21	1.21	94	196	260	Construction work in progress	GMW GS 2310 (S/N 1254)	7772
16-Jul-13	11:46	17-Jul-13	11:46	Cloudy	2.6754	2.8256	11949.03	11973.03	24.00	1.21	1.21	1.21	86	196	260	Construction work in progress	GMW GS 2310 (S/N 1254)	7628
22-Jul-13	12:06	23-Jul-13	12:06	Sunny	2.6934	2.8415	11976.03	12000.03	24.00	1.21	1.21	1.21	85	196	260	Construction work in progress	GMW GS 2310 (S/N 1254)	7632
26-Jul-13	12:13	27-Jul-13	12:13	Rainy	2.6892	2.8590	12003.03	12027.03	24.00	1.21	1.21	1.21	97	196	260	Construction work in progress	GMW GS 2310 (S/N 1254)	7637
												Min.	**85**					
												Max.	**108**					
												Average	**94**					


1-hr TSP Levels
AM6 (Stonecutters Island Sewage Treatment Works)
Action Level
Limit Level
AM6
1-hr TSP Level, µgm-3
600
500
400
300
200
100
0
01-Jul-13
02-Jul-13
03-Jul-13
04-Jul-13
05-Jul-13
06-Jul-13
07-Jul-13
08-Jul-13
09-Jul-13
10-Jul-13
11-Jul-13
12-Jul-13
13-Jul-13
14-Jul-13
15-Jul-13
16-Jul-13
17-Jul-13
18-Jul-13
19-Jul-13
20-Jul-13
21-Jul-13
22-Jul-13
23-Jul-13
24-Jul-13
25-Jul-13
26-Jul-13
27-Jul-13
28-Jul-13
29-Jul-13
30-Jul-13
31-Jul-13
Date

24-hr TSP Levels
AM6 (Stonecutters Island Sewage Treatment Works)



Appendix D - 1-hour TSP Monitoring Results

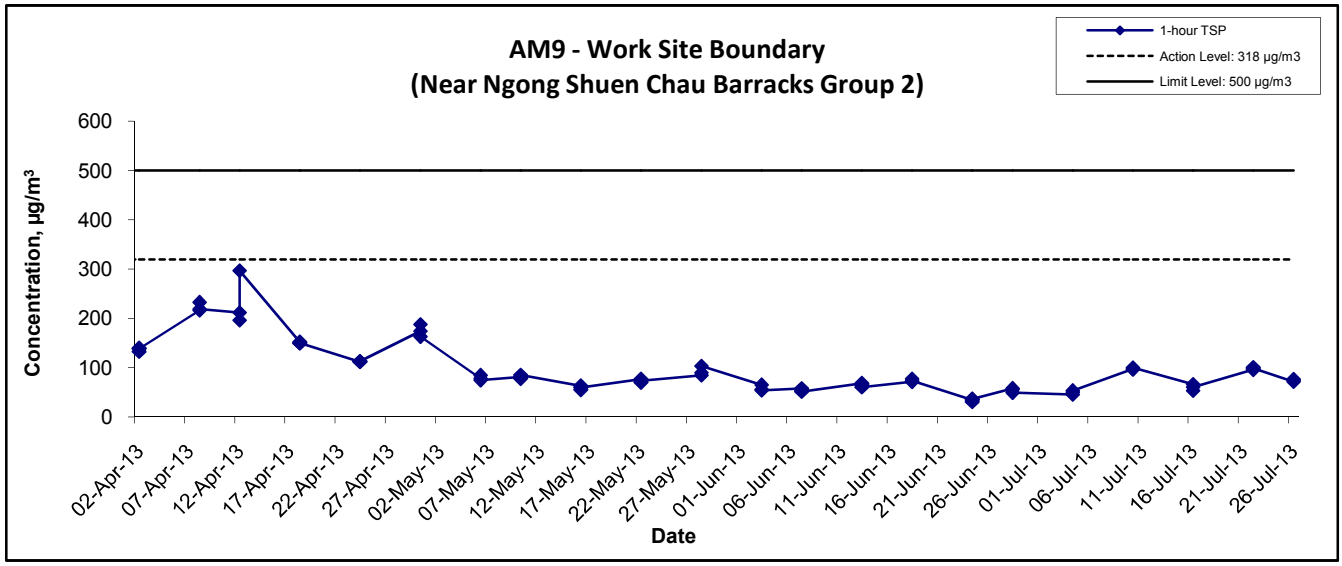
Location AM9 - Work Site Boundary (Near Ngong Shuen Chau Barracks Group 2)			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
4-Jul-13	15:00	Sunny	45.8
4-Jul-13	16:00	Sunny	50.1
4-Jul-13	17:00	Sunny	53.3
10-Jul-13	8:00	Cloudy	97.5
10-Jul-13	9:00	Cloudy	96.9
10-Jul-13	10:00	Cloudy	100.6
16-Jul-13	13:03	Cloudy	66.8
16-Jul-13	14:03	Cloudy	53.6
16-Jul-13	15:03	Cloudy	60.8
22-Jul-13	8:00	Sunny	96.3
22-Jul-13	9:00	Sunny	100.9
22-Jul-13	10:00	Sunny	99.2
26-Jul-13	9:00	Cloudy	71.9
26-Jul-13	10:00	Cloudy	74.7
26-Jul-13	11:00	Cloudy	77.1
		Average	76.4
		Maximum	100.9
		Minimum	45.8

Appendix D - 24-hour TSP Monitoring Results

Location AM9 - Work Site Boundary (Near Ngong Shuen Chau Barracks Group 2)

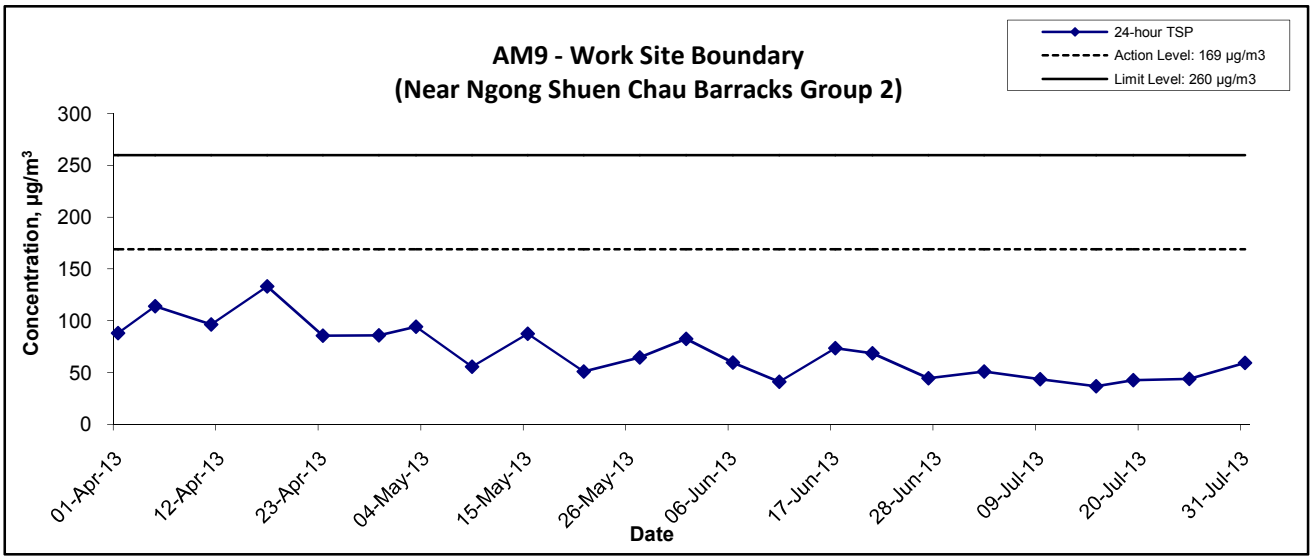
Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate Weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
			Initial	Final		Initial	Final		Initial	Final			
3-Jul-13	Sunny	303.2	3.7379	3.8267	0.0888	1401.6	1425.6	24.0	1.21	1.21	1.21	1741.9	51.0
9-Jul-13	Cloudy	300.3	3.8751	3.9516	0.0765	1425.6	1449.6	24.0	1.22	1.22	1.22	1750.5	43.7
15-Jul-13	Cloudy	299.3	3.0326	3.0969	0.0643	1449.6	1473.6	24.0	1.22	1.22	1.22	1752.5	36.7
19-Jul-13	Sunny	300.1	3.8823	3.9569	0.0746	1473.6	1497.6	24.0	1.21	1.21	1.21	1747.6	42.7
25-Jul-13	Cloudy	298.4	3.6190	3.6961	0.0771	1497.6	1521.6	24.0	1.22	1.22	1.22	1751.3	44.0
31-Jul-13	Cloudy	301.8	3.6171	3.7207	0.1036	1521.6	1545.6	24.0	1.21	1.21	1.21	1741.5	59.5
												Min	36.7
												Max	59.5
												Average	46.3

1-hr TSP Concentration Levels



Title: Contract No. DC/2009/18 HATS 2A – Upgrading Works at SCISTW– Effluent Tunnel and Disinfection Facilities Graphical Presentation of 1-hour TSP Monitoring Results	Scale: N.T.S Date: Jul 13	Project No.: MA11043 Appendix: D	CINOTECH

24-hr TSP Concentration Levels



Title: Contract No. DC/2009/18 HATS 2A – Upgrading Works at SCISTW– Effluent Tunnel and Disinfection Facilities Graphical Presentation of 24-hour TSP Monitoring Results	Scale: N.T.S Date: Jul 13	Project No.: MA11043 Appendix: D	CINOTECH

Appendix D - 1-hour TSP Monitoring Results

Location AM7 - North West Kowloon Sewage Pumping Station			
Date	Time	Weather	Particulate Concentration (μg/m^3)
4-Jul-13	9:00	Sunny	42
4-Jul-13	10:00	Sunny	46
4-Jul-13	11:00	Sunny	40
10-Jul-13	9:00	Sunny	65
10-Jul-13	10:00	Sunny	65
10-Jul-13	11:00	Sunny	66
16-Jul-13	13:00	Cloudy	68
16-Jul-13	14:00	Cloudy	72
16-Jul-13	15:00	Cloudy	63
22-Jul-13	8:45	Sunny	76
22-Jul-13	9:45	Sunny	77
22-Jul-13	10:45	Sunny	75
27-Jul-13	13:20	Cloudy	35
27-Jul-13	14:20	Cloudy	32
27-Jul-13	15:20	Cloudy	38
		Average	57
		Maximum	77
		Minimum	32

Location AM8 - Block A of Government Dockyard			
Date	Time	Weather	Particulate Concentration (μg/m3)
4-Jul-13	13:00	Sunny	34
4-Jul-13	14:00	Sunny	39
4-Jul-13	15:00	Sunny	37
10-Jul-13	8:10	Cloudy	47
10-Jul-13	9:10	Cloudy	47
10-Jul-13	10:10	Cloudy	51
16-Jul-13	13:00	Cloudy	62
16-Jul-13	14:00	Cloudy	67
16-Jul-13	15:00	Cloudy	59
22-Jul-13	8:30	Sunny	45
22-Jul-13	9:30	Sunny	46
22-Jul-13	10:30	Sunny	45
26-Jul-13	9:00	Cloudy	57
26-Jul-13	10:00	Cloudy	64
26-Jul-13	11:00	Cloudy	70
		Average	51
		Maximum	70
		Minimum	34

Appendix D - 24-hour TSP Monitoring Results

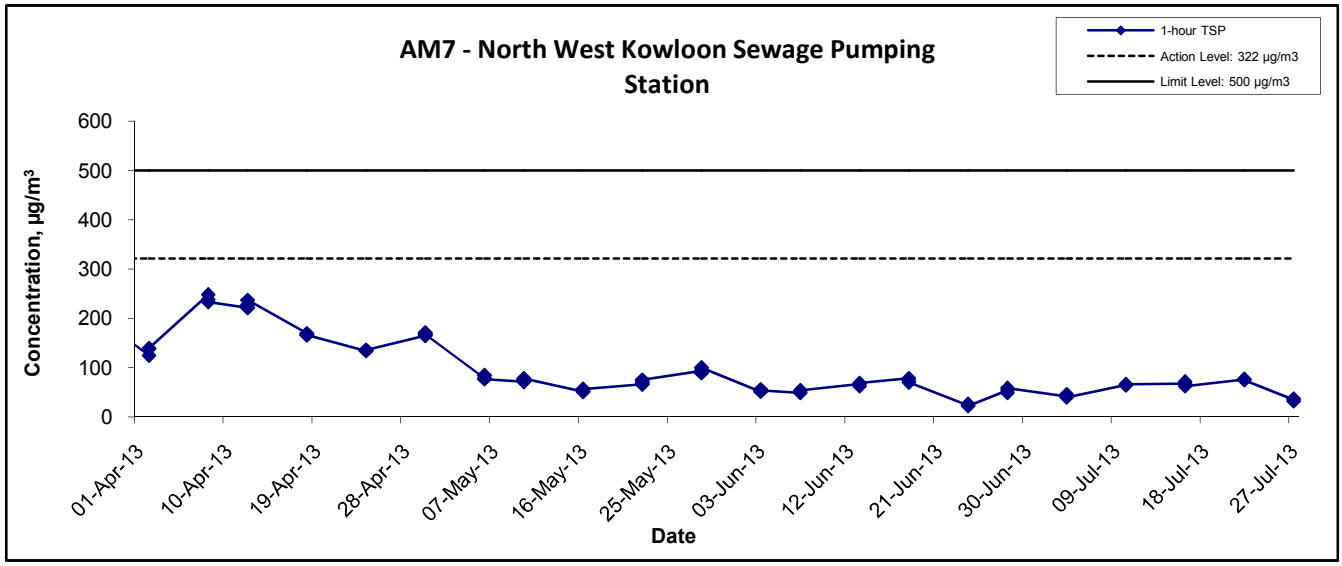
Location AM7 - North West Kowloon Sewage Pumping Station

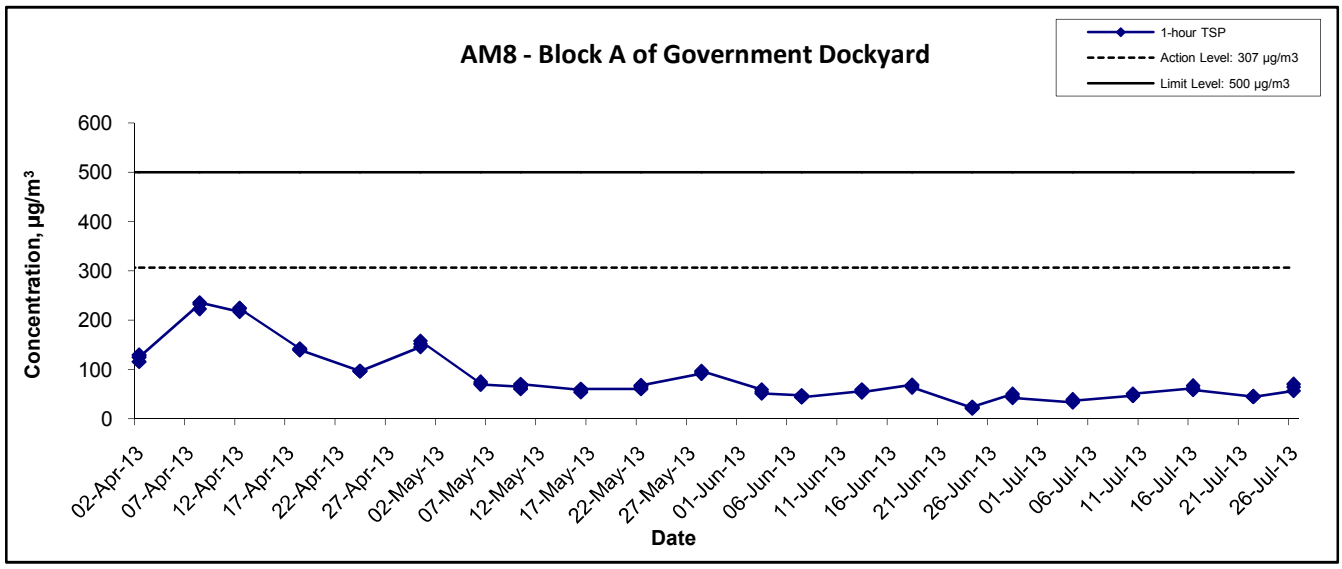
Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. (μg/m^3)
			Initial	Final		Initial	Final		Initial	Final			
3-Jul-13	Sunny	303.2	3.7476	3.8280	0.0804	28529.3	28553.3	24.0	1.21	1.21	1.21	1740.3	46.2
9-Jul-13	Sunny	300.3	3.8508	3.9597	0.1089	28553.3	28577.3	24.0	1.21	1.21	1.21	1749.0	62.3
15-Jul-13	Sunny	299.3	3.0208	3.1094	0.0886	28577.3	28601.3	24.0	1.22	1.22	1.22	1750.9	50.6
19-Jul-13	Sunny	300.1	3.8558	3.9752	0.1194	28601.3	28625.3	24.0	1.21	1.21	1.21	1747.3	68.3
25-Jul-13	Cloudy	298.4	3.6276	3.6942	0.0666	28625.3	28649.3	24.0	1.22	1.22	1.22	1749.7	38.1
31-Jul-13	Cloudy	301.8	3.6388	3.7868	0.1480	28649.3	28673.3	24.0	1.21	1.21	1.21	1739.9	85.1
												Min	38
												Max	85
												Average	58

Location AM8 - Block A of Government Dockyard

Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. (μg/m^3)
			Initial	Final		Initial	Final		Initial	Final			
3-Jul-13	Sunny	303.2	3.7386	3.7946	0.0560	2201.1	2225.1	24.0	1.21	1.21	1.21	1746.6	32.1
9-Jul-13	Cloudy	300.3	3.8692	3.9133	0.0441	2225.0	2249.0	24.0	1.22	1.22	1.22	1753.6	25.1
15-Jul-13	Cloudy	299.3	3.0369	3.0785	0.0416	2249.0	2273.0	24.0	1.22	1.22	1.22	1755.7	23.7
19-Jul-13	Sunny	300.1	3.8476	3.8993	0.0517	2273.0	2297.0	24.0	1.22	1.22	1.22	1750.5	29.5
25-Jul-13	Cloudy	298.4	3.0264	3.0910	0.0646	2297.0	2321.0	24.0	1.22	1.22	1.22	1754.4	36.8
31-Jul-13	Cloudy	301.8	3.6051	3.6638	0.0587	2321.0	2345.0	24.0	1.21	1.21	1.21	1743.3	33.7
												Min	24
												Max	37
												Average	30

1-hr TSP Concentration Levels





Title	Scale	Project No.
Contract No. DC/2009/10 HATS 2A – Upgrading Works at SCISTW– Main Pumping Station, Sedimentation Tanks and Ancillary Graphical Presentation of 1-hour TSP Monitoring Results	N.T.S	MA11007
	Date: Jul 13	Appendix: D

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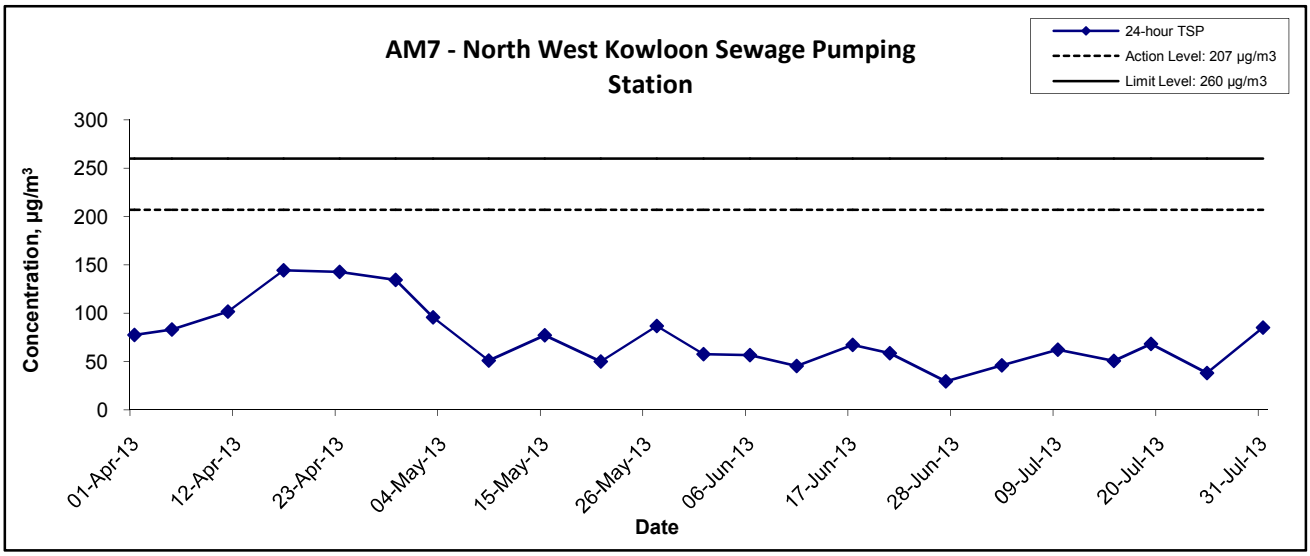
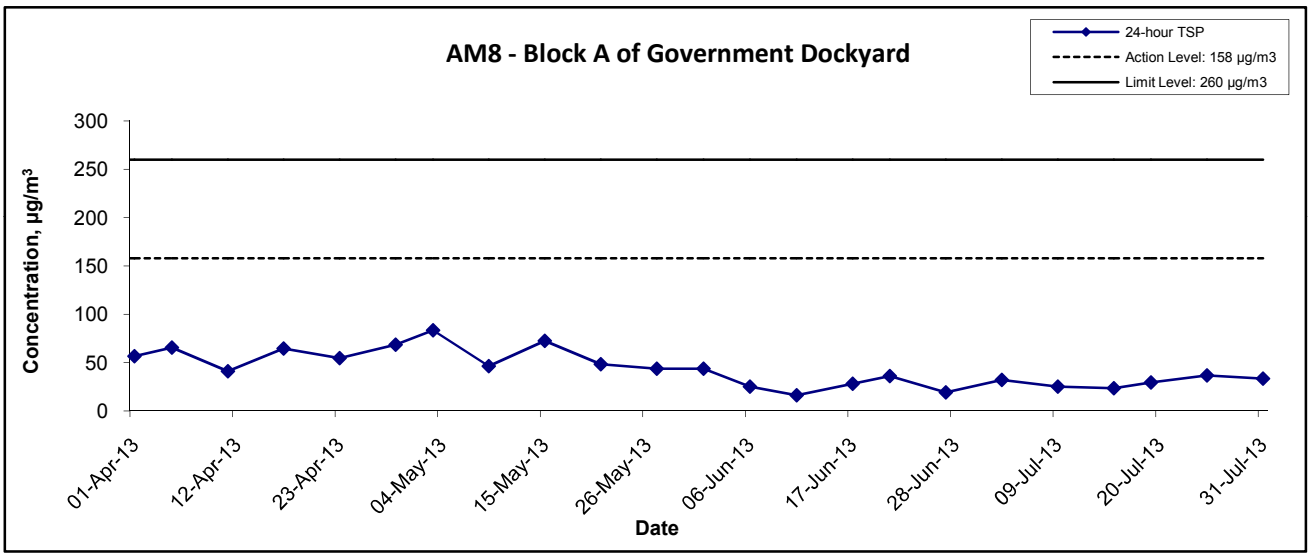
24-hr TSP Concentration Levels





Title	Contract No. DC/2009/10 HATS 2A – Upgrading Works at SCISTW– Main Pumping Station, Sedimentation Tanks and Ancillary Graphical Presentation of 24-hour TSP Monitoring Results	Scale N.T.S Date Jul 13	Project No. MA11007 Appendix D	CINOTECH

APPENDIX E
NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

Annex G6 Noise Monitoring Results

Daytime Noise Monitoring Results

Station NM5

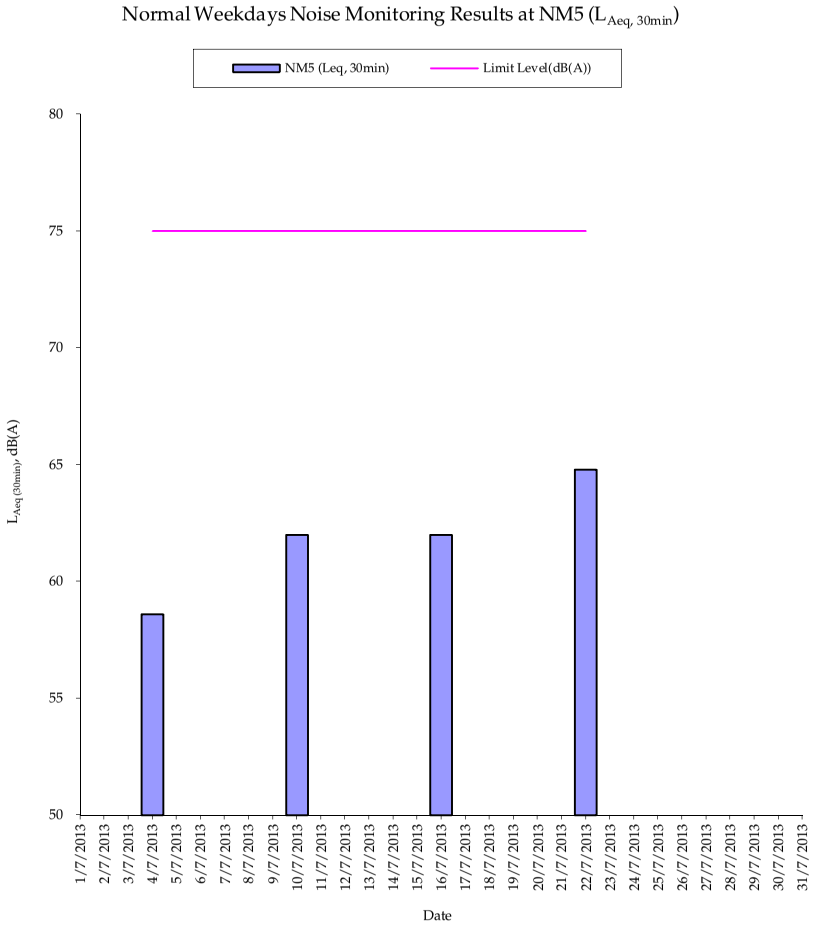
Date	Start Time	End Time	Weather	Noise level (dB(A)), 30 min			Major Construction Noise Source(s) Observed	Other Noise Source(s) Observed	Remarks	Temp. (℃)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
4-Jul-13	13:15	13:45	Sunny	59	60	56	Drill Rig and Welding Machine	Traffic noise	-	30	0.8	RION-NL31 (S/N 00410224)	RION-NL73 (S/N 10997142)
10-Jul-13	11:05	11:35	Cloudy	62	65	67	Drill Rig and Welding Machine	Traffic noise	-	30	0.5	RION-NL31 (S/N 00410224)	RION-NL73 (S/N 1078708)
16-Jul-13	10:52	11:22	Cloudy	62	64	58	Drill Rig, Welding Machine and Dump Truck	traffic noise	-	27	0.6	RION-NL31 (S/N 00410224)	RION-NL73 (S/N 10997142)
22-Jul-13	9:40	10:10	Sunny	65	67	61	Drill rig, welding machine and excavator	traffic noise	-	29	0.7	RION-NL31 (S/N 00410224)	RION-NL73 (S/N 10997142)
			Min.	**59**									
			Max.	**65**									

Annex G6 Noise Monitoring Results

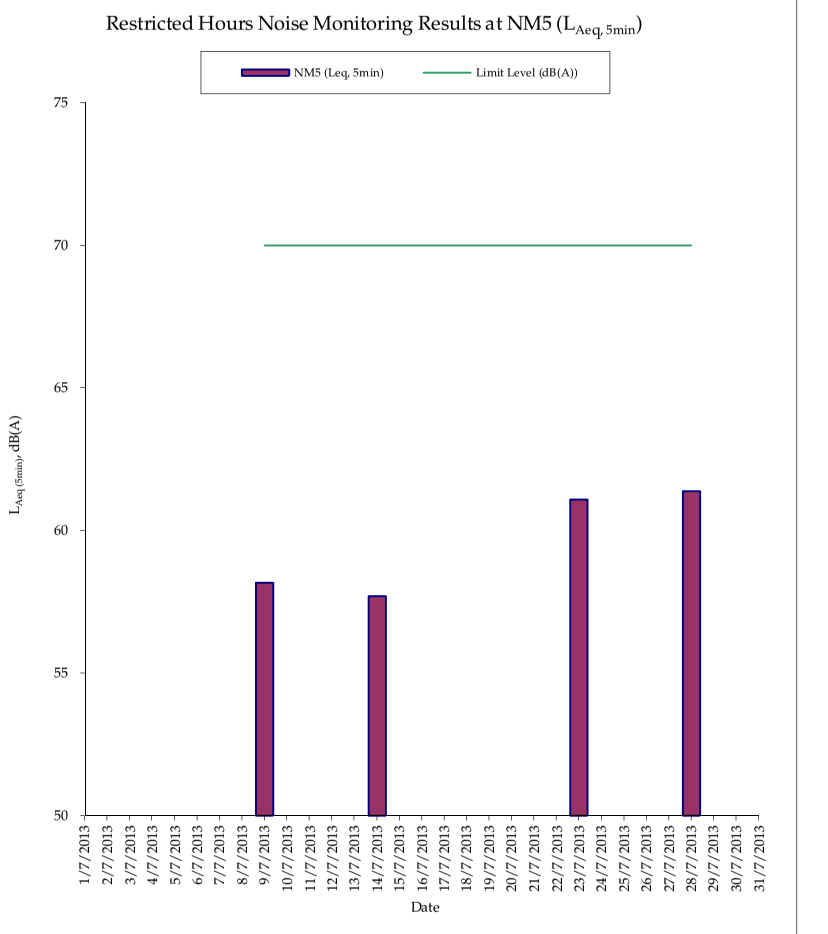
Restricted Hours Noise Monitoring Results

Station NM5

Date	Start Time	End Time	Weather	Noise level (dB(A)), 5 min			Major Construction Noise Source(s) Observed	Other Noise Source(s) Observed	Remarks	Temp. (℃)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
9-Jul-13	10:07	10:12	Sunny	58	59	57	Drill Rig and Concrete Lorry Mixer	Traffic noise	-	31	0.5	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10997142)
	10:12	10:17	Sunny	58	59	57			-				
	10:17	10:22	Sunny	58	60	57			-				
	10:07	10:22	Sunny	58	59	57			-				
14-Jul-13	10:10	10:15	Sunny	58	59	56	Drill Rig	Traffic noise & aircraft noise	-	31	0.6	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10997142)
	10:15	10:20	Sunny	58	59	56			-				
	10:20	10:25	Sunny	58	59	56			-				
	10:10	10:25	Sunny	58	59	56			-				
23-Jul-13	19:12	19:17	Cloudy	61	62	58	Drill Rig	Traffic noise & aircraft noise	-	29	0.8	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10997142)
	19:17	19:22	Cloudy	60	62	58			-				
	19:22	19:27	Cloudy	62	65	58			-				
	19:12	19:27	Cloudy	61	63	58			-				
28-Jul-13	9:30	9:35	Sunny	59	60	58	Drill rig	Traffic noise	-	30	0.3	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10997142)
	9:35	9:40	Sunny	62	65	59			-				
	9:40	9:45	Sunny	62	63	59			-				
	9:30	9:45	Sunny	61	63	59			-				
			Min.	**58**									
			Max.	**62**									



Remark:
- 75dB(A) was adopted as the Limit Level during normal weekdays in the reporting period



Remark:
- 70dB(A) was adopted as the Limit Level during restricted hours in the reporting period

Appendix E - Noise Monitoring Results

(0700-1900 hrs on Normal Weekdays)

Location NM7 - Open Area near Naval Base Barrack					
Date	Time	Weather	Unit: dB (A) (30-min)		
			Measured Noise Level		
			L_{eq}	L_{10}	L_{90}
4-Jul-13	15:00	Sunny	71.2	73.8	67.5
10-Jul-13	08:10	Cloudy	70.3	73.4	66.1
16-Jul-13	13:00	Cloudy	68.3	71.1	64.9
22-Jul-13	08:05	Sunny	70.3	72.1	65.7

(Restricted Hours - 07:00 to 23:00 holidays & 19:00 to 23:00 on all other days)

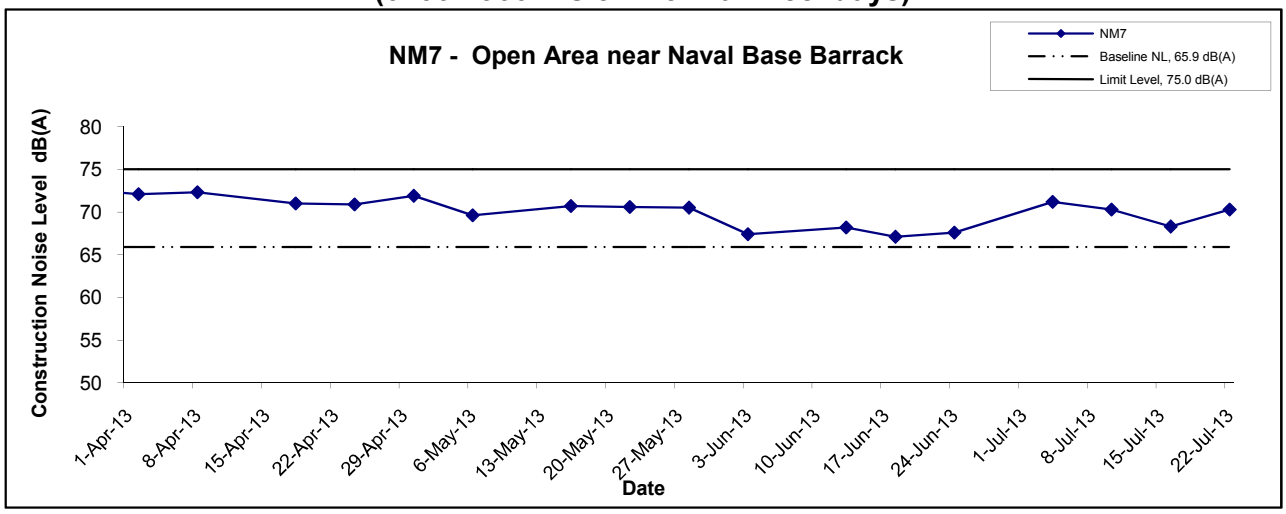
Location NM7 - Customs' Marine Base (Block H of Government Dockyard) Rooftop						
Date	Time	Weather	dB (A) (5-min)			
			L_{eq}	L_{10}	L_{90}	Average L_{eq}
4-Jul-13	19:10	Fine	63.4	65.8	60.1	63.6
	19:15		64.5	66.4	60.6	
	19:20		62.8	65.2	58.9	
10-Jul-13	19:00	Fine	63.8	66.3	60.3	64.2
	19:05		64.7	67.4	60.8	
	19:10		63.9	67.0	59.8	
16-Jul-13	19:00	Fine	63.2	66.3	59.8	63.8
	19:05		63.9	67.2	59.9	
	19:10		64.3	67.9	60.3	
22-Jul-13	22:00	Fine	59.8	61.9	56.4	60.1
	22:05		60.3	62.3	56.9	
	22:10		60.2	62.7	57.2	

(Restricted Hours - 23:00 to 07:00 on all days)

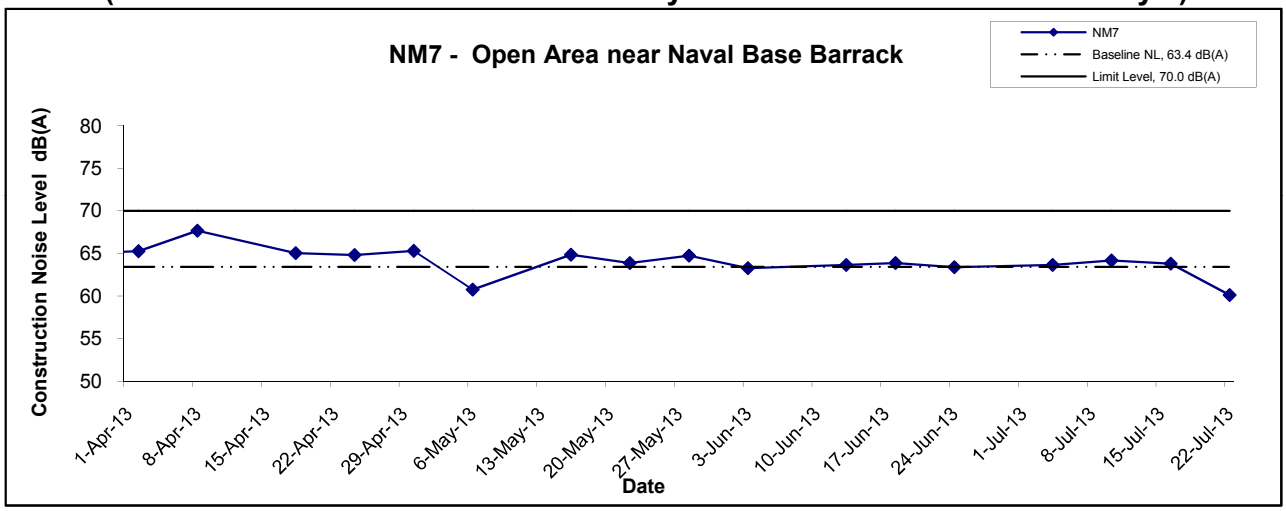
Location NM7 - Customs' Marine Base (Block H of Government Dockyard) Rooftop								
Date	Time	Weather	dB (A) (5-min)				Baseline Level	Construction Noise Level
			L_{eq}	L_{10}	L_{90}	Average L_{eq}	L_{eq}	L_{eq}
4-Jul-13	23:00	Fine	58.7	60.5	55.4	58.8	59.7	58.8 Measured≦Baseline
	23:05		59.8	61.6	56.3			
	23:10		57.6	56.3	54.7			
10-Jul-13	23:00	Fine	57.6	59.7	54.9	58.6		58.6 Measured≦Baseline
	23:05		58.6	60.1	54.7			
	23:10		59.5	61.2	55.4			
16-Jul-13	23:05	Fine	58.6	60.7	55.2	59.3		59.3 Measured≦Baseline
	23:10		59.4	61.5	55.6			
	23:15		59.7	61.7	66.3			
22-Jul-13	23:20	Fine	59.7	62.4	56.3	59.4		59.4 Measured≦Baseline
	23:25		58.9	61.4	55.5			
	23:30		59.6	61.9	56.1			

Noise Levels

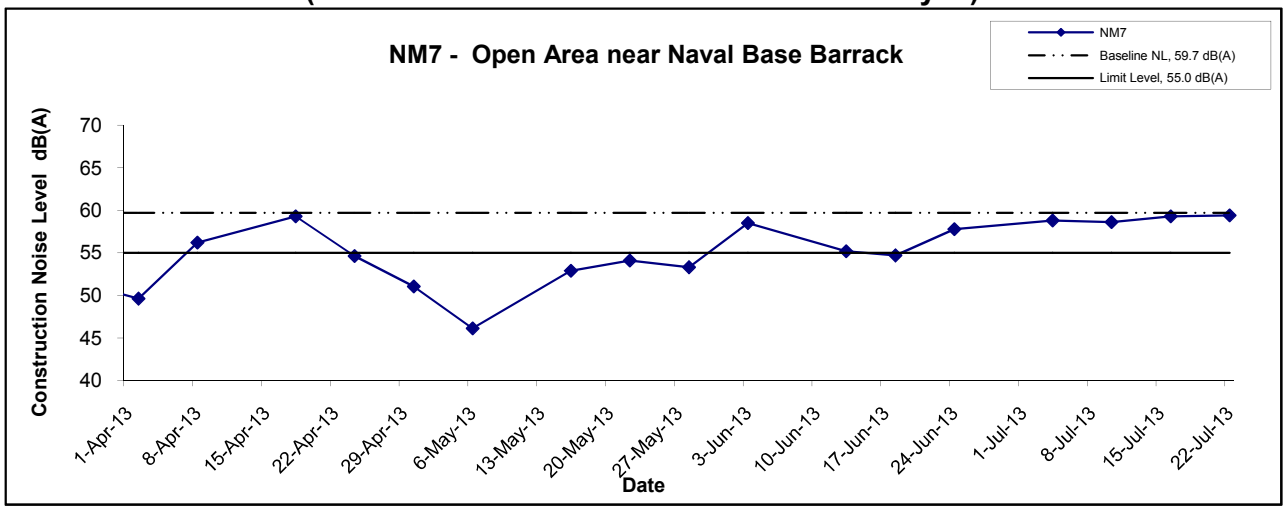
(0700-1900 hrs on Normal Weekdays)



(Restricted Hours - 07:00 - 23:00 holidays & 19:00 - 23:00 on all other days)



(Restricted Hours - 23:00 to 07:00 on all days)



Title		Scale	Project No.
Contract No. DC/2009/18 HATS 2A – Upgrading Works at SCISTW– Effluent Tunnel and Disinfection Facilities Graphical Presentation of Noise Monitoring Result (NM7)		N.T.S	MA11043
		Date Jul 13	Appendix E

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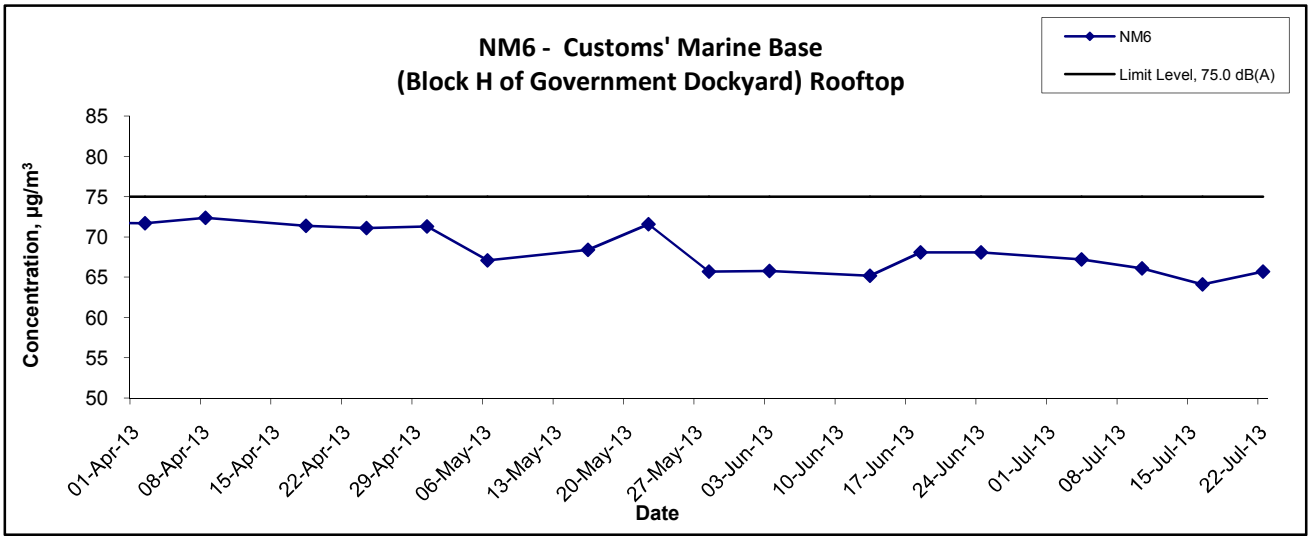
Appendix E - Noise Monitoring Results

(0700-1900 hrs on Normal Weekdays)

Location NM6 - Customs' Marine Base (Block H of Government Dockyard) Rooftop					
Date	Time	Weather	Unit: dB (A) (30-min) Measured Noise Level		
			L_{eq}	L_{10}	L_{90}
4-Jul-13	13:20	Sunny	67.2	69.8	64.0
10-Jul-13	09:40	Cloudy	66.1	69.4	60.1
16-Jul-13	14:00	Cloudy	64.1	65.3	62.7
22-Jul-13	09:00	Sunny	65.7	66.8	64.1

Noise Levels

(0700-1900 hrs on Normal Weekdays)



Title: Contract No. DC/2009/10 HATS 2A – Upgrading Works at SCISTW– Main Pumping Station, Sedimentation Tanks and Ancillary Graphical Presentation of Noise Monitoring Result	Scale: N.T.S Date: Jul 13	Project No.: MA11007 Appendix: E	CINOTECH

APPENDIX F
ENVIRONMENTAL PERMITS AND LICENSES

7 STONECUTTERS ISLAND PRODUCTION AND RISER SHAFTS

7.1 CONSTRUCTION ACTIVITIES DURING THE REPORTING MONTH

A summary of the major construction activities undertaken in this reporting period is shown in *Table 7.1*. The locations of the construction activities are shown in *Annex G1*.

Table 7.1 Summary of Construction Activities Undertaken from 1 to 31 July 2013 at the Stonecutters Island Production and Riser Shafts

Worksite	Construction Activities Undertaken
Riser Shaft	• Raise boring – reaming.
Production Shaft (Tunnel L)	• Pre-excavation grouting; and • Drilling and blasting

7.2 STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS

A summary of the relevant permits, licences, and/or notifications on environmental protection for this Project which are valid during the reporting month is presented in *Table 7.2*.

Table 7.2 Summary of Environmental Licensing, Notification and Permit Status at Stonecutters Island Production and Riser Shafts

Permit/ Licences/ Notification	Reference	Validity Period	Remarks
Wastewater Discharge License	Stonecutters Island Production Shaft and Riser Shaft WT00005069-2009	3 November 2010 – 31 October 2014	--
Chemical Waste Producer Registration	Stonecutters Island Production Shaft and Riser Shaft 5213-269-G2449-07	Throughout the Contract	--
Construction Noise Permit CNP	Stonecutters Island Production Shaft and Riser Shaft GW-RW0258-13	23 April 2013 – 22 October 2013	
	Stonecutters Island Area K-1 GW-RW0990-12	9 January 2013 – 8 July 2013	Superseded by CNP No.: GW-GW-RW0388-13
	Stonecutters Island Area K-1 GW-RW0388-13	9 July 2013 – 8 January 2014	--

7.3 ENVIRONMENTAL MONITORING REQUIREMENTS

7.3.1 Air Quality Monitoring

Monitoring Location

In accordance with the EM&A Manual, 24-hour and 1-hour averaged TSP levels should be conducted at designated monitoring stations. Since access to some of the proposed monitoring locations stated in the EM&A Manual was denied or not available, alternative locations were proposed and agreed by the

Waste/ Chemical Management	130703-R01	Clear the stagnant water in the drip tray at Portion 3.	The stagnant water in the drip tray was cleared.
	130703-R03	Clear the general refuse at Portion 3.	The general refuse was cleared and a rubbish bin was provided on site.
	130710-R01	Clear the stagnant water in the drip tray at Portion 3.	The stagnant water in the drip tray was cleared.
	130718-R03	Oil drums require drip tray at Portion 3	The Contractor has provided a temporary drip tray for the oil drum before a new drip tray with larger capacity arrive.
	130718-O04	The machine that needs repairing should be contained with impervious material to prevent oil stain at Portion 3.	The identified equipments were relocated from the site.
	130724-O02	Oil stain should be cleared to prevent runoff during rainy season (Portion 3)	The oil stain was cleared from the haul road.
	130724-R03	Oil drums require drip tray at Portion 3	The Contractor has provided a temporary drip tray for the oil drum before a new drip tray with larger capacity arrive.
Landscape and Visual	N/A	There was no observation in the reporting period.	N/A
Noise	130731-O02	Noise emission labels should be placed on the air compressors (Portion 7)	The air compressors were provided with noise emission labels.
Permit/ Licenses	N/A	There was no observation in the reporting period.	N/A

4.5 The summaries of site audits are attached in **Appendix G**.

4.6 Details of the implementation of mitigation measures are provided in the **Appendix J**.

Status of Environmental Licensing and Permitting

4.7 All permits/licenses obtained for the Contract DC/2009/18 are summarized in **Table 4.2**.

Table 4.2 Summary of Environmental Licensing and Permit Status for Contract DC/2009/18

Permit/ A/C Number	Valid Period		Details	Status
	From	To		
Water Discharge License				
WT00010571-2011	13/10/2011	31/10/2016	Location: Portion 7A and 15A	Valid
Registered Chemical Waste Producer				
5213-269-C3689-01	8/9/2011	N/A	Site Area under the Project	Valid
Billing Account for Disposal of Construction Waste				
7013233	18/7/2011	N/A	N/A	Valid
Notification of Works Under APCO				
Ref: 332427	15/7/2011	N/A	N/A	N/A
Construction Noise Permit				
GW-RW0116-13	22/2/2013	21/8/2013	Location: Construction site at Stonecutters Island Sewage treatment works (Portion C2)	Valid

Permit/ A/C Number	Valid Period		Details	Status
	From	To		
GW-RW0283-13	13/5/2013	12/11/2013	Location: Construction site at Stonecutters Island Sewage treatment works (Barging Point)	Valid
GW-RW0328-13	14/5/2013	12/11/2013	Location: Construction site at Stonecutters Island Sewage treatment works (Portion 3)	Valid
GW-RW0340-13	01/06/2013	30/11/2013	Location: Construction site at Stonecutters Island Sewage treatment works (Portion 7)	Valid
GW-RW0386-13	14/6/2013	13/12/2013	Location: Construction site at Stonecutters Island Sewage treatment works (Portion 3)	Valid

Status of Waste Management

4.8 The amount of wastes generated by the activities of the Project in the reporting month is shown in **Appendix H**.

Review of Environmental Monitoring Procedures

4.9 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.

Implementation Status of Event Action Plans

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

1-hr TSP

4.11 No Action/Limit Level exceedance was recorded.

24-hr TSP

4.12 No Action/Limit Level exceedance was recorded.

Construction Noise

4.13 No Action/Limit Level exceedance was recorded.

Waste/ Chemical Management	130704-O03	Chemicals in use were observed without container tray. The contractor was reminded to provide container tray for the chemicals to avoid spillage. (Portion 4)	Container tray was provided and maintained adequate capacity for the chemicals.
	130718-R01	Water in drip tray should be regularly cleared to maintain adequate capacity. (Portion 5)	The water in drip tray was cleared.
	130725-O03	Drip tray hole should be sealed to avoid spillage. (Portion 3)	Drip tray hole was sealed.
Landscape and Visual	N/A	There was no observation in the reporting period.	N/A
Noise	N/A	There was no observation in the reporting period.	N/A
Permit/ Licenses	N/A	There was no observation in the reporting period.	N/A

Review of Environmental Monitoring Procedures

4.7 The monitoring works conducted by the monitoring teams of Contracts DC/2007/23 and DC/2009/10. The monitoring procedures were reviewed by their respective ETs.

Status of Environmental Licensing and Permitting

4.8 All permits/licenses obtained for the Contract DC/2009/17 are summarized in **Table 4.2**.

Table 4.2 Summary of Environmental Licensing and Permit Status

Permit No.	Valid Period		Details	Status
	From	To		
Water Discharge License				
WT00007763-2010	22/10/2010	31/10/2015	Location: Portion 5	Valid
WT00007921-2010	23/11/2010	30/11/2015	Location: Portion C	Valid
WT00007982-2010	3/12/2010	31/12/2015	Location: Portion 3&4	Valid
Registered Chemical Waste Producer				
5213-239-C3388-02	19/10/2010	N/A	Major chemical waste types are: Spent battery, waste mechanical oil and spent lubricant.	Valid
Billing Account for Disposal of Construction Waste				
A/C No.7011408	15/09/2010	N/A	N/A	Valid
Notification of Works Under APCO				
Ref:321235	7/09/2010	N/A	--	Valid
Construction Noise Permit				
GW-RW0229-13	21/04/2012	20/10/2013	Location: Portion 3, 4 and 5	Valid
GW-RW0746-12	21/04/2012	20/10/2013	Location: Portion 3, 4 and 5	Valid

	130726-O01	General refuse on the ground should be properly disposed of. (Portion 4)	Item 130726-O01 was found outstanding on 130802 site inspection, general refuse was still observed on site. It will be follow up during the next inspection on 130809.
Landscape and Visual	N/A	There was no observation in the reporting month.	N/A
Noise	N/A	There was no observation in the reporting month.	N/A
Permit/ Licenses	N/A	There was no observation in the reporting month.	N/A

Review of Environmental Monitoring Procedures

4.7 The monitoring works conducted by the monitoring teams of Contracts DC/2007/23, and DC/2009/10. The monitoring procedures were reviewed by their respective ETs.

Status of Environmental Licensing and Permitting

4.8 All permits/licenses obtained for the Contract DC/2009/10 are summarized in **Table 4.2**.

Table 4.2 Summary of Environmental Licensing and Permit Status for Contract DC/2009/10

Reference Number	Valid Period		Details	Status
	From	To		
Water Discharge License				
WT00009245-2011	1/6/2011	30/6/2016	The application was approved on 1-6-2011.	Valid
WT00012151-2012	28/2/2012	28/2/2017	The application was approved on 28-2-2012.	Valid
WT00015128-2013	28/1/2013	31/1/2018	The application was approved on 28-1-2013.	Valid
Registered Chemical Waste Producer				
WPN5213-269-3584-01	N/A	N/A	The application was approved on 4-5-2011.	Valid
Billing Account for Disposal of Construction Waste				
CSW01444	16/3/2011	N/A	The application was approved on 16-3-2011.	Valid
Notification of Works Under APCO				
327427	N/A	N/A	Notice form received by EPD on 2-3-2011.	N/A
Construction Noise Permit for Percussive Pilling (driving steel pile)				
PP-RW0009-13	3/5/2013	1/2/2014	Location: Portion 3 and 8.	Valid
PP-RW0027-12	10/1/2013	1/10/2013	Location: Portion 4.	Valid
Construction Noise Permit for use of mechanical equipment outside permitted working hours				
GW-RW0378-13	25/6/2013	24/12/2013	Location: Portion 4&5	Valid
GW-RW0381-13	25/6/2013	24/12/2013	Location: Portion B	Valid

Reference Number	Valid Period		Details	Status
	From	To		
GW-RW0053-13	1/2/2013	31/7/2013	Location: Portion 3 and 8	Expired on 31/7/2013
GW-RW0038-13	1/2/2013	31/7/2013	Location: Portion 6	Expired on 31/7/2013
GW-RW0480-13	1/8/2013	31/1/2014	Location: Portion 3 and 8	Valid on 1/8/2013
GW-RW0479-13	1/8/2013	31/1/2014	Location: Portion 6	Valid on 1/8/2013
Renewal of Admission Ticket for Disposal of Special Waste (Grit) at Landfills				
No. 10641	1/6/2013	30/11/2013	N/A	Valid

Status of Waste Management

4.9 The amount of wastes generated by the activities of the Project in the reporting month is shown in **Appendix H**.

Implementation Status of Event Action Plans

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

1-hr TSP

4.11 No Action/Limit Level exceedance was recorded.

24-hr TSP

4.12 No Action/Limit Level exceedance was recorded.

Construction Noise

4.13 No Action/Limit Level exceedance was recorded.

Landscape and Visual

4.14 No non-compliance was recorded.

Summary of Complaints and Prosecutions

4.15 No environmental complaint and prosecution was received for the Project in the reporting month.

4.16 There were no environmental complaint and prosecution received since the commencement of the Project. The Complaint Log is presented in **Appendix K**.

APPENDIX G
SUMMARY OF EXCEEDANCE

APPENIDX G – SUMMARY OF EXCEEDANCE

Reporting Month: July 2013

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

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

c) Exceedance Report for Construction Noise (NIL)

No Exceedance of Action/Limit Level for normal working hours and restricted hours was recorded.

APPENDIX H
SITE AUDIT SUMMARY

Annex K Summary of Site Inspections Observations and Follow-ups

Inspection date: 04 July 2013

Follow-up Actions Taken after Previous Site Audit

North Point Production Shaft

- Stagnant water in the drip tray at the opposite of the Wastewater Treatment System had been removed.

Stonecutters Island Production Shaft

- Stagnant water was still observed in the drip tray at the back of the noise enclosure. The Contractor was further reminded to remove the stagnant water to ensure a sufficient capacity to prevent chemical spillage.
- Chemical drums were still observed at the entrance of the noise enclosure. The Contractor was further reminded to provide drip tray to prevent potential chemical spillage.

Observations and Recommendations

North Point Production Shaft

- Oil stains were observed around the chemical storage area and inside the noise enclosure. The Contractor was reminded to remove the oil stains.

Wan Chai Production Shaft

- Waste was observed accumulating at the waste storage container. The Contractor was reminded to remove the waste more frequently to ensure a better housekeeping.

Stonecutters Island Production Shaft

- Chemical drums were observed at the waste storage. The Contractor was reminded to provide drip tray to prevent potential chemical spillage.

Inspection date: 11 July 2013

Follow-up Actions Taken after Previous Site Audit

North Point Production Shaft

- The oil stains around the chemical storage area and inside the noise enclosure has been removed.

Wan Chai Production Shaft

- Accumulated waste in the waste storage container has been removed.

Stonecutters Island Production Shaft

- Stagnant water was still observed in the drip tray at the back of the noise enclosure. The Contractor was further reminded to remove the stagnant water to ensure a sufficient capacity to prevent chemical spillage.
- Chemical drums were still observed at the entrance of the noise enclosure. The Contractor was further reminded to provide drip tray to prevent potential chemical spillage.
- Chemical drums at the waste storage were still observed without drip tray. The Contractor was further reminded to provide drip tray to prevent potential chemical spillage.

Observations and Recommendations

Nil

Inspection date: 18 July 2013

Follow-up Actions Taken after Previous Site Audit

Stonecutters Island Production Shaft

- Stagnant water in the drip tray at the back of the noise enclosure had been removed.
- Chemical drums at the entrance of the noise enclosure had been removed.
- Chemical drums at the waste storage had been provided with drip trays.

Observations and Recommendations

Wan Chai Production Shaft

- The sewer pipe outside the washroom was observed damaged. The Contractor was reminded to repair the sewer pipe to provide proper drainage system.
- Water and chemical mixture was observed accumulated in a container in the chemical storage area. The Contractor was reminded to dispose of the mixture as chemical waste.

Inspection date: 25 July 2013

Follow-up Actions Taken after Previous Site Audit

Wan Chai Production Shaft

- The sewer pipe outside the washroom was observed damaged during the site audit on 18 July 2013. The Contractor was reminded to repair the sewer pipe to provide proper drainage system. This will be checked during next site audit.
- Water and chemical mixture was observed accumulated in a container in the chemical storage area during the site audit on 18 July 2013. The Contractor was reminded to dispose of the mixture as chemical waste. This will be checked during next site audit.

Observations and Recommendations

North Point Production Shaft

- A chemical drum inside the workshop was observed without drip tray. The Contractor was reminded to provide a drip tray to prevent potential chemical spillage.

Stonecutters Island Production Shaft

- Two chemical drums in the front of the noise enclosure and a chemical drum at the back of the noise enclosure next to the generator were observed without drip trays. The Contractor was reminded to provide drip trays to prevent potential chemical spillage.

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.

4.2 Environmental site audits were conducted on 3rd, 10th, 18th, 24th and 31st July 2013 for the Project. No non-compliance was observed during the site audits.

4.3 Site inspections were undertaken to ensure and check that the implementation and maintenance of mitigation measures for Air Quality, Noise, Water Quality, Waste Management, Landscape and Visual are being properly carried out in the reporting month in accordance to section 14.1 of the EM&A Manual. No non-compliance was observed during the site inspections.

Implementation Status of Environmental Mitigation Measures

4.4 During the weekly environmental site inspections in the reporting period, no non-conformance was identified. The observations of the site audit for the Projects are summarized in **Table 4.1**.

Table 4.1 Observations of Site Audit

Parameters	Ref. Number	Observations	Follow Up Action
Water Quality	130718-R01	Accumulated sediment in the u-channel should be cleared at Portion 7	Identified sediment was removed from the u-channel
	130718-O02	Silty water contained within the stockpile should be cleared and provide with proper drainage system directed to sedimentation tank at Portion 7.	The Contractor has cleared the silty water and rectified the surface area to enable better water drainage.
	130724-O01	The drip tray should be properly sealed and maintained with the oil cleared from the tray (Portion 3)	The drip tray was properly sealed with the oil in the tray removed.
	130724-O02	Oil stain should be cleared to prevent runoff during rainy season (Portion 3)	The oil stain was cleared from the haul road.
	130731-O03	Drainage channel should avoid silt accumulation in Portion 7	The Contractor had been clearing the drainage channel.
	130731-O04	The mud trails outside the wheel washing facility should be cleared in Portion 7	The mud trails was cleared from the haul road
	130731-R05	The sedimentation tank in Portion 7 is needed to be functioning to avoid overflow	The sedimentation tank has been functioning and the accumulated water was subsequently removed
Air Quality	130703-R02	Cover the dusty stockpile with impervious sheets properly at Portion 3	Remarked as ref.130710-R02
	130710-R02	Stockpile should be covered with impervious materials and carry out material sorting.	The identified stockpile was removed.
	130731-O01	Water should be sprayed on the haul road to prevent dust generation in Portion 3.	The Contractor has sprayed water on the haul road.

Waste/ Chemical Management	130703-R01	Clear the stagnant water in the drip tray at Portion 3.	Remarked as ref.130710-R01
	130703-R03	Clear the general refuse at Portion 3.	The general refuse was cleared and a rubbish bin was provided on site.
	130710-R01	Clear the stagnant water in the drip tray at Portion 3.	The stagnant water in the drip tray was cleared.
	130718-R03	Oil drums require drip tray at Portion 3	Remarked as ref.130724-R03
	130718-O04	The machine that needs repairing should be contained with impervious material to prevent oil stain at Portion 3.	The identified equipments were relocated from the site.
	130724-O02	Oil stain should be cleared to prevent runoff during rainy season (Portion 3)	The oil stain was cleared from the haul road.
	130724-R03	Oil drums require drip tray at Portion 3	The Contractor has provided a temporary drip tray for the oil drum before a new drip tray with larger capacity arrive.
Landscape and Visual	N/A	There was no observation in the reporting period.	N/A
Noise	130731-O02	Noise emission labels should be placed on the air compressors (Portion 7)	The air compressors were provided with noise emission labels.
Permit/ Licenses	N/A	There was no observation in the reporting period.	N/A

4.5 The summaries of site audits are attached in **Appendix G**.

4.6 Details of the implementation of mitigation measures are provided in the **Appendix J**.

Status of Environmental Licensing and Permitting

4.7 All permits/licenses obtained for the Contract DC/2009/18 are summarized in **Table 4.2**.

Table 4.2 Summary of Environmental Licensing and Permit Status for Contract DC/2009/18

Permit/ A/C Number	Valid Period		Details	Status
	From	To		
Water Discharge License				
WT00010571-2011	13/10/2011	31/10/2016	Location: Portion 7A and 15A	Valid
Registered Chemical Waste Producer				
5213-269-C3689-01	8/9/2011	N/A	Site Area under the Project	Valid
Billing Account for Disposal of Construction Waste				
7013233	18/7/2011	N/A	N/A	Valid
Notification of Works Under APCO				
Ref: 332427	15/7/2011	N/A	N/A	N/A
Construction Noise Permit				
GW-RW0116-13	22/2/2013	21/8/2013	Location: Construction site at Stonecutters Island Sewage treatment works (Portion C2)	Valid
GW-RW0283-13	13/5/2013	12/11/2013	Location: Construction site at Stonecutters Island Sewage treatment works (Barging Point)	Valid

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.

4.2 Environmental site audits were conducted on 4, 11 18 and 25 July 2013 for the Project. No non-compliance was observed during the site audits.

4.3 Site inspections were undertaken to ensure and check that the implementation and maintenance of mitigation measures for Air Quality, Noise, Water Quality, Waste Management, Landscape and Visual are being properly carried out in the reporting month in accordance to section 14.1 of the EM&A Manual. No non-compliance was observed during the site inspections.

4.4 The summaries of site audits are attached in **Appendix C**.

Implementation Status of Environmental Mitigation Measures

4.5 Details of the implementation of mitigation measures are provided in the **Appendix F.**

4.6 During the weekly environmental site inspections in the reporting period, no non-conformance was identified. The observations of the site audit for the Projects are summarized in **Table 4.1.**

Table 4.1 Observations of Site Audit

Parameters	Ref. Number	Observations	Follow Up Action
Water Quality	130704-O01	Silt was observed on the side of the road due to sediment runoff. The contractor was reminded to remove the excavated materials near the road. (C7)	Silt and excavated materials are cleared by the contractor.
	130704-O02	The contractor was reminded to discharge the wastewater to sedimentation facilities properly. (Opposite Portion 4)	Item 130704 was found outstanding during 130711 site inspection. The contractor was reminded to provide mitigation measures as soon as possible. According to the contractor, the pipe was connected when discharging.
	130711-R02	Stagnant water should be cleared to avoid mosquito breeding. (Portion 3)	Stagnant water was cleared.
	130725-R01	Silt and dusty materials on the side road should be cleared regularly to avoid water runoff. (Portion C7)	Dusty materials were cleared.
	130725-R02	To properly connect the water pipe to sedimentation tank for discharge. (Portion 4)	According to the contractor water pipe will be connected to the sedimentation tank for discharge when in use.
Air Quality	130711-O01	Exposed stockpile and dusty materials on the ground should be covered to avoid dust emission. (Portion 3)	The stockpile was cleared during site inspection.

Waste/ Chemical Management	130704-O03	Chemicals in use were observed without container tray. The contractor was reminded to provide container tray for the chemicals to avoid spillage. (Portion 4)	Container tray was provided and maintained adequate capacity for the chemicals.
	130718-R01	Water in drip tray should be regularly cleared to maintain adequate capacity. (Portion 5)	The water in drip tray was cleared.
	130725-O03	Drip tray hole should be sealed to avoid spillage. (Portion 3)	Drip tray hole was sealed.
Landscape and Visual	N/A	There was no observation in the reporting period.	N/A
Noise	N/A	There was no observation in the reporting period.	N/A
Permit/ Licenses	N/A	There was no observation in the reporting period.	N/A

Review of Environmental Monitoring Procedures

4.7 The monitoring works conducted by the monitoring teams of Contracts DC/2007/23 and DC/2009/10. The monitoring procedures were reviewed by their respective ETs.

Status of Environmental Licensing and Permitting

4.8 All permits/licenses obtained for the Contract DC/2009/17 are summarized in **Table 4.2**.

Table 4.2 Summary of Environmental Licensing and Permit Status

Permit No.	Valid Period		Details	Status
	From	To		
Water Discharge License				
WT00007763-2010	22/10/2010	31/10/2015	Location: Portion 5	Valid
WT00007921-2010	23/11/2010	30/11/2015	Location: Portion C	Valid
WT00007982-2010	3/12/2010	31/12/2015	Location: Portion 3&4	Valid
Registered Chemical Waste Producer				
5213-239-C3388-02	19/10/2010	N/A	Major chemical waste types are: Spent battery, waste mechanical oil and spent lubricant.	Valid
Billing Account for Disposal of Construction Waste				
A/C No.7011408	15/09/2010	N/A	N/A	Valid
Notification of Works Under APCO				
Ref:321235	7/09/2010	N/A	--	Valid
Construction Noise Permit				
GW-RW0229-13	21/04/2012	20/10/2013	Location: Portion 3, 4 and 5	Valid
GW-RW0746-12	21/04/2012	20/10/2013	Location: Portion 3, 4 and 5	Valid

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.

4.2 Environmental site audits were conducted on 5, 12, 17 and 26 July 2013 for the Project. No non-compliance was observed during the site audits.

4.3 Site inspections were undertaken to ensure and check that the implementation and maintenance of mitigation measures for Air Quality, Noise, Water Quality, Waste Management, Landscape and Visual are being properly carried out in the reporting month in accordance to section 14.1 of the EM&A Manual. No non-compliance was observed during the site inspections.

4.4 The summaries of site audits are attached in **Appendix G**.

Implementation Status of Environmental Mitigation Measures

4.5 Details of the implementation of mitigation measures are provided in the **Appendix J**.

4.6 During the weekly environmental site inspections in the reporting period, no non-conformance was identified. The observations of the site audit for the Projects are summarized in **Table 4.1**.

Table 4.1 Observations of Site Audit

Parameters	Ref. Number	Observations	Follow Up Action
Water Quality	130712-O01	Sedimentation tank should be provided for discharge of wastewater. (Portion 4)	Water pipe was properly connected to the sedimentation tank.
	130726-O02	Water pump should be regularly checked to be functioning to avoid silty water runoff. (Portion 3)	Water pump was properly functioning.
Air Quality	130705-O01	Exposed stockpile should be covered by tarpaulin to reduce dust generation in dry days. (Portion 3)	Exposed stockpile was observed wet and backfilling was in progress during the site inspection.
	130712-R03	Site vehicle transporting stockpile materials should be covered entirely. (Portion 4)	According to the contractor, site vehicle transporting stockpile materials are all completely covered.
	130717-R01	Exposed stockpile near side road should be covered or bunded to avoid water runoff. (Portion 4)	The stockpile was covered.
Waste/ Chemical Management	130705-O02	Stagnant water in drip tray should be cleared regularly to maintain adequate capacity. (Portion 3)	Stagnant water was cleared in drip tray.
	130712-O02	C&D materials should be sorted and separated from waste materials. (Portion 4)	C&D materials are probably sorted.
	130712-R04	Drip tray should be provided for the oil drums. (Portion 3)	Drip tray was provided for the oil drums.

	130726-O01	General refuse on the ground should be properly disposed of. (Portion 4)	Item 130726-O01 was found outstanding on 130802 site inspection, general refuse was still observed on site. It will be follow up during the next inspection on 130809.
Landscape and Visual	N/A	There was no observation in the reporting month.	N/A
Noise	N/A	There was no observation in the reporting month.	N/A
Permit/ Licenses	N/A	There was no observation in the reporting month.	N/A

Review of Environmental Monitoring Procedures

4.7 The monitoring works conducted by the monitoring teams of Contracts DC/2007/23, and DC/2009/10. The monitoring procedures were reviewed by their respective ETs.

Status of Environmental Licensing and Permitting

4.8 All permits/licenses obtained for the Contract DC/2009/10 are summarized in **Table 4.2**.

Table 4.2 Summary of Environmental Licensing and Permit Status for Contract DC/2009/10

Reference Number	Valid Period		Details	Status
	From	To		
Water Discharge License				
WT00009245-2011	1/6/2011	30/6/2016	The application was approved on 1-6-2011.	Valid
WT00012151-2012	28/2/2012	28/2/2017	The application was approved on 28-2-2012.	Valid
WT00015128-2013	28/1/2013	31/1/2018	The application was approved on 28-1-2013.	Valid
Registered Chemical Waste Producer				
WPN5213-269-3584-01	N/A	N/A	The application was approved on 4-5-2011.	Valid
Billing Account for Disposal of Construction Waste				
CSW01444	16/3/2011	N/A	The application was approved on 16-3-2011.	Valid
Notification of Works Under APCO				
327427	N/A	N/A	Notice form received by EPD on 2-3-2011.	N/A
Construction Noise Permit for Percussive Pilling (driving steel pile)				
PP-RW0009-13	3/5/2013	1/2/2014	Location: Portion 3 and 8.	Valid
PP-RW0027-12	10/1/2013	1/10/2013	Location: Portion 4.	Valid
Construction Noise Permit for use of mechanical equipment outside permitted working hours				
GW-RW0378-13	25/6/2013	24/12/2013	Location: Portion 4&5	Valid
GW-RW0381-13	25/6/2013	24/12/2013	Location: Portion B	Valid

APPENDIX I
EVENT ACTION PLANS

APPENDIX I – Event / Action Plans

Table I-1 Event / Action Plan For Air Quality

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
ACTION LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and ER; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failurein writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented	1. Submit proposals for remedial to ER within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
	actions required; 7. If exceedance continues, arrange meeting with IEC and ER; 8. If exceedance stops, cease additional monitoring			
LIMIT LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
2. Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 5. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. 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 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

Table I-2 Event / Action Plan For Construction Noise

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
Action Level being exceeded	1. Notify ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Advise the ER on the effectiveness of the proposed remedial measures	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures	1. Submit noise mitigation proposals to IEC and ER; 2. Implement noise mitigation proposals
Limit Level being exceeded	1. Inform IEC, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and ER on remedial measures required; 7. Assess effectiveness of	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
	Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring		until the exceedance is abated	the ER until the exceedance is abated

APPENDIX J
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)

APPENDIX J IMPLEMENTATION SCHEDULE OF ENVIRONMENTAL MITIGATION MEASURES (EMIS)

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract			
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18
A	**Air Quality**					
3.74	Skip hoist for material transport should be totally enclosed by impervious sheeting.	All construction sites	^	^	^	^
	Vehicle washing facilities should be provided at every vehicle 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 hardcore.			^	^	^
	Where a site boundary adjoins a road, streets or other areas accessible to the public, hoarding of not less than 2.4 m high from ground level should be provided along the entire length except for a site entrance or exit.			N/A	N/A	N/A
	Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.			^	^	^
	Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.			*	*	*
	Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs			^	*	^
	Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.			^	^	^
	Imposition of speed controls for vehicles on unpaved site roads. Ten kilometers per hour is			^	^	^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract			
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18
	the recommended limit.					
	Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the 3 sides.			^	^	^
	Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.			^	^	^
3.74	Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.	All construction sites		^	^	^
B	**Airborne Noise**					
4.56–4.61	Use of quiet PME, movable barriers and acoustic mats.	All construction sites	^	^	^	^
4.67	Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program.		^	^	^	^
	Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program.		^	^	^	^
	Mobile plant, if any, shall be sited as far away from NSRs as possible.		^	^	^	^
	Machines and plant (such as trucks) that may be in intermittent use shall be shut down between works periods or shall be throttled down to a minimum.		^	^	^	^
4.67	Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby		^	^	^	^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract			
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18
	NSRs.					
	Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities.		^	^	^	^
C	**Water Quality**					
6.349 to 6.375	Construction Site Runoff and General Construction Activities The mitigation measures as outlined in the ProPECC PN 1/94 Construction Site Drainage should be adopted where applicable.	All construction sites	^	*	^	*
6.376	Effluent Discharge There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the WPCO license which is under the ambit of regional office (RO) of EPD. Minimum distances of 100 m should be maintained between the discharge points of construction site effluent and the existing saltwater intakes.		^	*	*	^
6.377	Accidental Spillage of Chemicals Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste		^	^	^	^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract			
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18
	Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.					
6.378	Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.		^	^	^	^
6.379	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: • Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. • Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. • Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.		<>	^	^	*

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract			
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18
6.380	Construction Works in Close Proximity of Storm Drains or Seafront To minimize the potential water quality impacts from the construction works located at or near any watercourse, the practices outlined below should be adopted where applicable. • The use of less or smaller construction plants may be specified to reduce the disturbance to the storm water courses or marine environment. • Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works. • Stockpiling of construction materials and dusty materials should be covered and located away from any water courses. • Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers. Construction activities, which generate large amount of wastewater, should be carried out in a distance • away from the waterfront, where practicable. • Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert or sea.	All construction sites	^	^	^	^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract			
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18
D	**Waste Management**					
9.107	Reusable steel or concrete panel shutters, fencing and hoarding and signboard should be used as a preferred alternative to items made of wood, to minimize wastage of wood. Attention should be paid to WBTC No. 19/2001 - Metallic Site Hoardings and Signboards to reduce the amount of timber used on construction sites. Metallic alternatives to timber are readily available and should be used rather than new timber. Precast concrete units should be adopted wherever feasible to minimize the use of timber formwork.	All construction sites	^	^	^	^
9.109	All waste materials should be segregated into categories covering: • excavated materials suitable for reuse on-site; • excavated materials suitable for public filling facilities; • remaining C&D waste for landfill; • chemical waste; and • general refuse for landfill.	All construction sites	^	^	^	^
9.113	Sort C&D waste from demolition of existing facilities to recover recyclable portions such as metals;		^	^	*	^
	Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.			^	^	^
	Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force.			^	^	^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract			
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18
	Any unused chemicals or those with remaining functional capacity shall be recycled.			^	^	^
	Proper storage and site practices to minimise the potential for damage or contamination of construction materials.			^	^	^
9.115	Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.		^	^	^	^
	Training of site personnel in proper waste management and chemical waste handling procedures.			^	^	^
	Develop and provide toolbox talk for on-site sorting of C&D materials to enhance worker's awareness in handling, sorting, reuse and recycling of C&D materials.			^	^	^
	Provision of sufficient waste disposal points and regular collection of waste.			^	^	^
	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.			^	^	*
9.125	Bentonite slurries used in diaphragm wall construction should be reconditioned and reused wherever practicable. The disposal of residual used bentonite slurry should follow the good practice guidelines stated in ProPECC PN 1/94 "Construction Site Drainage"	All construction sites	N/A	N/A	^	^
9.131	Adequate number of portable toilets at temporary works areas or the PTWs to ensure that sewage from site staff would be properly collected.		^	^	^	^
9.133	General refuse should be stored in enclosed bins, skips or compaction units separating from C&D material and disposed of at designated landfill.		^	^	*	*

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract			
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18
9.135	The recyclable component of the municipal waste generated by the workforce, such as aluminium cans, paper and cleansed plastic containers should be separated from other waste. Provision and collection of recycling bins for different types of recyclable waste should be set up by the Contractor. The Contractor should also be responsible for arranging recycling companies to collect these materials.		^	^	^	^
9.137	If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.		^	*	*	^
9.142	Prior to excavation of the marine deposit layer, the deposit should be tested in accordance with the ETWB TC(W) No. 34/2002 and the results should be presented in a Preliminary Sediment		^	N/A	N/A	N/A

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract			
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18
	Quality Report. The marine deposit should be disposed of at the disposal site designated by the Marine Fill Committee (MFC) or Director of Environmental Protection (DEP) depending on the test results.					
E	**Terrestrial Ecology**					
10.94	To implement effective noise mitigation measures as recommended in Section 4 of EIA.	All construction sites	^	N/A	N/A	N/A
10.95	Dust control practices such as regular watering, complete coverage of any aggregate or dusty material storage piles, and re-schedule of dusty activities during high-wind conditions as well as other measures recommended in Section 3 of EIA, should be implemented.		^	^	^	^
10.96	Fences/hoardings should be erected and installed along the boundary of the works areas.		^	^	^	^
10.97	Standard good site practices as suggested in Section 10 of EIA should be implemented.		^	N/A	N/A	N/A
10.98	Provision of proper drainage system and runoff control measures such as use of sand/silt traps, oil/grease separators, sedimentation tanks, etc.		^	^	^	#
F	**Landscape and Visual**					
Table 13.7	Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical.	All construction sites	^	^	^	^
	Existing trees to be retained on site should be carefully protected during construction.			^	^	^
	Trees unavoidably affected by the works should be transplanted where practical.			^	^	^
	Compensatory tree planting should be provided to compensate for felled trees.			^	^	^
	Control of night-time lighting.			^	^	^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract			
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18
Table 13.7	Erection of decorative screen hoarding compatible with the surrounding setting.			N/A	N/A	N/A
G	**Marine Ecology**					
11.137	To minimize the potential indirect impacts on water quality from construction site runoff and various construction activities, the practices outlined in ProPECC PN 1/94 Construction Site Drainage should be adopted.	All construction sites	^	^	^	^
H	**Hazard to Life**					
14A.201	Limiting use of cranes in terms of locations, lifting height, swing angle and setting up safety zone.	Exact location will be determined on construction site by the engineer	^	^	^	^
I	**Cultural Heritage**					
Tables 15.8 - 15.11	The construction vibration control limit (ppv of 25mm/s) shall be strictly followed.	Identified historical buildings/structures as mentioned in EM&A Manual Tables 15.8, 15.9, 15.10 and 15.11	NA. Vibration monitoring has not been launched during the reporting period	N/A	N/A	^

Remarks:	^ Compliance of mitigation measure;
	<> Compliance of mitigation measure but need improvement';
	N/A Not Applicable;
	* Recommendation was made during site audit but improved/rectified by the contractor.
	@ partially implemented

	X	Non-compliance of mitigation measure;
	•	Non-compliance but rectified by the contractor;
	#	Recommendation was made during site audit and to be improved / rectified by the contractor.

APPENDIX K
COMPLAINT LOG

APPENDIX K – COMPLAINT LOG

Reporting Month: July 2013

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
DC/2009/18 Com#1_22-07-13	Construction site at Portion 3 and 7	22 July 2013	The complaint was lodged by a complainant on 22 July 2013 concerning noise generated from the construction works at 03:00am on 19 July 2013.	According to the information provided by the Contractor, mucking out excavated rocks was carried out 90m below ground within a noise enclosure area. Furthermore, the distance between the complainant's residence and the closest construction work is at least 1km away, which would have shapely minimized the chance of potential noise disturbance to the complainant's area. Based on the monitoring results and the other information collected, the complaint was considered not justifiable since no exceedance of the noise monitoring results was recorded in July The Contractor was reminded to make sure the noise enclosure door will be kept close during night time construction.	Closed

APPENDIX L
CONSTRUCTION PROGRAMME

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	% Comp
HATS Stage 2A - Contract DC/2007/23					
Stonecutters Island STW Production Shaft					
Preliminaries Works					
SCPS10070	SCPS: Construct/Install Blast Protection	2	22SEP10	24SEP10	0
SCPS10075	SCPS: Site Inspection from Mines	1	25SEP10	25SEP10	0
SCPS10080	SCPS: Issue Blasting Permit	1	27SEP10	27SEP10	0
EBS, Env. & Geotechnical Instrumentations					
Markers/UMP's/Others(Same note as Piez.)					
SCPS0391	SCPS: Install GS Markers (17 Nos.)	74	01SEP09A	01FEB10	85
SCPS0393	SCPS: JointSurvey&EstablishBaseline Readings GSM	14	02FEB10	20FEB10	0
Piezometers(NearbyPTWorPScovered inthisInstalln)					
SCPS0375	SCPS: BH907 Piezometer Baseline Establishment	26	10NOV09A	23JAN10	85
SCPS0381	SCPS: BH908 Piezometer Baseline Establishment	26	10NOV09A	27JAN10	73
SCPS0387	SCPS: BH906 Piezometer Baseline Establishment	26	15JAN10A	06FEB10	40
Electrical & Mechanical Installations					
SCPS0620	SCPS: Installation Works for 11KV Application	60	08APR10	18JUN10	0
SCPS0625	SCPS: 11 KV Connection & Power On	4	19JUN10	23JUN10	0
Marine Dumping Permit					
SCPS0370	SCPS: Request for Disposal Site&Get Permit	24	02JAN10A	05FEB10	38
Diaphragm Wall					
SCPS0279	SCPS: Excavate 3rd Panel to Formation Level	12	16JAN10A	20JAN10	92
SCPS0281	SCPS: 3rd Panel Desanding & Preparation Works	4	21JAN10	25JAN10	0
SCPS0282	SCPS: Grouting Works Phase 1	45	21JAN10	17MAR10	0
SCPS0283	SCPS: 3rd Panel Rebar Cage Installation	3	26JAN10	28JAN10	0
SCPS0285	SCPS: 3rd Panel Concreting Works	1	29JAN10	29JAN10	0
SCPS0287	SCPS: Excavate 4th Panel to Formation Level	23	30JAN10	01MAR10	0
SCPS0289	SCPS: 4th Panel Desanding & Preparation Works	9	02MAR10	11MAR10	0
SCPS0291	SCPS: 4th Panel Rebar Cage Installation	6	12MAR10	18MAR10	0
SCPS0292	SCPS: Grouting Works Phase 2	45	18MAR10	11MAY10	0
SCPS0293	SCPS: 4th Panel Concreting Works	1	19MAR10	19MAR10	0
SCPS0297	SCPS: Excavate 5th Panel to Formation Level	8	20MAR10	29MAR10	0
SCPS0299	SCPS: 5th Panel Desanding & Preparation Works	3	30MAR10	01APR10	0
SCPS0301	SCPS: 5th Panel Rebar Cage Installation	2	02APR10	03APR10	0
SCPS0303	SCPS: 5th Panel Concreting Works	1	06APR10	06APR10	0
SCPS0307	SCPS: Excavate 6th Panel to Formation Level	23	07APR10	04MAY10	0
SCPS0309	SCPS: 6th Panel Desanding & Preparation Works	9	05MAY10	14MAY10	0
SCPS0310	SCPS: Grouting Works Phase 3	50	12MAY10	10JUL10	0
SCPS0311	SCPS: 6th Panel Rebar Cage Installation	6	15MAY10	21MAY10	0
SCPS0313	SCPS: 6th Panel Concreting Works	1	22MAY10	22MAY10	0
SCPS0317	SCPS: Excavate 7th Panel to Formation Level	8	24MAY10	01JUN10	0
SCPS0319	SCPS: 7th Panel Desanding & Preparation Works	3	02JUN10	04JUN10	0
SCPS0321	SCPS: 7th Panel Rebar Cage Installation	2	05JUN10	07JUN10	0
SCPS0323	SCPS: 7th Panel Concreting Works	1	08JUN10	08JUN10	0
SCPS0327	SCPS: Excavate 8th Panel to Formation Level	8	09JUN10	18JUN10	0
SCPS0329	SCPS: 8th Panel Desanding & Preparation Works	3	19JUN10	22JUN10	0
SCPS0331	SCPS: 8th Panel Rebar Cage Installation	2	23JUN10	24JUN10	0
SCPS0333	SCPS: 8th Panel Concreting Works	1	25JUN10	25JUN10	0
SCPS0335	SCPS: Install Dewatering Wells for Pump-test	12	05JUL10	17JUL10	0
SCPS0337	SCPS: Pumping Test	6	19JUL10	24JUL10	0
SCPS0338	SCPS: Submission of Pumping Test Report	6	26JUL10	31JUL10	0
SCPS0341	SCPS: Demobilization	6	26JUL10	31JUL10	0
Shaft Excavation					
SCPS0500	SCPS: Construct Capping Beam & Shaft Collar	12	26JUL10	07AUG10	0
SCPS0510	SCPS: Initial Excavation of Shaft (7m)	4	09AUG10	12AUG10	0
SCPS0520	SCPS: Set-Up Equipment for Shaft Sink	12	13AUG10	26AUG10	0
SCPS0525	SCPS: Erect Noise Enclosure at Shaft Top	12	13AUG10	26AUG10	0
SCPS0530	SCPS: Excavate Soil & Ring Beams (50m)	22	27AUG10	21SEP10	0
SCPS0575	SCPS: Probe, Grout, D&B Rock, Muck Out (87m)	100	28SEP10	26JAN11	0
SCPS0640	SCPS: Construct Sump at Shaft Bottom	2	27JAN11	28JAN11	0
SCPS0665	SCPS: Erect Tunnel Hoist & Muck Out System	10	29JAN11	12FEB11	0
Backfill, Reinstatement & Landscaping					
SCPS0910	SCPS: Backfill Shaft (20%)	8	12SEP13	21SEP13	0
SCPS0920	SCPS: Backfill Shaft (40%)	8	23SEP13	02OCT13	0
SCPS0930	SCPS: Backfill Shaft (60%)	8	03OCT13	11OCT13	0
SCPS0940	SCPS: Backfill Shaft (80%)	8	12OCT13	22OCT13	0
SCPS0950	SCPS: Backfill Shaft (100%)	8	23OCT13	31OCT13	0
SCPS0960	SCPS: Reinstatement Around PS Area	12	01NOV13	14NOV13	0
SCPS0970	SCPS: Demobilise Clear Area	6	15NOV13	21NOV13	0
SCPS0975	SCPS: Complete All Works at SCI PS (KD-11)	0		21NOV13	0
SCPS0980	SCPS: Landscaping & Planting Works	60	22NOV13*	20JAN14	0
SCPS0990	SCPS: Period of Establishment Works	360	21JAN14	15JAN15	0
SCPS1000	SCPS: End of Establishment Period	0		15JAN15	0

Start Date	31JUL09
Finish Date	15JAN15
Data Date	20JAN10
Run Date	01FEB10 10:42

Early Bar
Progress Bar
Critical Activity

WPU7 Sheet 1 of 1

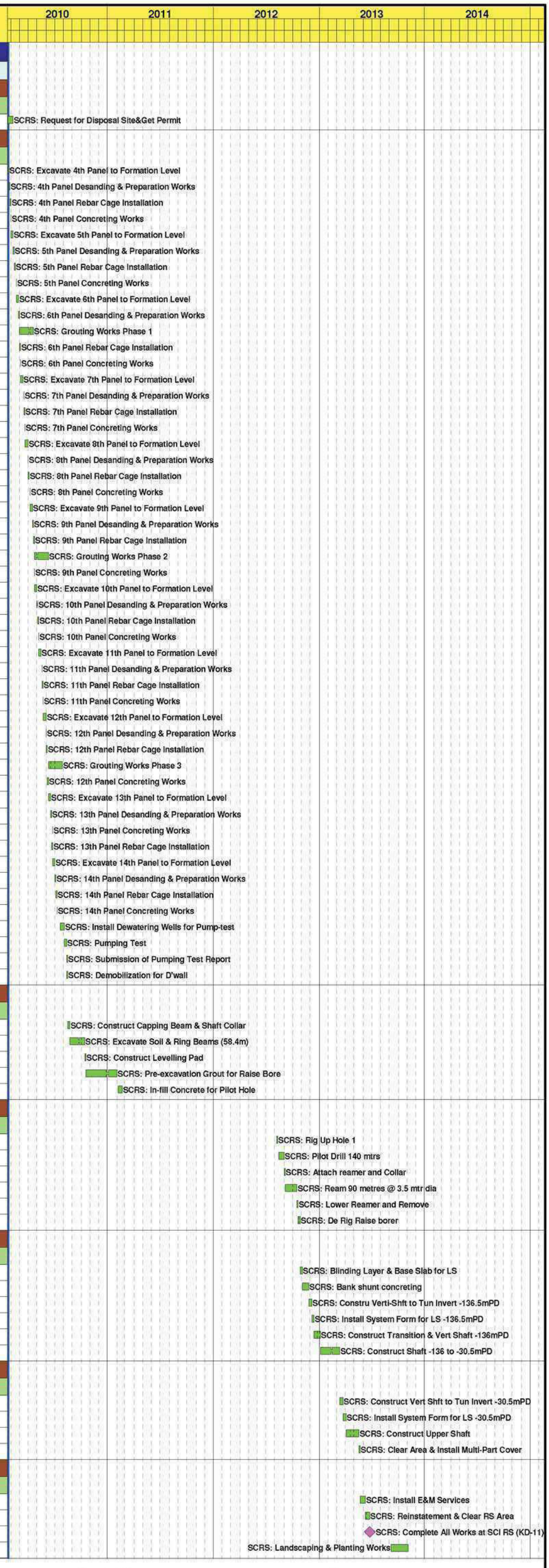
Habour Area Treatment Scheme Stage 2A
Contract No. DC/2007/23 - Construction of Sewage Conveyance from North Point to Stonecutters Island
Programme

Annex G8 Construction Programme for the Project

Gammon

Date	Revision	Checked	Approved

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	% Comp
HATS Stage 2A - Contract DC/2007/23					
Stonecutters Island STW Riser Shaft					
Marine Dumping Permit					
SCRS0370	SCRS: Request for Disposal Site&Get Permit	24	05JAN10A	06FEB10	33
Diaphragm Wall					
SCRS0287	SCRS: Excavate 4th Panel to Formation Level	7	09JAN10A	23JAN10	50
SCRS0289	SCRS: 4th Panel Desanding & Preparation Works	3	25JAN10	27JAN10	0
SCRS0291	SCRS: 4th Panel Rebar Cage Installation	2	28JAN10	29JAN10	0
SCRS0293	SCRS: 4th Panel Concreting Works	1	30JAN10	30JAN10	0
SCRS0295	SCRS: Excavate 5th Panel to Formation Level	7	01FEB10	08FEB10	0
SCRS0297	SCRS: 5th Panel Desanding & Preparation Works	3	09FEB10	11FEB10	0
SCRS0299	SCRS: 5th Panel Rebar Cage Installation	2	12FEB10	13FEB10	0
SCRS0301	SCRS: 5th Panel Concreting Works	1	18FEB10	18FEB10	0
SCRS0303	SCRS: Excavate 6th Panel to Formation Level	7	19FEB10	26FEB10	0
SCRS0305	SCRS: 6th Panel Desanding & Preparation Works	3	27FEB10	02MAR10	0
SCRS0306	SCRS: Grouting Works Phase 1	40	03MAR10	19APR10	0
SCRS0307	SCRS: 6th Panel Rebar Cage Installation	2	03MAR10	04MAR10	0
SCRS0309	SCRS: 6th Panel Concreting Works	1	05MAR10	05MAR10	0
SCRS0311	SCRS: Excavate 7th Panel to Formation Level	7	06MAR10	13MAR10	0
SCRS0313	SCRS: 7th Panel Desanding & Preparation Works	3	15MAR10	17MAR10	0
SCRS0315	SCRS: 7th Panel Rebar Cage Installation	2	18MAR10	19MAR10	0
SCRS0317	SCRS: 7th Panel Concreting Works	1	20MAR10	20MAR10	0
SCRS0319	SCRS: Excavate 8th Panel to Formation Level	7	22MAR10	29MAR10	0
SCRS0321	SCRS: 8th Panel Desanding & Preparation Works	3	30MAR10	01APR10	0
SCRS0323	SCRS: 8th Panel Rebar Cage Installation	2	02APR10	03APR10	0
SCRS0325	SCRS: 8th Panel Concreting Works	1	06APR10	06APR10	0
SCRS0327	SCRS: Excavate 9th Panel to Formation Level	7	07APR10	14APR10	0
SCRS0329	SCRS: 9th Panel Desanding & Preparation Works	3	15APR10	17APR10	0
SCRS0331	SCRS: 9th Panel Rebar Cage Installation	2	19APR10	20APR10	0
SCRS0332	SCRS: Grouting Works Phase 2	40	21APR10	07JUN10	0
SCRS0333	SCRS: 9th Panel Concreting Works	1	21APR10	21APR10	0
SCRS0335	SCRS: Excavate 10th Panel to Formation Level	7	22APR10	29APR10	0
SCRS0337	SCRS: 10th Panel Desanding & Preparation Works	3	30APR10	04MAY10	0
SCRS0339	SCRS: 10th Panel Rebar Cage Installation	2	05MAY10	06MAY10	0
SCRS0341	SCRS: 10th Panel Concreting Works	1	07MAY10	07MAY10	0
SCRS0343	SCRS: Excavate 11th Panel to Formation Level	7	08MAY10	15MAY10	0
SCRS0345	SCRS: 11th Panel Desanding & Preparation Works	3	17MAY10	19MAY10	0
SCRS0347	SCRS: 11th Panel Rebar Cage Installation	2	20MAY10	21MAY10	0
SCRS0349	SCRS: 11th Panel Concreting Works	1	22MAY10	22MAY10	0
SCRS0351	SCRS: Excavate 12th Panel to Formation Level	7	24MAY10	31MAY10	0
SCRS0353	SCRS: 12th Panel Desanding & Preparation Works	3	01JUN10	03JUN10	0
SCRS0355	SCRS: 12th Panel Rebar Cage Installation	2	04JUN10	05JUN10	0
SCRS0356	SCRS: Grouting Works Phase 3	40	08JUN10	26JUL10	0
SCRS0357	SCRS: 12th Panel Concreting Works	1	07JUN10	07JUN10	0
SCRS0359	SCRS: Excavate 13th Panel to Formation Level	7	08JUN10	15JUN10	0
SCRS0361	SCRS: 13th Panel Desanding & Preparation Works	3	17JUN10	19JUN10	0
SCRS0365	SCRS: 13th Panel Concreting Works	1	23JUN10	23JUN10	0
SCRS0366	SCRS: 13th Panel Rebar Cage Installation	2	21JUN10	22JUN10	0
SCRS0367	SCRS: Excavate 14th Panel to Formation Level	7	24JUN10	02JUL10	0
SCRS0369	SCRS: 14th Panel Desanding & Preparation Works	3	03JUL10	06JUL10	0
SCRS0371	SCRS: 14th Panel Rebar Cage Installation	2	07JUL10	08JUL10	0
SCRS0373	SCRS: 14th Panel Concreting Works	1	09JUL10	09JUL10	0
SCRS0380	SCRS: Install Dewatering Wells for Pump-test	12	20JUL10	02AUG10	0
SCRS0390	SCRS: Pumping Test	6	03AUG10	09AUG10	0
SCRS0392	SCRS: Submission of Pumping Test Report	6	10AUG10	16AUG10	0
SCRS0394	SCRS: Demobilization for D'wall	6	10AUG10	16AUG10	0
Shaft Excavation					
SCRS0400	SCRS: Construct Capping Beam & Shaft Collar	6	17AUG10	23AUG10	0
SCRS0410	SCRS: Excavate Soil & Ring Beams (58.4m)	42	24AUG10	13OCT10	0
SCRS0420	SCRS: Construct Levelling Pad	3	14OCT10	18OCT10	0
SCRS0430	SCRS: Pre-excavation Grout for Raise Bore	90	19OCT10	02FEB11	0
SCRS0440	SCRS: In-fill Concrete for Pilot Hole	12	07FEB11	19FEB11	0
Raised Boring					
SCRS0700	SCRS: Rig Up Hole 1	5	07AUG12	11AUG12	0
SCRS0710	SCRS: Pilot Drill 140 mtrs	16	13AUG12	30AUG12	0
SCRS0720	SCRS: Attach reamer and Collar	3	31AUG12	03SEP12	0
SCRS0730	SCRS: Ream 90 metres @ 3.5 mtr dia	35	04SEP12	16OCT12	0
SCRS0740	SCRS: Lower Reamer and Remove	3	17OCT12	19OCT12	0
SCRS0750	SCRS: De Rig Raise borer	5	20OCT12	26OCT12	0
Lower Shaft Construction					
SCRS0835	SCRS: Blinding Layer & Base Slab for LS	6	27OCT12	02NOV12	0
SCRS0840	SCRS: Bank shunt concreting	18	03NOV12	23NOV12	0
SCRS0875	SCRS: Constru Verti-Shft to Tun Invert -136.5mPD	9	24NOV12	04DEC12	0
SCRS0885	SCRS: Install System Form for LS -136.5mPD	9	05DEC12	14DEC12	0
SCRS0935	SCRS: Construct Transition & Vert Shaft -136mPD	15	15DEC12	03JAN13	0
SCRS0940	SCRS: Construct Shaft -136 to -30.5mPD	55	04JAN13	12MAR13	0
Upper Shaft Construction					
SCRS0975	SCRS: Construct Vert Shft to Tun Invert -30.5mPD	9	13MAR13	22MAR13	0
SCRS0995	SCRS: Install System Form for LS -30.5mPD	9	23MAR13	02APR13	0
SCRS1045	SCRS: Construct Upper Shaft	36	03APR13	16MAY13	0
SCRS1065	SCRS: Clear Area & Install Multi-Part Cover	3	17MAY13	20MAY13	0
Miscellaneous Works					
SCRS2010	SCRS: Install E&M Services	18	21MAY13	10JUN13	0
SCRS2020	SCRS: Reinstatement & Clear RS Area	12	11JUN13	25JUN13	0
SCRS2025	SCRS: Complete All Works at SCI RS (KD-11)	0		25JUN13	0
SCRS2030	SCRS: Landscaping & Planting Works	60	08SEP13*	06NOV13	0



Start Date	31JUL09
Finish Date	15JAN15
Data Date	20JAN10
Run Date	01FEB10 10:50

Early Bar
Progress Bar
Critical Activity

WPU7 Sheet 1 of 2

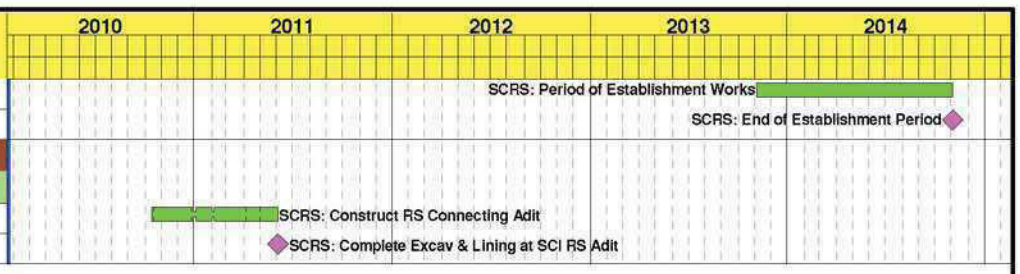
Habour Area Treatment Scheme Stage 2A
Contract No. DC/2007/23 - Construction of Sewage Conveyance from North Point to Stonecutters Island Programme

Annex G8 Construction Programme for the Project

Gammon

Date	Revision	Checked	Approved

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	% Comp
SCRS2060	SCRS: Period of Establishment Works	360	07NOV13	01NOV14	0
SCRS2070	SCRS: End of Establishment Period	0		01NOV14	0
Connecting Adit					
SCRS2040	SCRS: Construct RS Connecting Adit	192	14OCT10	03JUN11	0
SCRS2050	SCRS: Complete Excav & Lining at SCI RS Adit	0		03JUN11	0



Start Date	31JUL09
Finish Date	15JAN15
Data Date	20JAN10
Run Date	01FEB10 10:50

Early Bar
Progress Bar
Critical Activity

WPU7 Sheet 2 of 2

Habour Area Treatment Scheme Stage 2A
Contract No. DC/2007/23 - Construction of Sewage Conveyance from North Point to Stonecutters Island
Programme

Annex G8 Construction Programme for the Project

Gammon

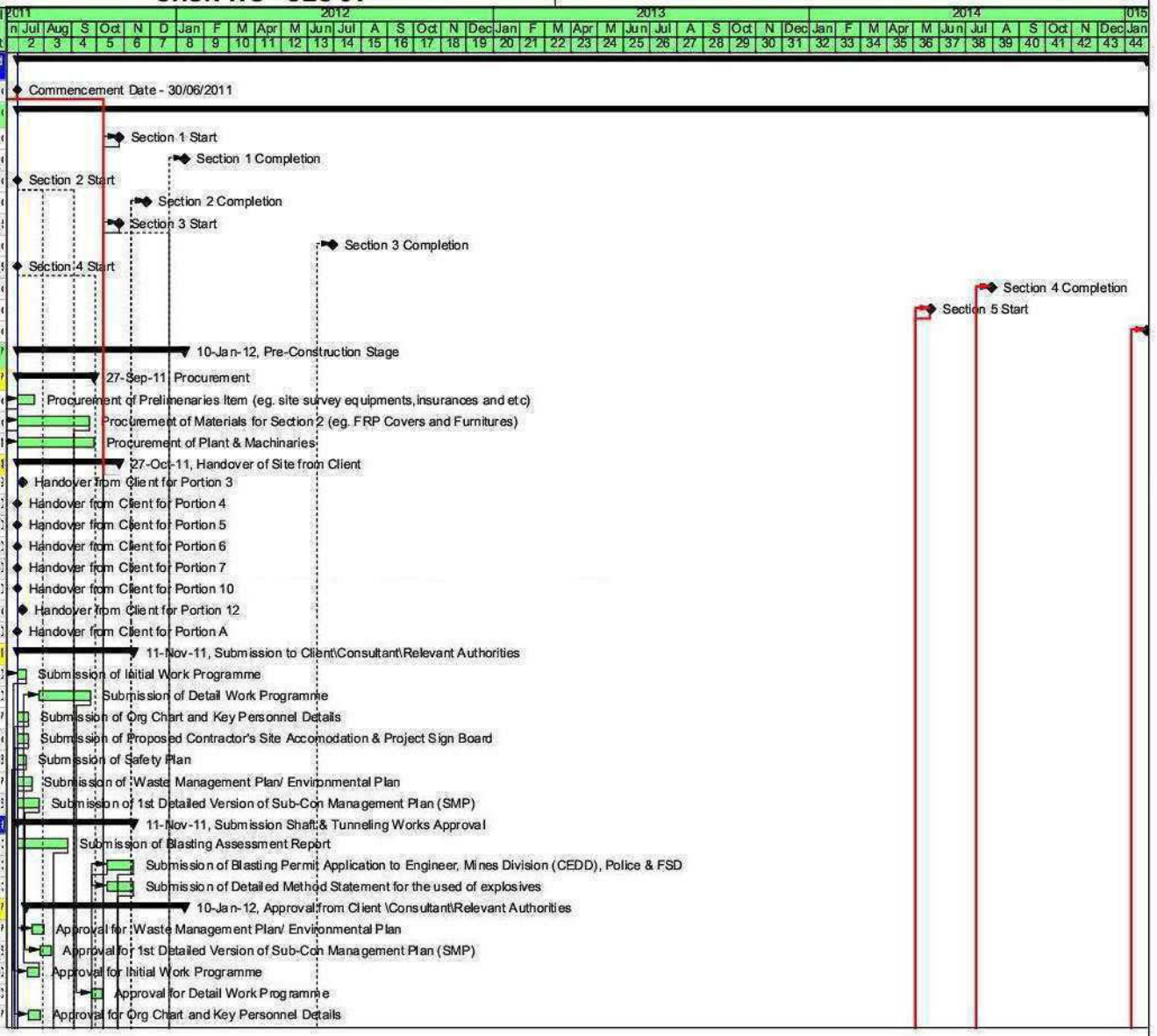
Date	Revision	Checked	Approved

Harbour Area Treatment Scheme Stage 2A - Initial Work Programme

CHUN WO - CEC JV

09-Jul-11 12:08

Activity Name	Original Duration	Start	Finish
Harbour Area Treatment Scheme Stage 2	1263d	30-Jun-11	26-Jan-15
Commencement Date - 30/06/2011	0d	30-Jun-11	
Sectional Completion Milestones	1263d	30-Jun-11	26-Jan-15
Section 1 Start	0d	27-Oct-11	
Section 1 Completion	0d		10-Jan-12*
Section 2 Start	0d	30-Jun-11*	
Section 2 Completion	0d		26-Nov-11*
Section 3 Start	0d	27-Oct-11	
Section 3 Completion	0d		28-Jun-12*
Section 4 Start	0d	30-Jun-11	
Section 4 Completion	0d		30-Jul-14*
Section 5 Start	0d	22-May-14	
Section 5 Completion	0d		26-Jan-15*
Pre-Construction Stage	188d	30-Jun-11	10-Jan-12
Procurement	87d	30-Jun-11	27-Sep-11
Procurement of Prelimenaries Item (eg. site survey eq	21d	30-Jun-11	20-Jul-11
Procurement of Materials for Section 2 (eg. FRP Cove	84d	30-Jun-11	21-Sep-11
Procurement of Plant & Machinaries	90d	30-Jun-11	27-Sep-11
Handover of Site from Client	115d	30-Jun-11	27-Oct-11
Handover from Client for Portion 3	0d	07-Jul-11*	
Handover from Client for Portion 4	0d	30-Jun-11	
Handover from Client for Portion 5	0d	30-Jun-11	
Handover from Client for Portion 6	0d	30-Jun-11	
Handover from Client for Portion 7	0d	30-Jun-11	
Handover from Client for Portion 10	0d	30-Jun-11	
Handover from Client for Portion 12	0d	07-Jul-11*	
Handover from Client for Portion A	0d	30-Jun-11*	
Submission to Client\Consultant\Relevant Author	130d	30-Jun-11	11-Nov-11
Submission of Initial Work Programme	12d	30-Jun-11	11-Jul-11
Submission of Detail Work Programme	60d	26-Jul-11	23-Sep-11
Submission of Org Chart and Key Personnel Details	14d	30-Jun-11	13-Jul-11
Submission of Proposed Contractor's Site Accomodati	14d	30-Jun-11	13-Jul-11
Submission of Safety Plan	11d	30-Jun-11	10-Jul-11
Submission of Waste Management Plan/ Environmen	18d	30-Jun-11	17-Jul-11
Submission of 1st Detailed Version of Sub-Con Manag	27d	30-Jun-11	26-Jul-11
Submission Shaft & Tunneling Works Approval	130d	30-Jun-11	11-Nov-11
Submission of Blasting Assessment Report	60d	30-Jun-11	28-Aug-11
Submission of Blasting Permit Application to Engine	30d	13-Oct-11	11-Nov-11
Submission of Detailed Method Statement for the us	30d	13-Oct-11	11-Nov-11
Approval from Client \Consultant\Relevant Autho	177d	11-Jul-11	10-Jan-12
Approval for Waste Management Plan/ Environmental	14d	18-Jul-11	31-Jul-11
Approval for 1st Detailed Version of Sub-Con Manage	14d	27-Jul-11	09-Aug-11
Approval for Initial Work Programme	14d	12-Jul-11	25-Jul-11
Approval for Detail Work Programme	14d	24-Sep-11	07-Oct-11
Approval for Org Chart and Key Personnel Details	14d	14-Jul-11	27-Jul-11



Actual Work ◆ Milestone
Remaining Work ▼ Summary
Critical Work

DC/2009/18 - HARBOUR AREA TREATMENT SCHEME STAGE 2A - Upgrading Works at Stonecutters Island Sewage Treatment Works - Effluent Tunnel and Disinfection Facilities.

INITIAL WORK PROGRAMME, REV.0 (1st Submission)

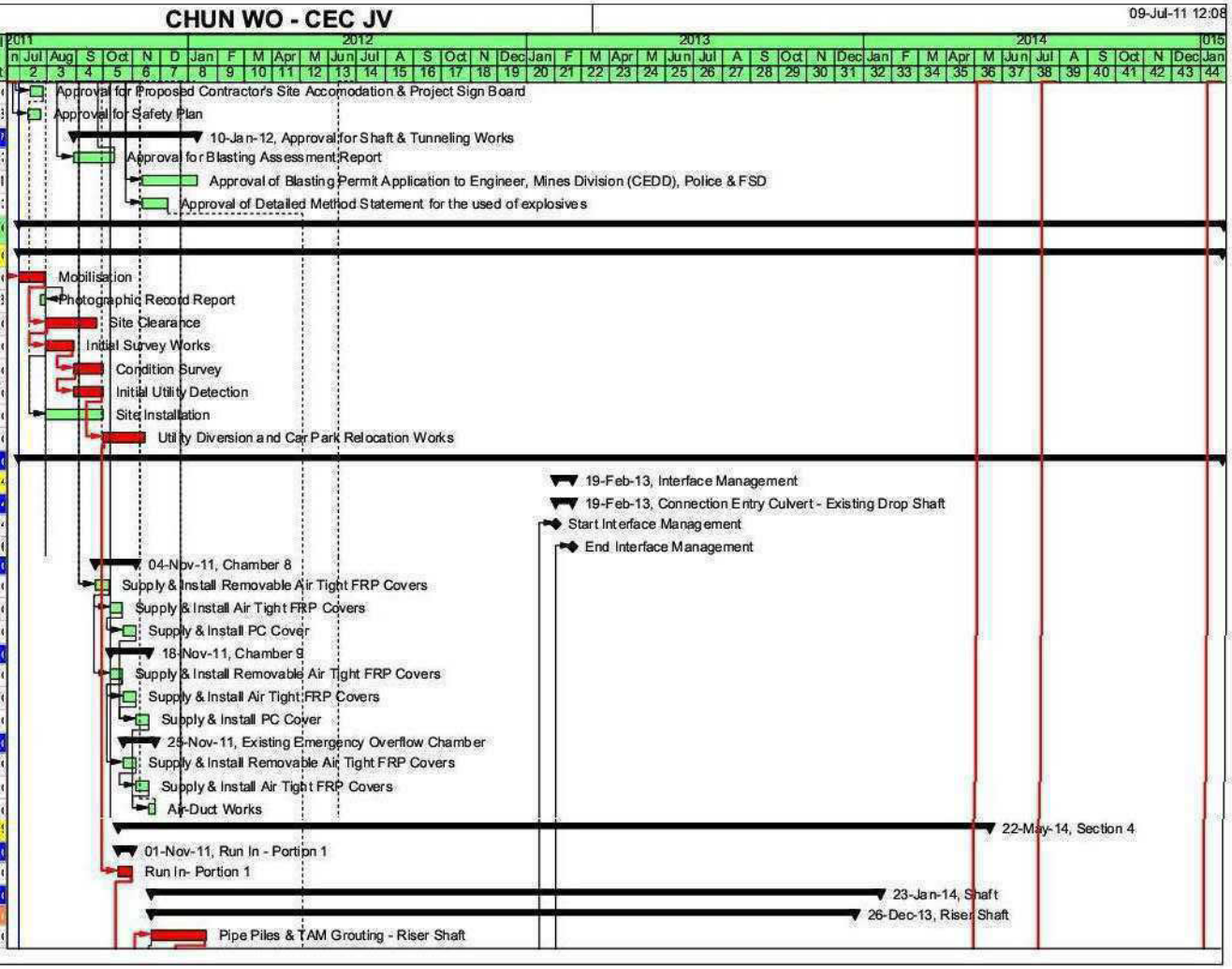
Date	Revision	Checked	Approved
11-Jul-11	Initial Work Programme		

Harbour Area Treatment Scheme Stage 2A - Initial Work Programme

CHUN WO - CEC JV

09-Jul-11 12:08

Activity Name	Original Duration	Start	Finish
Approval for Proposed Contractor's Site Accomodation	14d	14-Jul-11	27-Jul-11
Approval for Safety Plan	14d	11-Jul-11	24-Jul-11
Approval for Shaft & Tunneling Works	128d	29-Aug-11	10-Jan-12
Approval for Blasting Assessment Report	45d	29-Aug-11	12-Oct-11
Approval of Blasting Permit Application to Engineer,	60d	12-Nov-11	10-Jan-12
Approval of Detailed Method Statement for the used	28d	12-Nov-11	09-Dec-11
Construction Stage	1263d	30-Jun-11	26-Jan-15
Preliminaries	1262d	30-Jun-11	24-Jan-15
Mobilisation	24d	30-Jun-11	30-Jul-11
Photographic Record Report	5d	25-Jul-11	30-Jul-11
Site Clearance	42d	30-Jul-11	23-Sep-11
Initial Survey Works	24d	30-Jul-11	30-Aug-11
Condition Survey	24d	30-Aug-11	30-Sep-11
Initial Utility Detection	24d	30-Aug-11	30-Sep-11
Site Installation	48d	30-Jul-11	30-Sep-11
Utility Diversion and Car Park Relocation Works	36d	30-Sep-11	14-Nov-11
Reccuring Items	1262d	30-Jun-11	24-Jan-15
Interface Management	17d	01-Feb-13	19-Feb-13
Connection Entry Culvert - Existing Drop Shaft	17d	01-Feb-13	19-Feb-13
Start Interface Management	0d	01-Feb-13	
End Interface Management	0d		19-Feb-13
Chamber 8	42d	22-Sep-11	04-Nov-11
Supply & Install Removable Air Tight FRP Covers	12d	22-Sep-11	07-Oct-11
Supply & Install Air Tight FRP Covers	12d	08-Oct-11	21-Oct-11
Supply & Install PC Cover	12d	22-Oct-11	04-Nov-11
Chamber 9	41d	08-Oct-11	18-Nov-11
Supply & Install Removable Air Tight FRP Covers	12d	08-Oct-11	21-Oct-11
Supply & Install Air Tight FRP Covers	12d	22-Oct-11	04-Nov-11
Supply & Install PC Cover	12d	05-Nov-11	18-Nov-11
Existing Emergency Overflow Chamber	33d	22-Oct-11	25-Nov-11
Supply & Install Removable Air Tight FRP Covers	12d	22-Oct-11	04-Nov-11
Supply & Install Air Tight FRP Covers	12d	05-Nov-11	18-Nov-11
Air-Duct Works	6d	19-Nov-11	25-Nov-11
Section 4	918d	17-Oct-11	22-May-14
Run In - Portion 1	14d	17-Oct-11	01-Nov-11
Run In- Portion 1	13d	17-Oct-11	01-Nov-11
Shaft	767d	22-Nov-11	23-Jan-14
Riser Shaft	740d	22-Nov-11	26-Dec-13
Pipe Piles & TAM Grouting - Riser Shaft	49d	22-Nov-11	20-Jan-12

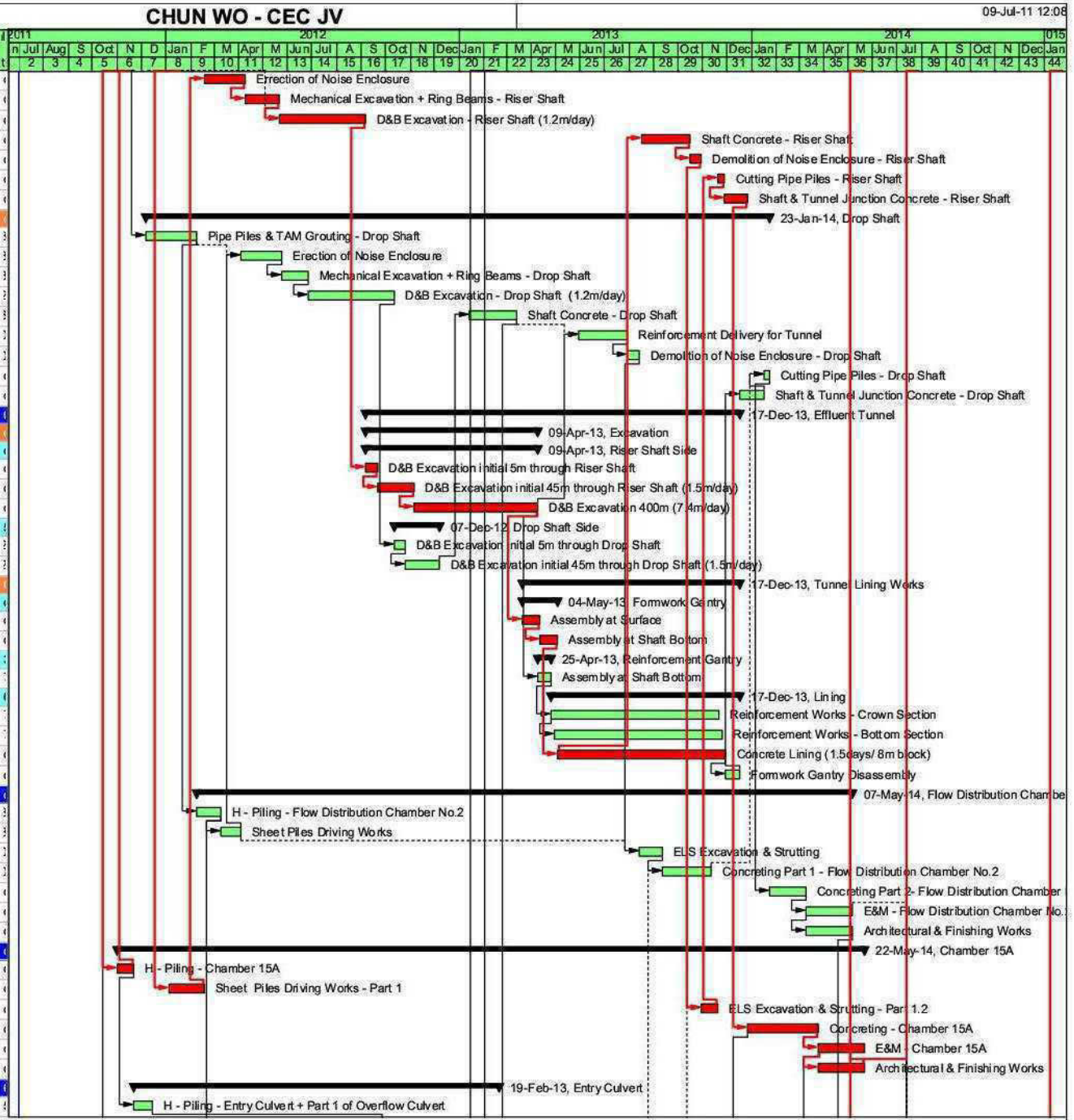


Harbour Area Treatment Scheme Stage 2A - Initial Work Programme

CHUN WO - CEC JV

09-Jul-11 12:08

Activity Name	Original Duration	Start	Finish
Erection of Noise Enclosure	42d	18-Feb-12	09-Apr-12
Mechanical Excavation + Ring Beams - Riser Sh	35d	09-Apr-12	21-May-12
D&B Excavation - Riser Shaft (1.2m/day)	72d	21-May-12	06-Sep-12
Shaft Concrete - Riser Shaft	46d	16-Aug-13	16-Oct-13
Demolition of Noise Enclosure - Riser Shaft	12d	16-Oct-13	30-Oct-13
Cutting Pipe Piles - Riser Shaft	6d	20-Nov-13	27-Nov-13
Shaft & Tunnel Junction Concrete - Riser Shaft	24d	27-Nov-13	26-Dec-13
Drop Shaft	754d	07-Dec-11	23-Jan-14
Pipe Piles & TAM Grouting - Drop Shaft	49d	07-Dec-11	08-Feb-12
Erection of Noise Enclosure	42d	03-Apr-12	24-May-12
Mechanical Excavation + Ring Beams - Drop Sha	27d	24-May-12	26-Jun-12
D&B Excavation - Drop Shaft (1.2m/day)	69d	26-Jun-12	12-Oct-12
Shaft Concrete - Drop Shaft	48d	14-Jan-13	14-Mar-13
Reinforcement Delivery for Tunnel	48d	30-May-13	29-Jul-13
Demolition of Noise Enclosure - Drop Shaft	12d	29-Jul-13	13-Aug-13
Cutting Pipe Piles - Drop Shaft	6d	16-Jan-14	23-Jan-14
Shaft & Tunnel Junction Concrete - Drop Shaft	24d	17-Dec-13	16-Jan-14
Effluent Tunnel	453d	06-Sep-12	17-Dec-13
Excavation	209d	06-Sep-12	09-Apr-13
Riser Shaft Side	209d	06-Sep-12	09-Apr-13
D&B Excavation initial 5m through Riser Shaft	10d	06-Sep-12	21-Sep-12
D&B Excavation initial 45m through Riser Sha	30d	21-Sep-12	06-Nov-12
D&B Excavation 400m (7.4m/day)	105d	06-Nov-12	09-Apr-13
Drop Shaft Side	54d	12-Oct-12	07-Dec-12
D&B Excavation initial 5m through Drop Shaft	10d	12-Oct-12	26-Oct-12
D&B Excavation initial 45m through Drop Sha	30d	26-Oct-12	07-Dec-12
Tunnel Lining Works	263d	21-Mar-13	17-Dec-13
Formwork Gantry	43d	21-Mar-13	04-May-13
Assembly at Surface	18d	21-Mar-13	12-Apr-13
Assembly at Shaft Bottom	18d	12-Apr-13	04-May-13
Reinforcement Gantry	16d	09-Apr-13	25-Apr-13
Assembly at Shaft Bottom	14d	09-Apr-13	25-Apr-13
Lining	228d	25-Apr-13	17-Dec-13
Reinforcement Works - Crown Section	169d	25-Apr-13	21-Nov-13
Reinforcement Works - Bottom Section	169d	29-Apr-13	25-Nov-13
Concrete Lining (1.5days/ 8m block)	169d	04-May-13	29-Nov-13
Formwork Gantry Disassembly	15d	29-Nov-13	17-Dec-13
Flow Distribution Chamber No.2	795d	08-Feb-12	07-May-14
H - Piling - Flow Distribution Chamber No.2	26d	08-Feb-12	09-Mar-12
Sheet Piles Driving Works	21d	09-Mar-12	03-Apr-12
ELS Excavation & Strutting	23d	13-Aug-13	11-Sep-13
Concreting Part 1 - Flow Distribution Chamber No.2	48d	11-Sep-13	11-Nov-13
Concreting Part 2- Flow Distribution Chamber No.2	36d	23-Jan-14	10-Mar-14
E&M - Flow Distribution Chamber No.2	48d	10-Mar-14	07-May-14
Architectural & Finishing Works	48d	10-Mar-14	07-May-14
Chamber 15A	904d	01-Nov-11	22-May-14
H - Piling - Chamber 15A	18d	01-Nov-11	22-Nov-11
Sheet Piles Driving Works - Part 1	36d	04-Jan-12	18-Feb-12
ELS Excavation & Strutting - Part 1.2	18d	30-Oct-13	20-Nov-13
Concreting - Chamber 15A	72d	26-Dec-13	25-Mar-14
E&M - Chamber 15A	48d	25-Mar-14	22-May-14
Architectural & Finishing Works	48d	25-Mar-14	22-May-14
Entry Culvert	439d	22-Nov-11	19-Feb-13
H - Piling - Entry Culvert + Part 1 of Overflow Culvert	20d	22-Nov-11	15-Dec-11

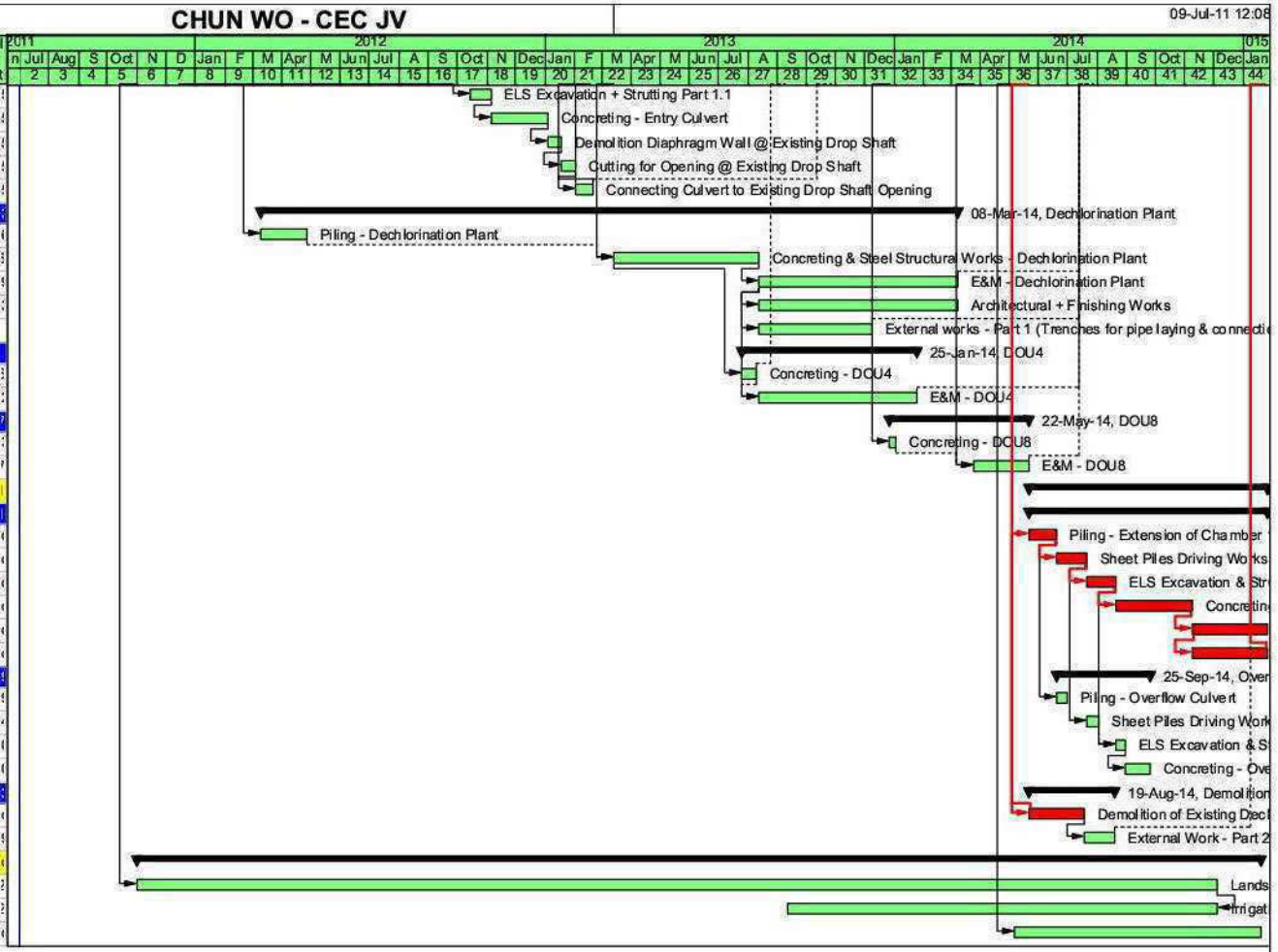


Harbour Area Treatment Scheme Stage 2A - Initial Work Programme

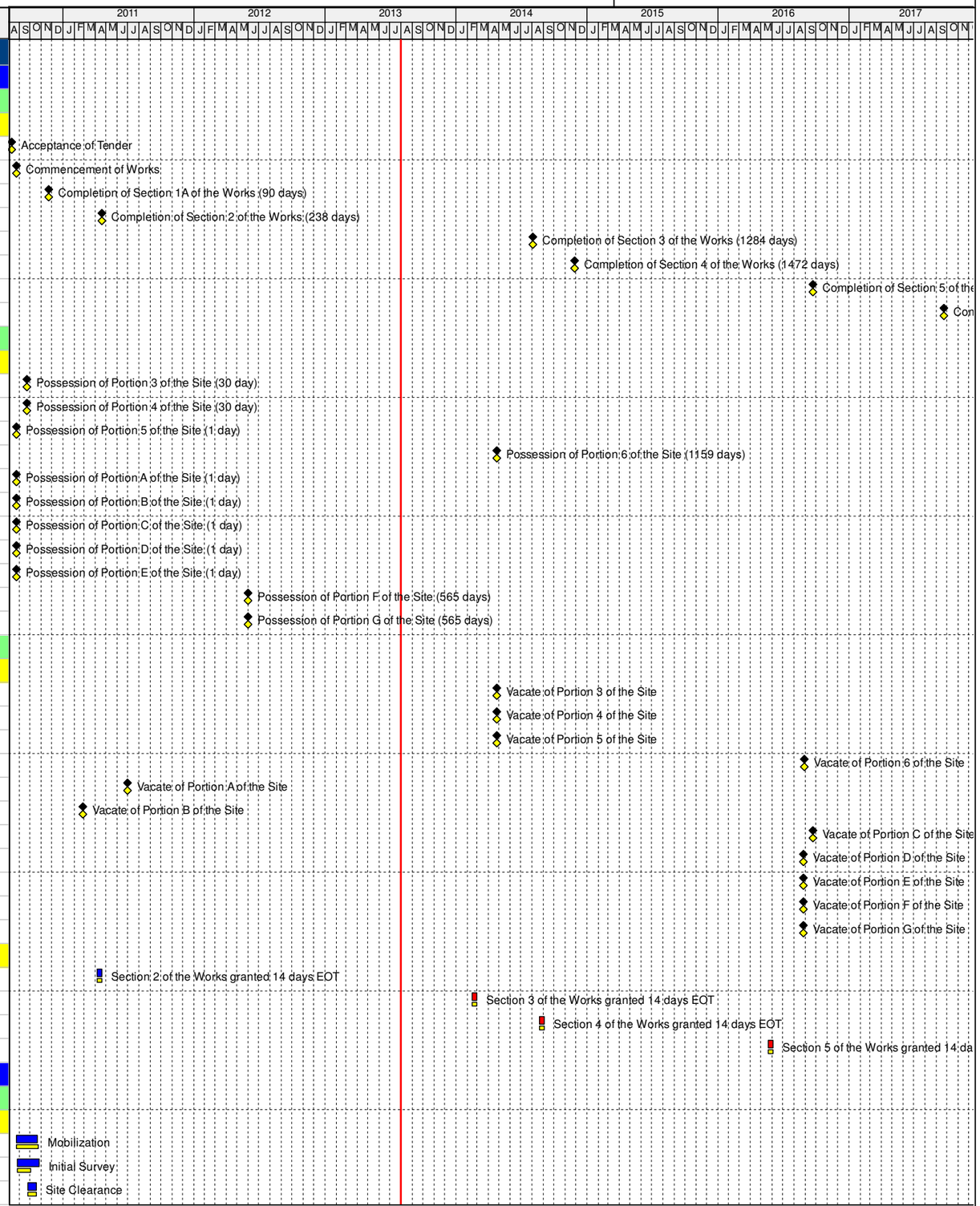
CHUN WO - CEC JV

09-Jul-11 12:08

Activity Name	Original Duration	Start	Finish
ELS Excavation + Strutting Part 1.1	18d	15-Oct-12	05-Nov-12
Concreting - Entry Culvert	50d	05-Nov-12	04-Jan-13
Demolition Diaphragm Wall @ Existing Drop Shaft	12d	04-Jan-13	18-Jan-13
Cutting for Opening @ Existing Drop Shaft	12d	18-Jan-13	01-Feb-13
Connecting Culvert to Existing Drop Shaft Opening	12d	01-Feb-13	19-Feb-13
Dechlorination Plant	706d	09-Mar-12	08-Mar-14
Piling - Dechlorination Plant	40d	09-Mar-12	26-Apr-12
Concreting & Steel Structural Works - Dechlorinatio	123d	14-Mar-13	12-Aug-13
E&M - Dechlorination Plant	168d	12-Aug-13	08-Mar-14
Architectural + Finishing Works	168d	12-Aug-13	08-Mar-14
External works - Part 1 (Trenches for pipe laying &	96d	12-Aug-13	09-Dec-13
DOU4	176d	25-Jul-13	25-Jan-14
Concreting - DOU4	12d	25-Jul-13	09-Aug-13
E&M - DOU4	135d	12-Aug-13	25-Jan-14
DOU8	143d	26-Dec-13	22-May-14
Concreting - DOU8	6d	26-Dec-13	03-Jan-14
E&M - DOU8	48d	25-Mar-14	22-May-14
Section 5	240d	22-May-14	26-Jan-15
Extension of Chamber	240d	22-May-14	26-Jan-15
Piling - Extension of Chamber 15	24d	22-May-14	20-Jun-14
Sheet Piles Driving Works - Part 2	25d	20-Jun-14	21-Jul-14
ELS Excavation & Strutting - Part 2	24d	21-Jul-14	20-Aug-14
Concreting - Extension of Chamber 15	63d	20-Aug-14	08-Nov-14
E&M - Extension of Chamber 15	65d	08-Nov-14	26-Jan-15
Architectural & Finishing Works - Extension of Chan	65d	08-Nov-14	26-Jan-15
Overflow Culvert	92d	20-Jun-14	25-Sep-14
Piling - Overflow Culvert	8d	20-Jun-14	30-Jun-14
Sheet Piles Driving Works - Overflow Culvert	10d	21-Jul-14	02-Aug-14
ELS Excavation & Strutting - Overflow Culvert	8d	20-Aug-14	30-Aug-14
Concreting - Overflow Culvert	20d	30-Aug-14	25-Sep-14
Demolition of Existing Dechlorination Plant	86d	22-May-14	19-Aug-14
Demolition of Existing Dechlorination Plant	48d	22-May-14	19-Jul-14
External Work - Part 2 (Concrete Pavement)	24d	19-Jul-14	19-Aug-14
Landscape Works	1138d	01-Nov-11	19-Jan-15
Landscaping Softwork	918d	01-Nov-11	05-Dec-14
Irrigation System	450d	11-Sep-13	05-Dec-14
Establishment Works	258d	07-May-14	19-Jan-15



Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
DC/2009/17 Programme Updated up to 31-Jul-13								
KEY DATE								
Contract Dates								
Commencement and Completion								
AC000010	Acceptance of Tender	0	12-Aug-10		12-Aug-10 A		0	
AC000020	Commencement of Works	0	25-Aug-10		25-Aug-10 A		0	
KD000010	Completion of Section 1A of the Works (90 days)	0		23-Nov-10		23-Nov-10 A	0	
KD000020	Completion of Section 2 of the Works (238 days)	0		20-Apr-11		20-Apr-11 A	0	
KD000030	Completion of Section 3 of the Works (1284 days)	0		04-Aug-14		04-Aug-14*	0	-157
KD000040	Completion of Section 4 of the Works (1472 days)	0		27-Nov-14		27-Nov-14*	0	-84
KD000050	Completion of Section 5 of the Works (2109 days)	0		22-Sep-16		22-Sep-16*	0	-112
KD000060	Completion of Maintenance Period	0		22-Sep-17		22-Sep-17*	0	-112
Access Dates								
Possession of Site								
AD000025	Possession of Portion 3 of the Site (30 day)	0	23-Sep-10		23-Sep-10 A		0	
AD000027	Possession of Portion 4 of the Site (30 day)	0	23-Sep-10		23-Sep-10 A		0	
AD000030	Possession of Portion 5 of the Site (1 day)	0	25-Aug-10		25-Aug-10 A		0	
AD000040	Possession of Portion 6 of the Site (1159 days)	0	25-Apr-14		25-Apr-14		0	-99
AD000050	Possession of Portion A of the Site (1 day)	0	25-Aug-10		25-Aug-10 A		0	
AD000060	Possession of Portion B of the Site (1 day)	0	25-Aug-10		25-Aug-10 A		0	
AD000070	Possession of Portion C of the Site (1 day)	0	25-Aug-10		25-Aug-10 A		0	
AD000080	Possession of Portion D of the Site (1 day)	0	25-Aug-10		25-Aug-10 A		0	
AD000090	Possession of Portion E of the Site (1 day)	0	25-Aug-10		25-Aug-10 A		0	
AD000100	Possession of Portion F of the Site (565 days)	0	31-May-12		31-May-12 A		0	
AD000110	Possession of Portion G of the Site (565 days)	0	31-May-12		31-May-12 A		0	
Completion								
Vacating of Area								
AD000120	Vacate of Portion 3 of the Site	0		24-Apr-14		24-Apr-14*	0	-55
AD000130	Vacate of Portion 4 of the Site	0		24-Apr-14		24-Apr-14*	0	-55
AD000140	Vacate of Portion 5 of the Site	0		24-Apr-14		24-Apr-14*	0	-55
AD000150	Vacate of Portion 6 of the Site	0		29-Aug-16		29-Aug-16*	0	-88
AD000160	Vacate of Portion A of the Site	0		01-Jul-11		01-Jul-11 A	0	
AD000170	Vacate of Portion B of the Site	0		25-Feb-11		25-Feb-11 A	0	
AD000180	Vacate of Portion C of the Site	0		22-Sep-16		22-Sep-16*	0	-112
AD000190	Vacate of Portion D of the Site	0		25-Aug-16		25-Aug-16*	0	-84
AD000200	Vacate of Portion E of the Site	0		25-Aug-16		25-Aug-16*	0	-84
AD000210	Vacate of Portion F of the Site	0		25-Aug-16		25-Aug-16*	0	-84
AD000220	Vacate of Portion G of the Site	0		25-Aug-16		25-Aug-16*	0	-84
Extension of Time								
KD000015	Section 2 of the Works granted 14 days EOT	14	06-Apr-11	19-Apr-11	06-Apr-11 A	19-Apr-11 A	0	
KD000025	Section 3 of the Works granted 14 days EOT	14	15-Feb-14	28-Feb-14	15-Feb-14*	28-Feb-14	14	0
KD000035	Section 4 of the Works granted 14 days EOT	14	22-Aug-14	04-Sep-14	22-Aug-14*	04-Sep-14	14	0
KD000045	Section 5 of the Works granted 14 days EOT	14	20-May-16	02-Jun-16	20-May-16*	02-Jun-16	14	0
Preliminaries and General Requirement								
General Requirements								
Initial Works								
PG000110	Mobilization	49	25-Aug-10	23-Oct-10	25-Aug-10 A	22-Oct-10 A	0	
PG000120	Initial Survey	30	28-Aug-10	04-Oct-10	28-Aug-10 A	26-Oct-10 A	0	
PG000130	Site Clearance	21	24-Sep-10	20-Oct-10	24-Sep-10 A	20-Oct-10 A	0	

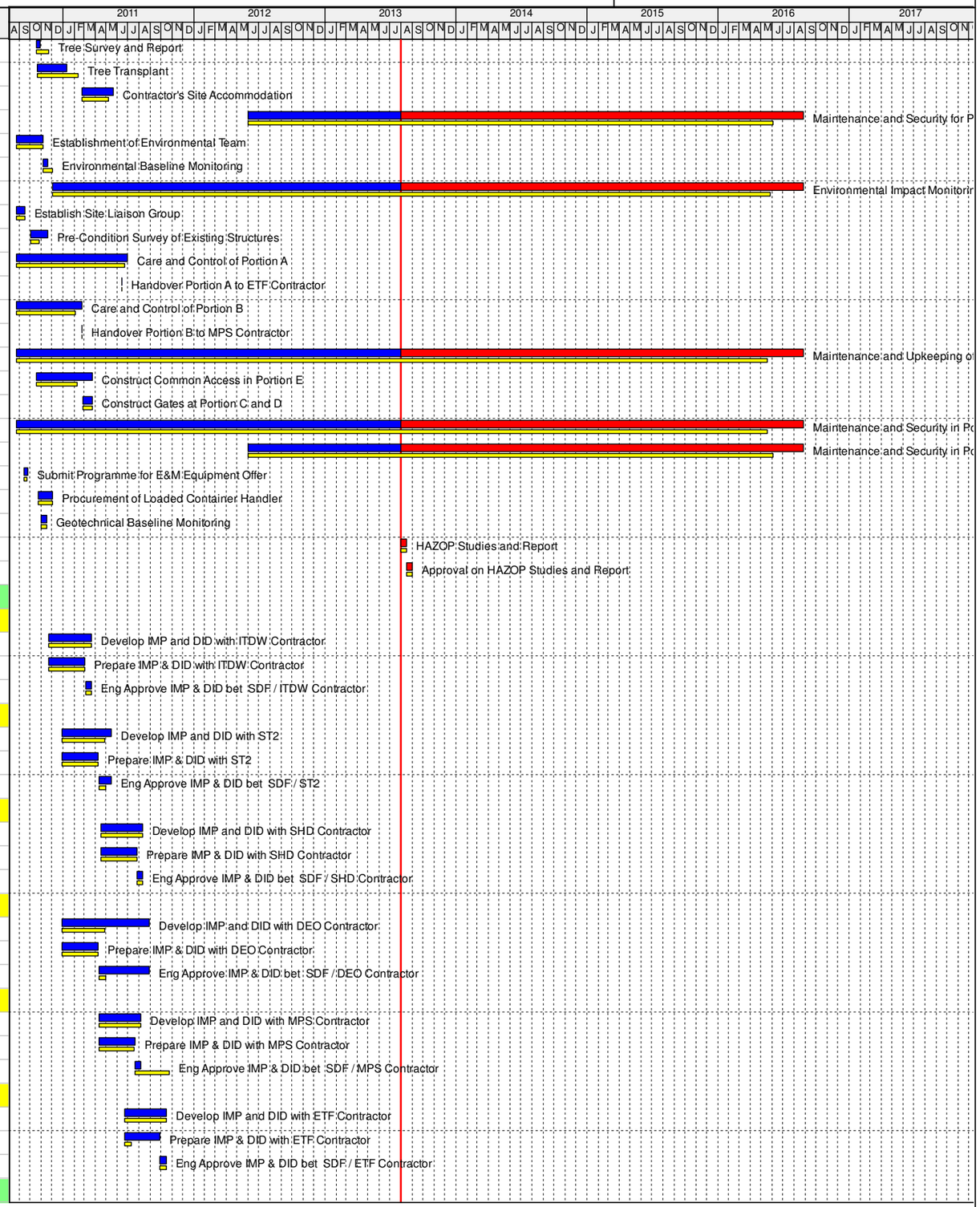


Actual Work | Project Baseline Bar
Remaining Work | Baseline Milestone
Critical Remaining Work | Milestone

Monthly Progress Updated as of 31 July 2013

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
PG000145	Tree Survey and Report	30	20-Oct-10	23-Nov-10	20-Oct-10 A	28-Oct-10 A	0	
PG000150	Tree Transplant	90	23-Oct-10	12-Feb-11	23-Oct-10 A	12-Jan-11 A	0	
PG000160	Contractor's Site Accommodation	60	24-Feb-11	09-May-11	24-Feb-11 A	20-May-11 A	0	
PG000172	Maintenance and Security for Portion F	1463	01-Jun-12	02-Jun-16	01-Jun-12 A	25-Aug-16	1122	-84
PG000175	Establishment of Environmental Team	60	25-Aug-10	05-Nov-10	25-Aug-10 A	05-Nov-10 A	0	
PG000180	Environmental Baseline Monitoring	24	06-Nov-10	03-Dec-10	06-Nov-10 A	20-Nov-10 A	0	
PG000190	Environmental Impact Monitoring	2000	04-Dec-10	25-May-16	04-Dec-10 A	25-Aug-16	1122	-84
PG000200	Establish Site Liaison Group	20	25-Aug-10	16-Sep-10	25-Aug-10 A	16-Sep-10 A	0	
PG000210	Pre-Condition Survey of Existing Structures	20	02-Oct-10	26-Oct-10	02-Oct-10 A	19-Nov-10 A	0	
PG000220	Care and Control of Portion A	302	25-Aug-10	22-Jun-11	25-Aug-10 A	30-Jun-11 A	0	
PG000230	Handover Portion A to ETF Contractor	1	13-Jun-11	13-Jun-11	13-Jun-11 A	13-Jun-11 A	0	
PG000240	Care and Control of Portion B	164	25-Aug-10	04-Feb-11	25-Aug-10 A	24-Feb-11 A	0	
PG000250	Handover Portion B to MPS Contractor	1	23-Feb-11	23-Feb-11	23-Feb-11 A	24-Feb-11 A	0	
PG000260	Maintenance and Upkeeping of Portion D	2095	25-Aug-10	19-May-16	25-Aug-10 A	25-Aug-16	1122	-84
PG000290	Construct Common Access in Portion E	90	20-Oct-10	09-Feb-11	20-Oct-10 A	25-Mar-11 A	0	
PG000295	Construct Gates at Portion C and D	24	25-Feb-11	24-Mar-11	25-Feb-11 A	24-Mar-11 A	0	
PG000300	Maintenance and Security in Portion E	2095	25-Aug-10	19-May-16	25-Aug-10 A	25-Aug-16	1122	-84
PG000310	Maintenance and Security in Portion G	1463	01-Jun-12	02-Jun-16	01-Jun-12 A	25-Aug-16	1122	-84
PG000330	Submit Programme for E&M Equipment Offer	9	15-Sep-10	23-Sep-10	15-Sep-10 A	24-Sep-10 A	0	
PG000400	Procurement of Loaded Container Handler	36	25-Oct-10	04-Dec-10	25-Oct-10 A	04-Dec-10 A	0	
PG000405	Geotechnical Baseline Monitoring	15	02-Nov-10	18-Nov-10	02-Nov-10 A	18-Nov-10 A	0	
PG000410	HAZOP Studies and Report	15	31-Jul-13	16-Aug-13	31-Jul-13	16-Aug-13	15	-82
PG000420	Approval on HAZOP Studies and Report	13	17-Aug-13	31-Aug-13	17-Aug-13	31-Aug-13	13	-82
Interface and Liaison								
Interface with Contractor of DC/2009/05								
PG000360	Develop IMP and DID with ITDW Contractor	95	23-Nov-10	21-Mar-11	23-Nov-10 A	22-Mar-11 A	0	
PG000362	Prepare IMP & DID with ITDW Contractor	80	23-Nov-10	03-Mar-11	23-Nov-10 A	04-Mar-11 A	0	
PG000364	Eng Approve IMP & DID bet SDF / ITDW Contractor	15	05-Mar-11	22-Mar-11	05-Mar-11 A	22-Mar-11 A	0	
Interface with ST2 of DSD								
PG000366	Develop IMP and DID with ST2	95	30-Dec-10	28-Apr-11	30-Dec-10 A	16-May-11 A	0	
PG000368	Prepare IMP & DID with ST2	80	30-Dec-10	08-Apr-11	30-Dec-10 A	09-Apr-11 A	0	
PG000376	Eng Approve IMP & DID bet SDF / ST2	15	11-Apr-11	29-Apr-11	11-Apr-11 A	16-May-11 A	0	
Interface with Contractor of DC/2009/19								
PG000378	Develop IMP and DID with SHD Contractor	95	16-Apr-11	11-Aug-11	16-Apr-11 A	12-Aug-11 A	0	
PG000380	Prepare IMP & DID with SHD Contractor	80	16-Apr-11	25-Jul-11	16-Apr-11 A	26-Jul-11 A	0	
PG000382	Eng Approve IMP & DID bet SDF / SHD Contractor	15	27-Jul-11	12-Aug-11	27-Jul-11 A	12-Aug-11 A	0	
Interface with Contractor of DC/2009/02								
PG000372	Develop IMP and DID with DEO Contractor	95	30-Dec-10	28-Apr-11	30-Dec-10 A	30-Aug-11 A	0	
PG000374	Prepare IMP & DID with DEO Contractor	80	30-Dec-10	08-Apr-11	30-Dec-10 A	09-Apr-11 A	0	
PG000377	Eng Approve IMP & DID bet SDF / DEO Contractor	15	11-Apr-11	29-Apr-11	11-Apr-11 A	30-Aug-11 A	0	
Interface with Contractor of DC/2009/10								
PG000384	Develop IMP and DID with MPS Contractor	95	11-Apr-11	05-Aug-11	11-Apr-11 A	06-Aug-11 A	0	
PG000386	Prepare IMP & DID with MPS Contractor	80	11-Apr-11	19-Jul-11	11-Apr-11 A	20-Jul-11 A	0	
PG000388	Eng Approve IMP & DID bet SDF / MPS Contractor	80	21-Jul-11	25-Oct-11	21-Jul-11 A	06-Aug-11 A	0	
Interface with Contractor of DC/2009/18								
PG000390	Develop IMP and DID with ETF Contractor	95	23-Jun-11	15-Oct-11	23-Jun-11 A	17-Oct-11 A	0	
PG000392	Prepare IMP & DID with ETF Contractor	15	23-Jun-11	11-Jul-11	23-Jun-11 A	27-Sep-11 A	0	
PG000394	Eng Approve IMP & DID bet SDF / ETF Contractor	15	28-Sep-11	17-Oct-11	28-Sep-11 A	17-Oct-11 A	0	
General Submission								



Actual Work | Project Baseline Bar
Remaining Work | Baseline Milestone
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Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
General Requirements								
PG000500	Submit Initial Works Programme	23	12-Aug-10	03-Sep-10	12-Aug-10 A	03-Sep-10 A	0	
PG000505	Submit First Three Month Rolling Program	14	21-Aug-10	03-Sep-10	21-Aug-10 A	03-Sep-10 A	0	
PG000510	Eng Comment on Initial Works Programme	38	04-Sep-10	11-Oct-10	04-Sep-10 A	11-Oct-10 A	0	
PG000515	Submit Revised Initial Works Programme	22	12-Oct-10	02-Nov-10	12-Oct-10 A	02-Nov-10 A	0	
PG000520	Approval of Revised Initial Programme	14	03-Nov-10	16-Nov-10	03-Nov-10 A	16-Nov-10 A	0	
PG000530	Submit Detail Works Programme	60	17-Nov-10	15-Jan-11	17-Nov-10 A	15-Jan-11 A	0	
PG000532	Engineer Comment on Detailed Works Programme	14	16-Jan-11	29-Jan-11	16-Jan-11 A	29-Jan-11 A	0	
PG000534	Submit Revised Detailed Works Programme	14	30-Jan-11	12-Feb-11	30-Jan-11 A	12-Feb-11 A	0	
PG000535	Approval of Detailed Works Programme	14	13-Feb-11	26-Feb-11	13-Feb-11 A	26-Feb-11 A	0	
PG000540	Submit Draft Safety Plan	13	25-Aug-10	06-Sep-10	25-Aug-10 A	06-Sep-10 A	0	
PG000550	Submit Safety Plan	62	07-Sep-10	07-Nov-10	07-Sep-10 A	07-Nov-10 A	0	
PG000555	Review and Approval of Safety Plan	14	08-Nov-10	21-Nov-10	08-Nov-10 A	21-Nov-10 A	0	
PG000560	Submission of Subcontractor Management Plan	26	12-Aug-10	06-Sep-10	12-Aug-10 A	06-Sep-10 A	0	
PG000565	Review and Approval of Subcontractor Management	14	07-Sep-10	20-Sep-10	07-Sep-10 A	20-Sep-10 A	0	
PG000570	Submit Draft Environmental Management Plan	26	12-Aug-10	06-Sep-10	12-Aug-10 A	06-Sep-10 A	0	
PG000580	Submit Environmental Management Plan	62	07-Sep-10	07-Nov-10	07-Sep-10 A	07-Nov-10 A	0	
PG000585	Review and Approval of Environmental Management	14	08-Nov-10	21-Nov-10	08-Nov-10 A	21-Nov-10 A	0	
PG000590	Submit Staff / Organization Chart	28	12-Aug-10	08-Sep-10	12-Aug-10 A	08-Sep-10 A	0	
PG000620	Submission of Initial Survey Record	28	04-Oct-10	31-Oct-10	04-Oct-10 A	01-Nov-10 A	0	
Design of Permanent Works								
Design Plan								
Design Submission and Approval								
DP000100	All - E&M Drawing with Loading	1	25-Aug-10	25-Aug-10	25-Aug-10 A	25-Aug-10 A	0	
DP001110	Submisson and Approval of Project Design Plan	74	25-Aug-10	06-Nov-10	25-Aug-10 A	06-Nov-10 A	0	
DP001150	Design Plan - Ist Submission	31	25-Aug-10	24-Sep-10	25-Aug-10 A	24-Sep-10 A	0	
DP001160	Design Plan - Engineer Comment	14	25-Sep-10	08-Oct-10	25-Sep-10 A	08-Oct-10 A	0	
DP001170	Design Plan - 2nd Submission	15	09-Oct-10	23-Oct-10	09-Oct-10 A	23-Oct-10 A	0	
DP001180	Design Plan - Engineer Approval	14	24-Oct-10	06-Nov-10	24-Oct-10 A	06-Nov-10 A	0	
DDA1 (SDB and Associated Structure)								
Sub-Package - A								
DP024005	DDA: SDB, DOU6&DGS - Piling Design and Approval	87	25-Aug-10	19-Nov-10	25-Aug-10 A	19-Nov-10 A	0	
DP025110	DDA: SDB, DOU6&DGS - Piling Design and Approval	87	25-Aug-10	19-Nov-10	25-Aug-10 A	19-Nov-10 A	0	
DP025120	DDA: SDB, DOU6&DGS - Submit Piling Design	73	25-Aug-10	05-Nov-10	25-Aug-10 A	05-Nov-10 A	0	
DP025130	DDA: SDB, DOU6&DGS - ICE Approve Piling Design	7	06-Nov-10	12-Nov-10	06-Nov-10 A	12-Nov-10 A	0	
DP025140	DDA: SDB, DOU6&DGS - Eng Approve Piling Design	14	06-Nov-10	19-Nov-10	06-Nov-10 A	19-Nov-10 A	0	
Sub-Package - A1								
DP025015	DDA: SDB, DOU6&DGS - Sub structure Design and Ap	93	27-Apr-11	28-Jul-11	27-Apr-11 A	12-Jul-11 A	0	
DP025025	DDA: SDB, DOU6&DGS - Submit Sub-structure Design	65	27-Apr-11	30-Jun-11	27-Apr-11 A	12-Jul-11 A	0	
DP025035	DDA: SDB, DOU6&DGS - ICE Approve sub-structure D	21	16-May-11	05-Jun-11	16-May-11 A	12-Jul-11 A	0	
DP025045	DDA: SDB, DOU6&DGS - Engineer Approve sub-struct	28	13-Jul-11	09-Aug-11	13-Jul-11 A	23-Nov-11 A	0	
Sub-Package - B								
DP024035	DDA: SDB - Structural Design and Approval	175	24-Dec-10	16-Jun-11	24-Dec-10 A	16-Jun-11 A	0	
DP024040	DDA: SDB - Submit Structural Design	77	24-Dec-10	10-Mar-11	24-Dec-10 A	10-Mar-11 A	0	
DP024050	DDA: SDB - ICE Approve Structural Design	21	11-Mar-11	31-Mar-11	11-Mar-11 A	31-Mar-11 A	0	
DP024060	DDA: SDB - Engineer Comment on Structural Design	28	01-Apr-11	28-Apr-11	01-Apr-11 A	28-Apr-11 A	0	
DP024061	DDA: SDB - Finalize Structural Design	28	29-Apr-11	26-May-11	29-Apr-11 A	26-May-11 A	0	
DP024062	DDA: SDB - Engineer Approve Structural Design	21	27-May-11	16-Jun-11	27-May-11 A	16-Jun-11 A	0	
DP025200	DDA: DOU6&DGS - Structural Design and Approval	158	23-Jan-11	29-Jun-11	23-Jan-11 A	29-Jun-11 A	0	

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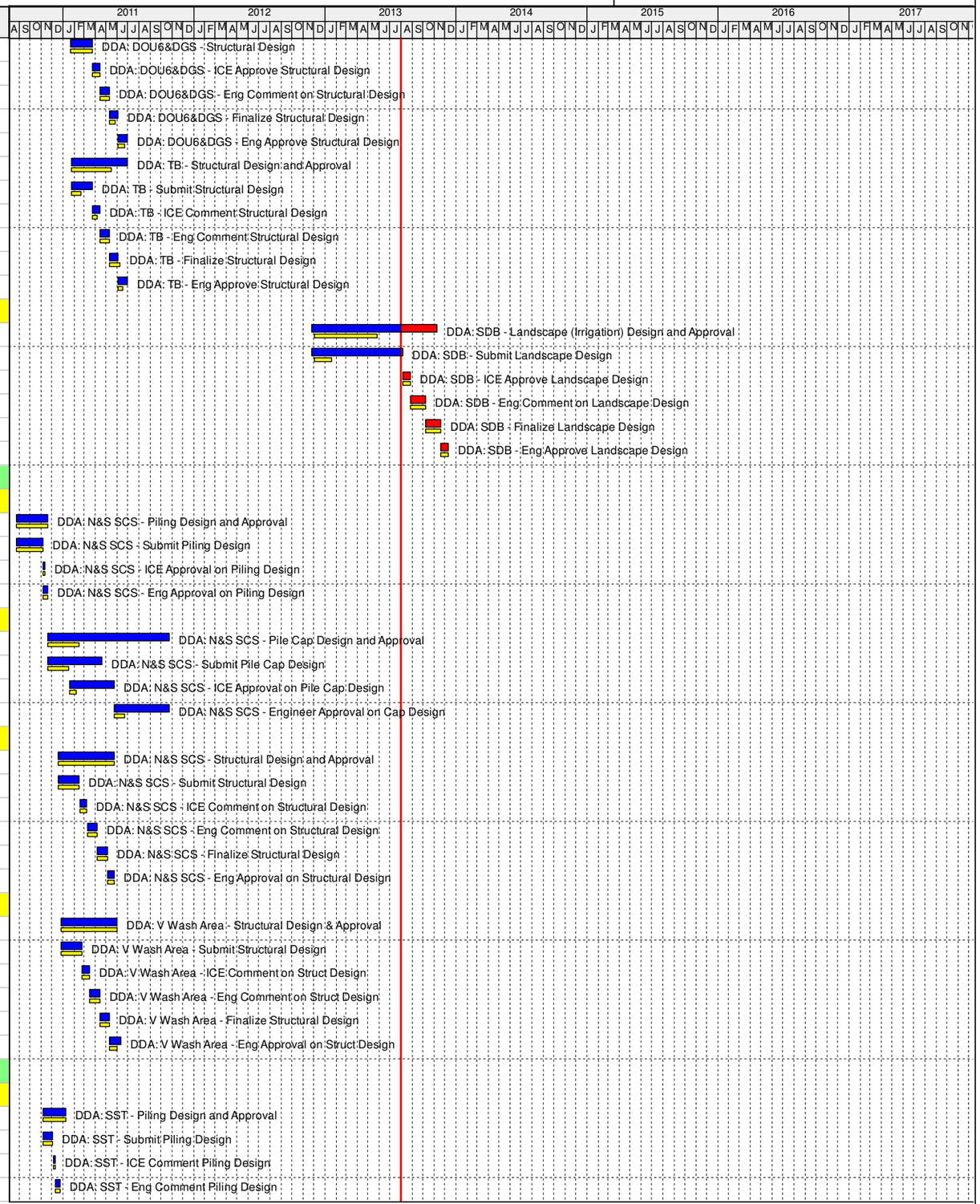
DP025210	DDA: DOU6&DGS - Structural Design	60	23-Jan-11	23-Mar-11	23-Jan-11 A	23-Mar-11 A	0	
DP025220	DDA: DOU6&DGS - ICE Approve Structural Design	21	24-Mar-11	13-Apr-11	24-Mar-11 A	13-Apr-11 A	0	
DP025230	DDA: DOU6&DGS - Eng Comment on Structural Design	28	14-Apr-11	11-May-11	14-Apr-11 A	11-May-11 A	0	
DP025240	DDA: DOU6&DGS - Finalize Structural Design	16	12-May-11	27-May-11	12-May-11 A	03-Jun-11 A	0	
DP025250	DDA: DOU6&DGS - Eng Approve Structural Design	21	03-Jun-11	23-Jun-11	03-Jun-11 A	29-Jun-11 A	0	
DP029105	DDA: TB - Structural Design and Approval	112	24-Jan-11	15-May-11	24-Jan-11 A	29-Jun-11 A	0	
DP029110	DDA: TB - Submit Structural Design	28	24-Jan-11	20-Feb-11	24-Jan-11 A	23-Mar-11 A	0	
DP029130	DDA: TB - ICE Comment Structural Design	14	24-Mar-11	06-Apr-11	24-Mar-11 A	13-Apr-11 A	0	
DP029140	DDA: TB - Eng Comment Structural Design	28	14-Apr-11	11-May-11	14-Apr-11 A	11-May-11 A	0	
DP029150	DDA: TB - Finalize Structural Design	28	12-May-11	08-Jun-11	12-May-11 A	02-Jun-11 A	0	
DP029160	DDA: TB - Eng Approve Structural Design	14	03-Jun-11	16-Jun-11	03-Jun-11 A	29-Jun-11 A	0	
Sub-Package- F								
DP024190	DDA: SDB - Landscape (Irrigation) Design and Approval	175	03-Dec-12	26-May-13	26-Nov-12 A	09-Nov-13	102	-4
DP024200	DDA: SDB - Submit Landscape Design	49	03-Dec-12	20-Jan-13	26-Nov-12 A	06-Aug-13	7	-4
DP024210	DDA: SDB - ICE Approve Landscape Design	21	07-Aug-13	27-Aug-13	07-Aug-13	27-Aug-13	21	-4
DP024220	DDA: SDB - Eng Comment on Landscape Design	42	28-Aug-13	08-Oct-13	28-Aug-13	08-Oct-13	42	-4
DP024230	DDA: SDB - Finalize Landscape Design	42	09-Oct-13	19-Nov-13	09-Oct-13	19-Nov-13	42	-4
DP024240	DDA: SDB - Eng Approve Landscape Design	21	20-Nov-13	10-Dec-13	20-Nov-13	10-Dec-13	21	-4
DDA2 (N&S Sludge Cake Silos)								
Sub-Package - A								
DP026110	DDA: N&S SCS - Piling Design and Approval	87	25-Aug-10	19-Nov-10	25-Aug-10 A	19-Nov-10 A	0	
DP026120	DDA: N&S SCS - Submit Piling Design	73	25-Aug-10	05-Nov-10	25-Aug-10 A	05-Nov-10 A	0	
DP026130	DDA: N&S SCS - ICE Approval on Piling Design	7	06-Nov-10	12-Nov-10	06-Nov-10 A	12-Nov-10 A	0	
DP026140	DDA: N&S SCS - Eng Approval on Piling Design	14	06-Nov-10	19-Nov-10	06-Nov-10 A	19-Nov-10 A	0	
Sub-Package - A1								
DP026150	DDA: N&S SCS - Pile Cap Design and Approval	88	20-Nov-10	15-Feb-11	20-Nov-10 A	25-Oct-11 A	0	
DP026160	DDA: N&S SCS - Submit Pile Cap Design	60	20-Nov-10	18-Jan-11	20-Nov-10 A	18-Apr-11 A	0	
DP026170	DDA: N&S SCS - ICE Approval on Pile Cap Design	21	19-Jan-11	08-Feb-11	19-Jan-11 A	24-May-11 A	0	
DP026180	DDA: N&S SCS - Engineer Approval on Cap Design	28	25-May-11	21-Jun-11	25-May-11 A	25-Oct-11 A	0	
Sub-Package - B1								
DP026200	DDA: N&S SCS - Structural Design and Approval	158	19-Dec-10	25-May-11	19-Dec-10 A	25-May-11 A	0	
DP026210	DDA: N&S SCS - Submit Structural Design	60	19-Dec-10	16-Feb-11	19-Dec-10 A	16-Feb-11 A	0	
DP026220	DDA: N&S SCS - ICE Comment on Structural Design	21	17-Feb-11	09-Mar-11	17-Feb-11 A	09-Mar-11 A	0	
DP026230	DDA: N&S SCS - Eng Comment on Structural Design	28	10-Mar-11	06-Apr-11	10-Mar-11 A	06-Apr-11 A	0	
DP026240	DDA: N&S SCS - Finalize Structural Design	28	07-Apr-11	04-May-11	07-Apr-11 A	04-May-11 A	0	
DP026250	DDA: N&S SCS - Eng Approval on Structural Design	21	05-May-11	25-May-11	05-May-11 A	25-May-11 A	0	
Sub-Package - B2								
DP026260	DDA: V Wash Area - Structural Design & Approval	158	26-Dec-10	01-Jun-11	26-Dec-10 A	01-Jun-11 A	0	
DP026270	DDA: V Wash Area - Submit Structural Design	60	26-Dec-10	23-Feb-11	26-Dec-10 A	23-Feb-11 A	0	
DP026280	DDA: V Wash Area - ICE Comment on Struct Design	21	24-Feb-11	16-Mar-11	24-Feb-11 A	16-Mar-11 A	0	
DP026290	DDA: V Wash Area - Eng Comment on Struct Design	28	17-Mar-11	13-Apr-11	17-Mar-11 A	13-Apr-11 A	0	
DP026360	DDA: V Wash Area - Finalize Structural Design	28	14-Apr-11	11-May-11	14-Apr-11 A	11-May-11 A	0	
DP026370	DDA: V Wash Area - Eng Approval on Struct Design	21	12-May-11	01-Jun-11	12-May-11 A	11-Jun-11 A	0	
DDA4 (Sludge Storage Tanks)								
Sub-Package - A								
DP028110	DDA: SST - Piling Design and Approval	63	07-Nov-10	08-Jan-11	07-Nov-10 A	08-Jan-11 A	0	
DP028120	DDA: SST - Submit Piling Design	28	07-Nov-10	04-Dec-10	07-Nov-10 A	04-Dec-10 A	0	
DP028130	DDA: SST - ICE Comment Piling Design	7	05-Dec-10	11-Dec-10	05-Dec-10 A	11-Dec-10 A	0	
DP028140	DDA: SST - Eng Comment Piling Design	14	12-Dec-10	25-Dec-10	12-Dec-10 A	25-Dec-10 A	0	



Actual Work | Project Baseline Bar
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DP028150	DDA: SST - Finalize Piling Design	7	26-Dec-10	01-Jan-11	26-Dec-10 A	01-Jan-11 A	0	
DP028160	DDA: SST - Eng Approve Piling Design	7	02-Jan-11	08-Jan-11	02-Jan-11 A	08-Jan-11 A	0	
Sub-Package - B								
DP028200	DDA: SST - Structural Design and Approval	112	09-Jan-11	30-Apr-11	09-Jan-11 A	30-Apr-11 A	0	
DP028210	DDA: SST - Submit Structural Design	28	09-Jan-11	05-Feb-11	09-Jan-11 A	05-Feb-11 A	0	
DP028220	DDA: SST - ICE Comment Structural Design	14	06-Feb-11	19-Feb-11	06-Feb-11 A	21-Feb-11 A	0	
DP028230	DDA: SST - Eng Comment Structural Design	28	22-Feb-11	21-Mar-11	22-Feb-11 A	19-Mar-11 A	0	
DP028240	DDA: SST - Finalize Structural Design	28	20-Mar-11	16-Apr-11	20-Mar-11 A	16-Apr-11 A	0	
DP028250	DDA: SST - Eng Approve Structural Design	14	17-Apr-11	30-Apr-11	17-Apr-11 A	30-Apr-11 A	0	
DDA5 (PWST & Pumping System)								
Sub-Package - A								
DP030105	DDA: PWST&PS - Piling Design and Approval	70	15-Dec-13	22-Feb-14	15-Dec-13	22-Feb-14	70	-24
DP030110	DDA: PWST&PS - Submit Piling Design	14	15-Dec-13	28-Dec-13	15-Dec-13	28-Dec-13	14	-24
DP030120	DDA: PWST&PS - ICE Comment Piling Design	7	29-Dec-13	04-Jan-14	29-Dec-13	04-Jan-14	7	-24
DP030130	DDA: PWST&PS - Eng Comment Piling Design	21	05-Jan-14	25-Jan-14	05-Jan-14	25-Jan-14	21	-24
DP030140	DDA: PWST&PS - Finalize Piling Design	14	26-Jan-14	08-Feb-14	26-Jan-14	08-Feb-14	14	-24
DP030150	DDA: PWST&PS - Eng Approve Piling Design	14	09-Feb-14	22-Feb-14	09-Feb-14	22-Feb-14	14	-24
Sub-Package - B								
DP030200	DDA: PWST&PS - Structure Design and Approval	98	23-Feb-14	31-May-14	23-Feb-14	31-May-14	98	-22
DP030210	DDA: PWST&PS - Submit Structure Design	28	23-Feb-14	22-Mar-14	23-Feb-14	22-Mar-14	28	-22
DP030220	DDA: PWST&PS - ICE Comment Structure Design	14	23-Mar-14	05-Apr-14	23-Mar-14	05-Apr-14	14	-22
DP030230	DDA: PWST&PS - Eng Comment Structure Design	21	06-Apr-14	26-Apr-14	06-Apr-14	26-Apr-14	21	-22
DP030240	DDA: PWST&PS - Finalize Structure Design	21	27-Apr-14	17-May-14	27-Apr-14	17-May-14	21	-22
DP030250	DDA: PWST&PS - Eng Approve Structure Design	14	18-May-14	31-May-14	18-May-14	31-May-14	14	-22
DDA7 (DOU5 and DGS)								
Sub-Package - A								
DP034105	DDA: DOU5&DGS - Piling Design and Approval	84	15-Dec-13	08-Mar-14	15-Dec-13	08-Mar-14	84	-24
DP034110	DDA: DOU5&DGS - Submit Piling Design	21	15-Dec-13	04-Jan-14	15-Dec-13	04-Jan-14	21	8
DP034120	DDA: DOU5&DGS - ICE Comment Piling Design	7	05-Jan-14	11-Jan-14	05-Jan-14	11-Jan-14	7	8
DP034130	DDA: DOU5&DGS - Eng Comment Piling Design	21	12-Jan-14	01-Feb-14	12-Jan-14	01-Feb-14	21	8
DP034140	DDA: DOU5&DGS - Finalize Piling Design	21	02-Feb-14	22-Feb-14	02-Feb-14	22-Feb-14	21	8
DP034150	DDA: DOU5&DGS - Eng Approve Piling Design	14	23-Feb-14	08-Mar-14	23-Feb-14	08-Mar-14	14	8
Sub-Package - A1								
DP034160	DDA: DOU5&DGS - Sub-structure Design and Approva	63	09-Mar-14	10-May-14	09-Mar-14	10-May-14	63	8
DP034170	DDA: DOU5&DGS - Submit Sub-structure Design	21	09-Mar-14	29-Mar-14	09-Mar-14	29-Mar-14	21	8
DP034180	DDA: DOU5&DGS - ICE Approve Sub-structure Design	14	30-Mar-14	12-Apr-14	30-Mar-14	12-Apr-14	14	8
DP034190	DDA: DOU5&DGS - Engineer Approve Sub-structure D	28	13-Apr-14	10-May-14	13-Apr-14	10-May-14	28	8
Sub-Package - B								
DP034200	DDA: DOU5&DGS - Structural Design and Approval	84	11-May-14	02-Aug-14	11-May-14	02-Aug-14	84	8
DP034210	DDA: DOU5&DGS - Submit Structural Design	14	11-May-14	24-May-14	11-May-14	24-May-14	14	8
DP034220	DDA: DOU5&DGS - ICE Comment Structural Design	14	25-May-14	07-Jun-14	25-May-14	07-Jun-14	14	8
DP034230	DDA: DOU5&DGS - Eng Comment Structural Design	21	08-Jun-14	28-Jun-14	08-Jun-14	28-Jun-14	21	8
DP034240	DDA: DOU5&DGS - Finalize Structural Design	21	29-Jun-14	19-Jul-14	29-Jun-14	19-Jul-14	21	8
DP034250	DDA: DOU5&DGS - Eng Approve Structural Design	14	20-Jul-14	02-Aug-14	20-Jul-14	02-Aug-14	14	8
DDA8 (Workshop Building)								
Sub-Package - A								
DP033105	DDA: WB - Piling Design and Approval	112	17-Nov-13	08-Mar-14	17-Nov-13	08-Mar-14	112	-24
DP033110	DDA: WB - Submit Piling Design	28	17-Nov-13	14-Dec-13	17-Nov-13	14-Dec-13	28	54
DP033120	DDA: WB - ICE Comment Piling Design	14	15-Dec-13	28-Dec-13	15-Dec-13	28-Dec-13	14	54

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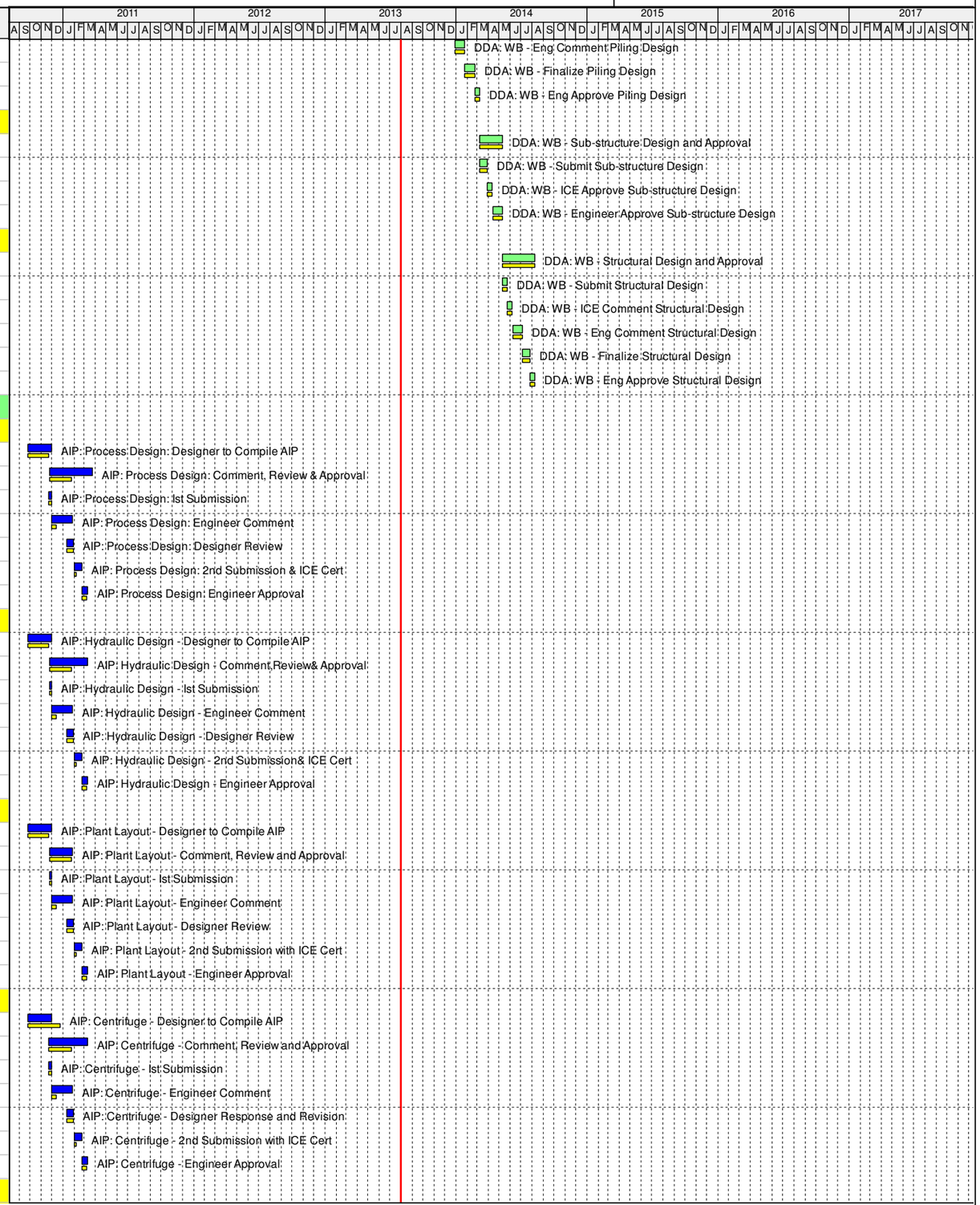
DP033130	DDA: WB - Eng Comment Piling Design	28	29-Dec-13	25-Jan-14	29-Dec-13	25-Jan-14	28	54
DP033140	DDA: WB - Finalize Piling Design	28	26-Jan-14	22-Feb-14	26-Jan-14	22-Feb-14	28	54
DP033150	DDA: WB - Eng Approve Piling Design	14	23-Feb-14	08-Mar-14	23-Feb-14	08-Mar-14	14	54
Sub-Package - A1								
DP034260	DDA: WB - Sub-structure Design and Approval	63	09-Mar-14	10-May-14	09-Mar-14	10-May-14	63	54
DP034270	DDA: WB - Submit Sub-structure Design	21	09-Mar-14	29-Mar-14	09-Mar-14	29-Mar-14	21	54
DP034280	DDA: WB - ICE Approve Sub-structure Design	14	30-Mar-14	12-Apr-14	30-Mar-14	12-Apr-14	14	54
DP034290	DDA: WB - Engineer Approve Sub-structure Design	28	13-Apr-14	10-May-14	13-Apr-14	10-May-14	28	54
Sub-Package - B								
DP033200	DDA: WB - Structural Design and Approval	91	11-May-14	09-Aug-14	11-May-14	09-Aug-14	91	54
DP033210	DDA: WB - Submit Structural Design	14	11-May-14	24-May-14	11-May-14	24-May-14	14	54
DP033220	DDA: WB - ICE Comment Structural Design	14	25-May-14	07-Jun-14	25-May-14	07-Jun-14	14	54
DP033230	DDA: WB - Eng Comment Structural Design	28	08-Jun-14	05-Jul-14	08-Jun-14	05-Jul-14	28	54
DP033240	DDA: WB - Finalize Structural Design	21	06-Jul-14	26-Jul-14	06-Jul-14	26-Jul-14	21	54
DP033250	DDA: WB - Eng Approve Structural Design	14	27-Jul-14	09-Aug-14	27-Jul-14	09-Aug-14	14	54
Approved-In-Principle (AIP) Submission - E&M								
AIP 1 - Process Design								
DP001210	AIP: Process Design: Designer to Compile AIP	60	25-Sep-10	23-Nov-10	25-Sep-10 A	29-Nov-10 A	0	
DP001215	AIP: Process Design: Comment, Review & Approval	63	24-Nov-10	25-Jan-11	24-Nov-10 A	23-Mar-11 A	0	
DP001220	AIP: Process Design: Ist Submission	7	23-Nov-10	29-Nov-10	23-Nov-10 A	29-Nov-10 A	0	
DP001230	AIP: Process Design: Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP001240	AIP: Process Design: Designer Review	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP001250	AIP: Process Design: 2nd Submission & ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP001260	AIP: Process Design: Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 2 - Hydraulic Design								
DP001310	AIP: Hydraulic Design - Designer to Compile AIP	60	25-Sep-10	23-Nov-10	25-Sep-10 A	29-Nov-10 A	0	
DP001315	AIP: Hydraulic Design - Comment,Review& Approval	63	24-Nov-10	25-Jan-11	24-Nov-10 A	11-Mar-11 A	0	
DP001320	AIP: Hydraulic Design - Ist Submission	7	24-Nov-10	30-Nov-10	24-Nov-10 A	29-Nov-10 A	0	
DP001330	AIP: Hydraulic Design - Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP001340	AIP: Hydraulic Design - Designer Review	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP001350	AIP: Hydraulic Design - 2nd Submission& ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP001360	AIP: Hydraulic Design - Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 3 - Plant Layout Design								
DP001410	AIP: Plant Layout - Designer to Compile AIP	60	25-Sep-10	23-Nov-10	25-Sep-10 A	29-Nov-10 A	0	
DP001415	AIP: Plant Layout - Comment, Review and Approval	63	24-Nov-10	25-Jan-11	24-Nov-10 A	28-Jan-11 A	0	
DP001420	AIP: Plant Layout - Ist Submission	7	24-Nov-10	30-Nov-10	24-Nov-10 A	30-Nov-10 A	0	
DP001430	AIP: Plant Layout - Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP001440	AIP: Plant Layout - Designer Review	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP001450	AIP: Plant Layout - 2nd Submission with ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP001460	AIP: Plant Layout - Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 4 - Dewatering Centrifuge								
DP003010	AIP: Centrifuge - Designer to Compile AIP	90	25-Sep-10	23-Dec-10	25-Sep-10 A	29-Nov-10 A	0	
DP003015	AIP: Centrifuge - Comment, Review and Approval	63	23-Nov-10	24-Jan-11	23-Nov-10 A	11-Mar-11 A	0	
DP003020	AIP: Centrifuge - Ist Submission	7	23-Nov-10	29-Nov-10	23-Nov-10 A	29-Nov-10 A	0	
DP003030	AIP: Centrifuge - Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP003040	AIP: Centrifuge - Designer Response and Revision	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP003050	AIP: Centrifuge - 2nd Submission with ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP003060	AIP: Centrifuge - Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 5 - Process Water Pumping System								

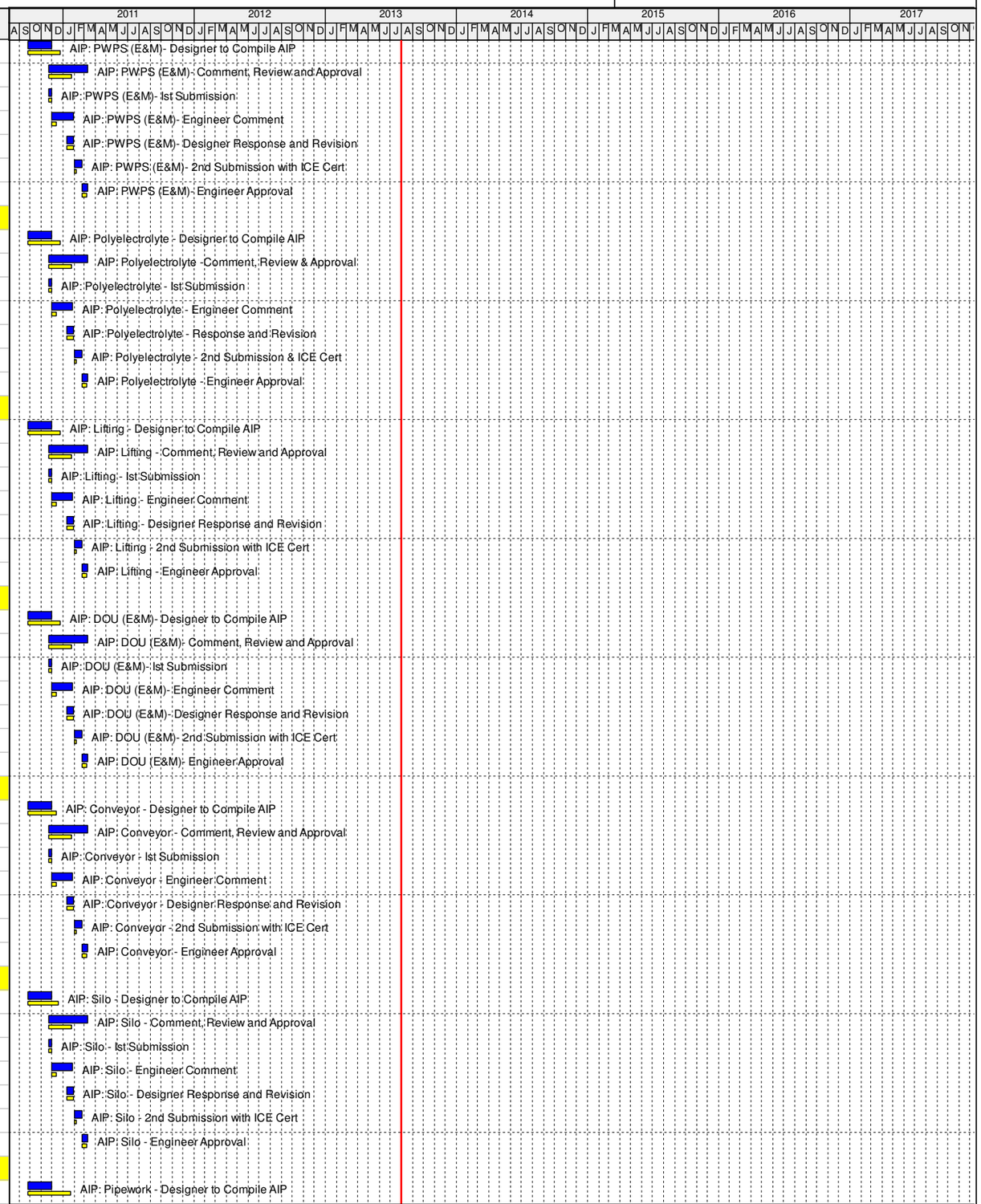


Actual Work | Project Baseline Bar
Remaining Work | Baseline Milestone
Critical Remaining Work | Milestone

Monthly Progress Updated as of 31 July 2013

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
DP003210	AIP: PWPS (E&M)- Designer to Compile AIP	90	25-Sep-10	23-Dec-10	25-Sep-10 A	29-Nov-10 A	0	
DP003215	AIP: PWPS (E&M)- Comment, Review and Approval	63	23-Nov-10	24-Jan-11	23-Nov-10 A	11-Mar-11 A	0	
DP003220	AIP: PWPS (E&M)- Ist Submission	7	23-Nov-10	29-Nov-10	23-Nov-10 A	29-Nov-10 A	0	
DP003230	AIP: PWPS (E&M)- Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	29-Jan-11 A	0	
DP003240	AIP: PWPS (E&M)- Designer Response and Revision	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP003250	AIP: PWPS (E&M)- 2nd Submission with ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP003260	AIP: PWPS (E&M)- Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 6 - Polyelectrolyte System								
DP003410	AIP: Polyelectrolyte - Designer to Compile AIP	90	25-Sep-10	23-Dec-10	25-Sep-10 A	29-Nov-10 A	0	
DP003415	AIP: Polyelectrolyte -Comment, Review & Approval	63	23-Nov-10	24-Jan-11	23-Nov-10 A	11-Mar-11 A	0	
DP003420	AIP: Polyelectrolyte - Ist Submission	7	23-Nov-10	29-Nov-10	23-Nov-10 A	29-Nov-10 A	0	
DP003430	AIP: Polyelectrolyte - Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP003440	AIP: Polyelectrolyte - Response and Revision	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP003450	AIP: Polyelectrolyte - 2nd Submission & ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP003460	AIP: Polyelectrolyte - Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 7 - Lifting Appliance								
DP003610	AIP: Lifting - Designer to Compile AIP	90	25-Sep-10	23-Dec-10	25-Sep-10 A	29-Nov-10 A	0	
DP003615	AIP: Lifting - Comment, Review and Approval	63	23-Nov-10	24-Jan-11	23-Nov-10 A	11-Mar-11 A	0	
DP003620	AIP: Lifting - Ist Submission	7	23-Nov-10	29-Nov-10	23-Nov-10 A	29-Nov-10 A	0	
DP003630	AIP: Lifting - Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP003640	AIP: Lifting - Designer Response and Revision	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP003650	AIP: Lifting - 2nd Submission with ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP003660	AIP: Lifting - Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 8 - Deodourization System								
DP003810	AIP: DOU (E&M)- Designer to Compile AIP	90	25-Sep-10	23-Dec-10	25-Sep-10 A	29-Nov-10 A	0	
DP003815	AIP: DOU (E&M)- Comment, Review and Approval	63	23-Nov-10	24-Jan-11	23-Nov-10 A	11-Mar-11 A	0	
DP003820	AIP: DOU (E&M)- Ist Submission	7	23-Nov-10	29-Nov-10	23-Nov-10 A	29-Nov-10 A	0	
DP003830	AIP: DOU (E&M)- Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP003840	AIP: DOU (E&M)- Designer Response and Revision	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP003850	AIP: DOU (E&M)- 2nd Submission with ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP003860	AIP: DOU (E&M)- Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 9 - Conveyor System								
DP004010	AIP: Conveyor - Designer to Compile AIP	80	25-Sep-10	13-Dec-10	25-Sep-10 A	29-Nov-10 A	0	
DP004015	AIP: Conveyor - Comment, Review and Approval	63	23-Nov-10	24-Jan-11	23-Nov-10 A	11-Mar-11 A	0	
DP004020	AIP: Conveyor - Ist Submission	7	23-Nov-10	29-Nov-10	23-Nov-10 A	29-Nov-10 A	0	
DP004030	AIP: Conveyor - Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP004040	AIP: Conveyor - Designer Response and Revision	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP004050	AIP: Conveyor - 2nd Submission with ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP004060	AIP: Conveyor - Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 10 - Sludge Cake Silos								
DP004210	AIP: Silo - Designer to Compile AIP	85	25-Sep-10	18-Dec-10	25-Sep-10 A	29-Nov-10 A	0	
DP004215	AIP: Silo - Comment, Review and Approval	63	23-Nov-10	24-Jan-11	23-Nov-10 A	11-Mar-11 A	0	
DP004220	AIP: Silo - Ist Submission	7	23-Nov-10	29-Nov-10	23-Nov-10 A	29-Nov-10 A	0	
DP004230	AIP: Silo - Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP004240	AIP: Silo - Designer Response and Revision	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP004250	AIP: Silo - 2nd Submission with ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP004260	AIP: Silo - Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 11 - Sludge Feed System								
DP004410	AIP: Pipework - Designer to Compile AIP	120	25-Sep-10	22-Jan-11	25-Sep-10 A	29-Nov-10 A	0	

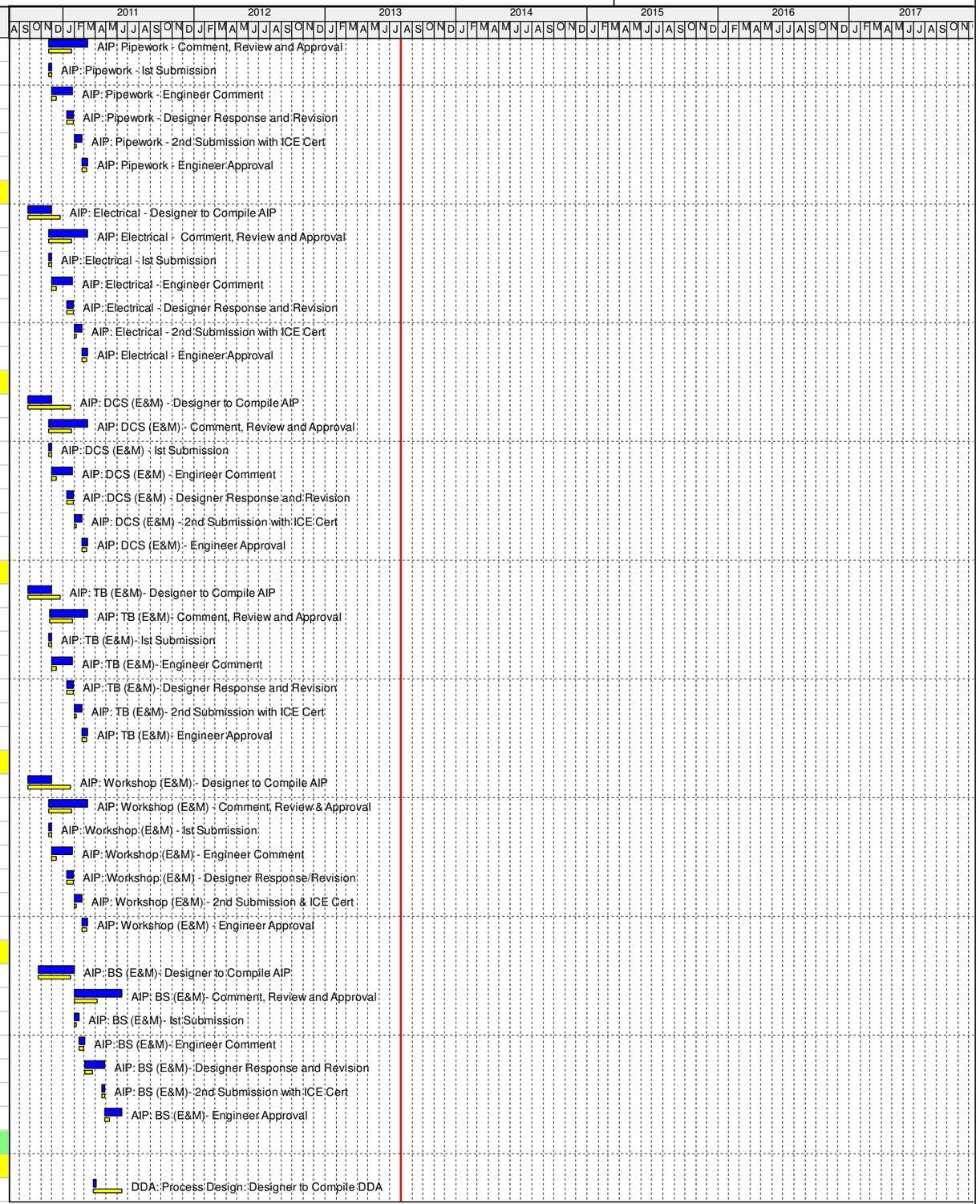


Actual Work
Remaining Work
Critical Remaining Work
Project Baseline Bar
Baseline Milestone
Milestone

Monthly Progress Updated as of 31 July 2013

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
DP004415	AIP: Pipework - Comment, Review and Approval	63	23-Nov-10	24-Jan-11	23-Nov-10 A	11-Mar-11 A	0	
DP004420	AIP: Pipework - Ist Submission	7	23-Nov-10	29-Nov-10	23-Nov-10 A	29-Nov-10 A	0	
DP004430	AIP: Pipework - Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP004440	AIP: Pipework - Designer Response and Revision	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP004450	AIP: Pipework - 2nd Submission with ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP004460	AIP: Pipework - Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 12 - Electical Switchboards and MCC								
DP004610	AIP: Electrical - Designer to Compile AIP	90	25-Sep-10	23-Dec-10	25-Sep-10 A	29-Nov-10 A	0	
DP004615	AIP: Electrical - Comment, Review and Approval	63	23-Nov-10	24-Jan-11	23-Nov-10 A	11-Mar-11 A	0	
DP004620	AIP: Electrical - Ist Submission	7	23-Nov-10	29-Nov-10	23-Nov-10 A	29-Nov-10 A	0	
DP004630	AIP: Electrical - Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP004640	AIP: Electrical - Designer Response and Revision	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP004650	AIP: Electrical - 2nd Submission with ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP004660	AIP: Electrical - Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 13 - DCS System								
DP004810	AIP: DCS (E&M) - Designer to Compile AIP	120	25-Sep-10	22-Jan-11	25-Sep-10 A	29-Nov-10 A	0	
DP004815	AIP: DCS (E&M) - Comment, Review and Approval	63	23-Nov-10	24-Jan-11	23-Nov-10 A	11-Mar-11 A	0	
DP004820	AIP: DCS (E&M) - Ist Submission	7	23-Nov-10	29-Nov-10	23-Nov-10 A	29-Nov-10 A	0	
DP004830	AIP: DCS (E&M) - Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP004840	AIP: DCS (E&M) - Designer Response and Revision	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP004850	AIP: DCS (E&M) - 2nd Submission with ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP004860	AIP: DCS (E&M) - Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 14 - HV Electrical Supply System								
DP005010	AIP: TB (E&M)- Designer to Compile AIP	90	25-Sep-10	23-Dec-10	25-Sep-10 A	29-Nov-10 A	0	
DP005015	AIP: TB (E&M)- Comment, Review and Approval	63	25-Nov-10	26-Jan-11	25-Nov-10 A	11-Mar-11 A	0	
DP005020	AIP: TB (E&M)- Ist Submission	7	23-Nov-10	29-Nov-10	23-Nov-10 A	29-Nov-10 A	0	
DP005030	AIP: TB (E&M)- Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP005040	AIP: TB (E&M)- Designer Response and Revision	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP005050	AIP: TB (E&M)- 2nd Submission with ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP005060	AIP: TB (E&M)- Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 15 - Workshop Equipment								
DP005210	AIP: Workshop (E&M) - Designer to Compile AIP	120	25-Sep-10	22-Jan-11	25-Sep-10 A	29-Nov-10 A	0	
DP005215	AIP: Workshop (E&M) - Comment, Review & Approval	63	23-Nov-10	24-Jan-11	23-Nov-10 A	11-Mar-11 A	0	
DP005220	AIP: Workshop (E&M) - Ist Submission	7	23-Nov-10	29-Nov-10	23-Nov-10 A	29-Nov-10 A	0	
DP005230	AIP: Workshop (E&M) - Engineer Comment	14	30-Nov-10	13-Dec-10	30-Nov-10 A	28-Jan-11 A	0	
DP005240	AIP: Workshop (E&M) - Designer Response/Revision	21	11-Jan-11	31-Jan-11	11-Jan-11 A	31-Jan-11 A	0	
DP005250	AIP: Workshop (E&M) - 2nd Submission & ICE Cert	7	01-Feb-11	07-Feb-11	01-Feb-11 A	23-Feb-11 A	0	
DP005260	AIP: Workshop (E&M) - Engineer Approval	14	24-Feb-11	09-Mar-11	24-Feb-11 A	11-Mar-11 A	0	
AIP 16 - Building Services System								
DP005410	AIP: BS (E&M)- Designer to Compile AIP	90	25-Oct-10	22-Jan-11	25-Oct-10 A	01-Feb-11 A	0	
DP005415	AIP: BS (E&M)- Comment, Review and Approval	63	02-Feb-11	05-Apr-11	02-Feb-11 A	14-Jun-11 A	0	
DP005420	AIP: BS (E&M)- Ist Submission	7	02-Feb-11	08-Feb-11	02-Feb-11 A	14-Feb-11 A	0	
DP005430	AIP: BS (E&M)- Engineer Comment	14	15-Feb-11	28-Feb-11	15-Feb-11 A	03-Mar-11 A	0	
DP005440	AIP: BS (E&M)- Designer Response and Revision	21	04-Mar-11	24-Mar-11	04-Mar-11 A	27-Apr-11 A	0	
DP005450	AIP: BS (E&M)- 2nd Submission with ICE Cert	7	20-Apr-11	26-Apr-11	20-Apr-11 A	27-Apr-11 A	0	
DP005460	AIP: BS (E&M)- Engineer Approval	14	27-Apr-11	10-May-11	27-Apr-11 A	14-Jun-11 A	0	
Detailed Design Approval (DDA) Submission								
DDA 21 - Process Design								
DP006010	DDA: Process Design: Designer to Compile DDA	80	27-Mar-11	14-Jun-11	27-Mar-11 A	04-Apr-11 A	0	



Actual Work | Project Baseline Bar
Remaining Work | Baseline Milestone
Critical Remaining Work | Milestone

Monthly Progress Updated as of 31 July 2013

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
DP006015	DDA: Process Design: Comment, Review & Approval	110	05-Apr-11	23-Jul-11	05-Apr-11 A	02-Dec-11 A	0	
DP006020	DDA: Process Design: Ist Submission	14	05-Apr-11	18-Apr-11	05-Apr-11 A	14-Apr-11 A	0	
DP006030	DDA: Process Design: Engineer Comment	28	15-Apr-11	12-May-11	15-Apr-11 A	13-Jun-11 A	0	
DP006040	DDA: Process Design: Designer Review	28	14-Jun-11	11-Jul-11	14-Jun-11 A	05-Aug-11 A	0	
DP006050	DDA: Process Design: 2nd Submission & ICE Cert	26	08-Aug-11	02-Sep-11	08-Aug-11 A	16-Aug-11 A	0	
DP006060	DDA: Process Design: Engineer Approval	14	17-Aug-11	30-Aug-11	17-Aug-11 A	02-Dec-11 A	0	
DDA 22 - Hydraulic Design								
DP006210	DDA: Hydraulic Design - Designer to Compile DDA	40	27-Mar-11	05-May-11	27-Mar-11 A	25-Apr-11 A	0	
DP006215	DDA: Hydraulic Design -Comment, Review &Approval	70	26-Apr-11	04-Jul-11	26-Apr-11 A	20-Oct-11 A	0	
DP006220	DDA: Hydraulic Design - Ist Submission	7	26-Apr-11	02-May-11	26-Apr-11 A	11-Jul-11 A	0	
DP006230	DDA: Hydraulic Design - Engineer Comment	21	12-Jul-11	01-Aug-11	12-Jul-11 A	09-Aug-11 A	0	
DP006240	DDA: Hydraulic Design - Designer Review	21	10-Aug-11	30-Aug-11	10-Aug-11 A	04-Oct-11 A	0	
DP006250	DDA: Hydraulic Design - 2nd Submission& ICE Cert	7	04-Oct-11	10-Oct-11	04-Oct-11 A	06-Oct-11 A	0	
DP006260	DDA: Hydraulic Design - Engineer Approval	14	07-Oct-11	20-Oct-11	07-Oct-11 A	20-Oct-11 A	0	
DDA 23 - Plant Layout Design								
DP006410	DDA: Plant Layout - Designer to Compile DDA	40	27-Mar-11	05-May-11	27-Mar-11 A	25-Apr-11 A	0	
DP006415	DDA: Plant Layout - Comment, Review and Approval	70	26-Apr-11	04-Jul-11	26-Apr-11 A	20-Oct-11 A	0	
DP006420	DDA: Plant Layout - Ist Submission	7	26-Apr-11	02-May-11	26-Apr-11 A	11-Jul-11 A	0	
DP006430	DDA: Plant Layout - Engineer Comment	21	12-Jul-11	01-Aug-11	12-Jul-11 A	09-Aug-11 A	0	
DP006440	DDA: Plant Layout - Designer Review	21	10-Aug-11	30-Aug-11	10-Aug-11 A	04-Oct-11 A	0	
DP006450	DDA: Plant Layout - 2nd Submission with ICE Cert	7	05-Oct-11	11-Oct-11	05-Oct-11 A	12-Oct-11 A	0	
DP006460	DDA: Plant Layout - Engineer Approval	14	13-Oct-11	26-Oct-11	13-Oct-11 A	20-Oct-11 A	0	
DDA 24 - Dewatering Centrifuges								
DP006610	DDA: Centrifuge - Designer to Compile DDA	60	27-Mar-11	25-May-11	27-Mar-11 A	04-Apr-11 A	0	
DP006615	DDA: Centrifuge - Comment, Review and Approval	82	04-Apr-11	24-Jun-11	04-Apr-11 A	17-Aug-11 A	0	
DP006620	DDA: Centrifuge - Ist Submission	14	04-Apr-11	17-Apr-11	04-Apr-11 A	11-Apr-11 A	0	
DP006630	DDA: Centrifuge - Engineer Comment	14	12-Apr-11	25-Apr-11	12-Apr-11 A	26-Apr-11 A	0	
DP006640	DDA: Centrifuge - Designer Response and Revision	21	27-Apr-11	17-May-11	27-Apr-11 A	20-Jun-11 A	0	
DP006650	DDA: Centrifuge - 2nd Submission with ICE Cert	12	21-Jun-11	02-Jul-11	21-Jun-11 A	04-Aug-11 A	0	
DP006660	DDA: Centrifuge - Engineer Approval	21	05-Aug-11	25-Aug-11	05-Aug-11 A	17-Aug-11 A	0	
DP006670	DDA: Local Control Panel - Prepare & Submission	30	10-Jan-12	08-Feb-12	10-Jan-12 A	31-Jan-12 A	0	
DP006680	DDA: Local Control Panel - Engineer Approval	28	01-Feb-12	28-Feb-12	01-Feb-12 A	03-Mar-12 A	0	
DDA 25 - Process Water Pumping Station								
DP006810	DDA: PWPS (E&M)- Designer to Compile DDA	90	26-May-11	23-Aug-11	26-May-11 A	04-Jun-11 A	0	
DP006815	DDA: PWPS (E&M)- Comment, Review and Approval	63	05-Jun-11	06-Aug-11	05-Jun-11 A	16-Nov-11 A	0	
DP006820	DDA: PWPS (E&M)- Ist Submission	14	05-Jun-11	18-Jun-11	05-Jun-11 A	20-Jun-11 A	0	
DP006830	DDA: PWPS (E&M)- Engineer Comment	14	21-Jun-11	04-Jul-11	21-Jun-11 A	06-Oct-11 A	0	
DP006840	DDA: PWPS (E&M)- Designer Response and Revision	21	07-Oct-11	27-Oct-11	07-Oct-11 A	19-Oct-11 A	0	
DP006850	DDA: PWPS (E&M)- 2nd Submission with ICE Cert	7	12-Oct-11	18-Oct-11	12-Oct-11 A	19-Oct-11 A	0	
DP006860	DDA: PWPS (E&M)- Engineer Approval	14	19-Oct-11	01-Nov-11	19-Oct-11 A	16-Nov-11 A	0	
DDA 26 - Polyelectrolyte System								
DP007010	DDA: Polyelectrolyte - Designer to Compile DDA	90	03-May-11	31-Jul-11	03-May-11 A	27-Jun-11 A	0	
DP007015	DDA: Polyelectrolyte - Comment, Review &Approval	63	29-Jul-11	29-Sep-11	29-Jul-11 A	17-Mar-12 A	0	
DP007020	DDA: Polyelectrolyte - Ist Submission	7	28-Jun-11	04-Jul-11	28-Jun-11 A	18-Jul-11 A	0	
DP007030	DDA: Polyelectrolyte - Engineer Comment	14	05-Aug-11	18-Aug-11	05-Aug-11 A	22-Aug-11 A	0	
DP007040	DDA: Polyelectrolyte - Response and Revision	21	23-Aug-11	12-Sep-11	23-Aug-11 A	31-Jan-12 A	0	
DP007050	DDA: Polyelectrolyte - 2nd Submission & ICE Cert	7	01-Feb-12	07-Feb-12	01-Feb-12 A	18-Feb-12 A	0	
DP007060	DDA: Polyelectrolyte - Engineer Approval	14	20-Feb-12	04-Mar-12	20-Feb-12 A	17-Mar-12 A	0	
DDA 27 - Sludge Feed System								

Actual Work | Remaining Work | Critical Remaining Work | Project Baseline Bar | Baseline Milestone | Milestone

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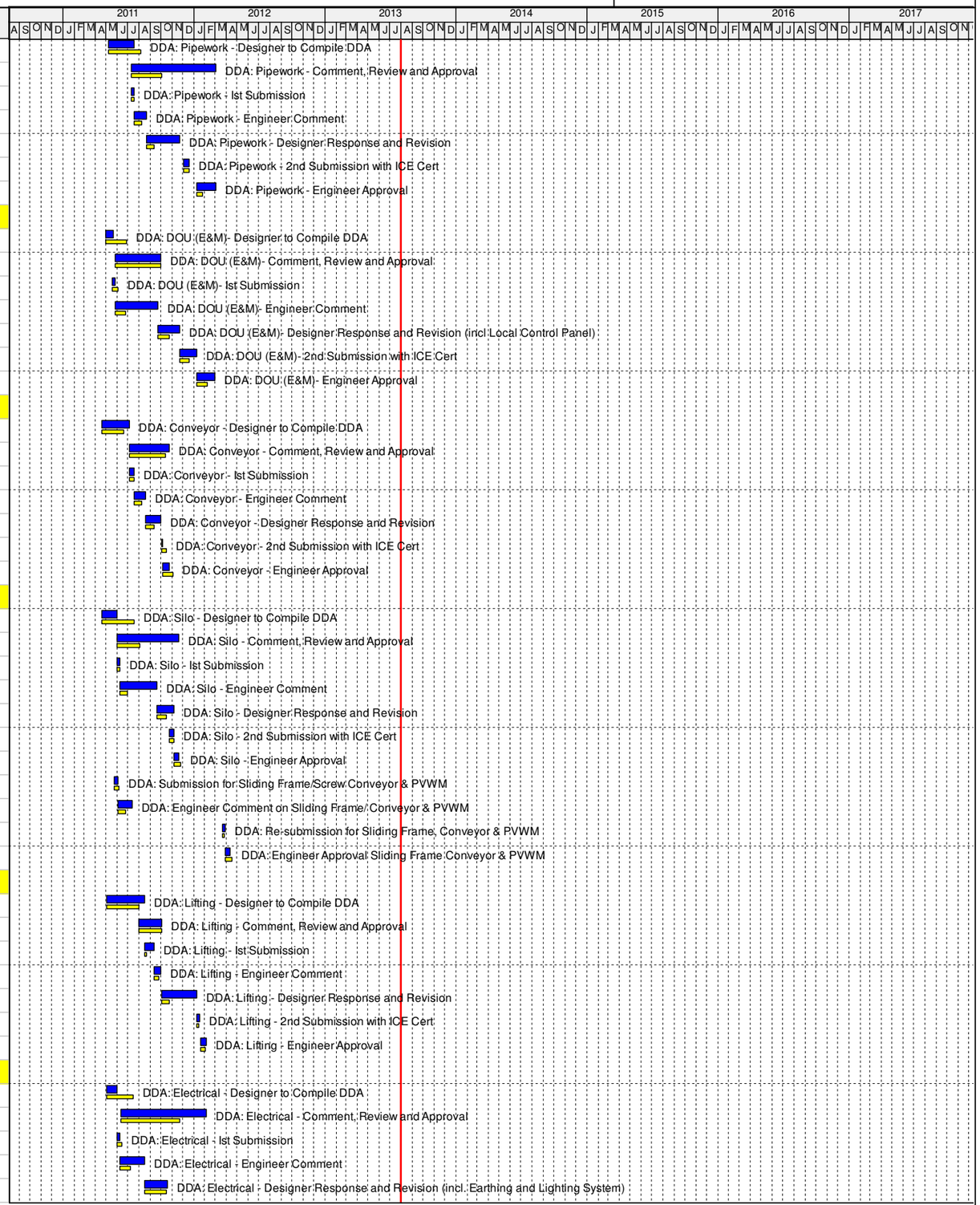
DP008010	DDA: Pipework - Designer to Compile DDA	90	09-May-11	06-Aug-11	09-May-11 A	19-Jul-11 A	0	
DP008015	DDA: Pipework - Comment, Review and Approval	83	12-Jul-11	02-Oct-11	12-Jul-11 A	02-Mar-12 A	0	
DP008020	DDA: Pipework - Ist Submission	7	12-Jul-11	18-Jul-11	12-Jul-11 A	19-Jul-11 A	0	
DP008030	DDA: Pipework - Engineer Comment	20	20-Jul-11	08-Aug-11	20-Jul-11 A	22-Aug-11 A	0	
DP008040	DDA: Pipework - Designer Response and Revision	20	23-Aug-11	11-Sep-11	23-Aug-11 A	22-Nov-11 A	0	
DP008050	DDA: Pipework - 2nd Submission with ICE Cert	18	03-Dec-11	20-Dec-11	03-Dec-11 A	20-Dec-11 A	0	
DP008060	DDA: Pipework - Engineer Approval	18	09-Jan-12	26-Jan-12	09-Jan-12 A	02-Mar-12 A	0	
DDA 28 - Deodourization System								
DP007410	DDA: DOU (E&M)- Designer to Compile DDA	60	30-Apr-11	28-Jun-11	30-Apr-11 A	20-May-11 A	0	
DP007415	DDA: DOU (E&M)- Comment, Review and Approval	128	26-May-11	30-Sep-11	26-May-11 A	30-Sep-11 A	0	
DP007420	DDA: DOU (E&M)- Ist Submission	14	20-May-11	02-Jun-11	20-May-11 A	27-May-11 A	0	
DP007430	DDA: DOU (E&M)- Engineer Comment	28	28-May-11	24-Jun-11	28-May-11 A	23-Sep-11 A	0	
DP007440	DDA: DOU (E&M)- Designer Response and Revision (incl Local Control Panel)	30	24-Sep-11	23-Oct-11	24-Sep-11 A	22-Nov-11 A	0	
DP007450	DDA: DOU (E&M)- 2nd Submission with ICE Cert	28	23-Nov-11	20-Dec-11	23-Nov-11 A	08-Jan-12 A	0	
DP007460	DDA: DOU (E&M)- Engineer Approval	28	10-Jan-12	06-Feb-12	10-Jan-12 A	28-Feb-12 A	0	
DDA 29 - Conveyor System								
DP007610	DDA: Conveyor - Designer to Compile DDA	60	20-Apr-11	18-Jun-11	20-Apr-11 A	04-Jul-11 A	0	
DP007615	DDA: Conveyor - Comment, Review and Approval	102	05-Jul-11	14-Oct-11	05-Jul-11 A	24-Oct-11 A	0	
DP007620	DDA: Conveyor - Ist Submission	14	05-Jul-11	18-Jul-11	05-Jul-11 A	19-Jul-11 A	0	
DP007630	DDA: Conveyor - Engineer Comment	21	20-Jul-11	09-Aug-11	20-Jul-11 A	19-Aug-11 A	0	
DP007640	DDA: Conveyor - Designer Response and Revision	25	20-Aug-11	13-Sep-11	20-Aug-11 A	30-Sep-11 A	0	
DP007650	DDA: Conveyor - 2nd Submission with ICE Cert	14	03-Oct-11	16-Oct-11	03-Oct-11 A	06-Oct-11 A	0	
DP007660	DDA: Conveyor - Engineer Approval	28	07-Oct-11	03-Nov-11	07-Oct-11 A	24-Oct-11 A	0	
DDA 30 - Sludge Cake Silos								
DP007810	DDA: Silo - Designer to Compile DDA	90	20-Apr-11	18-Jul-11	20-Apr-11 A	01-Jun-11 A	0	
DP007815	DDA: Silo - Comment, Review and Approval	63	02-Jun-11	03-Aug-11	02-Jun-11 A	21-Nov-11 A	0	
DP007820	DDA: Silo - Ist Submission	7	02-Jun-11	08-Jun-11	02-Jun-11 A	08-Jun-11 A	0	
DP007830	DDA: Silo - Engineer Comment	21	09-Jun-11	29-Jun-11	09-Jun-11 A	19-Sep-11 A	0	
DP007840	DDA: Silo - Designer Response and Revision	28	20-Sep-11	17-Oct-11	20-Sep-11 A	07-Nov-11 A	0	
DP007850	DDA: Silo - 2nd Submission with ICE Cert	14	25-Oct-11	07-Nov-11	25-Oct-11 A	07-Nov-11 A	0	
DP007860	DDA: Silo - Engineer Approval	18	08-Nov-11	25-Nov-11	08-Nov-11 A	21-Nov-11 A	0	
DP007870	DDA: Submission for Sliding Frame/Screw Conveyor & PVWM	14	23-May-11	05-Jun-11	23-May-11 A	03-Jun-11 A	0	
DP007880	DDA: Engineer Comment on Sliding Frame/ Conveyor & PVWM	21	04-Jun-11	24-Jun-11	04-Jun-11 A	13-Jul-11 A	0	
DP007890	DDA: Re-submission for Sliding Frame, Conveyor & PVWM	7	20-Mar-12	26-Mar-12	20-Mar-12 A	29-Mar-12 A	0	
DP007900	DDA: Engineer Approval Sliding Frame Conveyor & PVWM	18	30-Mar-12	16-Apr-12	30-Mar-12 A	10-Apr-12 A	0	
DDA 31 - Lifting Appliances								
DP007210	DDA: Lifting - Designer to Compile DDA	90	03-May-11	31-Jul-11	03-May-11 A	16-Aug-11 A	0	
DP007215	DDA: Lifting - Comment, Review and Approval	63	01-Aug-11	02-Oct-11	01-Aug-11 A	02-Oct-11 A	0	
DP007220	DDA: Lifting - Ist Submission	7	16-Aug-11	22-Aug-11	16-Aug-11 A	12-Sep-11 A	0	
DP007230	DDA: Lifting - Engineer Comment	14	12-Sep-11	25-Sep-11	12-Sep-11 A	30-Sep-11 A	0	
DP007240	DDA: Lifting - Designer Response and Revision	21	03-Oct-11	23-Oct-11	03-Oct-11 A	08-Jan-12 A	0	
DP007250	DDA: Lifting - 2nd Submission with ICE Cert	7	09-Jan-12	15-Jan-12	09-Jan-12 A	18-Jan-12 A	0	
DP007260	DDA: Lifting - Engineer Approval	14	19-Jan-12	01-Feb-12	19-Jan-12 A	04-Feb-12 A	0	
DDA 32 - Electrical Switchboard and MCC								
DP008210	DDA: Electrical - Designer to Compile DDA	75	03-May-11	16-Jul-11	03-May-11 A	01-Jun-11 A	0	
DP008215	DDA: Electrical - Comment, Review and Approval	166	11-Jun-11	23-Nov-11	11-Jun-11 A	04-Feb-12 A	0	
DP008220	DDA: Electrical - Ist Submission	14	02-Jun-11	15-Jun-11	02-Jun-11 A	08-Jun-11 A	0	
DP008230	DDA: Electrical - Engineer Comment	30	09-Jun-11	08-Jul-11	09-Jun-11 A	17-Aug-11 A	0	
DP008240	DDA: Electrical - Designer Response and Revision (incl. Earthing and Lighting System)	60	18-Aug-11	16-Oct-11	18-Aug-11 A	18-Oct-11 A	0	



Actual Work | Project Baseline Bar
Remaining Work | Baseline Milestone
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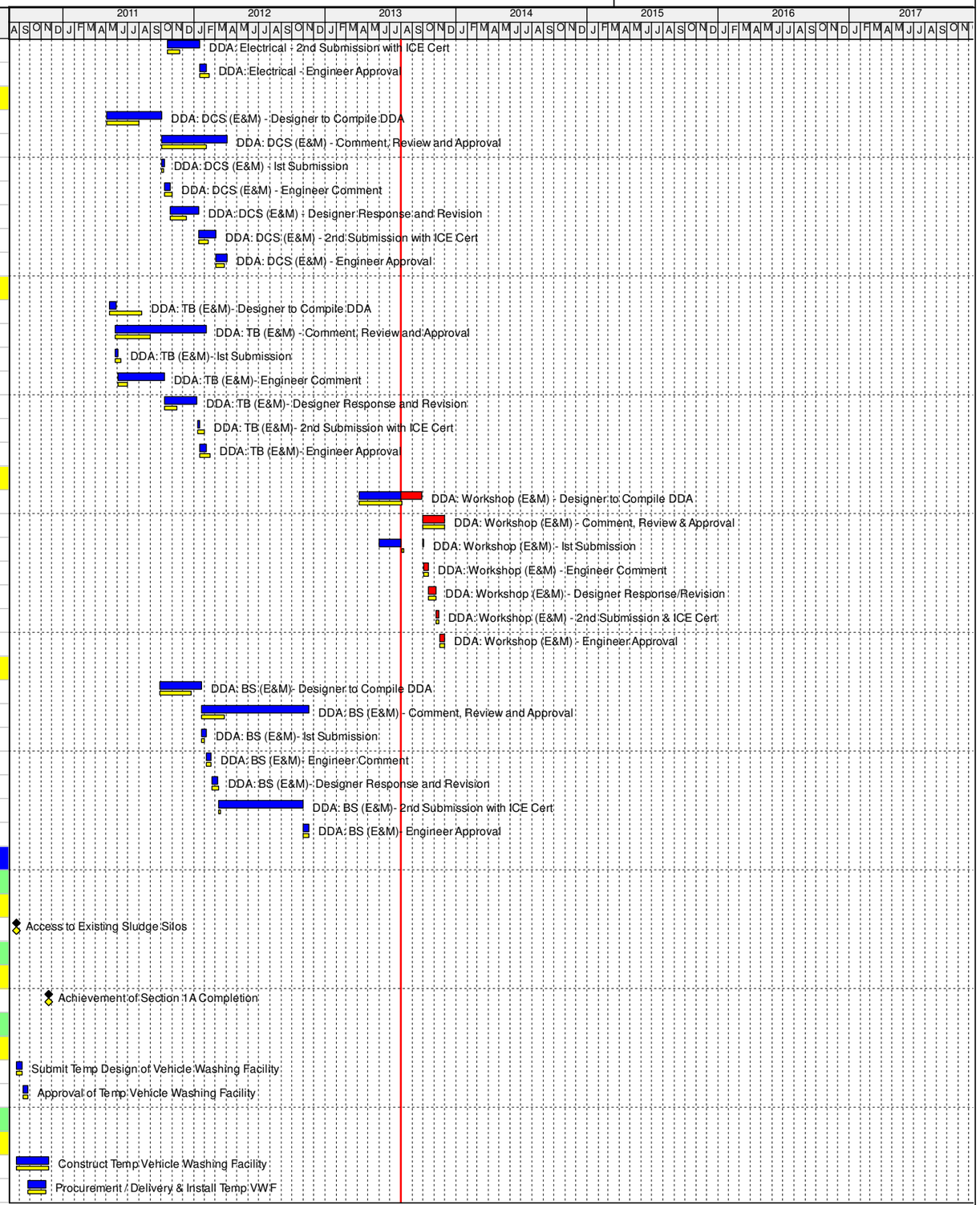
DP008250	DDA: Electrical - 2nd Submission with ICE Cert	35	19-Oct-11	22-Nov-11	19-Oct-11 A	17-Jan-12 A	0	
DP008260	DDA: Electrical - Engineer Approval	28	17-Jan-12	13-Feb-12	17-Jan-12 A	04-Feb-12 A	0	
DDA 33 - DCS System								
DP008410	DDA: DCS (E&M) - Designer to Compile DDA	90	03-May-11	31-Jul-11	03-May-11 A	03-Oct-11 A	0	
DP008415	DDA: DCS (E&M) - Comment, Review and Approval	125	03-Oct-11	04-Feb-12	03-Oct-11 A	02-Apr-12 A	0	
DP008420	DDA: DCS (E&M) - Ist Submission	7	03-Oct-11	09-Oct-11	03-Oct-11 A	10-Oct-11 A	0	
DP008430	DDA: DCS (E&M) - Engineer Comment	21	11-Oct-11	31-Oct-11	11-Oct-11 A	26-Oct-11 A	0	
DP008440	DDA: DCS (E&M) - Designer Response and Revision	45	27-Oct-11	10-Dec-11	27-Oct-11 A	13-Jan-12 A	0	
DP008450	DDA: DCS (E&M) - 2nd Submission with ICE Cert	28	14-Jan-12	10-Feb-12	14-Jan-12 A	01-Mar-12 A	0	
DP008460	DDA: DCS (E&M) - Engineer Approval	24	02-Mar-12	25-Mar-12	02-Mar-12 A	02-Apr-12 A	0	
DDA 34 - HV Electrical Supply System								
DP008610	DDA: TB (E&M)- Designer to Compile DDA	90	11-May-11	08-Aug-11	11-May-11 A	28-May-11 A	0	
DP008615	DDA: TB (E&M) - Comment, Review and Approval	98	28-May-11	02-Sep-11	28-May-11 A	04-Feb-12 A	0	
DP008620	DDA: TB (E&M)- Ist Submission	14	28-May-11	10-Jun-11	28-May-11 A	03-Jun-11 A	0	
DP008630	DDA: TB (E&M)- Engineer Comment	28	04-Jun-11	01-Jul-11	04-Jun-11 A	11-Oct-11 A	0	
DP008640	DDA: TB (E&M)- Designer Response and Revision	35	12-Oct-11	15-Nov-11	12-Oct-11 A	10-Jan-12 A	0	
DP008650	DDA: TB (E&M)- 2nd Submission with ICE Cert	21	11-Jan-12	31-Jan-12	11-Jan-12 A	17-Jan-12 A	0	
DP008660	DDA: TB (E&M)- Engineer Approval	28	18-Jan-12	14-Feb-12	18-Jan-12 A	04-Feb-12 A	0	
DDA 35 - Workshop Equipment								
DP008810	DDA: Workshop (E&M) - Designer to Compile DDA	120	05-Apr-13	02-Aug-13	05-Apr-13 A	28-Sep-13	60	-30
DP008815	DDA: Workshop (E&M) - Comment, Review & Approval	63	29-Sep-13	30-Nov-13	29-Sep-13	30-Nov-13	63	-30
DP008820	DDA: Workshop (E&M) - Ist Submission	7	03-Aug-13	09-Aug-13	01-Jun-13 A	02-Oct-13	4	-27
DP008830	DDA: Workshop (E&M) - Engineer Comment	14	02-Oct-13	16-Oct-13	02-Oct-13	16-Oct-13	14	-27
DP008840	DDA: Workshop (E&M) - Designer Response/Revision	21	16-Oct-13	06-Nov-13	16-Oct-13	06-Nov-13	21	-27
DP008850	DDA: Workshop (E&M) - 2nd Submission & ICE Cert	7	06-Nov-13	13-Nov-13	06-Nov-13	13-Nov-13	7	-27
DP008860	DDA: Workshop (E&M) - Engineer Approval	14	17-Nov-13	30-Nov-13	17-Nov-13	30-Nov-13	14	-30
DDA 36 - Building Services System								
DP009010	DDA: BS (E&M)- Designer to Compile DDA	90	27-Sep-11	25-Dec-11	27-Sep-11 A	22-Jan-12 A	0	
DP009015	DDA: BS (E&M) - Comment, Review and Approval	63	23-Jan-12	25-Mar-12	23-Jan-12 A	15-Nov-12 A	0	
DP009020	DDA: BS (E&M)- Ist Submission	7	23-Jan-12	29-Jan-12	23-Jan-12 A	04-Feb-12 A	0	
DP009030	DDA: BS (E&M)- Engineer Comment	14	06-Feb-12	19-Feb-12	06-Feb-12 A	18-Feb-12 A	0	
DP009040	DDA: BS (E&M)- Designer Response and Revision	21	20-Feb-12	11-Mar-12	20-Feb-12 A	08-Mar-12 A	0	
DP009050	DDA: BS (E&M)- 2nd Submission with ICE Cert	7	09-Mar-12	15-Mar-12	09-Mar-12 A	01-Nov-12 A	0	
DP009060	DDA: BS (E&M)- Engineer Approval	14	02-Nov-12	15-Nov-12	02-Nov-12 A	15-Nov-12 A	0	
Section 1A of the Works								
Site Access Dates								
Possesion of Site								
S1A00010	Access to Existing Sludge Silos	0	25-Aug-10		25-Aug-10 A		0	
Completion								
Commencement and Completion								
S1A00020	Achievement of Section 1A Completion	0		23-Nov-10		23-Nov-10 A	0	
General Submission								
Design Submission and Approval								
S1A00070	Submit Temp Design of Vehicle Washing Facility	15	25-Aug-10	10-Sep-10	25-Aug-10 A	10-Sep-10 A	0	
S1A00080	Approval of Temp Vehicle Washing Facility	11	11-Sep-10	24-Sep-10	11-Sep-10 A	24-Sep-10 A	0	
Vehicle Washing Facilities								
Initial Works								
S1A00090	Construct Temp Vehicle Washing Facility	74	25-Aug-10	22-Nov-10	25-Aug-10 A	22-Nov-10 A	0	
S1A00100	Procurement / Delivery & Install Temp VWF	42	25-Sep-10	15-Nov-10	25-Sep-10 A	15-Nov-10 A	0	



Actual Work | Project Baseline Bar
Remaining Work | Baseline Milestone
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Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S1A00110	Modification to Existing Facility	10	25-Sep-10	07-Oct-10	25-Sep-10 A	07-Oct-10 A	0	
S1A00120	Construct Temp Vehicle Washing Facility	32	13-Oct-10	19-Nov-10	13-Oct-10 A	19-Nov-10 A	0	
S1A00130	Testing and Commissioning Temp VWF	6	16-Nov-10	22-Nov-10	16-Nov-10 A	22-Nov-10 A	0	
Ferric Chloride Barge Unloading Facilities								
Initial Works								
S1A00305	Demolish Existing FCBUF	38	08-Oct-10	22-Nov-10	08-Oct-10 A	22-Nov-10 A	0	
S1A00310	Liaise ITDW to Divert Extg Utilities at FCBUF	12	08-Oct-10	22-Oct-10	08-Oct-10 A	22-Oct-10 A	0	
S1A00320	Liaise DEO to Divert Extg utilities at FCBUF	12	08-Oct-10	22-Oct-10	08-Oct-10 A	22-Oct-10 A	0	
S1A00330	Diversion of Existing Utilities at FCBUF	18	26-Oct-10	15-Nov-10	26-Oct-10 A	15-Nov-10 A	0	
S1A00340	Demolish Existing FCBUF Structure	3	16-Nov-10	18-Nov-10	16-Nov-10 A	18-Nov-10 A	0	
S1A00350	Reinstatement after demolition of FCBUF	3	19-Nov-10	22-Nov-10	19-Nov-10 A	22-Nov-10 A	0	
Section 2 of the Works								
Site Access Dates								
Possesion of Site								
S2000000	Access to Portions 3 and 4	0	23-Sep-10		23-Sep-10 A		0	
Completion								
Commencement and Completion								
S2000005	Completion of Utilities Construction under ITDW	0		19-Jan-11		19-Jan-11 A	0	
S2000010	Achievement of Section 2 Completion	0		20-Apr-11		20-Apr-11 A	0	
Utilties Diversion								
Initial Works								
S2000105	Installation of Geotechnical Instruments	21	07-Oct-10	01-Nov-10	07-Oct-10 A	01-Nov-10 A	0	
S2000115	Abandon Existing Fresh Watermain	21	28-Oct-10	20-Nov-10	28-Oct-10 A	22-Nov-10 A	0	
S2000120	Fence off Portion 3 and 4	45	20-Nov-10	14-Jan-11	20-Nov-10 A	15-Apr-11 A	0	
S2000200	Abandon Existing Cable Duct	40	19-Nov-10	07-Jan-11	19-Nov-10 A	07-Jan-11 A	0	
S2000220	Abandon Existing Foul Sewer	35	19-Nov-10	01-Jan-11	19-Nov-10 A	28-Mar-11 A	0	
S2000230	Abandon Existing Stormwater main	35	26-Nov-10	08-Jan-11	26-Nov-10 A	08-Jan-11 A	0	
Northern Sludge Cake Silo								
Building Foundation Works								
S2000390	NSCS: Piling Design	72	25-Aug-10	19-Nov-10	25-Aug-10 A	19-Nov-10 A	0	
S2000410	NSCS: Predrilling Work for 50% of Piling	18	29-Sep-10	21-Oct-10	29-Sep-10 A	21-Oct-10 A	0	
S2000415	NSCS: Completion of Predrilling Works for Piling	18	22-Oct-10	11-Nov-10	22-Oct-10 A	11-Nov-10 A	0	
S2000420	NSCS: Submit Predrilling Report for Piling	2	12-Nov-10	13-Nov-10	12-Nov-10 A	13-Nov-10 A	0	
S2000430	NSCS: Confirm Founding Level of Piles	5	15-Nov-10	19-Nov-10	15-Nov-10 A	19-Nov-10 A	0	
S2000435	NSCS: Arrange Piling Material for Test	23	25-Oct-10	19-Nov-10	25-Oct-10 A	19-Nov-10 A	0	
S2000438	NSCS: Mobilization of Piling Rigs, Grouting Machines & Other Lifting Equipment	3	20-Nov-10	23-Nov-10	20-Nov-10 A	23-Nov-10 A	0	
S2000440	NSCS: Prebored H-pile (SC-45 to SC-66, 22 nos.)	105	24-Nov-10	02-Apr-11	24-Nov-10 A	01-Feb-11 A	0	
S2000442	NSCS: Install Casing for Prebored H-Pile 6 nos	18	24-Nov-10	14-Dec-10	24-Nov-10 A	14-Dec-10 A	0	
S2000445	NSCS: Installation of H-section (6 nos.)	15	15-Dec-10	04-Jan-11	15-Dec-10 A	23-Dec-10 A	0	
S2000448	NSCS: Grouting for H-pile (SC46,54,56, 58,60&62)	15	22-Dec-10	11-Jan-11	22-Dec-10 A	29-Dec-10 A	0	
S2000450	NSCS: Install Casing for Prebored H-Pile 5 nos	15	16-Dec-10	05-Jan-11	16-Dec-10 A	28-Dec-10 A	0	
S2000452	NSCS: Installation of H-section (5 nos.)	15	23-Dec-10	12-Jan-11	23-Dec-10 A	06-Jan-11 A	0	
S2000454	NSCS: Grouting for H-Pile (SC48,50,52, 64 & 66)	15	28-Dec-10	14-Jan-11	28-Dec-10 A	07-Jan-11 A	0	
S2000456	NSCS: Install Casing for Prebored H-Pile 5 nos	15	30-Dec-10	17-Jan-11	30-Dec-10 A	12-Jan-11 A	0	
S2000458	NSCS: Installation of H-section (5 nos.)	15	06-Jan-11	22-Jan-11	06-Jan-11 A	20-Jan-11 A	0	
S2000460	NSCS: Grouting for H-Pile (SC45,47,49,51 & 61)	15	08-Jan-11	25-Jan-11	08-Jan-11 A	22-Jan-11 A	0	
S2000462	NSCS: Install Casing for Prebored H-Pile 6 nos	18	12-Jan-11	01-Feb-11	12-Jan-11 A	27-Jan-11 A	0	
S2000464	NSCS: Installation of H-section (6nos.)	15	20-Jan-11	10-Feb-11	20-Jan-11 A	29-Jan-11 A	0	
S2000466	NSCS: Grouting for H-Pile (SC53,55,57,59,63 &65)	16	24-Jan-11	15-Feb-11	24-Jan-11 A	01-Feb-11 A	0	

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S2000468	NSCS: As-built Piling Record to ITDW Contractor	22	16-Feb-11	12-Mar-11	16-Feb-11 A	15-Mar-11 A	0	
S2000470	NSCS: Load Test and Proof Drill	24	17-Mar-11	14-Apr-11	17-Mar-11 A	04-Apr-11 A	0	
S2000475	Start Tunnel Const by ITDW Contractor below SCS	0	19-Apr-11		19-Apr-11 A		0	
S2000480	Piling Along Tunnel at Northern Sludge Cake Silo	108	25-Nov-10	08-Apr-11	25-Nov-10 A	19-Apr-11 A	0	
Sludge Dewatering Building and DOU6								
Building Foundation Works								
S2000510	SDB & DOU6: Predrilling Work for Piling at SDB	22	27-Oct-10	20-Nov-10	27-Oct-10 A	11-Nov-10 A	0	
S2000515	SDB & DOU6: Predrilling Works for Piling at DOU6	14	27-Oct-10	11-Nov-10	27-Oct-10 A	11-Nov-10 A	0	
S2000520	SDB & DOU6: Submit Predrilling Report for Piling	2	12-Nov-10	13-Nov-10	12-Nov-10 A	13-Nov-10 A	0	
S2000530	SDB & DOU6: Confirm Founding Level of Piles	5	15-Nov-10	19-Nov-10	15-Nov-10 A	19-Nov-10 A	0	
S2000532	SDB & DOU6: Arrange Piling Material for Test	23	20-Nov-10	16-Dec-10	20-Nov-10 A	10-Dec-10 A	0	
S2000534	SDB & DOU6: Mobilization of Piling Rigs, Grouting Machines & Other Lifting Equipment	3	20-Dec-10	22-Dec-10	20-Dec-10 A	23-Dec-10 A	0	
S2000536	SDB & DOU6: Prebored H-pile (64 nos.)	105	28-Dec-10	09-May-11	28-Dec-10 A	09-Apr-11 A	0	
S2000538	SDB & DOU6: Install Casing for H-pile (10 nos)	20	03-Jan-11	25-Jan-11	03-Jan-11 A	20-Jan-11 A	0	
S2000550	SDB & DOU6: Installation of H-section (10 nos)	16	03-Jan-11	20-Jan-11	03-Jan-11 A	20-Jan-11 A	0	
S2000552	SDB & DOU6: Grout H-Pile (SC46,76,86,100 & 107)	8	05-Jan-11	13-Jan-11	05-Jan-11 A	13-Jan-11 A	0	
S2000555	SDB & DOU6: Grout H-Pile (SC77,87,88,98 &106)	8	14-Jan-11	22-Jan-11	14-Jan-11 A	22-Jan-11 A	0	
S2000557	SDB & DOU6: Install Casing for H-pile (12 nos)	22	19-Jan-11	17-Feb-11	19-Jan-11 A	16-Feb-11 A	0	
S2000560	SDB & DOU6: Installation of H-section (12 nos)	18	21-Jan-11	15-Feb-11	21-Jan-11 A	18-Feb-11 A	0	
S2000562	SDB & DOU6: Grout H-Pile (SC36,47,59,109,116&124	10	25-Jan-11	09-Feb-11	25-Jan-11 A	07-Feb-11 A	0	
S2000564	SDB & DOU6: Grout H-Pile (SC20,37,44,56,96&99)	10	25-Jan-11	09-Feb-11	25-Jan-11 A	07-Feb-11 A	0	
S2000566	SDB & DOU6: Predrilling at Existing VWF	7	03-Jan-11	10-Jan-11	03-Jan-11 A	10-Jan-11 A	0	
S2000568	SDB & DOU6: Submit Predrilling Report at VWF	2	11-Jan-11	12-Jan-11	11-Jan-11 A	12-Jan-11 A	0	
S2000570	SDB & DOU6: Confirm Pile Founding Level at VWF	5	13-Jan-11	18-Jan-11	13-Jan-11 A	18-Jan-11 A	0	
S2000572	SDB & DOU6: Install Casing for H-pile (14 nos)	16	14-Feb-11	03-Mar-11	14-Feb-11 A	25-Feb-11 A	0	
S2000574	SDB & DOU6: Installation of H-section (14 nos.)	20	17-Feb-11	11-Mar-11	17-Feb-11 A	01-Mar-11 A	0	
S2000575	SDB & DOU6: Grout H-Pile (11,23,57,68,79,115&117	12	21-Feb-11	05-Mar-11	21-Feb-11 A	25-Feb-11 A	0	
S2000585	SDB & DOU6: Grout H-Pile (22,26,43,48,89,97&108)	12	26-Feb-11	11-Mar-11	26-Feb-11 A	03-Mar-11 A	0	
S2000590	SDB & DOU6: Install Casing for H-pile (14 nos)	16	24-Feb-11	14-Mar-11	24-Feb-11 A	12-Mar-11 A	0	
S2000595	SDB & DOU6: Installation of H-section (14 nos.)	16	01-Mar-11	18-Mar-11	01-Mar-11 A	15-Mar-11 A	0	
S2000600	SDB & DOU6: Grout H-pile (SC3,5,12,15,60,66&69)	8	02-Mar-11	10-Mar-11	02-Mar-11 A	08-Mar-11 A	0	
S2000605	SDB & DOU6: Grout H-Pile (SC4,14,32,35,45,64&67)	8	09-Mar-11	17-Mar-11	09-Mar-11 A	16-Mar-11 A	0	
S2000610	SDB & DOU6: Install Casing for H-pile (14 nos)	16	12-Mar-11	30-Mar-11	12-Mar-11 A	02-Apr-11 A	0	
S2000615	SDB & DOU6: Installation of H-section (14 nos.)	16	16-Mar-11	02-Apr-11	16-Mar-11 A	07-Apr-11 A	0	
S2000620	SDB & DOU6: Grout H-Pile (SC6,21,25,34,55,58&70)	8	18-Mar-11	26-Mar-11	18-Mar-11 A	28-Mar-11 A	0	
S2000625	SDB & DOU6: Grout H-Pile (SC13,16,24,33,54,65&78	8	29-Mar-11	07-Apr-11	29-Mar-11 A	09-Apr-11 A	0	
S2000628	SDB & DOU6: Load Test and Proof Drill	16	17-Mar-11	04-Apr-11	17-Mar-11 A	04-Apr-11 A	0	
S2000630	SDB: As-built Piling Record to ITDW Contractor	12	12-Mar-11	25-Mar-11	12-Mar-11 A	25-Mar-11 A	0	
S2000635	SDB:Piling Along Tunnel at SDB	108	20-Dec-10	06-May-11	20-Dec-10 A	19-Apr-11 A	0	
S2000645	Start Tunnel Const by ITDW Contractor below SDB	0	19-Apr-11		19-Apr-11 A		0	
Demolition Works								
Existing Structure								
S2000300	Demolish Existing Vehicle Washing Facilities	32	23-Nov-10	01-Jan-11	23-Nov-10 A	31-Dec-10 A	0	
Section 3 of the Works								
Site Access Date								
Possession of Site								
S3000010	Access to Portion 5	0	25-Aug-10		25-Aug-10 A		0	
Completion								
Commencement and Completion								

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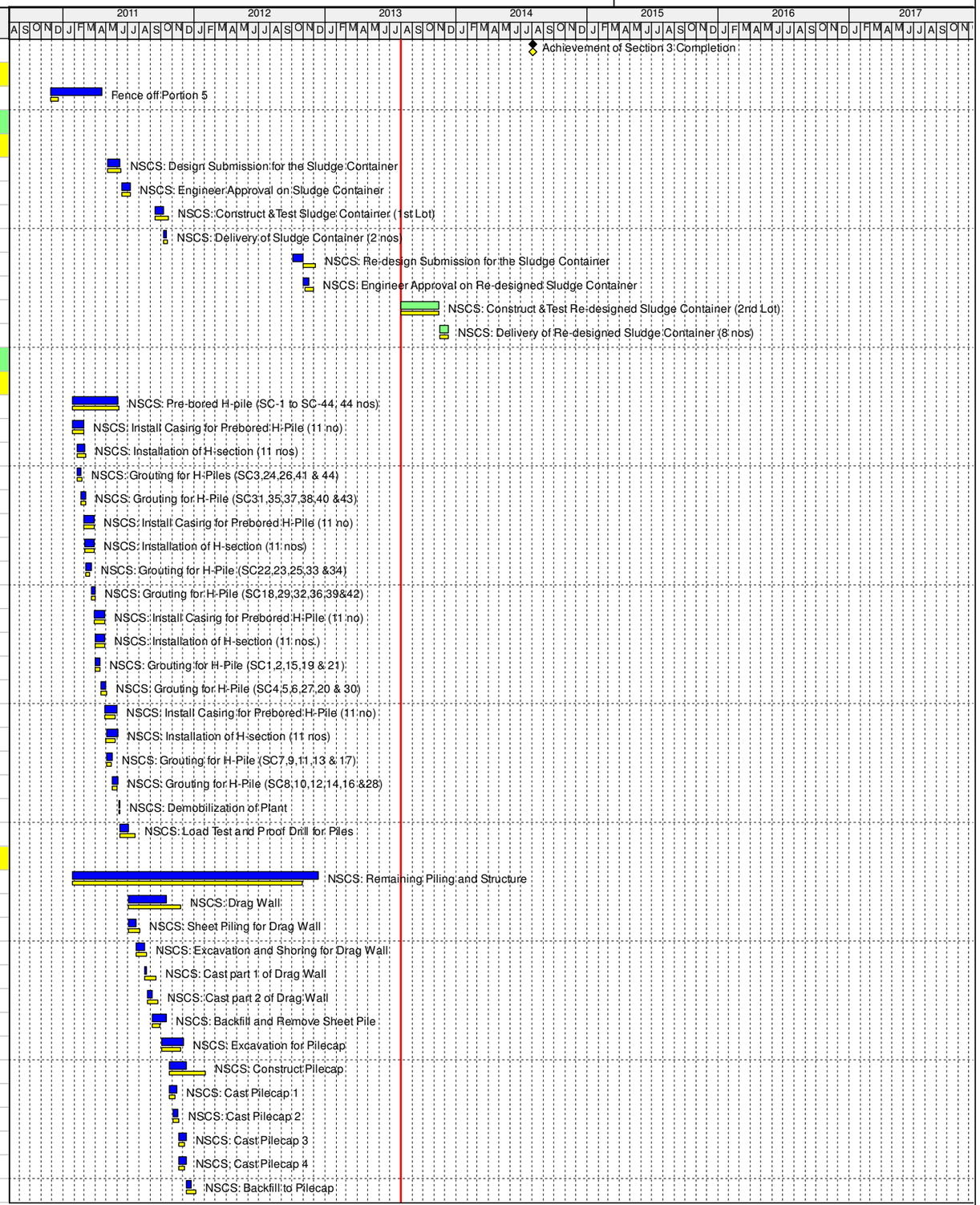
Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S3000020	Achievement of Section 3 Completion	0		04-Aug-14		04-Aug-14	0	-157
Initial Works								
S3000080	Fence off Portion 5	18	29-Nov-10	18-Dec-10	29-Nov-10 A	18-Apr-11 A	0	
Sludge Container								
Design and Supply								
S3000215	NSCS: Design Submission for the Sludge Container	30	06-May-11	11-Jun-11	06-May-11 A	08-Jun-11 A	0	
S3000230	NSCS: Engineer Approval on Sludge Container	21	13-Jun-11	07-Jul-11	13-Jun-11 A	07-Jul-11 A	0	
S3000255	NSCS: Construct &Test Sludge Container (1st Lot)	30	15-Sep-11	21-Oct-11	15-Sep-11 A	08-Oct-11 A	0	
S3000258	NSCS: Delivery of Sludge Container (2 nos)	10	08-Oct-11	19-Oct-11	08-Oct-11 A	17-Oct-11 A	0	
S3000268	NSCS: Re-design Submission for the Sludge Container	30	02-Nov-12	06-Dec-12	03-Oct-12 A	31-Oct-12 A	0	
S3000269	NSCS: Engineer Approval on Re-designed Sludge Container	21	06-Nov-12	29-Nov-12	01-Nov-12 A	17-Nov-12 A	0	
S3000270	NSCS: Construct &Test Re-designed Sludge Container (2nd Lot)	90	31-Jul-13	15-Nov-13	31-Jul-13	15-Nov-13	90	62
S3000276	NSCS: Delivery of Re-designed Sludge Container (8 nos)	21	16-Nov-13	10-Dec-13	16-Nov-13	10-Dec-13	21	62
Northern Sludge Cake Silo								
Piling Works								
S3000205	NSCS: Pre-bored H-pile (SC-1 to SC-44, 44 nos)	102	28-Jan-11	07-Jun-11	28-Jan-11 A	04-Jun-11 A	0	
S3000210	NSCS: Install Casing for Prebored H-Pile (11 no)	24	28-Jan-11	01-Mar-11	28-Jan-11 A	28-Feb-11 A	0	
S3000220	NSCS: Installation of H-section (11 nos)	22	09-Feb-11	05-Mar-11	09-Feb-11 A	03-Mar-11 A	0	
S3000222	NSCS: Grouting for H-Piles (SC3,24,26,41 & 44)	10	11-Feb-11	22-Feb-11	11-Feb-11 A	19-Feb-11 A	0	
S3000224	NSCS: Grouting for H-Pile (SC31,35,37,38,40 &43)	12	21-Feb-11	05-Mar-11	21-Feb-11 A	05-Mar-11 A	0	
S3000226	NSCS: Install Casing for Prebored H-Pile (11 no)	24	01-Mar-11	28-Mar-11	01-Mar-11 A	28-Mar-11 A	0	
S3000228	NSCS: Installation of H-section (11 nos)	22	04-Mar-11	29-Mar-11	04-Mar-11 A	30-Mar-11 A	0	
S3000232	NSCS: Grouting for H-Pile (SC22,23,25,33 &34)	10	07-Mar-11	17-Mar-11	07-Mar-11 A	20-Mar-11 A	0	
S3000238	NSCS: Grouting for H-Pile (SC18,29,32,36,39&42)	12	21-Mar-11	02-Apr-11	21-Mar-11 A	01-Apr-11 A	0	
S3000242	NSCS: Install Casing for Prebored H-Pile (11 no)	24	29-Mar-11	28-Apr-11	29-Mar-11 A	27-Apr-11 A	0	
S3000246	NSCS: Installation of H-section (11 nos.)	22	31-Mar-11	28-Apr-11	31-Mar-11 A	28-Apr-11 A	0	
S3000254	NSCS: Grouting for H-Pile (SC1,2,15,19 & 21)	10	02-Apr-11	14-Apr-11	02-Apr-11 A	15-Apr-11 A	0	
S3000262	NSCS: Grouting for H-Pile (SC4,5,6,27,20 & 30)	12	16-Apr-11	03-May-11	16-Apr-11 A	30-Apr-11 A	0	
S3000266	NSCS: Install Casing for Prebored H-Pile (11 no)	24	28-Apr-11	27-May-11	28-Apr-11 A	01-Jun-11 A	0	
S3000282	NSCS: Installation of H-section (11 nos)	22	30-Apr-11	27-May-11	03-May-11 A	03-Jun-11 A	0	
S3000284	NSCS: Grouting for H-Pile (SC7,9,11,13 & 17)	11	04-May-11	17-May-11	04-May-11 A	18-May-11 A	0	
S3000290	NSCS: Grouting for H-Pile (SC8,10,12,14,16 &28)	12	19-May-11	01-Jun-11	19-May-11 A	04-Jun-11 A	0	
S3000294	NSCS: Demobilization of Plant	3	07-Jun-11	09-Jun-11	07-Jun-11 A	09-Jun-11 A	0	
S3000296	NSCS: Load Test and Proof Drill for Piles	34	10-Jun-11	20-Jul-11	10-Jun-11 A	02-Jul-11 A	0	
Structure								
S3000236	NSCS: Remaining Piling and Structure	518	28-Jan-11	29-Oct-12	28-Jan-11 A	13-Dec-12 A	0	
S3000310	NSCS: Drag Wall	122	04-Jul-11	25-Nov-11	04-Jul-11 A	15-Oct-11 A	0	
S3000315	NSCS: Sheet Piling for Drag Wall	26	04-Jul-11	02-Aug-11	04-Jul-11 A	23-Jul-11 A	0	
S3000320	NSCS: Excavation and Shoring for Drag Wall	26	25-Jul-11	23-Aug-11	25-Jul-11 A	16-Aug-11 A	0	
S3000325	NSCS: Cast part 1 of Drag Wall	26	17-Aug-11	16-Sep-11	17-Aug-11 A	23-Aug-11 A	0	
S3000330	NSCS: Cast part 2 of Drag Wall	26	24-Aug-11	23-Sep-11	24-Aug-11 A	06-Sep-11 A	0	
S3000335	NSCS: Backfill and Remove Sheet Pile	18	07-Sep-11	28-Sep-11	07-Sep-11 A	15-Oct-11 A	0	
S3000340	NSCS: Excavation for Pilecap	45	03-Oct-11	24-Nov-11	03-Oct-11 A	02-Dec-11 A	0	
S3000350	NSCS: Construct Pilecap	80	24-Oct-11	02-Feb-12	24-Oct-11 A	10-Dec-11 A	0	
S3000360	NSCS: Cast Pilecap 1	15	24-Oct-11	09-Nov-11	24-Oct-11 A	14-Nov-11 A	0	
S3000365	NSCS: Cast Pilecap 2	15	03-Nov-11	19-Nov-11	03-Nov-11 A	18-Nov-11 A	0	
S3000370	NSCS: Cast Pilecap 3	15	19-Nov-11	06-Dec-11	19-Nov-11 A	10-Dec-11 A	0	
S3000375	NSCS: Cast Pilecap 4	15	19-Nov-11	06-Dec-11	19-Nov-11 A	10-Dec-11 A	0	
S3000380	NSCS: Backfill to Pilecap	20	12-Dec-11	06-Jan-12	11-Dec-11 A	24-Dec-11 A	0	



Actual Work | Remaining Work | Critical Remaining Work | Project Baseline Bar | Baseline Milestone | Milestone

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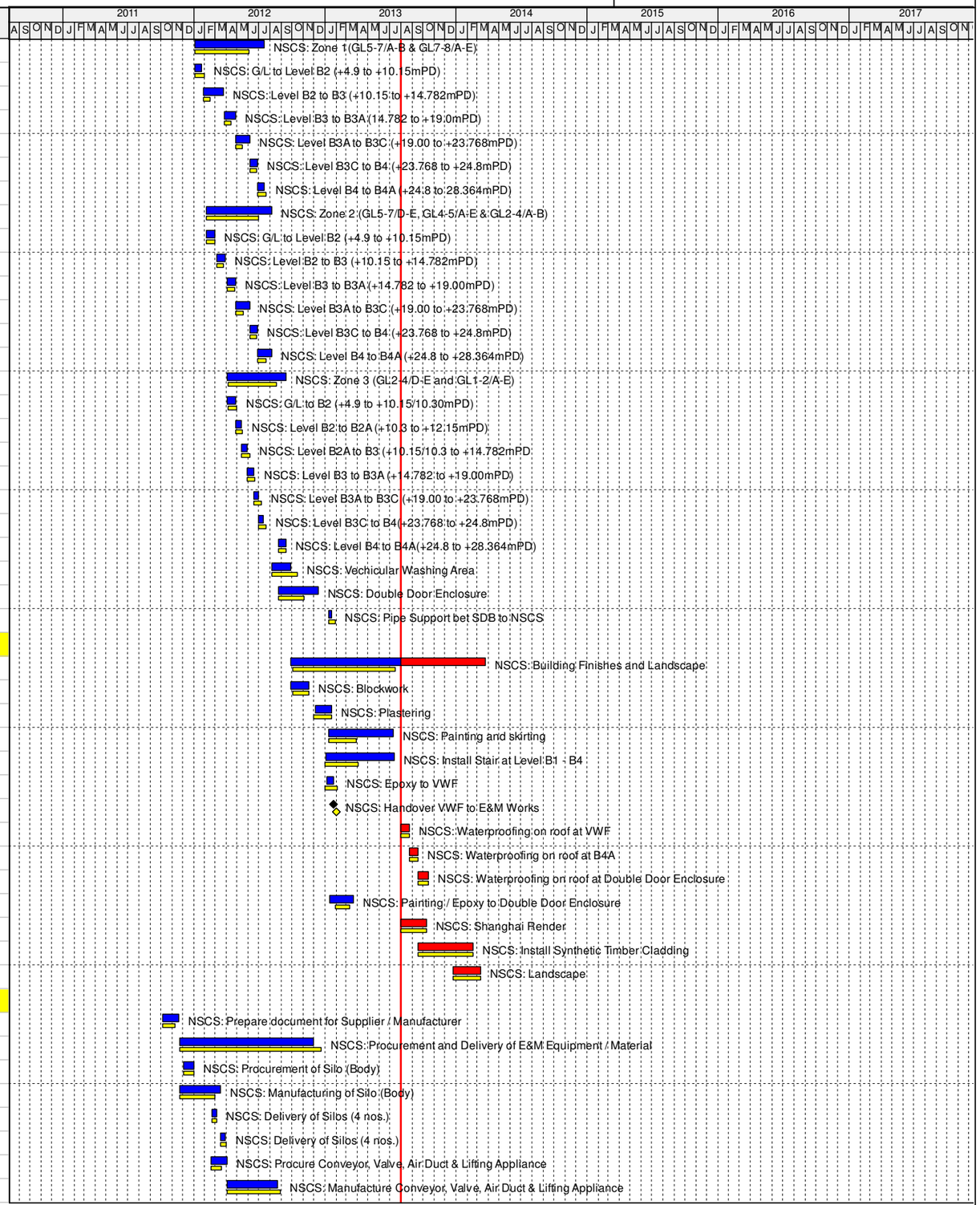
Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S3000391	NSCS: Zone 1(GL5-7/A-B & GL7-8/A-E)	120	03-Jan-12	02-Jun-12	03-Jan-12 A	16-Jul-12 A	0	
S3000392	NSCS: G/L to Level B2 (+4.9 to +10.15mPD)	20	03-Jan-12	31-Jan-12	03-Jan-12 A	21-Jan-12 A	0	
S3000394	NSCS: Level B2 to B3 (+10.15 to +14.782mPD)	16	27-Jan-12	14-Feb-12	27-Jan-12 A	24-Mar-12 A	0	
S3000396	NSCS: Level B3 to B3A (14.782 to +19.0mPD)	16	26-Mar-12	14-Apr-12	26-Mar-12 A	26-Apr-12 A	0	
S3000398	NSCS: Level B3A to B3C (+19.00 to +23.768mPD)	16	27-Apr-12	16-May-12	27-Apr-12 A	05-Jun-12 A	0	
S3000400	NSCS: Level B3C to B4 (+23.768 to +24.8mPD)	16	06-Jun-12	23-Jun-12	06-Jun-12 A	27-Jun-12 A	0	
S3000402	NSCS: Level B4 to B4A (+24.8 to 28.364mPD)	18	28-Jun-12	19-Jul-12	28-Jun-12 A	16-Jul-12 A	0	
S3000404	NSCS: Zone 2 (GL5-7/D-E, GL4-5/A-E & GL2-4/A-B)	118	06-Feb-12	28-Jun-12	06-Feb-12 A	06-Aug-12 A	0	
S3000406	NSCS: G/L to Level B2 (+4.9 to +10.15mPD)	20	06-Feb-12	28-Feb-12	06-Feb-12 A	27-Feb-12 A	0	
S3000408	NSCS: Level B2 to B3 (+10.15 to +14.782mPD)	18	05-Mar-12	24-Mar-12	05-Mar-12 A	28-Mar-12 A	0	
S3000410	NSCS: Level B3 to B3A (+14.782 to +19.00mPD)	17	03-Apr-12	25-Apr-12	03-Apr-12 A	26-Apr-12 A	0	
S3000412	NSCS: Level B3A to B3C (+19.00 to +23.768mPD)	17	27-Apr-12	17-May-12	27-Apr-12 A	05-Jun-12 A	0	
S3000414	NSCS: Level B3C to B4 (+23.768 to +24.8mPD)	16	06-Jun-12	23-Jun-12	06-Jun-12 A	27-Jun-12 A	0	
S3000416	NSCS: Level B4 to B4A (+24.8 to +28.364mPD)	18	28-Jun-12	19-Jul-12	28-Jun-12 A	06-Aug-12 A	0	
S3000418	NSCS: Zone 3 (GL2-4/D-E and GL1-2/A-E)	110	05-Apr-12	17-Aug-12	04-Apr-12 A	15-Sep-12 A	0	
S3000420	NSCS: G/L to B2 (+4.9 to +10.15/10.30mPD)	20	05-Apr-12	30-Apr-12	04-Apr-12 A	27-Apr-12 A	0	
S3000422	NSCS: Level B2 to B2A (+10.3 to +12.15mPD)	15	28-Apr-12	16-May-12	28-Apr-12 A	12-May-12 A	0	
S3000424	NSCS: Level B2A to B3 (+10.15/10.3 to +14.782mPD	17	14-May-12	04-Jun-12	14-May-12 A	28-May-12 A	0	
S3000426	NSCS: Level B3 to B3A (+14.782 to +19.00mPD)	18	29-May-12	18-Jun-12	29-May-12 A	15-Jun-12 A	0	
S3000428	NSCS: Level B3A to B3C (+19.00 to +23.768mPD)	18	16-Jun-12	07-Jul-12	16-Jun-12 A	29-Jun-12 A	0	
S3000430	NSCS: Level B3C to B4(+23.768 to +24.8mPD)	16	30-Jun-12	19-Jul-12	30-Jun-12 A	11-Jul-12 A	0	
S3000432	NSCS: Level B4 to B4A(+24.8 to +28.364mPD)	18	24-Aug-12	13-Sep-12	24-Aug-12 A	15-Sep-12 A	0	
S3000435	NSCS: Vechicular Washing Area	60	06-Aug-12	16-Oct-12	06-Aug-12 A	28-Sep-12 A	0	
S3000440	NSCS: Double Door Enclosure	60	23-Aug-12	02-Nov-12	23-Aug-12 A	13-Dec-12 A	0	
S3000442	NSCS: Pipe Support bet SDB to NSCS	18	10-Jan-13	30-Jan-13	12-Jan-13 A	19-Jan-13 A	0	
Architectural Finishes								
S3000450	NSCS: Building Finishes and Landscape	230	03-Oct-12	15-Jul-13	29-Sep-12 A	24-Mar-14	193	-20
S3000460	NSCS: Blockwork	40	03-Oct-12	17-Nov-12	29-Sep-12 A	17-Nov-12 A	0	
S3000470	NSCS: Plastering	40	30-Nov-12	18-Jan-13	05-Dec-12 A	19-Jan-13 A	0	
S3000480	NSCS: Painting and skirting	60	12-Jan-13	28-Mar-13	12-Jan-13 A	09-Jul-13 A	0	
S3000490	NSCS: Install Stair at Level B1 - B4	75	31-Dec-12	03-Apr-13	03-Jan-13 A	12-Jul-13 A	0	
S3000500	NSCS: Epoxy to VWF	30	31-Dec-12	04-Feb-13	07-Jan-13 A	24-Jan-13 A	0	
S3000505	NSCS: Handover VWF to E&M Works	0		01-Feb-13		24-Jan-13 A	0	
S3000510	NSCS: Waterproofing on roof at VWF	21	31-Jul-13	24-Aug-13	31-Jul-13	24-Aug-13	21	-9
S3000520	NSCS: Waterproofing on roof at B4A	21	24-Aug-13	18-Sep-13	24-Aug-13	18-Sep-13	21	-9
S3000530	NSCS: Waterproofing on roof at Double Door Enclosure	21	18-Sep-13	16-Oct-13	18-Sep-13	16-Oct-13	21	-9
S3000540	NSCS: Painting / Epoxy to Double Door Enclosure	30	29-Jan-13	09-Mar-13	14-Jan-13 A	21-Mar-13 A	0	
S3000550	NSCS: Shanghai Render	60	31-Jul-13	10-Oct-13	31-Jul-13	10-Oct-13	60	-3
S3000560	NSCS: Install Synthetic Timber Cladding	120	18-Sep-13	17-Feb-14	18-Sep-13	17-Feb-14	120	-9
S3000570	NSCS: Landscape	60	24-Dec-13	12-Mar-14	24-Dec-13	12-Mar-14	60	-9
Procurement and Manufacturing								
S3000595	NSCS: Prepare document for Supplier / Manufacturer	35	07-Oct-11	10-Nov-11	07-Oct-11 A	21-Nov-11 A	0	
S3000600	NSCS: Procurement and Delivery of E&M Equipment / Material	396	22-Nov-11	21-Dec-12	22-Nov-11 A	30-Nov-12 A	0	
S3000602	NSCS: Procurement of Silo (Body)	30	02-Dec-11	31-Dec-11	02-Dec-11 A	31-Dec-11 A	0	
S3000604	NSCS: Manufacturing of Silo (Body)	100	22-Nov-11	29-Feb-12	22-Nov-11 A	15-Mar-12 A	0	
S3000608	NSCS: Delivery of Silos (4 nos.)	15	20-Feb-12	05-Mar-12	20-Feb-12 A	05-Mar-12 A	0	
S3000609	NSCS: Delivery of Silos (4 nos.)	15	16-Mar-12	30-Mar-12	16-Mar-12 A	29-Mar-12 A	0	
S3000610	NSCS: Procure Conveyor, Valve, Air Duct & Lifting Appliance	30	17-Feb-12	17-Mar-12	17-Feb-12 A	02-Apr-12 A	0	
S3000620	NSCS: Manufacture Conveyor, Valve, Air Duct & Lifting Appliance	150	03-Apr-12	30-Aug-12	03-Apr-12 A	20-Aug-12 A	0	



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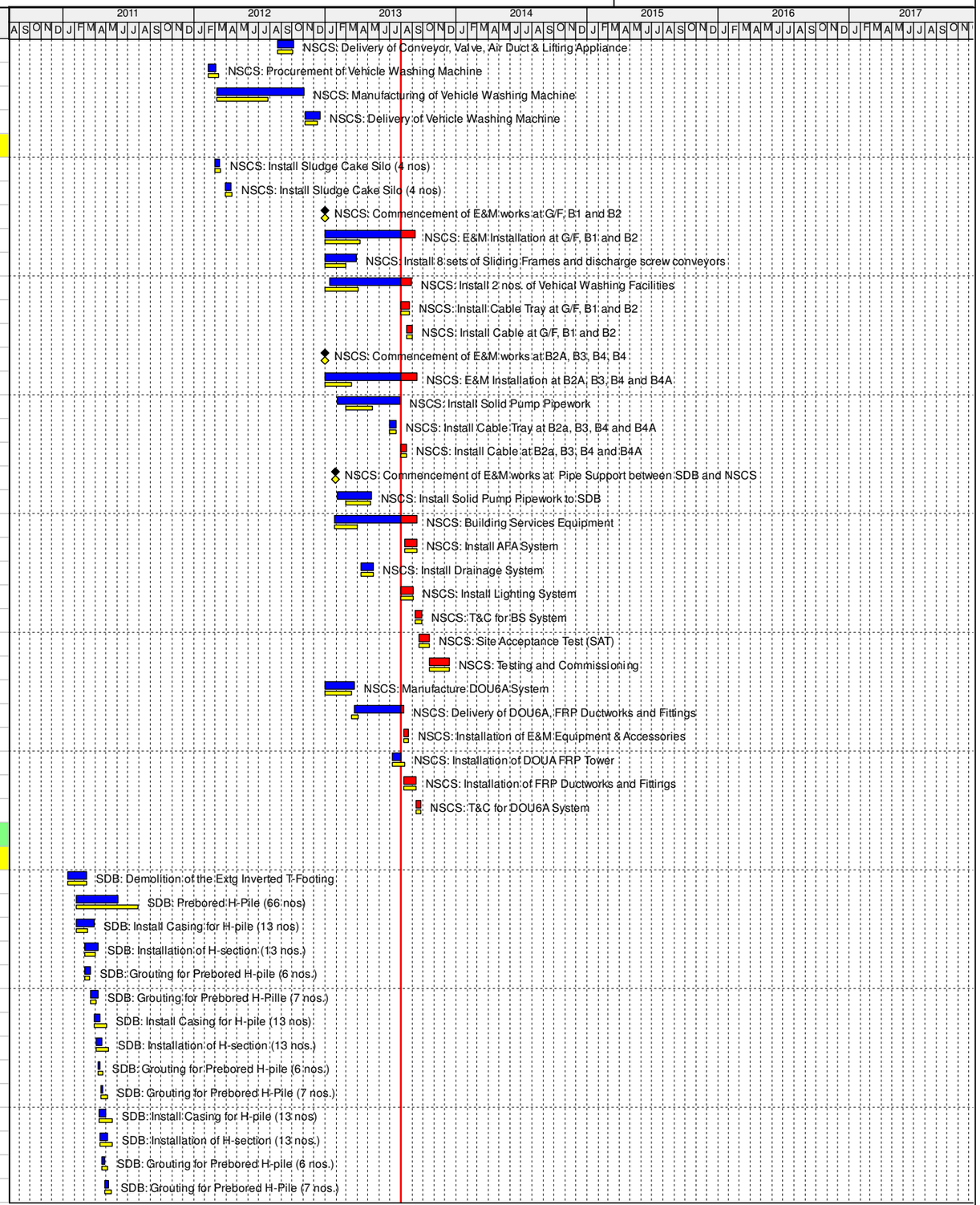
S3000645	NSCS: Delivery of Conveyor, Valve, Air Duct & Lifting Appliance	44	21-Aug-12	03-Oct-12	21-Aug-12 A	05-Oct-12 A	0	
S3000655	NSCS: Procurement of Vehicle Washing Machine	30	10-Feb-12	10-Mar-12	10-Feb-12 A	03-Mar-12 A	0	
S3000658	NSCS: Manufacturing of Vehicle Washing Machine	144	05-Mar-12	26-Jul-12	05-Mar-12 A	04-Nov-12 A	0	
S3000685	NSCS: Delivery of Vehicle Washing Machine	35	05-Nov-12	09-Dec-12	05-Nov-12 A	20-Dec-12 A	0	
E&M Installation and T&C								
S3000605	NSCS: Install Sludge Cake Silo (4 nos)	14	28-Feb-12	14-Mar-12	28-Feb-12 A	12-Mar-12 A	0	
S3000625	NSCS: Install Sludge Cake Silo (4 nos)	14	29-Mar-12	17-Apr-12	29-Mar-12 A	14-Apr-12 A	0	
S3000800	NSCS: Commencement of E&M works at G/F, B1 and B2	0	31-Dec-12		02-Jan-13 A		0	
S3000810	NSCS: E&M Installation at G/F, B1 and B2	98	31-Dec-12	07-Apr-13	02-Jan-13 A	08-Sep-13	40	-118
S3000830	NSCS: Install 8 sets of Sliding Frames and discharge screw conveyors	60	31-Dec-12	28-Feb-13	02-Jan-13 A	29-Mar-13 A	0	
S3000840	NSCS: Install 2 nos. of Vehical Washing Facilities	95	31-Dec-12	04-Apr-13	14-Jan-13 A	29-Aug-13	30	-108
S3000850	NSCS: Install Cable Tray at G/F, B1 and B2	25	31-Jul-13	24-Aug-13	31-Jul-13	24-Aug-13	25	-111
S3000860	NSCS: Install Cable at G/F, B1 and B2	18	15-Aug-13	01-Sep-13	15-Aug-13	01-Sep-13	18	-111
S3000870	NSCS: Commencement of E&M works at B2A, B3, B4, B4	0	31-Dec-12		02-Jan-13 A		0	
S3000880	NSCS: E&M Installation at B2A, B3, B4 and B4A	75	31-Dec-12	15-Mar-13	02-Jan-13 A	14-Sep-13	46	-140
S3000890	NSCS: Install Solid Pump Pipework	75	28-Feb-13	13-May-13	04-Feb-13 A	29-Jul-13 A	0	
S3000910	NSCS: Install Cable Tray at B2a, B3, B4 and B4A	18	30-Jun-13	17-Jul-13	30-Jun-13 A	17-Jul-13 A	0	
S3000920	NSCS: Install Cable at B2a, B3, B4 and B4A	18	31-Jul-13	17-Aug-13	31-Jul-13	17-Aug-13	18	-112
S3000940	NSCS: Commencement of E&M works at Pipe Support between SDB and NSCS	0	31-Jan-13		31-Jan-13 A		0	
S3000950	NSCS: Install Solid Pump Pipework to SDB	70	28-Feb-13	08-May-13	04-Feb-13 A	09-May-13 A	0	
S3000960	NSCS: Building Services Equipment	66	26-Jan-13	01-Apr-13	26-Jan-13 A	13-Sep-13	45	-144
S3000962	NSCS: Install AFA System	36	10-Aug-13	14-Sep-13	10-Aug-13	14-Sep-13	36	-144
S3000964	NSCS: Install Drainage System	36	10-Apr-13	15-May-13	10-Apr-13 A	15-May-13 A	0	
S3000966	NSCS: Install Lighting System	35	31-Jul-13	03-Sep-13	31-Jul-13	03-Sep-13	35	-144
S3000968	NSCS: T&C for BS System	20	09-Sep-13	28-Sep-13	09-Sep-13	28-Sep-13	20	-144
S3000970	NSCS: Site Acceptance Test (SAT)	30	19-Sep-13	18-Oct-13	19-Sep-13	18-Oct-13	30	-144
S3000980	NSCS: Testing and Commissioning	56	19-Oct-13	14-Dec-13	19-Oct-13	14-Dec-13	56	-144
S3000990	NSCS: Manufacture DOU6A System	75	31-Dec-12	15-Mar-13	31-Dec-12 A	23-Mar-13 A	0	
S3001000	NSCS: Delivery of DOU6A, FRP Ductworks and Fittings	18	16-Mar-13	02-Apr-13	25-Mar-13 A	07-Aug-13	8	-121
S3001010	NSCS: Installation of E&M Equipment & Accessories	15	08-Aug-13	22-Aug-13	08-Aug-13	22-Aug-13	15	-101
S3001020	NSCS: Installation of DOUA FRP Tower	35	08-Jul-13	11-Aug-13	08-Jul-13 A	31-Jul-13 A	0	
S3001030	NSCS: Installation of FRP Ductworks and Fittings	35	08-Aug-13	11-Sep-13	08-Aug-13	11-Sep-13	35	-121
S3001040	NSCS: T&C for DOU6A System	14	12-Sep-13	25-Sep-13	12-Sep-13	25-Sep-13	14	-121
Sludge Dewatering Building and DOU6								
Piling Works								
S3001175	SDB: Demolition of the Extg Inverted T-Footing	40	15-Jan-11	07-Mar-11	15-Jan-11 A	08-Mar-11 A	0	
S3001180	SDB: Prebored H-Pile (66 nos)	142	08-Feb-11	30-Jul-11	08-Feb-11 A	03-Jun-11 A	0	
S3001182	SDB: Install Casing for H-pile (13 nos)	27	08-Feb-11	10-Mar-11	08-Feb-11 A	29-Mar-11 A	0	
S3001184	SDB: Installation of H-section (13 nos.)	26	03-Mar-11	01-Apr-11	03-Mar-11 A	08-Apr-11 A	0	
S3001186	SDB: Grouting for Prebored H-pile (6 nos.)	12	04-Mar-11	17-Mar-11	04-Mar-11 A	18-Mar-11 A	0	
S3001188	SDB: Grouting for Prebored H-Pille (7 nos.)	14	19-Mar-11	04-Apr-11	19-Mar-11 A	09-Apr-11 A	0	
S3001190	SDB: Install Casing for H-pile (13 nos)	27	29-Mar-11	03-May-11	29-Mar-11 A	13-Apr-11 A	0	
S3001192	SDB: Installation of H-section (13 nos.)	26	04-Apr-11	07-May-11	04-Apr-11 A	20-Apr-11 A	0	
S3001194	SDB: Grouting for Prebored H-pile (6 nos.)	12	08-Apr-11	21-Apr-11	08-Apr-11 A	15-Apr-11 A	0	
S3001196	SDB: Grouting for Prebored H-Pile (7 nos.)	14	16-Apr-11	05-May-11	16-Apr-11 A	21-Apr-11 A	0	
S3001202	SDB: Install Casing for H-pile (13 nos)	27	13-Apr-11	18-May-11	13-Apr-11 A	29-Apr-11 A	0	
S3001204	SDB: Installation of H-section (13 nos.)	26	15-Apr-11	19-May-11	15-Apr-11 A	05-May-11 A	0	
S3001210	SDB: Grouting for Prebored H-pile (6 nos.)	12	19-Apr-11	05-May-11	19-Apr-11 A	27-Apr-11 A	0	
S3001215	SDB: Grouting for Prebored H-Pile (7 nos.)	14	28-Apr-11	16-May-11	28-Apr-11 A	07-May-11 A	0	



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Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S3001222	SDB: Install Casing for H-pile (13 nos)	27	27-Apr-11	30-May-11	27-Apr-11 A	13-May-11 A	0	
S3001224	SDB: Installation of H-section (13 nos.)	26	29-Apr-11	31-May-11	29-Apr-11 A	20-May-11 A	0	
S3001230	SDB: Grouting for Prebored H-pile (6 nos.)	12	03-May-11	17-May-11	03-May-11 A	12-May-11 A	0	
S3001236	SDB: Grouting for Prebored H-Pile (7 nos.)	14	13-May-11	28-May-11	13-May-11 A	22-May-11 A	0	
S3001240	SDB: Install Casing for H-pile (14 nos)	28	14-May-11	16-Jun-11	14-May-11 A	03-Jun-11 A	0	
S3001250	SDB: Installation of H-section (14 nos.)	28	18-May-11	20-Jun-11	18-May-11 A	03-Jun-11 A	0	
S3001254	SDB: Grouting for Prebore H-Pile (7 nos.)	14	21-May-11	07-Jun-11	21-May-11 A	31-May-11 A	0	
S3001258	SDB: Grouting for Prebored H-Pile (7 nos.)	14	28-May-11	14-Jun-11	28-May-11 A	03-Jun-11 A	0	
S3001260	SDB: Demobilization of Plant	4	04-Jun-11	09-Jun-11	04-Jun-11 A	08-Jun-11 A	0	
S3001264	SDB: Load Test and Proof Drill for Piles	34	18-Jun-11	28-Jul-11	18-Jun-11 A	05-Jul-11 A	0	
Structure								
S3001200	SDB: Remaining Piling and Structure	490	08-Feb-11	29-Sep-12	08-Feb-11 A	15-Jan-13 A	0	
S3001220	SDB: Excavation of ground beam and pilecap	60	05-Jul-11	12-Sep-11	05-Jul-11 A	16-Dec-11 A	0	
S3001226	SDB: Casting of Ground Beam & Pile Cap (GL12-14)	34	30-Aug-11	11-Oct-11	30-Aug-11 A	25-Nov-11 A	0	
S3001228	SDB: Casting of Ground Beam & Pile Cap (GL1-3)	30	17-Oct-11	19-Nov-11	17-Oct-11 A	22-Dec-11 A	0	
S3001232	SDB: Casting of Ground Beam & Pile Cap (GL4-11)	40	02-Nov-11	17-Dec-11	02-Nov-11 A	30-Dec-11 A	0	
S3001234	SDB: Underground Drainage (GL1-7, GL A1-F)	25	06-Dec-11	06-Jan-12	06-Dec-11 A	30-Dec-11 A	0	
S3001238	SDB: Underground Drainage (GL 7-14, GL A1-F)	25	19-Dec-11	19-Jan-12	19-Dec-11 A	22-Jan-12 A	0	
S3001242	SDB: GF and Upper GF GL 1-7 Base Slab	30	27-Jan-12	01-Mar-12	22-Jan-12 A	17-Mar-12 A	0	
S3001243	SDB: GFSlab Grid 1 to 3	12	14-Nov-12	27-Nov-12	18-Oct-12 A	31-Oct-12 A	0	
S3001244	SDB: GL 7-14 GF & Upper GF Base Slab / Trenches	30	31-Dec-11	10-Feb-12	31-Dec-11 A	10-Mar-12 A	0	
S3001246	SDB: Construct Column GL1 - GL 7	30	21-Jan-12	29-Feb-12	20-Jan-12 A	03-Apr-12 A	0	
S3001248	SDB: Construct Column GL 7 - GL 13	28	16-Jan-12	22-Feb-12	15-Jan-12 A	01-Mar-12 A	0	
S3001252	SDB: Upper Structure	124	03-Jan-12	07-Jun-12	03-Jan-12 A	09-Aug-12 A	0	
S3001256	SDB: Bay 1 1st Lift (GL9-13/A1-D, +5.4 to +9.15mPD)	15	03-Jan-12	19-Jan-12	03-Jan-12 A	06-Mar-12 A	0	
S3001262	SDB: Bay 1 2nd Lift (GL9-13/A1-D, +9.15 to +12.9mPD)	18	06-Mar-12	26-Mar-12	06-Mar-12 A	13-Apr-12 A	0	
S3001270	SDB: Bay 1 3rd Lift (GL9-13/A1-D, +12.9 to +16.8mPD)	18	17-Apr-12	08-May-12	17-Apr-12 A	07-May-12 A	0	
S3001272	SDB: Bay 1 4th Lift (GL9-13/A1-D, +16.8 to19.1mPD)	18	08-May-12	30-May-12	08-May-12 A	28-May-12 A	0	
S3001274	SDB: Bay 2, 1st Lift (GL5-9/AI-D, +5.4 to +9.15mPD)	15	05-Mar-12	21-Mar-12	05-Mar-12 A	23-Mar-12 A	0	
S3001282	SDB: Bay 2, 2nd Lift (GL5-9/AI-D, +9.15 to +12.9mPD)	18	24-Mar-12	17-Apr-12	24-Mar-12 A	21-Apr-12 A	0	
S3001284	SDB: Bay 2, 3rd Lift (GL5-9/AI-D, +12.9 to +16.8mPD)	18	25-Apr-12	16-May-12	25-Apr-12 A	19-May-12 A	0	
S3001286	SDB: Bay 2, 4th Lift (GL5-9/AI-D, +16.8 to +19.1mPD)	18	22-May-12	13-Jun-12	22-May-12 A	05-Jul-12 A	0	
S3001288	SDB: Bay 3, 1st Lift (GL1-5/AI-D, +5.4 to +9.15mPD)	18	02-Apr-12	25-Apr-12	02-Apr-12 A	21-Apr-12 A	0	
S3001298	SDB: Bay 3, 2nd Lift (GL1-5/AI-D, +9.15 to +12.9mPD)	18	23-Apr-12	14-May-12	23-Apr-12 A	13-Jun-12 A	0	
S3001302	SDB: Bay 3, 3rd Lift (GL1-5/AI-D, +12.9 to +16.8mPD)	18	14-Jun-12	05-Jul-12	14-Jun-12 A	13-Jul-12 A	0	
S3001304	SDB: Bay 3, 4th Lift (GL1-5/AI-D, +16.8 to +19.1mPD)	18	14-Jul-12	03-Aug-12	14-Jul-12 A	09-Aug-12 A	0	
S3001310	SDB: Staircase Roof	21	19-Jun-12	13-Jul-12	19-Jun-12 A	10-Jul-12 A	0	
S3001320	DOU 6 Structure	60	01-Mar-12	14-May-12	01-Mar-12 A	12-Apr-12 A	0	
S3001330	SDB: DG Store Structure	60	01-Mar-12	14-May-12	01-Mar-12 A	16-Oct-12 A	0	
S3001340	SDB: Close Wall Stem at DG Store	12	17-Aug-12	30-Aug-12	17-Aug-12 A	25-Jan-13 A	0	
Architectural Finishes								
S3001380	SDB: Building Finishes and Landscape	385	05-Jul-12	19-Oct-13	05-Jul-12 A	25-Feb-14	170	3
S3001390	SDB: Finishes to G/F	180	05-Jul-12	05-Feb-13	05-Jul-12 A	05-Feb-13 A	0	
S3001392	SDB: Blockwork to MCC / Control Room	40	05-Jul-12	20-Aug-12	05-Jul-12 A	11-Aug-12 A	0	
S3001394	SDB: Blockwork to MCC / Control Room	30	01-Aug-12	04-Sep-12	01-Aug-12 A	28-Aug-12 A	0	
S3001396	SDB: Painting to MCC / Control Room	18	03-Oct-12	23-Oct-12	31-Aug-12 A	20-Sep-12 A	0	
S3001397	SDB: Handover MCC / Control Room to E&M Works	0		03-Oct-12		20-Sep-12 A	0	
S3001398	SDB: Chequer Plate Flooring	30	02-Jul-13	06-Aug-13	02-Jul-13 A	15-Jul-13 A	0	
S3001400	SDB: Tile to Polymer Preparation Room	15	03-Oct-12	19-Oct-12	12-Sep-12 A	28-Sep-12 A	0	

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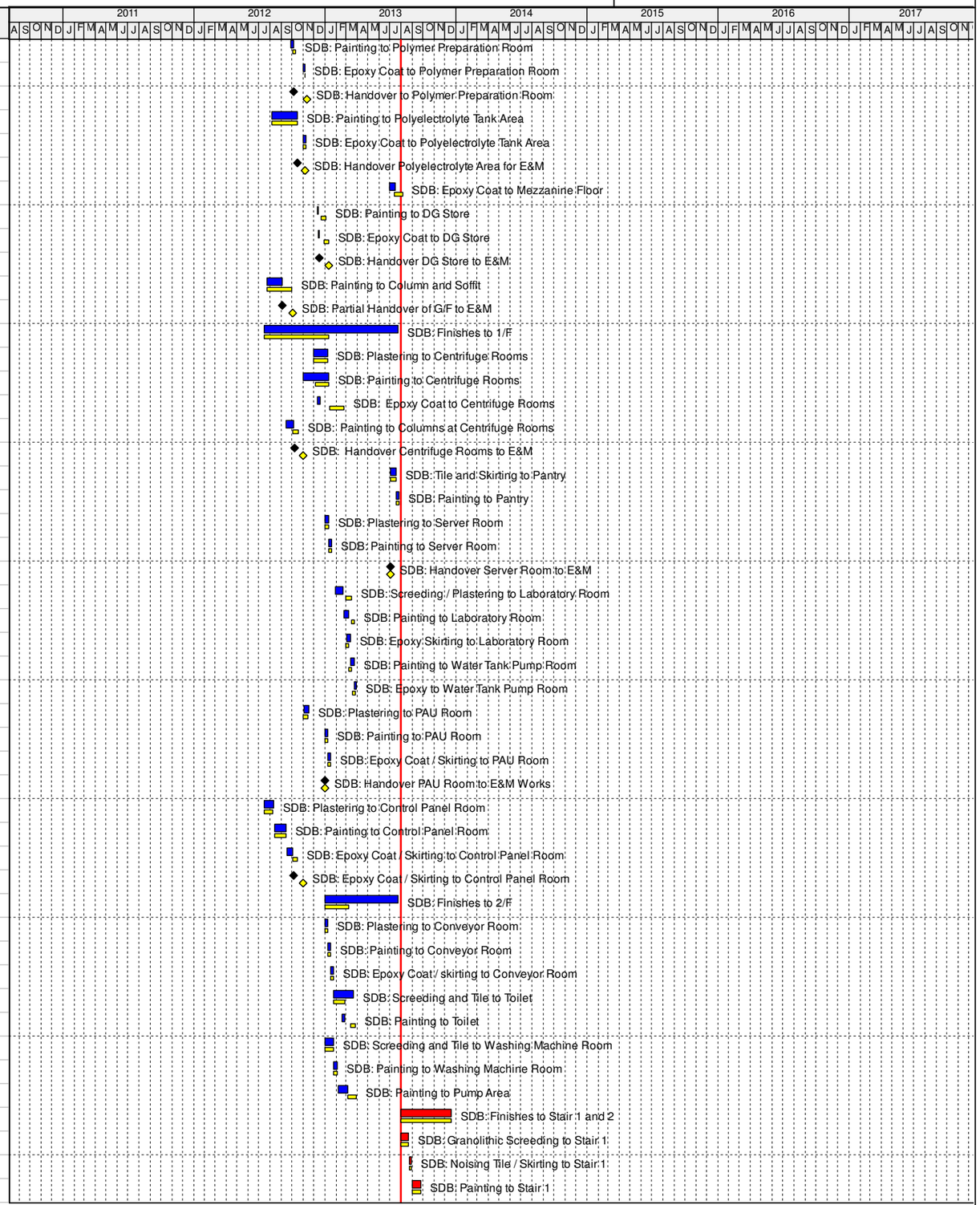
Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S3001402	SDB: Painting to Polymer Preparation Room	7	03-Oct-12	10-Oct-12	29-Sep-12 A	06-Oct-12 A	0	
S3001404	SDB: Epoxy Coat to Polymer Preparation Room	0	06-Nov-12	06-Nov-12	31-Oct-12 A	06-Nov-12 A	0	
S3001405	SDB: Handover to Polymer Preparation Room	0		12-Nov-12		06-Oct-12 A	0	
S3001406	SDB: Painting to Polyelectrolyte Tank Area	60	06-Aug-12	16-Oct-12	06-Aug-12 A	16-Oct-12 A	0	
S3001408	SDB: Epoxy Coat to Polyelectrolyte Tank Area	8	31-Oct-12	08-Nov-12	31-Oct-12 A	08-Nov-12 A	0	
S3001409	SDB: Handover Polyelectrolyte Area for E&M	0		05-Nov-12		17-Oct-12 A	0	
S3001410	SDB: Epoxy Coat to Mezzanine Floor	20	13-Jul-13	06-Aug-13	01-Jul-13 A	15-Jul-13 A	0	
S3001412	SDB: Painting to DG Store	10	20-Dec-12	04-Jan-13	11-Dec-12 A	14-Dec-12 A	0	
S3001414	SDB: Epoxy Coat to DG Store	10	29-Dec-12	11-Jan-13	14-Dec-12 A	15-Dec-12 A	0	
S3001415	SDB: Handover DG Store to E&M	0		11-Jan-13		17-Dec-12 A	0	
S3001416	SDB: Painting to Column and Soffit	60	23-Jul-12	29-Sep-12	23-Jul-12 A	04-Sep-12 A	0	
S3001418	SDB: Partial Handover of G/F to E&M	0		03-Oct-12		04-Sep-12 A	0	
S3001420	SDB: Finishes to 1/F	150	16-Jul-12	11-Jan-13	16-Jul-12 A	24-Jul-13 A	0	
S3001421	SDB: Plastering to Centrifuge Rooms	30	30-Nov-12	08-Jan-13	30-Nov-12 A	07-Jan-13 A	0	
S3001422	SDB: Painting to Centrifuge Rooms	30	05-Dec-12	12-Jan-13	31-Oct-12 A	11-Jan-13 A	0	
S3001423	SDB: Epoxy Coat to Centrifuge Rooms	30	14-Jan-13	23-Feb-13	11-Dec-12 A	19-Dec-12 A	0	
S3001424	SDB: Painting to Columns at Centrifuge Rooms	15	03-Oct-12	19-Oct-12	14-Sep-12 A	06-Oct-12 A	0	
S3001425	SDB: Handover Centrifuge Rooms to E&M	0		01-Nov-12		08-Oct-12 A	0	
S3001432	SDB: Tile and Skirting to Pantry	14	02-Jul-13	17-Jul-13	02-Jul-13 A	17-Jul-13 A	0	
S3001433	SDB: Painting to Pantry	7	18-Jul-13	25-Jul-13	18-Jul-13 A	25-Jul-13 A	0	
S3001434	SDB: Plastering to Server Room	10	31-Dec-12	11-Jan-13	31-Dec-12 A	11-Jan-13 A	0	
S3001435	SDB: Painting to Server Room	7	12-Jan-13	19-Jan-13	12-Jan-13 A	19-Jan-13 A	0	
S3001436	SDB: Handover Server Room to E&M	0		02-Jul-13		02-Jul-13 A	0	
S3001437	SDB: Screeding / Plastering to Laboratory Room	14	28-Feb-13	15-Mar-13	31-Jan-13 A	21-Feb-13 A	0	
S3001438	SDB: Painting to Laboratory Room	7	16-Mar-13	23-Mar-13	22-Feb-13 A	09-Mar-13 A	0	
S3001439	SDB: Epoxy Skirting to Laboratory Room	7	01-Mar-13	08-Mar-13	04-Mar-13 A	13-Mar-13 A	0	
S3001440	SDB: Painting to Water Tank Pump Room	7	09-Mar-13	16-Mar-13	14-Mar-13 A	23-Mar-13 A	0	
S3001442	SDB: Epoxy to Water Tank Pump Room	7	18-Mar-13	25-Mar-13	25-Mar-13 A	30-Mar-13 A	0	
S3001450	SDB: Plastering to PAU Room	12	31-Oct-12	14-Nov-12	05-Nov-12 A	17-Nov-12 A	0	
S3001452	SDB: Painting to PAU Room	7	31-Dec-12	08-Jan-13	31-Dec-12 A	08-Jan-13 A	0	
S3001454	SDB: Epoxy Coat / Skirting to PAU Room	7	09-Jan-13	16-Jan-13	09-Jan-13 A	16-Jan-13 A	0	
S3001455	SDB: Handover PAU Room to E&M Works	0		31-Dec-12		31-Dec-12 A	0	
S3001456	SDB: Plastering to Control Panel Room	21	16-Jul-12	08-Aug-12	16-Jul-12 A	11-Aug-12 A	0	
S3001458	SDB: Painting to Control Panel Room	30	13-Aug-12	15-Sep-12	13-Aug-12 A	15-Sep-12 A	0	
S3001460	SDB: Epoxy Coat / Skirting to Control Panel Room	12	03-Oct-12	17-Oct-12	17-Sep-12 A	04-Oct-12 A	0	
S3001462	SDB: Epoxy Coat / Skirting to Control Panel Room	0		01-Nov-12		05-Oct-12 A	0	
S3001463	SDB: Finishes to 2/F	52	31-Dec-12	07-Mar-13	31-Dec-12 A	24-Jul-13 A	0	
S3001464	SDB: Plastering to Conveyor Room	7	31-Dec-12	08-Jan-13	31-Dec-12 A	08-Jan-13 A	0	
S3001466	SDB: Painting to Conveyor Room	7	09-Jan-13	16-Jan-13	09-Jan-13 A	16-Jan-13 A	0	
S3001468	SDB: Epoxy Coat / skirting to Conveyor Room	7	17-Jan-13	24-Jan-13	17-Jan-13 A	24-Jan-13 A	0	
S3001470	SDB: Screeding and Tile to Toilet	21	25-Jan-13	25-Feb-13	25-Jan-13 A	21-Mar-13 A	0	
S3001472	SDB: Painting to Toilet	10	14-Mar-13	25-Mar-13	18-Feb-13 A	26-Feb-13 A	0	
S3001474	SDB: Screeding and Tile to Washing Machine Room	20	31-Dec-12	23-Jan-13	31-Dec-12 A	23-Jan-13 A	0	
S3001476	SDB: Painting to Washing Machine Room	10	24-Jan-13	04-Feb-13	24-Jan-13 A	04-Feb-13 A	0	
S3001478	SDB: Painting to Pump Area	20	06-Mar-13	28-Mar-13	06-Feb-13 A	06-Mar-13 A	0	
S3001479	SDB: Finishes to Stair 1 and 2	118	31-Jul-13	19-Dec-13	31-Jul-13	19-Dec-13	118	-32
S3001480	SDB: Granolithic Screeding to Stair 1	20	31-Jul-13	22-Aug-13	31-Jul-13	22-Aug-13	20	-32
S3001482	SDB: Noising Tile / Skirting to Stair 1	7	23-Aug-13	30-Aug-13	23-Aug-13	30-Aug-13	7	-32
S3001484	SDB: Painting to Stair 1	20	31-Aug-13	24-Sep-13	31-Aug-13	24-Sep-13	20	-32



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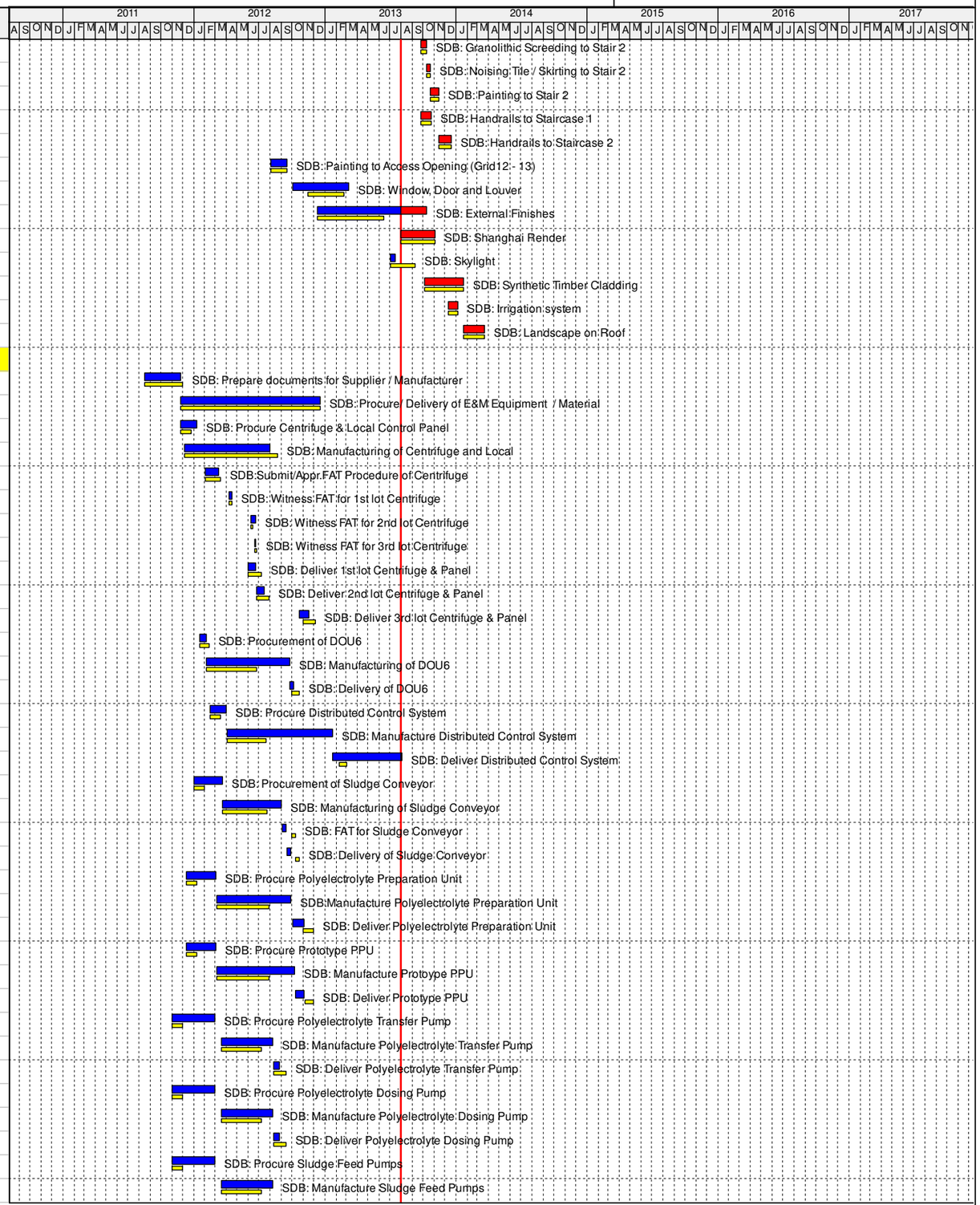
Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S3001486	SDB: Granolithic Screeding to Stair 2	14	25-Sep-13	11-Oct-13	25-Sep-13	11-Oct-13	14	-32
S3001488	SDB: Noising Tile / Skirting to Stair 2	7	12-Oct-13	21-Oct-13	12-Oct-13	21-Oct-13	7	-32
S3001490	SDB: Painting to Stair 2	20	22-Oct-13	13-Nov-13	22-Oct-13	13-Nov-13	20	-32
S3001492	SDB: Handrails to Staircase 1	25	25-Sep-13	25-Oct-13	25-Sep-13	25-Oct-13	25	-16
S3001494	SDB: Handrails to Staircase 2	30	14-Nov-13	19-Dec-13	14-Nov-13	19-Dec-13	30	-32
S3001496	SDB: Painting to Access Opening (Grid12 - 13)	40	02-Aug-12	17-Sep-12	02-Aug-12 A	17-Sep-12 A	0	
S3001500	SDB: Window, Door and Louver	80	14-Nov-12	23-Feb-13	03-Oct-12 A	08-Mar-13 A	0	
S3001515	SDB: External Finishes	145	11-Dec-12	13-Jun-13	11-Dec-12 A	10-Oct-13	60	-103
S3001520	SDB: Shanghai Render	80	31-Jul-13	04-Nov-13	31-Jul-13	04-Nov-13	80	-103
S3001524	SDB: Skylight	60	02-Jul-13	09-Sep-13	02-Jul-13 A	15-Jul-13 A	0	
S3001525	SDB: Synthetic Timber Cladding	90	05-Oct-13	23-Jan-14	05-Oct-13	23-Jan-14	90	-103
S3001530	SDB: Irrigation system	20	11-Dec-13	06-Jan-14	11-Dec-13	06-Jan-14	20	-3
S3001540	SDB: Landscape on Roof	45	23-Jan-14	21-Mar-14	23-Jan-14	21-Mar-14	45	-17
Procurement, Manufacture and Delivery								
S3001545	SDB: Prepare documents for Supplier / Manufacturer	105	18-Aug-11	30-Nov-11	18-Aug-11 A	25-Nov-11 A	0	
S3001550	SDB: Procure/ Delivery of E&M Equipment / Material	390	26-Nov-11	19-Dec-12	26-Nov-11 A	19-Dec-12 A	0	
S3001560	SDB: Procure Centrifuge & Local Control Panel	30	26-Nov-11	25-Dec-11	26-Nov-11 A	08-Jan-12 A	0	
S3001570	SDB: Manufacturing of Centrifuge and Local	260	06-Dec-11	21-Aug-12	06-Dec-11 A	30-Jul-12 A	0	
S3001575	SDB:Submit/Appr.FAT Procedure of Centrifuge	45	01-Feb-12	16-Mar-12	01-Feb-12 A	10-Mar-12 A	0	
S3001578	SDB: Witness FAT for 1st lot Centrifuge	8	08-Apr-12	15-Apr-12	08-Apr-12 A	15-Apr-12 A	0	
S3001580	SDB: Witness FAT for 2nd lot Centrifuge	7	08-Jun-12	14-Jun-12	08-Jun-12 A	22-Jun-12 A	0	
S3001581	SDB: Witness FAT for 3rd lot Centrifuge	7	18-Jun-12	24-Jun-12	18-Jun-12 A	22-Jun-12 A	0	
S3001582	SDB: Deliver 1st lot Centrifuge & Panel	36	01-Jun-12	06-Jul-12	01-Jun-12 A	22-Jun-12 A	0	
S3001584	SDB: Deliver 2nd lot Centrifuge & Panel	36	23-Jun-12	28-Jul-12	23-Jun-12 A	16-Jul-12 A	0	
S3001586	SDB: Deliver 3rd lot Centrifuge & Panel	36	31-Oct-12	05-Dec-12	22-Oct-12 A	16-Nov-12 A	0	
S3001592	SDB: Procurement of DOU6	28	16-Jan-12	12-Feb-12	16-Jan-12 A	04-Feb-12 A	0	
S3001594	SDB: Manufacturing of DOU6	140	06-Feb-12	24-Jun-12	06-Feb-12 A	24-Sep-12 A	0	
S3001598	SDB: Delivery of DOU6	21	30-Sep-12	20-Oct-12	25-Sep-12 A	06-Oct-12 A	0	
S3001600	SDB: Procure Distributed Control System	30	15-Feb-12	15-Mar-12	15-Feb-12 A	31-Mar-12 A	0	
S3001610	SDB: Manufacture Distributed Control System	110	02-Apr-12	20-Jul-12	02-Apr-12 A	21-Jan-13 A	0	
S3001630	SDB: Deliver Distributed Control System	21	10-Feb-13	02-Mar-13	22-Jan-13 A	02-Aug-13	3	-156
S3001640	SDB: Procurement of Sludge Conveyor	30	02-Jan-12	31-Jan-12	02-Jan-12 A	20-Mar-12 A	0	
S3001650	SDB: Manufacturing of Sludge Conveyor	125	21-Mar-12	23-Jul-12	21-Mar-12 A	01-Sep-12 A	0	
S3001660	SDB: FAT for Sludge Conveyor	10	01-Oct-12	10-Oct-12	03-Sep-12 A	15-Sep-12 A	0	
S3001670	SDB: Delivery of Sludge Conveyor	10	11-Oct-12	20-Oct-12	17-Sep-12 A	29-Sep-12 A	0	
S3001850	SDB: Procure Polyelectrolyte Preparation Unit	30	12-Dec-11	10-Jan-12	12-Dec-11 A	03-Mar-12 A	0	
S3001852	SDB:Manufacture Polyelectrolyte Preparation Unit	147	05-Mar-12	29-Jul-12	05-Mar-12 A	29-Sep-12 A	0	
S3001854	SDB: Deliver Polyelectrolyte Preparation Unit	30	31-Oct-12	29-Nov-12	03-Oct-12 A	03-Nov-12 A	0	
S3001860	SDB: Procure Prototype PPU	30	12-Dec-11	10-Jan-12	12-Dec-11 A	03-Mar-12 A	0	
S3001862	SDB: Manufacture Protoype PPU	147	05-Mar-12	29-Jul-12	05-Mar-12 A	09-Oct-12 A	0	
S3001864	SDB: Deliver Prototype PPU	25	05-Nov-12	29-Nov-12	10-Oct-12 A	03-Nov-12 A	0	
S3001870	SDB: Procure Polyelectrolyte Transfer Pump	30	01-Nov-11	30-Nov-11	01-Nov-11 A	29-Feb-12 A	0	
S3001872	SDB: Manufacture Polyelectrolyte Transfer Pump	112	19-Mar-12	08-Jul-12	19-Mar-12 A	09-Aug-12 A	0	
S3001874	SDB: Deliver Polyelectrolyte Transfer Pump	37	10-Aug-12	15-Sep-12	10-Aug-12 A	27-Aug-12 A	0	
S3001880	SDB: Procure Polyelectrolyte Dosing Pump	30	01-Nov-11	30-Nov-11	01-Nov-11 A	29-Feb-12 A	0	
S3001882	SDB: Manufacture Polyelectrolyte Dosing Pump	112	19-Mar-12	08-Jul-12	19-Mar-12 A	09-Aug-12 A	0	
S3001884	SDB: Deliver Polyelectrolyte Dosing Pump	37	10-Aug-12	15-Sep-12	10-Aug-12 A	27-Aug-12 A	0	
S3001890	SDB: Procure Sludge Feed Pumps	30	01-Nov-11	30-Nov-11	01-Nov-11 A	29-Feb-12 A	0	
S3001900	SDB: Manufacture Sludge Feed Pumps	110	19-Mar-12	06-Jul-12	19-Mar-12 A	09-Aug-12 A	0	

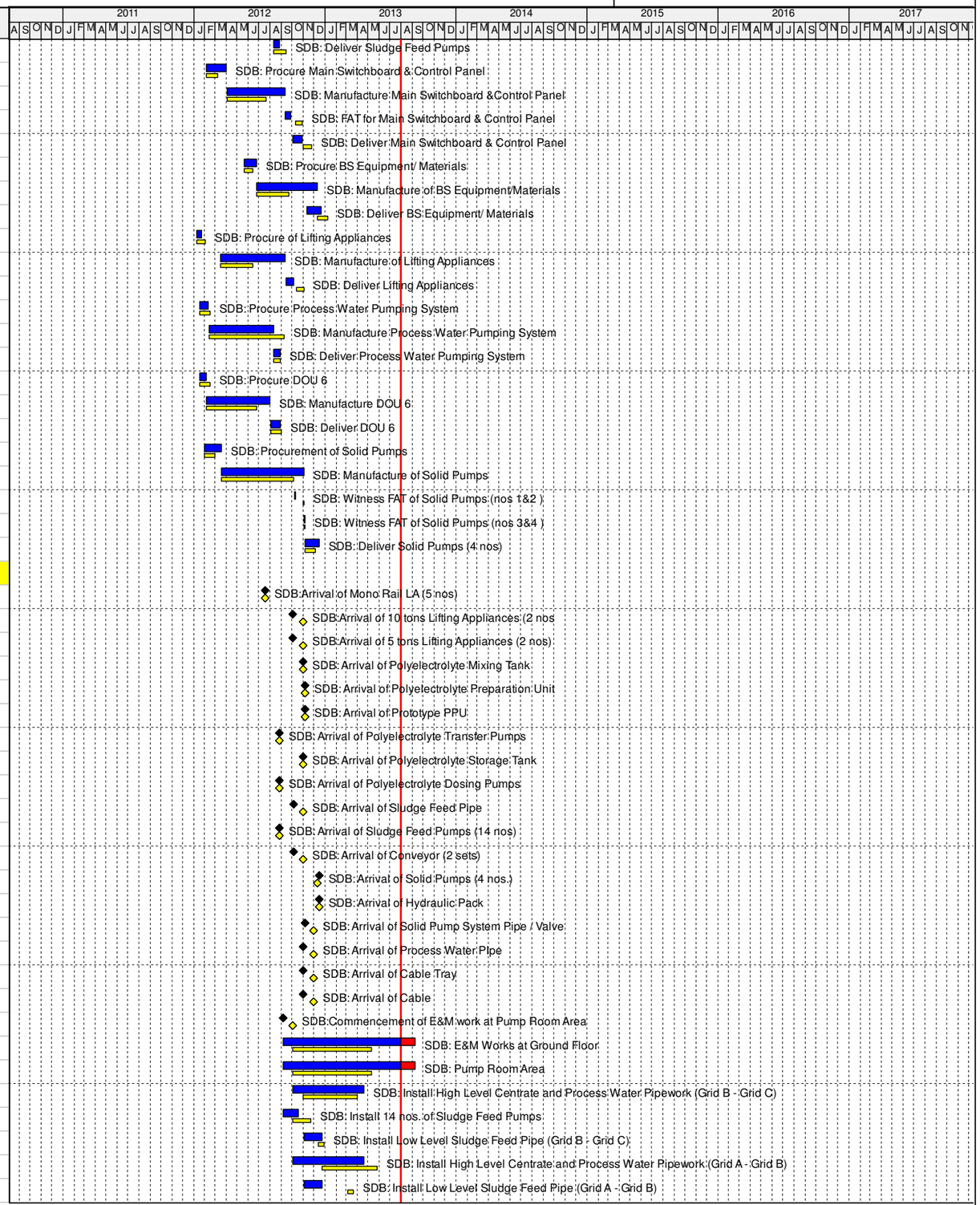


Actual Work | Remaining Work | Critical Remaining Work | Project Baseline Bar | Baseline Milestone | Milestone

Monthly Progress Updated as of 31 July 2013

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S3001915	SDB: Deliver Sludge Feed Pumps	37	10-Aug-12	15-Sep-12	10-Aug-12 A	27-Aug-12 A	0	
S3001925	SDB: Procure Main Switchboard & Control Panel	30	06-Feb-12	06-Mar-12	06-Feb-12 A	31-Mar-12 A	0	
S3001926	SDB: Manufacture Main Switchboard &Control Panel	110	02-Apr-12	20-Jul-12	02-Apr-12 A	12-Sep-12 A	0	
S3001995	SDB: FAT for Main Switchboard & Control Panel	20	11-Oct-12	30-Oct-12	13-Sep-12 A	29-Sep-12 A	0	
S3002000	SDB: Deliver Main Switchboard & Control Panel	24	31-Oct-12	23-Nov-12	03-Oct-12 A	29-Oct-12 A	0	
S3002010	SDB: Procure BS Equipment/ Materials	24	22-May-12	14-Jun-12	22-May-12 A	23-Jun-12 A	0	
S3002015	SDB: Manufacture of BS Equipment/Materials	90	25-Jun-12	22-Sep-12	25-Jun-12 A	09-Dec-12 A	0	
S3002020	SDB: Deliver BS Equipment/ Materials	30	10-Dec-12	08-Jan-13	12-Nov-12 A	21-Dec-12 A	0	
S3002025	SDB: Procure of Lifting Appliances	26	09-Jan-12	03-Feb-12	09-Jan-12 A	21-Jan-12 A	0	
S3002030	SDB: Manufacture of Lifting Appliances	90	15-Mar-12	12-Jun-12	15-Mar-12 A	13-Sep-12 A	0	
S3002040	SDB: Deliver Lifting Appliances	20	14-Oct-12	02-Nov-12	14-Sep-12 A	05-Oct-12 A	0	
S3002045	SDB: Procure Process Water Pumping System	30	16-Jan-12	14-Feb-12	16-Jan-12 A	11-Feb-12 A	0	
S3002046	SDB: Manufacture Process Water Pumping System	210	13-Feb-12	09-Sep-12	13-Feb-12 A	10-Aug-12 A	0	
S3002048	SDB: Deliver Process Water Pumping System	20	11-Aug-12	30-Aug-12	11-Aug-12 A	30-Aug-12 A	0	
S3002050	SDB: Procure DOU 6	30	16-Jan-12	14-Feb-12	16-Jan-12 A	04-Feb-12 A	0	
S3002052	SDB: Manufacture DOU 6	140	06-Feb-12	24-Jun-12	06-Feb-12 A	01-Aug-12 A	0	
S3002054	SDB: Deliver DOU 6	31	02-Aug-12	01-Sep-12	02-Aug-12 A	30-Aug-12 A	0	
S3002056	SDB: Procurement of Solid Pumps	31	30-Jan-12	29-Feb-12	30-Jan-12 A	17-Mar-12 A	0	
S3002058	SDB: Manufacture of Solid Pumps	200	19-Mar-12	04-Oct-12	19-Mar-12 A	02-Nov-12 A	0	
S3002060	SDB: Witness FAT of Solid Pumps (nos 1&2)	4	31-Oct-12	03-Nov-12	08-Oct-12 A	11-Oct-12 A	0	
S3002070	SDB: Witness FAT of Solid Pumps (nos 3&4)	4	03-Nov-12	06-Nov-12	03-Nov-12 A	06-Nov-12 A	0	
S3002080	SDB: Deliver Solid Pumps (4 nos)	30	07-Nov-12	06-Dec-12	07-Nov-12 A	15-Dec-12 A	0	
E&M Installation and T&C								
S3002090	SDB:Arrival of Mono Rail LA (5 nos)	0	17-Jul-12		17-Jul-12 A		0	
S3002100	SDB:Arrival of 10 tons Lifting Appliances (2 nos	0	31-Oct-12		04-Oct-12 A		0	
S3002110	SDB:Arrival of 5 tons Lifting Appliances (2 nos)	0	31-Oct-12		04-Oct-12 A		0	
S3002120	SDB: Arrival of Polyelectrolyte Mixing Tank	0	31-Oct-12		31-Oct-12 A		0	
S3002150	SDB: Arrival of Polyelectrolyte Preparation Unit	0	05-Nov-12		05-Nov-12 A		0	
S3002180	SDB: Arrival of Prototype PPU	0	05-Nov-12		05-Nov-12 A		0	
S3002210	SDB: Arrival of Polyelectrolyte Transfer Pumps	0	27-Aug-12		27-Aug-12 A		0	
S3002225	SDB: Arrival of Polyelectrolyte Storage Tank	0	31-Oct-12		31-Oct-12 A		0	
S3002240	SDB: Arrival of Polyelectrolyte Dosing Pumps	0	27-Aug-12		27-Aug-12 A		0	
S3002250	SDB: Arrival of Sludge Feed Pipe	0	31-Oct-12		06-Oct-12 A		0	
S3002260	SDB: Arrival of Sludge Feed Pumps (14 nos)	0	27-Aug-12		27-Aug-12 A		0	
S3002270	SDB: Arrival of Conveyor (2 sets)	0	31-Oct-12		06-Oct-12 A		0	
S3002280	SDB: Arrival of Solid Pumps (4 nos.)	0	10-Dec-12		15-Dec-12 A		0	
S3002290	SDB: Arrival of Hydraulic Pack	0	15-Dec-12		15-Dec-12 A		0	
S3002300	SDB: Arrival of Solid Pump System Pipe / Valve	0	30-Nov-12		07-Nov-12 A		0	
S3002310	SDB: Arrival of Process Water Plpe	0	30-Nov-12		31-Oct-12 A		0	
S3002320	SDB: Arrival of Cable Tray	0	30-Nov-12		31-Oct-12 A		0	
S3002330	SDB: Arrival of Cable	0	30-Nov-12		31-Oct-12 A		0	
S3003010	SDB:Commencement of E&M work at Pump Room Area	0	04-Oct-12		06-Sep-12 A		0	
S3003020	SDB: E&M Works at Ground Floor	220	04-Oct-12	11-May-13	06-Sep-12 A	10-Sep-13	42	-137
S3003030	SDB: Pump Room Area	220	04-Oct-12	11-May-13	06-Sep-12 A	10-Sep-13	42	-137
S3003040	SDB: Install High Level Centrate and Process Water Pipework (Grid B - Grid C)	153	31-Oct-12	01-Apr-13	02-Oct-12 A	19-Apr-13 A	0	
S3003050	SDB: Install 14 nos. of Sludge Feed Pumps	50	04-Oct-12	22-Nov-12	06-Sep-12 A	20-Oct-12 A	0	
S3003070	SDB: Install Low Level Sludge Feed Pipe (Grid B - Grid C)	18	12-Dec-12	29-Dec-12	05-Nov-12 A	24-Dec-12 A	0	
S3003080	SDB: Install High Level Centrate and Process Water Pipework (Grid A - Grid B)	153	25-Dec-12	26-May-13	02-Oct-12 A	19-Apr-13 A	0	
S3003090	SDB: Install Low Level Sludge Feed Pipe (Grid A - Grid B)	18	04-Mar-13	21-Mar-13	04-Nov-12 A	24-Dec-12 A	0	



Actual Work | Project Baseline Bar
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Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S3003110	SDB: Install Sludge Collecting Conveyor 2 nos. (Grid B - Grid C)	73	31-Jan-13	13-Apr-13	28-Jan-13 A	08-Sep-13	40	-145
S3003120	SDB: Install Sludge Collecting Conveyor 2 nos. (Grid A - Grid B)	57	31-Jul-13	25-Sep-13	31-Jul-13	25-Sep-13	57	-152
S3003130	SDB: Install DOU6 Ductwork	60	09-Jan-13	09-Mar-13	09-Jan-13 A	07-Aug-13	8	-111
S3003140	SDB: Install Cable Tray in Pump Room	52	08-Jan-13	28-Feb-13	08-Jan-13 A	14-Apr-13 A	0	
S3003150	SDBL Install Cable in Pump Room	53	31-Mar-13	22-May-13	22-May-13 A	30-Jun-13 A	0	
S3003160	SDB: Commencement of E&M works at Polyelectrolyte Area	0	31-Oct-12		05-Oct-12 A		0	
S3003170	SDB: Polyelectrolyte Area	175	31-Oct-12	23-Apr-13	05-Oct-12 A	08-Sep-13	40	-131
S3003180	SDB: Install 5 nos. of Mono Rails (Grid 7 - Grid 12)	20	31-Oct-12	19-Nov-12	05-Oct-12 A	27-Oct-12 A	0	
S3003190	SDB: Install 4 nos. of Polyelectrolyte Storage Tank (Grid 3 - Grid 7)	121	30-Nov-12	30-Mar-13	31-Oct-12 A	04-Apr-13 A	0	
S3003200	SDB: Install 4 nos. of Polyelectrolyte Mixing Tank (Grid 8- Grid 12)	115	30-Nov-12	24-Mar-13	06-Nov-12 A	30-Jun-13 A	0	
S3003210	SDB: Install Prototype Polyelectrolyte Preparation Unit	28	21-Jan-13	17-Feb-13	24-Jan-13 A	22-Feb-13 A	0	
S3003220	SDB: Install 2 nos. of Polyelectrolyte Transfer Pumps	14	28-Feb-13	13-Mar-13	18-Feb-13 A	04-Aug-13	5	-116
S3003230	SDB: Install 4 nos. of Polyelectrolyte Preparation Unit	32	28-Jan-13	28-Feb-13	24-Jan-13 A	04-Aug-13	5	-115
S3003240	SDB: Install Polyelectrolyte Feed Pipe	57	18-Jan-13	15-Mar-13	21-Jan-13 A	04-Sep-13	36	-131
S3003250	SDB: Install 14 nos. of Polyelectrolyte Feed Pump	30	10-Mar-13	08-Apr-13	18-Feb-13 A	20-Aug-13	12	-116
S3003260	SDB: Install Cable Tray at Polyelectrolyte Area	15	28-Feb-13	14-Mar-13	25-Feb-13 A	30-Jun-13 A	0	
S3003270	SDB: Install Cable at Polyelectrolyte Area	53	28-Feb-13	21-Apr-13	18-Feb-13 A	08-Sep-13	40	-143
S3003280	SDB: Commencement of E&M works at Solid Pump Area	0	31-Dec-12		24-Dec-12 A		0	
S3003290	SDB: Solid Pump Area	111	31-Dec-12	20-Apr-13	24-Dec-12 A	13-Sep-13	45	-144
S3003300	SDB: Install Solid Pump Pipework & Support	100	31-Dec-12	09-Apr-13	24-Dec-12 A	09-Apr-13 A	0	
S3003310	SDB: Install 4 nos. of Solid Pump	45	21-Jan-13	06-Mar-13	24-Dec-12 A	04-Aug-13	5	-144
S3003320	SDB: Install 2 nos. of Solid Pump Hydraulic Power Pack	45	21-Jan-13	06-Mar-13	21-Dec-12 A	21-Jun-13 A	0	
S3003330	SDB: Install Cable Tray at Pump Area	24	02-Mar-13	25-Mar-13	21-Jan-13 A	21-Jun-13 A	0	
S3003340	SDB: Install Cable at Pump Area	21	31-Jul-13	20-Aug-13	31-Jul-13	20-Aug-13	21	-116
S3003350	SDB: Commencement of E&M works at MCC Room	0	30-Nov-12		12-Nov-12 A		0	
S3003360	SDB: MCC Room	74	30-Nov-12	11-Feb-13	12-Nov-12 A	28-Sep-13	60	-145
S3003370	SDB: Install panel support in MCC Room	28	30-Nov-12	27-Dec-12	12-Nov-12 A	06-Jan-13 A	0	
S3003380	SDB: Install Main Switch Board & Control Panel LV System	60	07-Jan-13	07-Mar-13	07-Jan-13 A	19-Jun-13 A	0	
S3003390	SDB: Install Cable Tray in MCC Room	75	07-Jan-13	22-Mar-13	07-Jan-13 A	31-Jan-13 A	0	
S3003400	SDB: Install Cable in MCC Room	60	31-Jul-13	28-Sep-13	31-Jul-13	28-Sep-13	60	-155
S3003410	SDB: Commencement of E&M works at DOU6 and DG Store	0	31-Dec-12		31-Dec-12 A		0	
S3003420	SDB: DOU6 and DG Store Area	90	07-Jan-13	06-Apr-13	07-Jan-13 A	18-Sep-13	50	-145
S3003430	SDB: Install 4 nos. of DOU6	48	07-Jan-13	23-Feb-13	07-Jan-13 A	25-Feb-13 A	0	
S3003440	SDB: Install 1 set of Process Water Pumping System	85	31-Dec-12	25-Mar-13	31-Dec-12 A	29-Aug-13	30	-131
S3003445	SDB: Install Storage Tanks at DGS	7	20-Feb-13	26-Feb-13	31-Dec-12 A	05-Jan-13 A	0	
S3003450	SDB: Install Pumping System at DGS	60	31-Jul-13	28-Sep-13	31-Jul-13	28-Sep-13	60	-131
S3003460	SDB: Install Cable Tray	22	31-Jul-13	21-Aug-13	31-Jul-13	21-Aug-13	22	-125
S3003470	SDB: Install Cable	16	28-Aug-13	12-Sep-13	28-Aug-13	12-Sep-13	16	-131
S3003480	SDB: Commencement of E&M works at Centrifuge Room 2	0	31-Oct-12		05-Oct-12 A		0	
S3003490	SDB: E&M Works at First Floor	175	31-Oct-12	23-Apr-13	05-Oct-12 A	23-Sep-13	55	-150
S3003500	SDB: Centrifuge Room 2 (South)	107	31-Oct-12	14-Feb-13	05-Oct-12 A	29-Aug-13	30	-158
S3003510	SDB: Install 1 no. of 10 ton and 1 no. of 5 ton LA (Grid B - Grid C)	23	31-Oct-12	22-Nov-12	05-Oct-12 A	27-Oct-12 A	0	
S3003520	SDB: Install 7 nos. of Centrifuges (Centrifuge no. 2, 4, 6, 8, 10, 12, 14)	60	30-Nov-12	28-Jan-13	31-Oct-12 A	08-Dec-12 A	0	
S3003530	SDB: Install DOU6 Ductwork in South Centrifuge Room	60	09-Jan-13	09-Mar-13	09-Jan-13 A	09-Aug-13	10	-148
S3003540	SDB: Install Cable Tray in South Centrifuge Room	19	31-Jul-13	18-Aug-13	31-Jul-13	18-Aug-13	19	-134
S3003550	SDB: Install Cable in South Centrifuge Room	20	19-Aug-13	07-Sep-13	19-Aug-13	07-Sep-13	20	-134
S3003560	SDB: Commencement of E&M works at Centrifuge Room 1	0	30-Nov-12		31-Oct-12 A		0	
S3003570	SDB: Centrifuge Room 1 (North)	149	30-Nov-12	27-Apr-13	31-Oct-12 A	24-Aug-13	25	-158
S3003580	SDB: Install 1 no. of 10 ton and 1 no. of 5 ton LA (Grid A - Grid B)	22	30-Nov-12	21-Dec-12	31-Oct-12 A	21-Nov-12 A	0	

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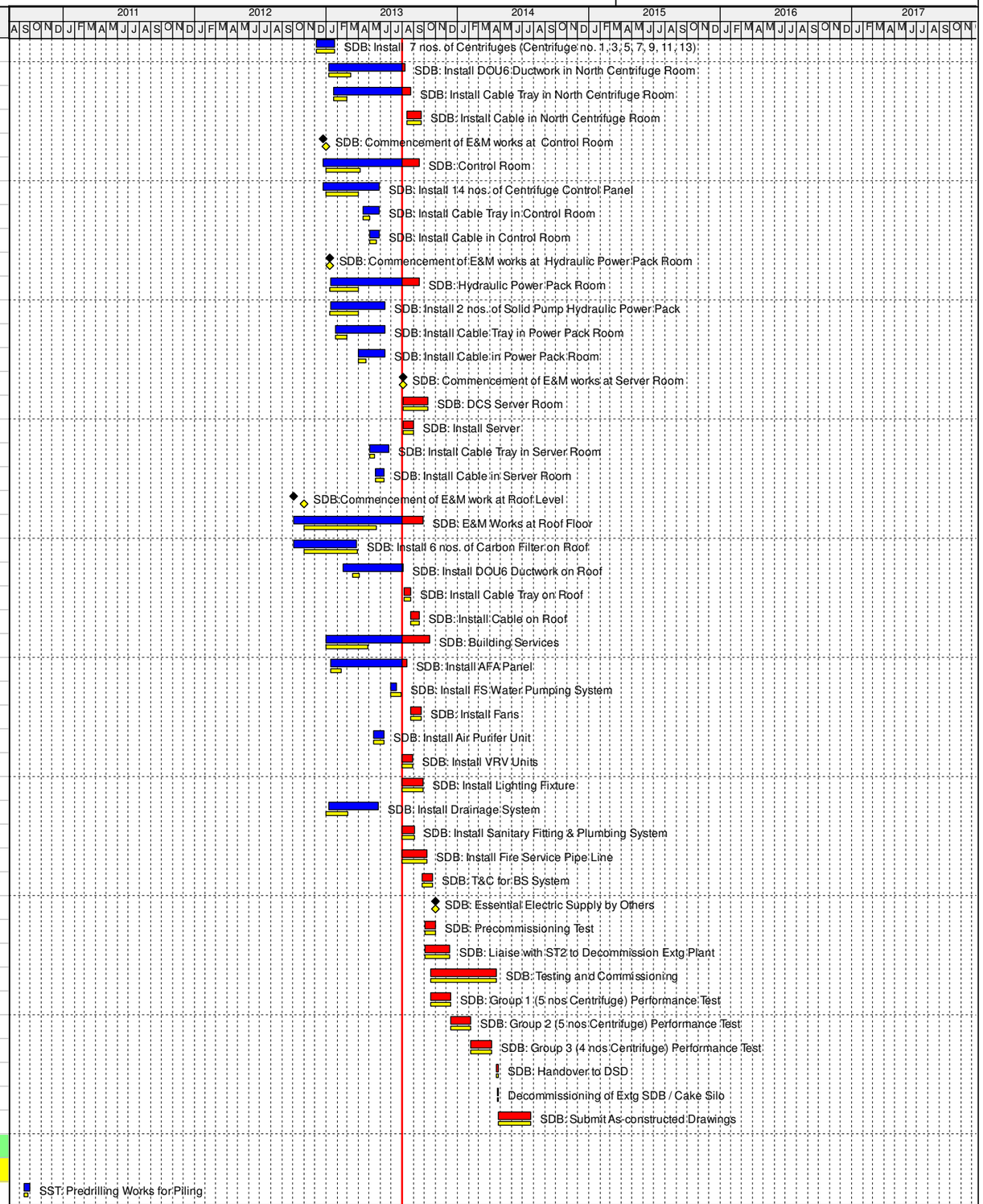
Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S3003590	SDB: Install 7 nos. of Centrifuges (Centrifuge no. 1, 3, 5, 7, 9, 11, 13)	51	06-Dec-12	25-Jan-13	06-Dec-12 A	25-Jan-13 A	0	
S3003600	SDB: Install DOU6 Ductwork in North Centrifuge Room	60	09-Jan-13	09-Mar-13	09-Jan-13 A	09-Aug-13	10	-148
S3003610	SDB: Install Cable Tray in North Centrifuge Room	39	21-Jan-13	28-Feb-13	21-Jan-13 A	24-Aug-13	25	-148
S3003620	SDB: Install Cable in North Centrifuge Room	39	14-Aug-13	21-Sep-13	14-Aug-13	21-Sep-13	39	-148
S3003630	SDB: Commencement of E&M works at Control Room	0	31-Dec-12		25-Dec-12 A		0	
S3003640	SDB: Control Room	97	31-Dec-12	06-Apr-13	25-Dec-12 A	18-Sep-13	50	-158
S3003650	SDB: Install 14 nos. of Centrifuge Control Panel	90	31-Dec-12	30-Mar-13	25-Dec-12 A	30-May-13 A	0	
S3003660	SDB: Install Cable Tray in Control Room	19	14-Apr-13	02-May-13	14-Apr-13 A	30-May-13 A	0	
S3003670	SDB: Install Cable in Control Room	18	03-May-13	20-May-13	03-May-13 A	30-May-13 A	0	
S3003680	SDB: Commencement of E&M works at Hydraulic Power Pack Room	0	12-Jan-13		12-Jan-13 A		0	
S3003690	SDB: Hydraulic Power Pack Room	79	12-Jan-13	31-Mar-13	14-Jan-13 A	18-Sep-13	50	-116
S3003700	SDB: Install 2 nos. of Solid Pump Hydraulic Power Pack	79	12-Jan-13	31-Mar-13	14-Jan-13 A	15-Jun-13 A	0	
S3003710	SDB: Install Cable Tray in Power Pack Room	32	28-Jan-13	28-Feb-13	28-Jan-13 A	15-Jun-13 A	0	
S3003720	SDB: Install Cable in Power Pack Room	22	31-Mar-13	21-Apr-13	31-Mar-13 A	15-Jun-13 A	0	
S3003730	SDB: Commencement of E&M works at Server Room	0	03-Aug-13		03-Aug-13		0	-156
S3003740	SDB: DCS Server Room	69	03-Aug-13	10-Oct-13	03-Aug-13	10-Oct-13	69	-156
S3003750	SDB: Install Server	30	03-Aug-13	01-Sep-13	03-Aug-13	01-Sep-13	30	-128
S3003760	SDB: Install Cable Tray in Server Room	14	03-May-13	16-May-13	03-May-13 A	25-Jun-13 A	0	
S3003770	SDB: Install Cable in Server Room	25	17-May-13	10-Jun-13	17-May-13 A	10-Jun-13 A	0	
S3003780	SDB:Commencement of E&M work at Roof Level	0	31-Oct-12		03-Oct-12 A		0	
S3003790	SDB: E&M Works at Roof Floor	202	31-Oct-12	20-May-13	03-Oct-12 A	28-Sep-13	60	-132
S3003800	SDB: Install 6 nos. of Carbon Filter on Roof	149	31-Oct-12	28-Mar-13	03-Oct-12 A	28-Mar-13 A	0	
S3003810	SDB: Install DOU6 Ductwork on Roof	19	15-Mar-13	02-Apr-13	18-Feb-13 A	04-Aug-13	5	-121
S3003820	SDB: Install Cable Tray on Roof	20	05-Aug-13	24-Aug-13	05-Aug-13	24-Aug-13	20	-121
S3003830	SDB: Install Cable on Roof	24	25-Aug-13	17-Sep-13	25-Aug-13	17-Sep-13	24	-121
S3003840	SDB: Building Services	117	02-Jan-13	28-Apr-13	02-Jan-13 A	16-Oct-13	78	-158
S3003850	SDB: Install AFA Panel	30	14-Jan-13	12-Feb-13	14-Jan-13 A	13-Aug-13	14	-155
S3003860	SDB: Install FS Water Pumping System	30	30-Jun-13	29-Jul-13	30-Jun-13 A	15-Jul-13 A	0	
S3003870	SDB: Install Fans	30	25-Aug-13	23-Sep-13	25-Aug-13	23-Sep-13	30	-148
S3003880	SDB: Install Air Purifer Unit	30	13-May-13	11-Jun-13	13-May-13 A	11-Jun-13 A	0	
S3003890	SDB: Install VRV Units	30	31-Jul-13	29-Aug-13	31-Jul-13	29-Aug-13	30	-148
S3003900	SDB: Install Lighting Fixture	60	31-Jul-13	28-Sep-13	31-Jul-13	28-Sep-13	60	-145
S3003920	SDB: Install Drainage System	60	02-Jan-13	02-Mar-13	10-Jan-13 A	27-May-13 A	0	
S3003930	SDB: Install Sanitary Fitting & Plumbing System	35	31-Jul-13	03-Sep-13	31-Jul-13	03-Sep-13	35	-138
S3003940	SDB: Install Fire Service Pipe Line	70	31-Jul-13	08-Oct-13	31-Jul-13	08-Oct-13	70	-155
S3003950	SDB: T&C for BS System	30	24-Sep-13	23-Oct-13	24-Sep-13	23-Oct-13	30	-158
S3003960	SDB: Essential Electric Supply by Others	0	02-Nov-13		02-Nov-13*		0	-96
S3004000	SDB: Precommissioning Test	30	02-Oct-13	31-Oct-13	02-Oct-13	31-Oct-13	30	-158
S3004010	SDB: Liaise with ST2 to Decommission Extg Plant	60	02-Oct-13	11-Dec-13	02-Oct-13	11-Dec-13	60	-117
S3004020	SDB: Testing and Commissioning	183	18-Oct-13	18-Apr-14	18-Oct-13	18-Apr-14	183	-158
S3004030	SDB: Group 1 (5 nos Centrifuge) Performance Test	56	18-Oct-13	12-Dec-13	18-Oct-13	12-Dec-13	56	-158
S3004040	SDB: Group 2 (5 nos Centrifuge) Performance Test	56	14-Dec-13	08-Feb-14	14-Dec-13	08-Feb-14	56	-144
S3004050	SDB: Group 3 (4 nos Centrifuge) Performance Test	56	08-Feb-14	05-Apr-14	08-Feb-14	05-Apr-14	56	-144
S3004060	SDB: Handover to DSD	5	19-Apr-14	24-Apr-14	19-Apr-14	24-Apr-14	5	-126
S3004070	Decommissioning of Extg SDB / Cake Silo	4	21-Apr-14	24-Apr-14	21-Apr-14	24-Apr-14	4	-78
S3004080	SDB: Submit As-constructed Drawings	90	25-Apr-14	23-Jul-14	25-Apr-14	23-Jul-14	90	-20
Sludge Storage Tank 6 and 7								
Piling Works								
S3005110	SST: Predrilling Works for Piling	10	14-Sep-10	25-Sep-10	14-Sep-10 A	30-Sep-10 A	0	



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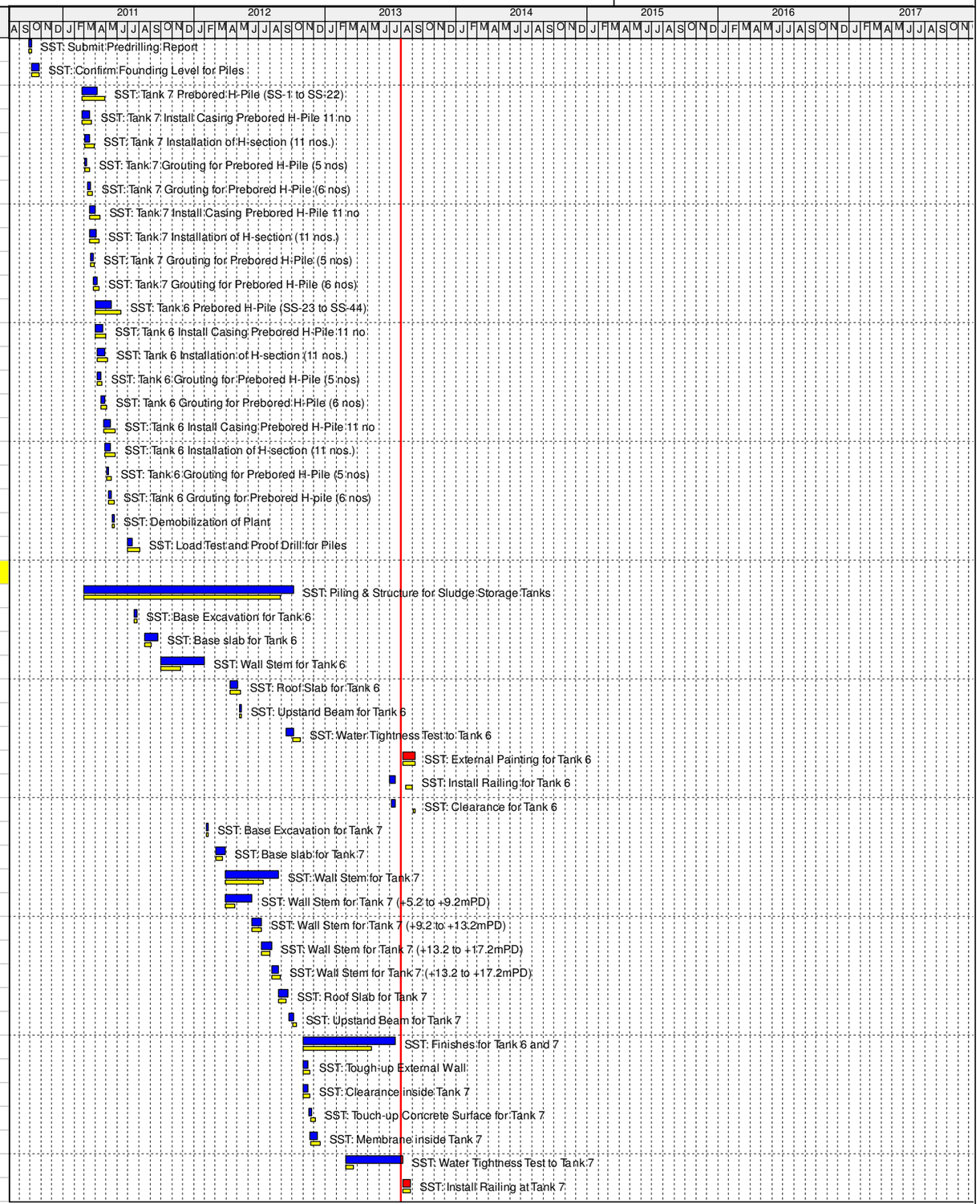
Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S3005120	SST: Submit Predrilling Report	6	28-Sep-10	05-Oct-10	28-Sep-10 A	06-Oct-10 A	0	
S3005130	SST: Confirm Founding Level for Piles	18	05-Oct-10	26-Oct-10	05-Oct-10 A	26-Oct-10 A	0	
S3005132	SST: Tank 7 Prebored H-Pile (SS-1 to SS-22)	53	22-Feb-11	27-Apr-11	22-Feb-11 A	06-Apr-11 A	0	
S3005134	SST: Tank 7 Install Casing Prebored H-Pile 11 no	24	22-Feb-11	21-Mar-11	22-Feb-11 A	15-Mar-11 A	0	
S3005136	SST: Tank 7 Installation of H-section (11 nos.)	22	03-Mar-11	28-Mar-11	03-Mar-11 A	17-Mar-11 A	0	
S3005138	SST: Tank 7 Grouting for Prebored H-Pile (5 nos)	10	04-Mar-11	15-Mar-11	04-Mar-11 A	08-Mar-11 A	0	
S3005140	SST: Tank 7 Grouting for Prebored H-Pile (6 nos)	12	11-Mar-11	24-Mar-11	11-Mar-11 A	18-Mar-11 A	0	
S3005142	SST: Tank 7 Install Casing Prebored H-Pile 11 no	24	16-Mar-11	13-Apr-11	16-Mar-11 A	02-Apr-11 A	0	
S3005144	SST: Tank 7 Installation of H-section (11 nos.)	22	17-Mar-11	12-Apr-11	17-Mar-11 A	04-Apr-11 A	0	
S3005146	SST: Tank 7 Grouting for Prebored H-Pile (5 nos)	10	19-Mar-11	30-Mar-11	19-Mar-11 A	26-Mar-11 A	0	
S3005148	SST: Tank 7 Grouting for Prebored H-Pile (6 nos)	12	28-Mar-11	11-Apr-11	28-Mar-11 A	06-Apr-11 A	0	
S3005150	SST: Tank 6 Prebored H-Pile (SS-23 to SS-44)	55	02-Apr-11	11-Jun-11	02-Apr-11 A	17-May-11 A	0	
S3005152	SST: Tank 6 Install Casing Prebored H-Pile 11 no	22	02-Apr-11	30-Apr-11	02-Apr-11 A	21-Apr-11 A	0	
S3005154	SST: Tank 6 Installation of H-section (11 nos.)	22	06-Apr-11	04-May-11	06-Apr-11 A	26-Apr-11 A	0	
S3005156	SST: Tank 6 Grouting for Prebored H-Pile (5 nos)	10	07-Apr-11	18-Apr-11	07-Apr-11 A	16-Apr-11 A	0	
S3005158	SST: Tank 6 Grouting for Prebored H-Pile (6 nos)	12	16-Apr-11	03-May-11	16-Apr-11 A	28-Apr-11 A	0	
S3005160	SST: Tank 6 Install Casing Prebored H-Pile 11 no	25	26-Apr-11	26-May-11	26-Apr-11 A	12-May-11 A	0	
S3005164	SST: Tank 6 Installation of H-section (11 nos.)	24	28-Apr-11	27-May-11	28-Apr-11 A	14-May-11 A	0	
S3005166	SST: Tank 6 Grouting for Prebored H-Pile (5 nos)	12	03-May-11	17-May-11	03-May-11 A	07-May-11 A	0	
S3005168	SST: Tank 6 Grouting for Prebored H-pile (6 nos)	14	09-May-11	25-May-11	09-May-11 A	17-May-11 A	0	
S3005170	SST: Demobilization of Plant	6	18-May-11	24-May-11	18-May-11 A	24-May-11 A	0	
S3005180	SST: Load Test and Proof Drill for Piles	30	30-Jun-11	04-Aug-11	30-Jun-11 A	12-Jul-11 A	0	
Structure								
S3005505	SST: Piling & Structure for Sludge Storage Tanks	447	28-Feb-11	30-Aug-12	28-Feb-11 A	06-Oct-12 A	0	
S3005510	SST: Base Excavation for Tank 6	6	20-Jul-11	26-Jul-11	20-Jul-11 A	26-Jul-11 A	0	
S3005610	SST: Base slab for Tank 6	18	16-Aug-11	05-Sep-11	16-Aug-11 A	22-Sep-11 A	0	
S3005710	SST: Wall Stem for Tank 6	48	01-Oct-11	26-Nov-11	30-Sep-11 A	31-Jan-12 A	0	
S3005810	SST: Roof Slab for Tank 6	22	11-Apr-12	09-May-12	11-Apr-12 A	02-May-12 A	0	
S3005820	SST: Upstand Beam for Tank 6	6	07-May-12	12-May-12	07-May-12 A	12-May-12 A	0	
S3005830	SST: Water Tightness Test to Tank 6	18	03-Oct-12	23-Oct-12	14-Sep-12 A	06-Oct-12 A	0	
S3005850	SST: External Painting for Tank 6	30	07-Aug-13	10-Sep-13	07-Aug-13	10-Sep-13	30	-101
S3005860	SST: Install Railing for Tank 6	18	13-Aug-13	02-Sep-13	30-Jun-13 A	15-Jul-13 A	0	
S3005870	SST: Clearance for Tank 6	6	03-Sep-13	09-Sep-13	04-Jul-13 A	15-Jul-13 A	0	
S3005910	SST: Base Excavation for Tank 7	6	06-Feb-12	11-Feb-12	06-Feb-12 A	11-Feb-12 A	0	
S3006010	SST: Base slab for Tank 7	18	01-Mar-12	21-Mar-12	01-Mar-12 A	29-Mar-12 A	0	
S3006110	SST: Wall Stem for Tank 7	84	30-Mar-12	13-Jul-12	30-Mar-12 A	23-Aug-12 A	0	
S3006120	SST: Wall Stem for Tank 7 (+5.2 to +9.2mPD)	18	30-Mar-12	23-Apr-12	30-Mar-12 A	11-Jun-12 A	0	
S3006130	SST: Wall Stem for Tank 7 (+9.2 to +13.2mPD)	21	12-Jun-12	06-Jul-12	12-Jun-12 A	06-Jul-12 A	0	
S3006140	SST: Wall Stem for Tank 7 (+13.2 to +17.2mPD)	21	07-Jul-12	31-Jul-12	07-Jul-12 A	04-Aug-12 A	0	
S3006150	SST: Wall Stem for Tank 7 (+13.2 to +17.2mPD)	21	06-Aug-12	29-Aug-12	06-Aug-12 A	23-Aug-12 A	0	
S3006210	SST: Roof Slab for Tank 7	18	25-Aug-12	14-Sep-12	25-Aug-12 A	21-Sep-12 A	0	
S3006220	SST: Upstand Beam for Tank 7	10	03-Oct-12	13-Oct-12	22-Sep-12 A	06-Oct-12 A	0	
S3006310	SST: Finishes for Tank 6 and 7	152	31-Oct-12	09-May-13	31-Oct-12 A	15-Jul-13 A	0	
S3006315	SST: Tough-up External Wall	18	31-Oct-12	20-Nov-12	31-Oct-12 A	15-Nov-12 A	0	
S3006320	SST: Clearance inside Tank 7	18	31-Oct-12	20-Nov-12	31-Oct-12 A	15-Nov-12 A	0	
S3006325	SST: Touch-up Concrete Surface for Tank 7	12	21-Nov-12	04-Dec-12	16-Nov-12 A	24-Nov-12 A	0	
S3006330	SST: Membrane inside Tank 7	21	23-Nov-12	17-Dec-12	19-Nov-12 A	11-Dec-12 A	0	
S3006340	SST: Water Tightness Test to Tank 7	18	28-Feb-13	20-Mar-13	01-Mar-13 A	06-Aug-13	6	-109
S3006350	SST: Install Railing at Tank 7	18	07-Aug-13	27-Aug-13	07-Aug-13	27-Aug-13	18	-89



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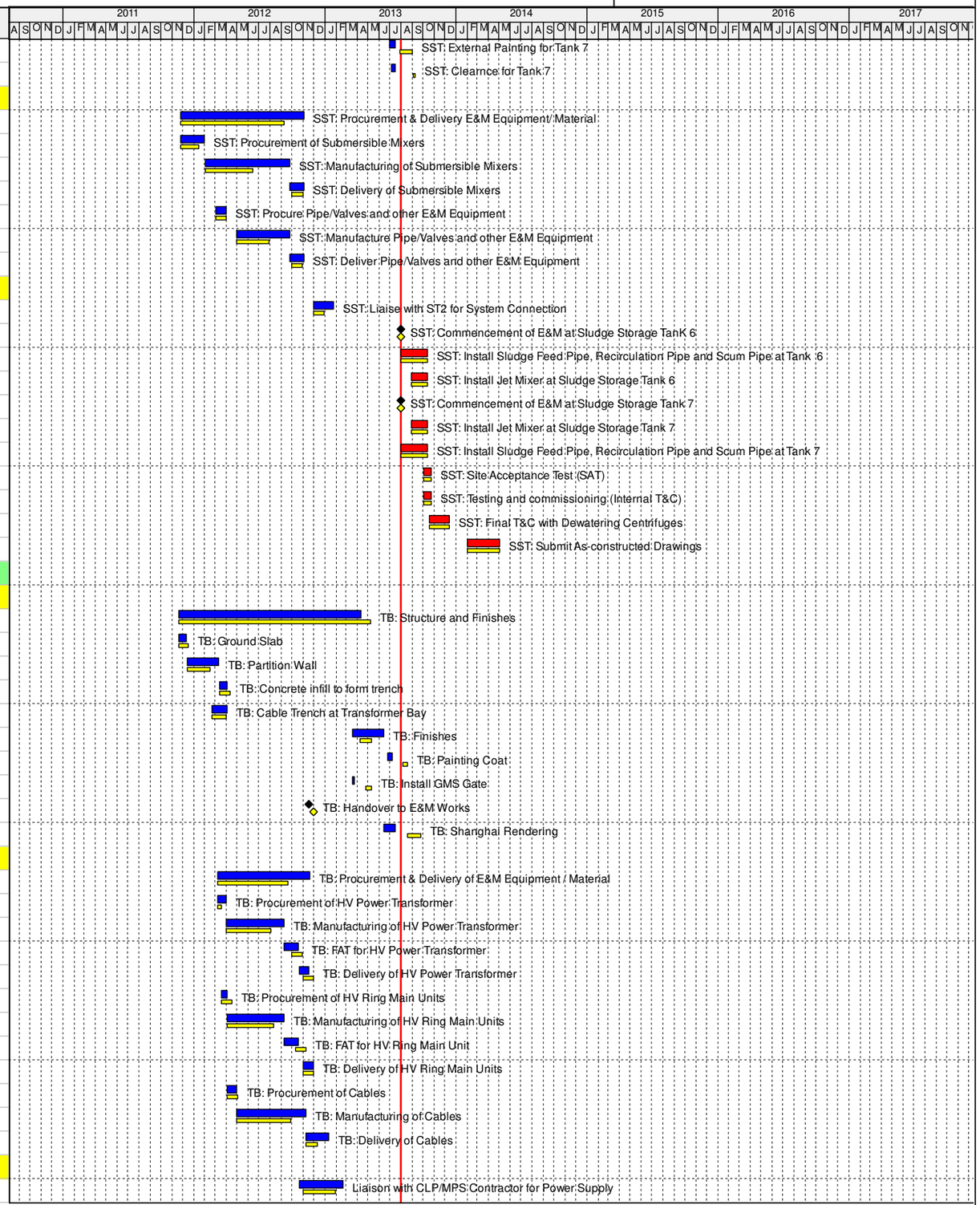
S3006360	SST: External Painting for Tank 7	30	30-Jul-13	02-Sep-13	30-Jun-13 A	15-Jul-13 A	0	
S3006370	SST: Clearnce for Tank 7	6	03-Sep-13	09-Sep-13	04-Jul-13 A	15-Jul-13 A	0	
Procurement, Manufacture and Delivery								
S3006450	SST: Procurement & Delivery E&M Equipment/ Material	290	25-Nov-11	09-Sep-12	25-Nov-11 A	03-Nov-12 A	0	
S3006460	SST: Procurement of Submersible Mixers	50	25-Nov-11	13-Jan-12	25-Nov-11 A	31-Jan-12 A	0	
S3006470	SST: Manufacturing of Submersible Mixers	135	01-Feb-12	14-Jun-12	01-Feb-12 A	24-Sep-12 A	0	
S3006480	SST: Delivery of Submersible Mixers	32	30-Sep-12	31-Oct-12	25-Sep-12 A	03-Nov-12 A	0	
S3006490	SST: Procure Pipe/Valves and other E&M Equipment	30	01-Mar-12	30-Mar-12	01-Mar-12 A	31-Mar-12 A	0	
S3006590	SST: Manufacture Pipe/Valves and other E&M Equipment	90	30-Apr-12	28-Jul-12	30-Apr-12 A	24-Sep-12 A	0	
S3006610	SST: Deliver Pipe/Valves and other E&M Equipment	30	30-Sep-12	29-Oct-12	25-Sep-12 A	03-Nov-12 A	0	
E&M Installation and T&C								
S3006505	SST: Liaise with ST2 for System Connection	30	30-Nov-12	29-Dec-12	30-Nov-12 A	24-Jan-13 A	0	
S3006670	SST: Commencement of E&M at Sludge Storage TanK 6	0	31-Jul-13		31-Jul-13		0	-158
S3006680	SST: Install Sludge Feed Pipe, Recirculation Pipe and Scum Pipe at Tank 6	75	31-Jul-13	13-Oct-13	31-Jul-13	13-Oct-13	75	-158
S3006685	SST: Install Jet Mixer at Sludge Storage Tank 6	45	30-Aug-13	13-Oct-13	30-Aug-13	13-Oct-13	45	-158
S3006700	SST: Commencement of E&M at Sludge Storage Tank 7	0	31-Jul-13		31-Jul-13		0	-158
S3006710	SST: Install Jet Mixer at Sludge Storage Tank 7	45	29-Aug-13	13-Oct-13	29-Aug-13	13-Oct-13	45	-157
S3006720	SST: Install Sludge Feed Pipe, Recirculation Pipe and Scum Pipe at Tank 7	75	31-Jul-13	13-Oct-13	31-Jul-13	13-Oct-13	75	-158
S3006730	SST: Site Acceptance Test (SAT)	24	02-Oct-13	25-Oct-13	02-Oct-13	25-Oct-13	24	-158
S3006740	SST: Testing and commissioning (Internal T&C)	24	02-Oct-13	25-Oct-13	02-Oct-13	25-Oct-13	24	-158
S3006750	SST: Final T&C with Dewatering Centrifuges	56	18-Oct-13	12-Dec-13	18-Oct-13	12-Dec-13	56	-158
S3006760	SST: Submit As-constructed Drawings	90	01-Feb-14	01-May-14	01-Feb-14	01-May-14	90	-62
Transformer Bay								
Structure								
S3007010	TB: Structure and Finishes	430	21-Nov-11	08-May-13	21-Nov-11 A	12-Apr-13 A	0	
S3007020	TB: Ground Slab	24	21-Nov-11	17-Dec-11	21-Nov-11 A	12-Dec-11 A	0	
S3007110	TB: Partition Wall	48	13-Dec-11	15-Feb-12	13-Dec-11 A	11-Mar-12 A	0	
S3007210	TB: Concrete infill to form trench	24	13-Mar-12	10-Apr-12	13-Mar-12 A	03-Apr-12 A	0	
S3007220	TB: Cable Trench at Transformer Bay	36	20-Feb-12	31-Mar-12	20-Feb-12 A	03-Apr-12 A	0	
S3007310	TB: Finishes	27	08-Apr-13	11-May-13	18-Mar-13 A	15-Jun-13 A	0	
S3007320	TB: Painting Coat	12	06-Aug-13	19-Aug-13	24-Jun-13 A	07-Jul-13 A	0	
S3007330	TB: Install GMS Gate	14	24-Apr-13	10-May-13	18-Mar-13 A	23-Mar-13 A	0	
S3007340	TB: Handover to E&M Works	0		30-Nov-12		16-Nov-12 A	0	
S3007350	TB: Shanghai Rendering	30	20-Aug-13	24-Sep-13	15-Jun-13 A	15-Jul-13 A	0	
Procurement, Manufacture and Delivery								
S3007410	TB: Procurement & Delivery of E&M Equipment / Material	195	08-Mar-12	18-Sep-12	08-Mar-12 A	19-Nov-12 A	0	
S3007420	TB: Procurement of HV Power Transformer	10	08-Mar-12	17-Mar-12	08-Mar-12 A	31-Mar-12 A	0	
S3007430	TB: Manufacturing of HV Power Transformer	125	01-Apr-12	03-Aug-12	01-Apr-12 A	08-Sep-12 A	0	
S3007435	TB: FAT for HV Power Transformer	30	30-Sep-12	29-Oct-12	10-Sep-12 A	20-Oct-12 A	0	
S3007440	TB: Delivery of HV Power Transformer	30	31-Oct-12	29-Nov-12	22-Oct-12 A	17-Nov-12 A	0	
S3007450	TB: Procurement of HV Ring Main Units	30	19-Mar-12	17-Apr-12	19-Mar-12 A	02-Apr-12 A	0	
S3007460	TB: Manufacturing of HV Ring Main Units	130	03-Apr-12	10-Aug-12	03-Apr-12 A	08-Sep-12 A	0	
S3007470	TB: FAT for HV Ring Main Unit	30	10-Oct-12	08-Nov-12	10-Sep-12 A	20-Oct-12 A	0	
S3007480	TB: Delivery of HV Ring Main Units	30	31-Oct-12	29-Nov-12	31-Oct-12 A	29-Nov-12 A	0	
S3007540	TB: Procurement of Cables	30	02-Apr-12	01-May-12	02-Apr-12 A	28-Apr-12 A	0	
S3007550	TB: Manufacturing of Cables	150	30-Apr-12	26-Sep-12	30-Apr-12 A	09-Nov-12 A	0	
S3007560	TB: Delivery of Cables	30	10-Nov-12	09-Dec-12	10-Nov-12 A	11-Jan-13 A	0	
E&M Installation and T&C								
S3007510	Liaison with CLP/MPS Contractor for Power Supply	75	31-Oct-12	29-Jan-13	22-Oct-12 A	20-Feb-13 A	0	



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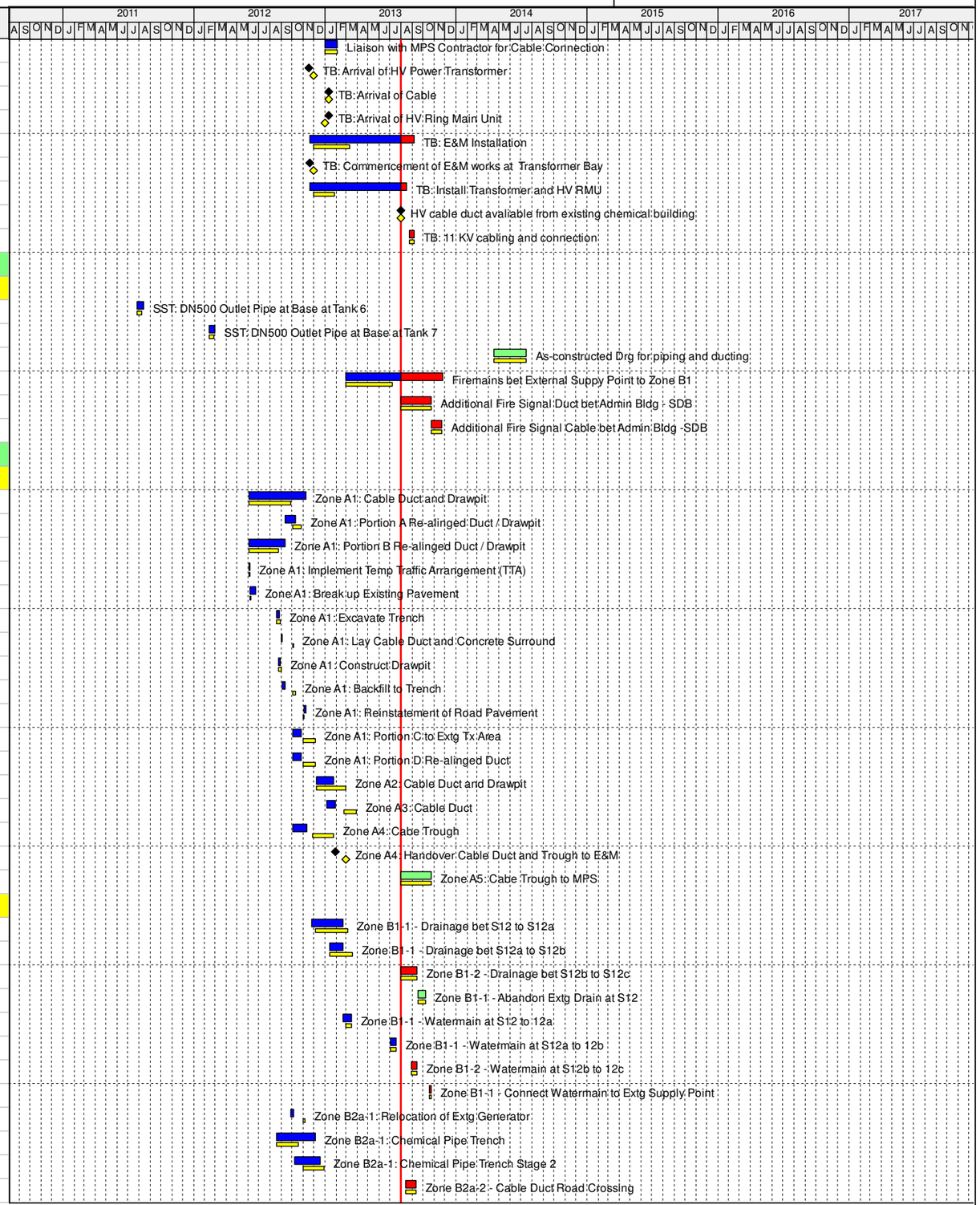
Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S3007520	Liaison with MPS Contractor for Cable Connection	30	31-Dec-12	04-Feb-13	31-Dec-12 A	04-Feb-13 A	0	
S3007535	TB: Arrival of HV Power Transformer	0	30-Nov-12		17-Nov-12 A		0	
S3007555	TB: Arrival of Cable	0	12-Jan-13		12-Jan-13 A		0	
S3007575	TB: Arrival of HV Ring Main Unit	0	31-Dec-12		12-Jan-13 A		0	
S3007800	TB: E&M Installation	100	30-Nov-12	09-Mar-13	19-Nov-12 A	05-Sep-13	37	-126
S3007810	TB: Commencement of E&M works at Transformer Bay	0	01-Dec-12		19-Nov-12 A		0	
S3007820	TB: Install Transformer and HV RMU	58	01-Dec-12	27-Jan-13	19-Nov-12 A	17-Aug-13	18	-134
S3007830	HV cable duct avaliable from existing chemical building	0	31-Jul-13		31-Jul-13		0	-134
S3007840	TB: 11 KV cabling and connection	14	25-Aug-13	07-Sep-13	25-Aug-13	07-Sep-13	14	-134
System								
Pump, Piping and Ducting								
S3005520	SST: DN500 Outlet Pipe at Base at Tank 6	12	27-Jul-11	09-Aug-11	27-Jul-11 A	15-Aug-11 A	0	
S3006000	SST: DN500 Outlet Pipe at Base at Tank 7	12	13-Feb-12	25-Feb-12	13-Feb-12 A	29-Feb-12 A	0	
S3008340	As-constructed Drg for piping and ducting	90	17-Apr-14	15-Jul-14	17-Apr-14	15-Jul-14	90	779
S3009940	Firemains bet External Suppy Point to Zone B1	105	28-Feb-13	08-Jul-13	01-Mar-13 A	25-Nov-13	98	-80
S3009950	Additional Fire Signal Duct bet Admin Bldg - SDB	70	31-Jul-13	23-Oct-13	31-Jul-13	23-Oct-13	70	-80
S3009960	Additional Fire Signal Cable bet Admin Bldg -SDB	30	24-Oct-13	22-Nov-13	24-Oct-13	22-Nov-13	30	-97
External (Civil) Works								
Zone A								
S3008352	Zone A1: Cable Duct and Drawpit	100	04-Jun-12	28-Sep-12	04-Jun-12 A	10-Nov-12 A	0	
S3008355	Zone A1: Portion A Re-alinged Duct / Drawpit	20	03-Oct-12	25-Oct-12	13-Sep-12 A	10-Oct-12 A	0	
S3008360	Zone A1: Portion B Re-alinged Duct / Drawpit	70	04-Jun-12	24-Aug-12	04-Jun-12 A	12-Sep-12 A	0	
S3008365	Zone A1: Implement Temp Traffic Arrangement (TTA)	2	04-Jun-12	05-Jun-12	04-Jun-12 A	05-Jun-12 A	0	
S3008370	Zone A1: Break up Existing Pavement	3	06-Jun-12	08-Jun-12	06-Jun-12 A	20-Jun-12 A	0	
S3008375	Zone A1: Excavate Trench	10	20-Aug-12	30-Aug-12	20-Aug-12 A	25-Aug-12 A	0	
S3008380	Zone A1: Lay Cable Duct and Concrete Surround	4	03-Oct-12	06-Oct-12	31-Aug-12 A	04-Sep-12 A	0	
S3008385	Zone A1: Construct Drawpit	6	25-Aug-12	31-Aug-12	25-Aug-12 A	30-Aug-12 A	0	
S3008388	Zone A1: Backfill to Trench	6	03-Oct-12	09-Oct-12	05-Sep-12 A	11-Sep-12 A	0	
S3008390	Zone A1: Reinstatement of Road Pavement	4	31-Oct-12	03-Nov-12	05-Nov-12 A	10-Nov-12 A	0	
S3008392	Zone A1: Portion C to Extg Tx Area	30	31-Oct-12	04-Dec-12	03-Oct-12 A	27-Oct-12 A	0	
S3008394	Zone A1: Portion D Re-alinged Duct	30	31-Oct-12	04-Dec-12	03-Oct-12 A	27-Oct-12 A	0	
S3008410	Zone A2: Cable Duct and Drawpit	63	08-Dec-12	28-Feb-13	08-Dec-12 A	26-Jan-13 A	0	
S3008420	Zone A3: Cable Duct	30	22-Feb-13	28-Mar-13	07-Jan-13 A	31-Jan-13 A	0	
S3008430	Zone A4: Cabe Trough	50	26-Nov-12	25-Jan-13	03-Oct-12 A	10-Nov-12 A	0	
S3008434	Zone A4: Handover Cable Duct and Trough to E&M	0		28-Feb-13		31-Jan-13 A	0	
S3008440	Zone A5: Cabe Trough to MPS	70	31-Jul-13	23-Oct-13	31-Jul-13	23-Oct-13	70	103
Zone B								
S3008460	Zone B1-1 - Drainage bet S12 to S12a	70	06-Dec-12	06-Mar-13	26-Nov-12 A	21-Feb-13 A	0	
S3008465	Zone B1-1 - Drainage bet S12a to S12b	50	15-Jan-13	19-Mar-13	15-Jan-13 A	21-Feb-13 A	0	
S3008470	Zone B1-2 - Drainage bet S12b to S12c	40	31-Jul-13	14-Sep-13	31-Jul-13	14-Sep-13	40	-117
S3008480	Zone B1-1 - Abandon Extg Drain at S12	18	16-Sep-13	08-Oct-13	16-Sep-13	08-Oct-13	18	75
S3008490	Zone B1-1 - Watermain at S12 to 12a	15	28-Feb-13	16-Mar-13	21-Feb-13 A	15-Mar-13 A	0	
S3008500	Zone B1-1 - Watermain at S12a to 12b	15	02-Jul-13	18-Jul-13	02-Jul-13 A	18-Jul-13 A	0	
S3008505	Zone B1-2 - Watermain at S12b to 12c	15	29-Aug-13	14-Sep-13	29-Aug-13	14-Sep-13	15	-117
S3008510	Zone B1-1 - Connect Watermain to Extg Supply Point	6	19-Oct-13	25-Oct-13	19-Oct-13	25-Oct-13	6	-92
S3008520	Zone B2a-1: Relocation of Extg Generator	7	31-Oct-12	07-Nov-12	29-Sep-12 A	06-Oct-12 A	0	
S3008530	Zone B2a-1: Chemical Pipe Trench	51	20-Aug-12	19-Oct-12	20-Aug-12 A	05-Dec-12 A	0	
S3008532	Zone B2a-1: Chemical Pipe Trench Stage 2	50	31-Oct-12	29-Dec-12	08-Oct-12 A	17-Dec-12 A	0	
S3008540	Zone B2a-2 - Cable Duct Road Crossing	25	14-Aug-13	11-Sep-13	14-Aug-13	11-Sep-13	25	-93



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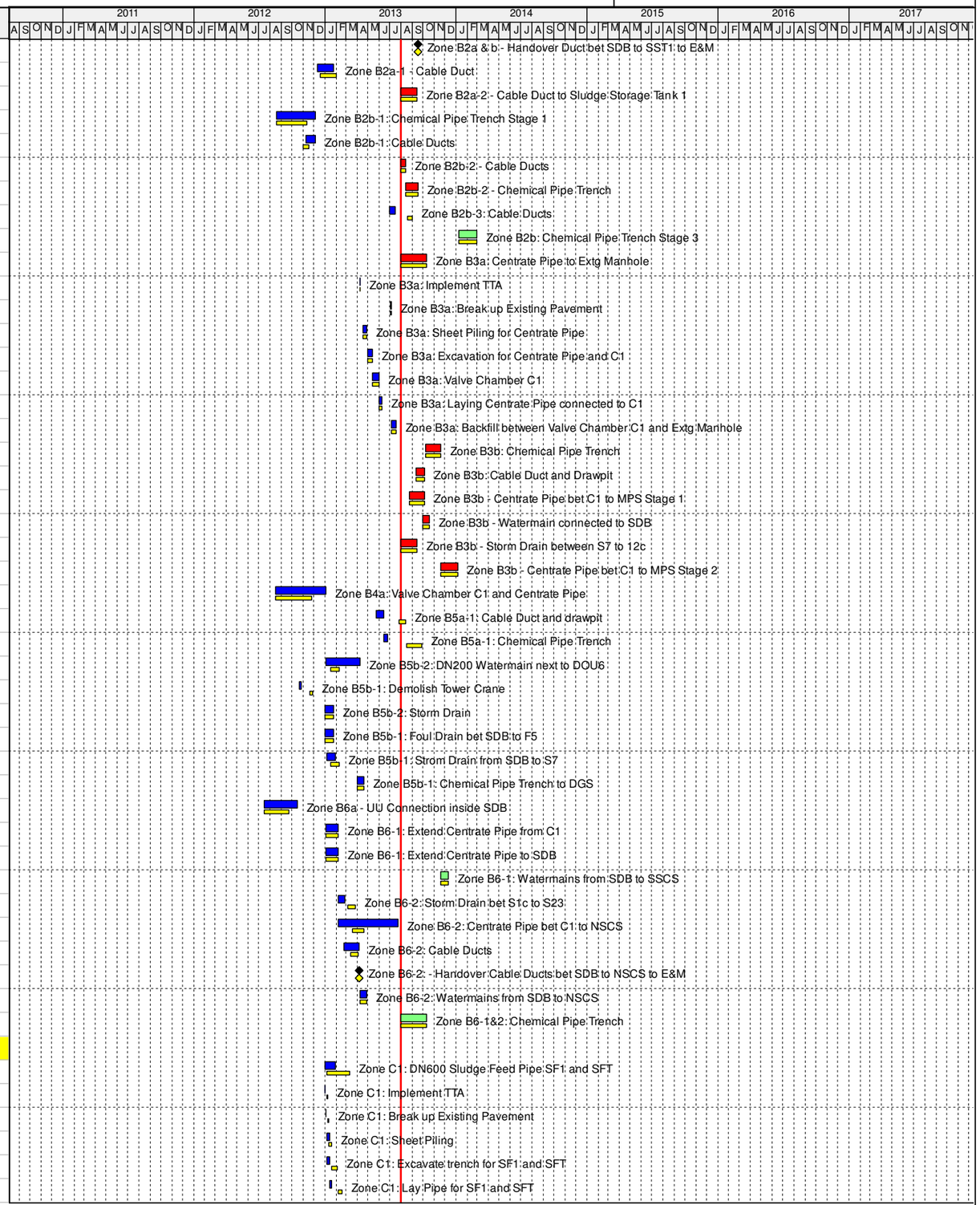
S3008550	Zone B2a & b - Handover Duct bet SDB to SST1 to E&M	0		17-Sep-13		17-Sep-13	0	-98
S3008555	Zone B2a-1 - Cable Duct	36	18-Dec-12	31-Jan-13	11-Dec-12 A	23-Jan-13 A	0	
S3008560	Zone B2a-2 - Cable Duct to Sludge Storage Tank 1	40	31-Jul-13	14-Sep-13	31-Jul-13	14-Sep-13	40	-96
S3008570	Zone B2b-1: Chemical Pipe Trench Stage 1	70	20-Aug-12	10-Nov-12	20-Aug-12 A	05-Dec-12 A	0	
S3008575	Zone B2b-1: Cable Ducts	15	31-Oct-12	16-Nov-12	08-Nov-12 A	05-Dec-12 A	0	
S3008580	Zone B2b-2 - Cable Ducts	12	31-Jul-13	13-Aug-13	31-Jul-13	13-Aug-13	12	-98
S3008585	Zone B2b-2 - Chemical Pipe Trench	30	14-Aug-13	17-Sep-13	14-Aug-13	17-Sep-13	30	-98
S3008590	Zone B2b-3: Cable Ducts	12	20-Aug-13	02-Sep-13	01-Jul-13 A	15-Jul-13 A	0	
S3008608	Zone B2b: Chemical Pipe Trench Stage 3	40	08-Jan-14	27-Feb-14	08-Jan-14	27-Feb-14	40	1
S3008610	Zone B3a: Centrate Pipe to Extg Manhole	60	31-Jul-13	10-Oct-13	31-Jul-13	10-Oct-13	60	-40
S3008620	Zone B3a: Implement TTA	1	09-Apr-13	09-Apr-13	09-Apr-13 A	09-Apr-13 A	0	
S3008630	Zone B3a: Break up Existing Pavement	4	02-Jul-13	05-Jul-13	02-Jul-13 A	05-Jul-13 A	0	
S3008640	Zone B3a: Sheet Piling for Centrate Pipe	10	17-Apr-13	27-Apr-13	17-Apr-13 A	27-Apr-13 A	0	
S3008645	Zone B3a: Excavation for Centrate Pipe and C1	12	29-Apr-13	13-May-13	29-Apr-13 A	13-May-13 A	0	
S3008655	Zone B3a: Valve Chamber C1	15	14-May-13	31-May-13	14-May-13 A	31-May-13 A	0	
S3008660	Zone B3a: Laying Centrate Pipe connected to C1	6	01-Jun-13	07-Jun-13	01-Jun-13 A	07-Jun-13 A	0	
S3008665	Zone B3a: Backfill between Valve Chamber C1 and Extg Manhole	12	06-Jul-13	19-Jul-13	06-Jul-13 A	19-Jul-13 A	0	
S3008670	Zone B3b: Chemical Pipe Trench	36	07-Oct-13	18-Nov-13	07-Oct-13	18-Nov-13	36	-52
S3008685	Zone B3b: Cable Duct and Drawpit	18	13-Sep-13	05-Oct-13	13-Sep-13	05-Oct-13	18	-121
S3008690	Zone B3b - Centrate Pipe bet C1 to MPS Stage 1	36	23-Aug-13	05-Oct-13	23-Aug-13	05-Oct-13	36	-121
S3008700	Zone B3b - Watermain connected to SDB	15	30-Sep-13	18-Oct-13	30-Sep-13	18-Oct-13	15	-119
S3008710	Zone B3b - Storm Drain between S7 to 12c	40	31-Jul-13	14-Sep-13	31-Jul-13	14-Sep-13	40	-121
S3008730	Zone B3b - Centrate Pipe bet C1 to MPS Stage 2	50	19-Nov-13	07-Jan-14	19-Nov-13	07-Jan-14	50	-64
S3008750	Zone B4a: Valve Chamber C1 and Centrate Pipe	84	17-Aug-12	24-Nov-12	17-Aug-12 A	02-Jan-13 A	0	
S3008770	Zone B5a-1: Cable Duct and drawpit	18	25-Jul-13	14-Aug-13	25-May-13 A	14-Jun-13 A	0	
S3008775	Zone B5a-1: Chemical Pipe Trench	36	15-Aug-13	26-Sep-13	15-Jun-13 A	26-Jun-13 A	0	
S3008885	Zone B5b-2: DN200 Watermain next to DOU6	21	16-Jan-13	09-Feb-13	03-Jan-13 A	08-Apr-13 A	0	
S3008890	Zone B5b-1: Demolish Tower Crane	6	20-Nov-12	27-Nov-12	22-Oct-12 A	27-Oct-12 A	0	
S3008900	Zone B5b-2: Storm Drain	20	31-Dec-12	23-Jan-13	02-Jan-13 A	24-Jan-13 A	0	
S3008910	Zone B5b-1: Foul Drain bet SDB to F5	21	31-Dec-12	24-Jan-13	02-Jan-13 A	25-Jan-13 A	0	
S3008920	Zone B5b-1: Strom Drain from SDB to S7	21	16-Jan-13	09-Feb-13	07-Jan-13 A	30-Jan-13 A	0	
S3008930	Zone B5b-1: Chemical Pipe Trench to DGS	15	01-Apr-13	20-Apr-13	01-Apr-13 A	20-Apr-13 A	0	
S3008940	Zone B6a - UU Connection inside SDB	60	16-Jul-12	22-Sep-12	16-Jul-12 A	15-Oct-12 A	0	
S3008959	Zone B6-1: Extend Centrate Pipe from C1	30	03-Jan-13	06-Feb-13	03-Jan-13 A	06-Feb-13 A	0	
S3008960	Zone B6-1: Extend Centrate Pipe to SDB	30	03-Jan-13	06-Feb-13	03-Jan-13 A	06-Feb-13 A	0	
s3008965	Zone B6-1: Watermains from SDB to SSCS	20	19-Nov-13	11-Dec-13	19-Nov-13	11-Dec-13	20	352
S3008970	Zone B6-2: Storm Drain bet S1c to S23	18	06-Mar-13	26-Mar-13	07-Feb-13 A	26-Feb-13 A	0	
S3008980	Zone B6-2: Centrate Pipe bet C1 to NSCS	24	19-Mar-13	18-Apr-13	07-Feb-13 A	25-Jul-13 A	0	
S3008990	Zone B6-2: Cable Ducts	18	14-Mar-13	03-Apr-13	23-Feb-13 A	06-Apr-13 A	0	
S3008995	Zone B6-2: - Handover Cable Ducts bet SDB to NSCS to E&M	0		06-Apr-13		06-Apr-13 A	0	
S3009000	Zone B6-2: Watermains from SDB to NSCS	15	08-Apr-13	26-Apr-13	08-Apr-13 A	26-Apr-13 A	0	
S3009010	Zone B6-1&2: Chemical Pipe Trench	60	31-Jul-13	10-Oct-13	31-Jul-13	10-Oct-13	60	73
Zone C								
S3009090	Zone C1: DN600 Sludge Feed Pipe SF1 and SFT	50	07-Jan-13	11-Mar-13	02-Jan-13 A	31-Jan-13 A	0	
S3009100	Zone C1: Implement TTA	1	07-Jan-13	07-Jan-13	02-Jan-13 A	02-Jan-13 A	0	
S3009110	Zone C1: Break up Existing Pavement	4	08-Jan-13	11-Jan-13	03-Jan-13 A	04-Jan-13 A	0	
S3009120	Zone C1: Sheet Piling	6	12-Jan-13	18-Jan-13	05-Jan-13 A	14-Jan-13 A	0	
S3009130	Zone C1: Excavate trench for SF1 and SFT	15	19-Jan-13	05-Feb-13	05-Jan-13 A	14-Jan-13 A	0	
S3009140	Zone C1: Lay Pipe for SF1 and SFT	6	06-Feb-13	18-Feb-13	15-Jan-13 A	19-Jan-13 A	0	

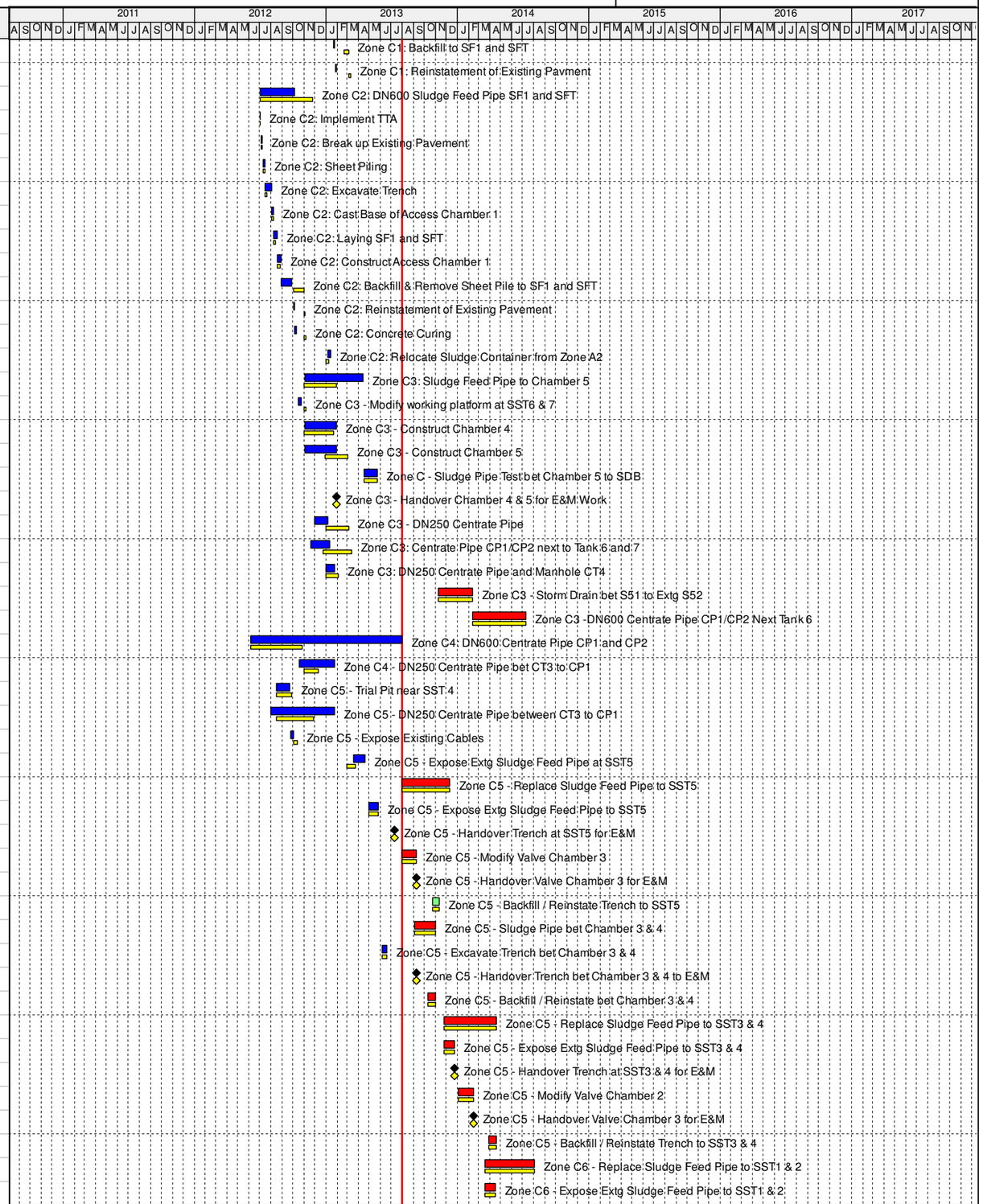


Actual Work | Project Baseline Bar
Remaining Work | Baseline Milestone
Critical Remaining Work | Milestone

Monthly Progress Updated as of 31 July 2013

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S3009150	Zone C1: Backfill to SF1 and SFT	12	19-Feb-13	04-Mar-13	21-Jan-13 A	26-Jan-13 A	0	
S3009160	Zone C1: Reinstatement of Existing Pavment	6	05-Mar-13	11-Mar-13	28-Jan-13 A	31-Jan-13 A	0	
S3009210	Zone C2: DN600 Sludge Feed Pipe SF1 and SFT	122	03-Jul-12	23-Nov-12	03-Jul-12 A	05-Oct-12 A	0	
S3009220	Zone C2: Implement TTA	1	03-Jul-12	03-Jul-12	03-Jul-12 A	03-Jul-12 A	0	
S3009230	Zone C2: Break up Existing Pavement	4	04-Jul-12	07-Jul-12	04-Jul-12 A	07-Jul-12 A	0	
S3009240	Zone C2: Sheet Piling	6	09-Jul-12	14-Jul-12	09-Jul-12 A	14-Jul-12 A	0	
S3009250	Zone C2: Excavate Trench	6	16-Jul-12	21-Jul-12	16-Jul-12 A	02-Aug-12 A	0	
S3009260	Zone C2: Cast Base of Access Chamber 1	4	03-Aug-12	07-Aug-12	03-Aug-12 A	08-Aug-12 A	0	
S3009270	Zone C2: Laying SF1 and SFT	4	09-Aug-12	13-Aug-12	09-Aug-12 A	18-Aug-12 A	0	
S3009280	Zone C2: Construct Access Chamber 1	6	20-Aug-12	25-Aug-12	20-Aug-12 A	28-Aug-12 A	0	
S3009290	Zone C2: Backfill & Remove Sheet Pile to SF1 and SFT	26	03-Oct-12	01-Nov-12	29-Aug-12 A	29-Sep-12 A	0	
S3009300	Zone C2: Reinstatement of Existing Pavement	4	31-Oct-12	03-Nov-12	03-Oct-12 A	05-Oct-12 A	0	
S3009310	Zone C2: Concrete Curing	7	31-Oct-12	06-Nov-12	06-Oct-12 A	12-Oct-12 A	0	
S3009315	Zone C2: Relocate Sludge Container from Zone A2	8	31-Dec-12	07-Jan-13	07-Jan-13 A	14-Jan-13 A	0	
S3009410	Zone C3: Sludge Feed Pipe to Chamber 5	75	31-Oct-12	29-Jan-13	05-Nov-12 A	13-Apr-13 A	0	
S3009420	Zone C3 - Modify working platform at SST6 & 7	7	31-Oct-12	07-Nov-12	15-Oct-12 A	24-Oct-12 A	0	
S3009430	Zone C3 - Construct Chamber 4	68	31-Oct-12	21-Jan-13	05-Nov-12 A	31-Jan-13 A	0	
S3009440	Zone C3 - Construct Chamber 5	49	29-Dec-12	02-Mar-13	05-Nov-12 A	31-Jan-13 A	0	
S3009450	Zone C - Sludge Pipe Test bet Chamber 5 to SDB	30	16-Apr-13	22-May-13	16-Apr-13 A	22-May-13 A	0	
S3009460	Zone C3 - Handover Chamber 4 & 5 for E&M Work	0		31-Jan-13		31-Jan-13 A	0	
S3009500	Zone C3 - DN250 Centrate Pipe	50	02-Jan-13	06-Mar-13	01-Dec-12 A	05-Jan-13 A	0	
S3009510	Zone C3: Centrate Pipe CP1/CP2 next to Tank 6 and 7	60	24-Dec-12	12-Mar-13	19-Nov-12 A	12-Jan-13 A	0	
S3009515	Zone C3: DN250 Centrate Pipe and Manhole CT4	30	31-Dec-12	04-Feb-13	31-Dec-12 A	26-Jan-13 A	0	
S3009520	Zone C3 - Storm Drain bet S51 to Extg S52	75	08-Nov-13	11-Feb-14	08-Nov-13	11-Feb-14	75	-67
S3009530	Zone C3 -DN600 Centrate Pipe CP1/CP2 Next Tank 6	120	12-Feb-14	09-Jul-14	12-Feb-14	09-Jul-14	120	-67
S3009540	Zone C4: DN600 Centrate Pipe CP1 and CP2	120	05-Jun-12	25-Oct-12	05-Jun-12 A	30-Jul-13 A	0	
S3009550	Zone C4 - DN250 Centrate Pipe bet CT3 to CP1	35	31-Oct-12	10-Dec-12	19-Oct-12 A	26-Jan-13 A	0	
S3009560	Zone C5 - Trial Pit near SST 4	35	17-Aug-12	26-Sep-12	17-Aug-12 A	22-Sep-12 A	0	
S3009570	Zone C5 - DN250 Centrate Pipe between CT3 to CP1	85	17-Aug-12	26-Nov-12	01-Aug-12 A	26-Jan-13 A	0	
S3009580	Zone C5 - Expose Existing Cables	10	03-Oct-12	13-Oct-12	24-Sep-12 A	03-Oct-12 A	0	
S3009630	Zone C5 - Expose Extg Sludge Feed Pipe at SST5	25	28-Feb-13	24-Mar-13	18-Mar-13 A	18-Apr-13 A	0	
S3009650	Zone C5 - Replace Sludge Feed Pipe to SST5	133	31-Jul-13	10-Dec-13	31-Jul-13	10-Dec-13	133	-111
S3009660	Zone C5 - Expose Extg Sludge Feed Pipe to SST5	25	01-May-13	25-May-13	01-May-13 A	25-May-13 A	0	
S3009670	Zone C5 - Handover Trench at SST5 for E&M	0		09-Jul-13		09-Jul-13 A	0	
S3009690	Zone C5 - Modify Valve Chamber 3	42	31-Jul-13	10-Sep-13	31-Jul-13	10-Sep-13	42	-92
S3009695	Zone C5 - Handover Valve Chamber 3 for E&M	0		10-Sep-13		10-Sep-13	0	-92
S3009710	Zone C5 - Backfill / Reinstate Trench to SST5	21	23-Oct-13	12-Nov-13	23-Oct-13	12-Nov-13	21	98
S3009720	Zone C5 - Sludge Pipe bet Chamber 3 & 4	60	04-Sep-13	02-Nov-13	04-Sep-13	02-Nov-13	60	-103
S3009730	Zone C5 - Excavate Trench bet Chamber 3 & 4	14	05-Jun-13	18-Jun-13	05-Jun-13 A	18-Jun-13 A	0	
S3009740	Zone C5 - Handover Trench bet Chamber 3 & 4 to E&M	0		10-Sep-13		10-Sep-13	0	-80
S3009760	Zone C5 - Backfill / Reinstate bet Chamber 3 & 4	21	11-Oct-13	31-Oct-13	11-Oct-13	31-Oct-13	21	-80
S3009800	Zone C5 - Replace Sludge Feed Pipe to SST3 & 4	145	25-Nov-13	18-Apr-14	25-Nov-13	18-Apr-14	145	-149
S3009810	Zone C5 - Expose Extg Sludge Feed Pipe to SST3 & 4	30	25-Nov-13	24-Dec-13	25-Nov-13	24-Dec-13	30	-149
S3009820	Zone C5 - Handover Trench at SST3 & 4 for E&M	0		24-Dec-13		24-Dec-13	0	-149
S3009840	Zone C5 - Modify Valve Chamber 2	42	04-Jan-14	14-Feb-14	04-Jan-14	14-Feb-14	42	-149
S3009845	Zone C5 - Handover Valve Chamber 3 for E&M	0		14-Feb-14		14-Feb-14	0	-149
S3009860	Zone C5 - Backfill / Reinstate Trench to SST3 & 4	21	29-Mar-14	18-Apr-14	29-Mar-14	18-Apr-14	21	-149
S3009870	Zone C6 - Replace Sludge Feed Pipe to SST1 & 2	140	18-Mar-14	04-Aug-14	18-Mar-14	04-Aug-14	140	-157
S3009880	Zone C6 - Expose Extg Sludge Feed Pipe to SST1 & 2	30	18-Mar-14	16-Apr-14	18-Mar-14	16-Apr-14	30	-157

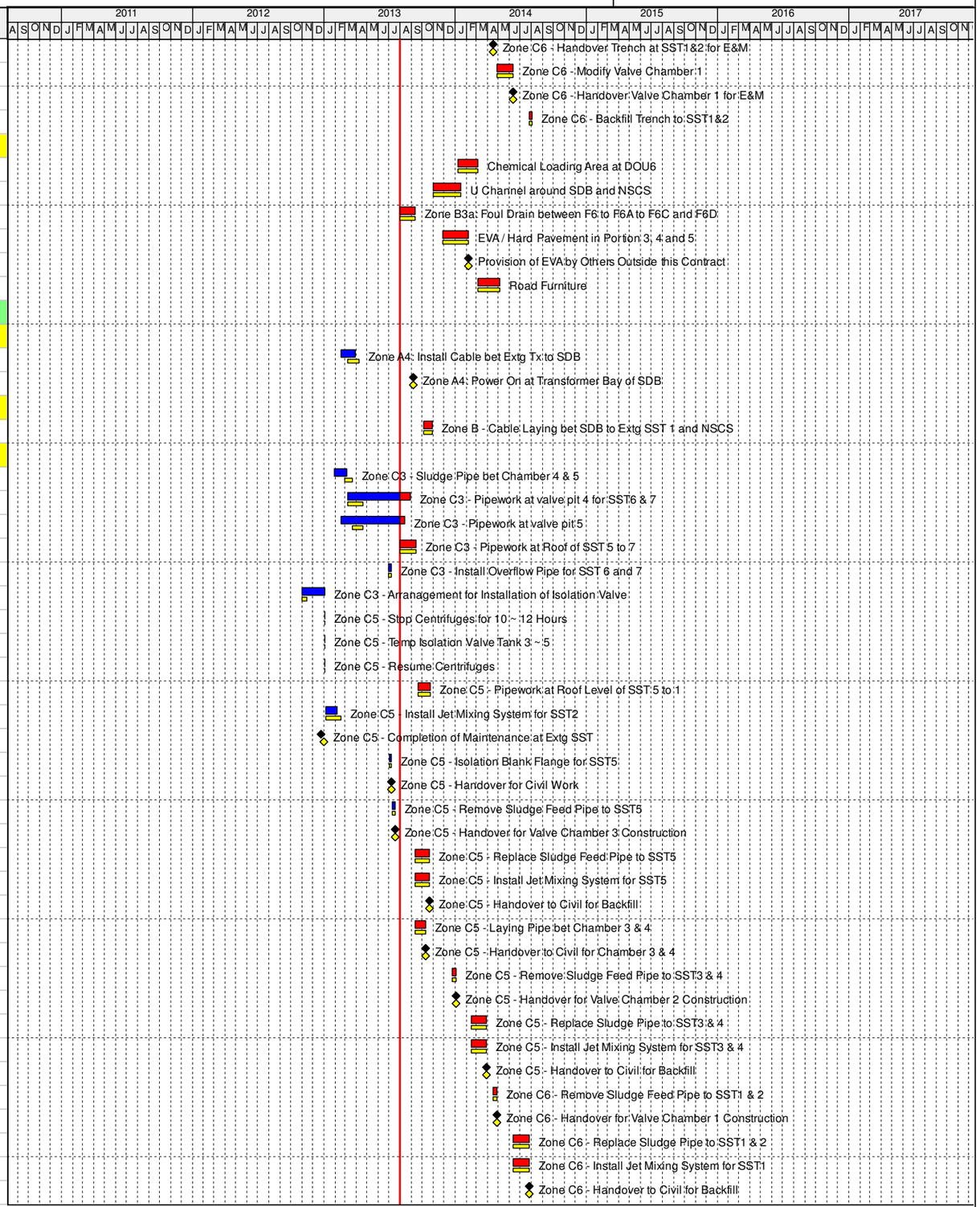


Actual Work
Remaining Work
Critical Remaining Work
Project Baseline Bar
Baseline Milestone
Milestone

Monthly Progress Updated as of 31 July 2013

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S3009890	Zone C6 - Handover Trench at SST1&2 for E&M	0		16-Apr-14		16-Apr-14	0	-157
S3009910	Zone C6 - Modify Valve Chamber 1	45	27-Apr-14	10-Jun-14	27-Apr-14	10-Jun-14	45	-157
S3009915	Zone C6 - Handover Valve Chamber 1 for E&M	0		10-Jun-14		10-Jun-14	0	-157
S3009930	Zone C6 - Backfill Trench to SST1&2	10	26-Jul-14	04-Aug-14	26-Jul-14	04-Aug-14	10	-157
Road and Drain								
S3011300	Chemical Loading Area at DOU6	45	08-Jan-14	05-Mar-14	08-Jan-14	05-Mar-14	45	-52
S3011310	U Channel around SDB and NSCS	65	31-Oct-13	17-Jan-14	31-Oct-13	17-Jan-14	65	-80
S3011400	Zone B3a: Foul Drain between F6 to F6A to F6C and F6D	36	31-Jul-13	11-Sep-13	31-Jul-13	11-Sep-13	36	-40
S3011800	EVA / Hard Pavement in Portion 3, 4 and 5	56	27-Nov-13	08-Feb-14	27-Nov-13	08-Feb-14	56	-103
S3012010	Provision of EVA by Others Outside this Contract	0		08-Feb-14		08-Feb-14	0	-103
S3012100	Road Furniture	48	06-Mar-14	06-May-14	06-Mar-14	06-May-14	48	-52
External (E&M) Works								
Zone A								
S3008435	Zone A4: Install Cable bet Extg Tx to SDB	30	09-Mar-13	07-Apr-13	18-Feb-13 A	30-Mar-13 A	0	
S3008438	Zone A4: Power On at Transformer Bay of SDB	0		07-Sep-13		07-Sep-13	0	-128
Zone B								
S3008720	Zone B - Cable Laying bet SDB to Extg SST 1 and NSCS	25	06-Oct-13	30-Oct-13	06-Oct-13	30-Oct-13	25	-146
Zone C								
S3009470	Zone C3 - Sludge Pipe bet Chamber 4 & 5	21	28-Feb-13	20-Mar-13	31-Jan-13 A	06-Mar-13 A	0	
S3009475	Zone C3 - Pipework at valve pit 4 for SST6 & 7	45	07-Mar-13	20-Apr-13	07-Mar-13 A	29-Aug-13	30	-109
S3009478	Zone C3 - Pipework at valve pit 5	30	21-Mar-13	19-Apr-13	18-Feb-13 A	14-Aug-13	15	-94
S3009480	Zone C3 - Pipework at Roof of SST 5 to 7	45	31-Jul-13	13-Sep-13	31-Jul-13	13-Sep-13	45	-124
S3009490	Zone C3 - Install Overflow Pipe for SST 6 and 7	7	30-Jun-13	06-Jul-13	30-Jun-13 A	06-Jul-13 A	0	
S3009585	Zone C3 - Arranagement for Installation of Isolation Valve	15	31-Oct-12	14-Nov-12	31-Oct-12 A	03-Jan-13 A	0	
S3009590	Zone C5 - Stop Centrifuges for 10 ~ 12 Hours	1	04-Jan-13	04-Jan-13	04-Jan-13 A	04-Jan-13 A	0	
S3009600	Zone C5 - Temp Isolation Valve Tank 3 ~ 5	1	04-Jan-13	04-Jan-13	04-Jan-13 A	04-Jan-13 A	0	
S3009610	Zone C5 - Resume Centrifuges	1	04-Jan-13	04-Jan-13	04-Jan-13 A	04-Jan-13 A	0	
S3009620	Zone C5 - Pipework at Roof Level of SST 5 to 1	35	21-Sep-13	25-Oct-13	21-Sep-13	25-Oct-13	35	-152
S3009625	Zone C5 - Install Jet Mixing System for SST2	45	05-Jan-13	18-Feb-13	05-Jan-13 A	08-Feb-13 A	0	
S3009635	Zone C5 - Completion of Maintenance at Extg SST	0		31-Dec-12		24-Dec-12 A	0	
S3009640	Zone C5 - Isolation Blank Flange for SST5	7	02-Jul-13	08-Jul-13	02-Jul-13 A	08-Jul-13 A	0	
S3009645	Zone C5 - Handover for Civil Work	0		08-Jul-13		08-Jul-13 A	0	
S3009680	Zone C5 - Remove Sludge Feed Pipe to SST5	10	09-Jul-13	18-Jul-13	09-Jul-13 A	18-Jul-13 A	0	
S3009685	Zone C5 - Handover for Valve Chamber 3 Construction	0		18-Jul-13		18-Jul-13 A	0	
S3009700	Zone C5 - Replace Sludge Feed Pipe to SST5	42	11-Sep-13	22-Oct-13	11-Sep-13	22-Oct-13	42	-92
S3009705	Zone C5 - Install Jet Mixing System for SST5	42	11-Sep-13	22-Oct-13	11-Sep-13	22-Oct-13	42	-92
S3009708	Zone C5 - Handover to Civil for Backfill	0		22-Oct-13		22-Oct-13	0	98
S3009750	Zone C5 - Laying Pipe bet Chamber 3 & 4	30	11-Sep-13	10-Oct-13	11-Sep-13	10-Oct-13	30	-80
S3009755	Zone C5 - Handover to Civil for Chamber 3 & 4	0		10-Oct-13		10-Oct-13	0	-80
S3009830	Zone C5 - Remove Sludge Feed Pipe to SST3 & 4	10	25-Dec-13	03-Jan-14	25-Dec-13	03-Jan-14	10	-149
S3009835	Zone C5 - Handover for Valve Chamber 2 Construction	0		03-Jan-14		03-Jan-14	0	-149
S3009850	Zone C5 - Replace Sludge Pipe to SST3 & 4	42	15-Feb-14	28-Mar-14	15-Feb-14	28-Mar-14	42	-149
S3009855	Zone C5 - Install Jet Mixing System for SST3 & 4	42	15-Feb-14	28-Mar-14	15-Feb-14	28-Mar-14	42	-149
S3009856	Zone C5 - Handover to Civil for Backfill	0		28-Mar-14		28-Mar-14	0	-149
S3009900	Zone C6 - Remove Sludge Feed Pipe to SST1 & 2	10	17-Apr-14	26-Apr-14	17-Apr-14	26-Apr-14	10	-157
S3009905	Zone C6 - Handover for Valve Chamber 1 Construction	0		26-Apr-14		26-Apr-14	0	-157
S3009920	Zone C6 - Replace Sludge Pipe to SST1 & 2	45	11-Jun-14	25-Jul-14	11-Jun-14	25-Jul-14	45	-157
S3009925	Zone C6 - Install Jet Mixing System for SST1	45	11-Jun-14	25-Jul-14	11-Jun-14	25-Jul-14	45	-157
S3009928	Zone C6 - Handover to Civil for Backfill	0		25-Jul-14		25-Jul-14	0	-157



Actual Work | Remaining Work | Critical Remaining Work | Project Baseline Bar | Baseline Milestone | Milestone

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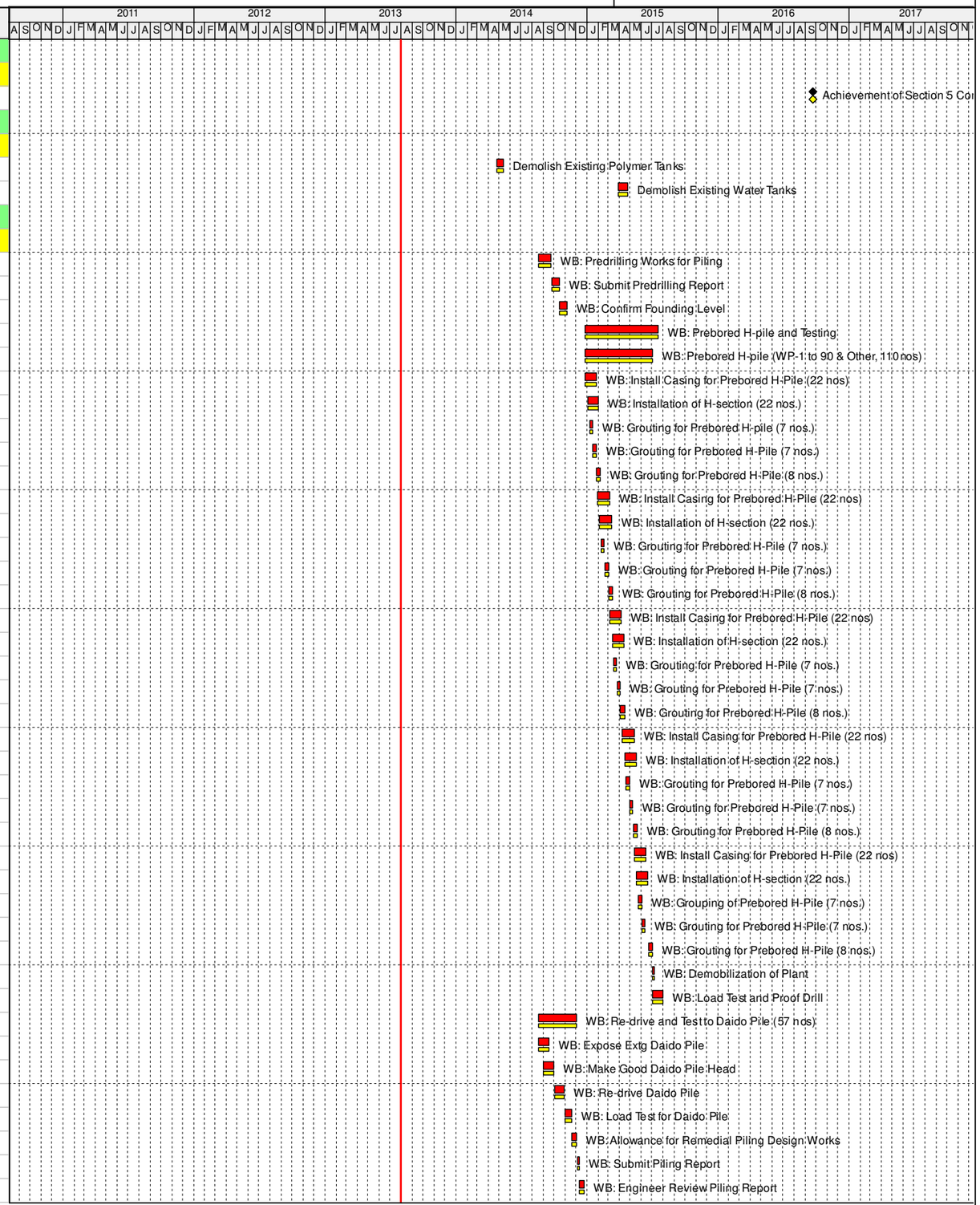
Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
Statutory Inspection and Training								
E&M Installation and T&C								
S3013095	S3 Work: Liaison with WSD for Fresh & Salt Water	30	11-Sep-13	18-Oct-13	11-Sep-13	18-Oct-13	30	-86
S3013110	S3 Work: Submission of FS Form 501	14	18-Jan-14	08-Feb-14	18-Jan-14	08-Feb-14	14	-103
S3013120	S3 Work: Inspect FS Installation by FSD	14	04-Mar-14	20-Mar-14	04-Mar-14	20-Mar-14	14	-103
S3013130	S3 Work: Inspect DG Store by FSD	12	17-Oct-13	30-Oct-13	17-Oct-13	30-Oct-13	12	52
S3013170	S3 Work: Preparation & Submit draft O&M Manuals	60	27-Nov-13	12-Feb-14	27-Nov-13	12-Feb-14	60	-70
S3013180	S3 Work: Submit Training Programme and Syllabus	25	01-Mar-14	25-Mar-14	01-Mar-14	25-Mar-14	25	-89
S3013190	S3 Work: Training of Employer Staff (3 Sessions)	6	07-Apr-14	15-Apr-14	07-Apr-14	15-Apr-14	6	-71
S3013210	S3 Work: Submit Modified O&M Manual as PS40.07	50	12-May-14	10-Jul-14	12-May-14	10-Jul-14*	50	-71
Section 4 of the Works								
Site Access Dates								
Possession of Site								
S4000010	Access to Portion 6	0	25-Apr-14		25-Apr-14		0	-112
Completion								
Commencement and Completion								
S4000020	Achievement of Section 4 Completion	0		27-Nov-14		27-Nov-14	0	-84
Initial Works								
S4000030	Liaison with ST2 for Demolition of SCS and SDB	60	13-Dec-13	28-Feb-14	13-Dec-13	28-Feb-14	60	-80
S4000035	Submit Method Statement - Demolish Extg SCS and SDB	30	01-Mar-14	05-Apr-14	01-Mar-14	05-Apr-14	30	-53
S4000045	Engineer Approve Demolition Extg SCS and SDB	14	06-Apr-14	19-Apr-14	06-Apr-14	19-Apr-14	14	-67
S4000050	Hoarding / Covered Walkway at Portion 6	24	25-Apr-14	24-May-14	25-Apr-14	24-May-14	24	-78
S4000060	Carry out survey all structure, plant / utilities	12	25-Apr-14	10-May-14	25-Apr-14	10-May-14	12	-78
S4000070	Notify Engineer on the Extent of Work	7	12-May-14	19-May-14	12-May-14	19-May-14	7	-78
S4000080	TTA Scheme Submission & Approval	60	27-Jan-14	12-Apr-14	27-Jan-14	12-Apr-14	60	-80
S4000085	Implement Temporary Traffic Arrangement	14	25-Apr-14	13-May-14	25-Apr-14	13-May-14	14	-89
Demolition Works								
Existing Structure								
S4000100	Extg SDB: Removal of Plant and Equipment	30	25-Apr-14	31-May-14	25-Apr-14	31-May-14	30	-89
S4000106	Extg SDB: Handover to Civil for Demolition	0		31-May-14		31-May-14	0	-89
S4000110	Extg SCS: Removal of Plant and Equipment	20	20-May-14	12-Jun-14	20-May-14	12-Jun-14	20	-89
S4000112	Extg SCS: Handover to Civil for Demolition	0		12-Jun-14		12-Jun-14	0	-89
S4000150	Extg SCS: Demolish Extg Structures	42	13-Jun-14	01-Aug-14	13-Jun-14	01-Aug-14	42	-89
S4000155	Extg SCS: Demolish Access Structure	10	13-Jun-14	24-Jun-14	13-Jun-14	24-Jun-14	10	-89
S4000160	Extg SCS: Erect Working Platform	8	25-Jun-14	04-Jul-14	25-Jun-14	04-Jul-14	8	-89
S4000165	Extg SCS: Remove Silos	18	05-Jul-14	25-Jul-14	05-Jul-14	25-Jul-14	18	-89
S4000170	Extg SCS: Remove Support Frame to Silos	6	26-Jul-14	01-Aug-14	26-Jul-14	01-Aug-14	6	-89
S4000200	Extg SDB: Demolish Extg Structure	65	03-Jun-14	18-Aug-14	03-Jun-14	18-Aug-14	65	-89
S4000210	Extg SDB: Erect Temp Scaffold inside	6	03-Jun-14	09-Jun-14	03-Jun-14	09-Jun-14	6	-89
S4000220	Extg SDB: Demolish Roof Slab and Wall	18	10-Jun-14	30-Jun-14	10-Jun-14	30-Jun-14	18	-89
S4000230	Extg SDB: Demolish I/F Slab and Wall	15	02-Jul-14	18-Jul-14	02-Jul-14	18-Jul-14	15	-89
S4000240	Extg SDB: Demolish Ground Floor Slab	10	19-Jul-14	30-Jul-14	19-Jul-14	30-Jul-14	10	-89
S4000250	Extg SDB: Demolish Pilecap / Daido Pile	16	31-Jul-14	18-Aug-14	31-Jul-14	18-Aug-14	16	-89
System								
Piping and Ducting								
S4000090	Centrate Pipe and Sludge Feed Pipe	84	19-Aug-14	27-Nov-14	19-Aug-14	27-Nov-14	84	-89
S4000105	Laying of Sludge Feed Pipe	60	19-Aug-14	30-Oct-14	19-Aug-14	30-Oct-14	60	-89
S4000120	Laying of Centrate Pipe	60	17-Sep-14	27-Nov-14	17-Sep-14	27-Nov-14	60	-89
Section 5 of the Works								

Actual Work | Remaining Work | Critical Remaining Work | Project Baseline Bar | Baseline Milestone | Milestone

Monthly Progress Updated as of 31 July 2013

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
Completion								
Commencement and Completion								
S5000010	Achievement of Section 5 Completion	0		22-Sep-16		22-Sep-16	0	-112
Demolition Works								
Existing Structure								
S5001100	Demolish Existing Polymer Tanks	15	25-Apr-14	14-May-14	25-Apr-14	14-May-14	15	-67
S5001200	Demolish Existing Water Tanks	20	30-Mar-15	24-Apr-15	30-Mar-15	24-Apr-15	20	-67
Workshop Building								
Piling Works								
S5002130	WB: Predrilling Works for Piling	30	19-Aug-14	23-Sep-14	19-Aug-14	23-Sep-14	30	-47
S5002140	WB: Submit Predrilling Report	18	24-Sep-14	16-Oct-14	24-Sep-14	16-Oct-14	18	-47
S5002150	WB: Confirm Founding Level	18	17-Oct-14	06-Nov-14	17-Oct-14	06-Nov-14	18	-47
S5002154	WB: Prebored H-pile and Testing	162	27-Dec-14	17-Jul-15	27-Dec-14	17-Jul-15	162	-76
S5002156	WB: Prebored H-pile (WP-1 to 90 & Other, 110 nos)	149	27-Dec-14	02-Jul-15	27-Dec-14	02-Jul-15	149	-88
S5002158	WB: Install Casing for Prebored H-Pile (22 nos)	27	27-Dec-14	28-Jan-15	27-Dec-14	28-Jan-15	27	-81
S5002160	WB: Installation of H-section (22 nos.)	25	05-Jan-15	02-Feb-15	05-Jan-15	02-Feb-15	25	-77
S5002162	WB: Grouting for Prebored H-pile (7 nos.)	8	08-Jan-15	16-Jan-15	08-Jan-15	16-Jan-15	8	-77
S5002164	WB: Grouting for Prebored H-Pile (7 nos.)	8	17-Jan-15	26-Jan-15	17-Jan-15	26-Jan-15	8	-77
S5002166	WB: Grouting for Prebored H-Pile (8 nos.)	10	27-Jan-15	06-Feb-15	27-Jan-15	06-Feb-15	10	-77
S5002168	WB: Install Casing for Prebored H-Pile (22 nos)	27	29-Jan-15	05-Mar-15	29-Jan-15	05-Mar-15	27	-81
S5002170	WB: Installation of H-section (22 nos.)	25	05-Feb-15	10-Mar-15	05-Feb-15	10-Mar-15	25	-78
S5002172	WB: Grouting for Prebored H-Pile (7 nos.)	8	09-Feb-15	17-Feb-15	09-Feb-15	17-Feb-15	8	-78
S5002174	WB: Grouting for Prebored H-Pile (7 nos.)	8	21-Feb-15	03-Mar-15	21-Feb-15	03-Mar-15	8	-78
S5002176	WB: Grouting for Prebored H-Pile (8 nos.)	10	04-Mar-15	14-Mar-15	04-Mar-15	14-Mar-15	10	-78
S5002178	WB: Install Casing for Prebored H-Pile (22 nos)	27	06-Mar-15	07-Apr-15	06-Mar-15	07-Apr-15	27	-81
S5002180	WB: Installation of H-section (22 nos.)	25	13-Mar-15	14-Apr-15	13-Mar-15	14-Apr-15	25	-79
S5002184	WB: Grouting for Prebored H-Pile (7 nos.)	8	17-Mar-15	25-Mar-15	17-Mar-15	25-Mar-15	8	-79
S5002186	WB: Grouting for Prebored H-Pile (7 nos.)	8	26-Mar-15	03-Apr-15	26-Mar-15	03-Apr-15	8	-79
S5002188	WB: Grouting for Prebored H-Pile (8 nos.)	10	04-Apr-15	18-Apr-15	04-Apr-15	18-Apr-15	10	-79
S5002190	WB: Install Casing for Prebored H-Pile (22 nos)	27	08-Apr-15	12-May-15	08-Apr-15	12-May-15	27	-81
S5002192	WB: Installation of H-section (22 nos.)	25	17-Apr-15	18-May-15	17-Apr-15	18-May-15	25	-80
S5002196	WB: Grouting for Prebored H-Pile (7 nos.)	8	21-Apr-15	29-Apr-15	21-Apr-15	29-Apr-15	8	-80
S5002198	WB: Grouting for Prebored H-Pile (7 nos.)	8	30-Apr-15	09-May-15	30-Apr-15	09-May-15	8	-80
S5002200	WB: Grouting for Prebored H-Pile (8 nos.)	10	11-May-15	22-May-15	11-May-15	22-May-15	10	-80
S5002202	WB: Install Casing for Prebored H-Pile (22 nos)	27	13-May-15	13-Jun-15	13-May-15	13-Jun-15	27	-81
S5002204	WB: Installation of H-section (22 nos.)	25	20-May-15	20-Jun-15	20-May-15	20-Jun-15	25	-81
S5002208	WB: Grouping of Prebored H-Pile (7 nos.)	8	23-May-15	02-Jun-15	23-May-15	02-Jun-15	8	-81
S5002210	WB: Grouting for Prebored H-Pile (7 nos.)	8	03-Jun-15	11-Jun-15	03-Jun-15	11-Jun-15	8	-81
S5002212	WB: Grouting for Prebored H-Pile (8 nos.)	9	22-Jun-15	02-Jul-15	22-Jun-15	02-Jul-15	9	-88
S5002214	WB: Demobilization of Plant	6	02-Jul-15	08-Jul-15	02-Jul-15	08-Jul-15	6	-88
S5002216	WB: Load Test and Proof Drill	25	03-Jul-15	31-Jul-15	03-Jul-15	31-Jul-15	25	-88
S5002218	WB: Re-drive and Test to Daido Pile (57 nos)	90	19-Aug-14	04-Dec-14	19-Aug-14	04-Dec-14	90	-88
S5002220	WB: Expose Extg Daido Pile	24	19-Aug-14	16-Sep-14	19-Aug-14	16-Sep-14	24	-88
S5002225	WB: Make Good Daido Pile Head	24	02-Sep-14	30-Sep-14	02-Sep-14	30-Sep-14	24	-88
S5002230	WB: Re-drive Daido Pile	24	03-Oct-14	30-Oct-14	03-Oct-14	30-Oct-14	24	-88
S5002235	WB: Load Test for Daido Pile	18	31-Oct-14	20-Nov-14	31-Oct-14	20-Nov-14	18	-88
S5002240	WB: Allowance for Remedial Piling Design Works	12	21-Nov-14	04-Dec-14	21-Nov-14	04-Dec-14	12	-88
S5002245	WB: Submit Piling Report	5	05-Dec-14	10-Dec-14	05-Dec-14	10-Dec-14	5	-88
S5002250	WB: Engineer Review Piling Report	12	11-Dec-14	24-Dec-14	11-Dec-14	24-Dec-14	12	-88

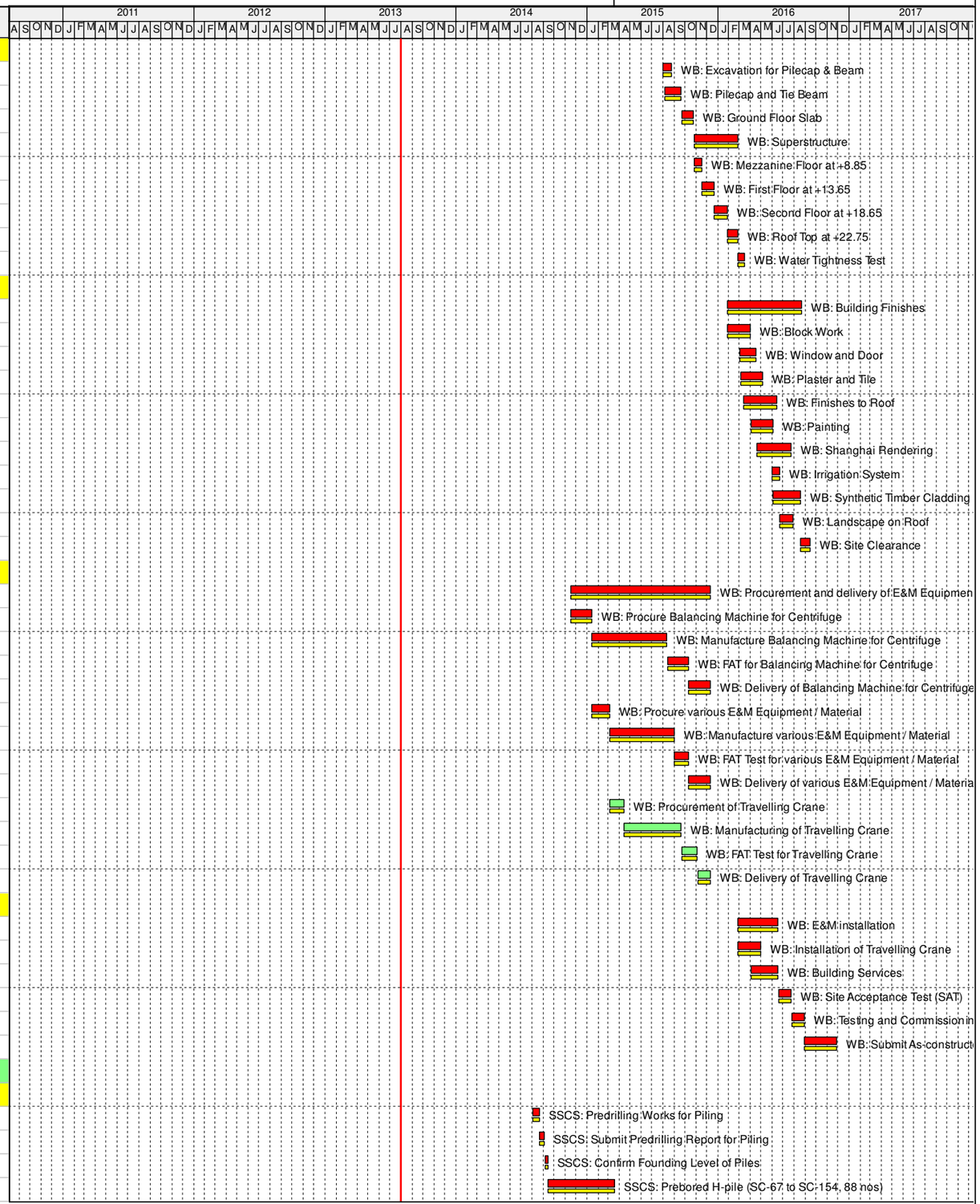


Actual Work | Project Baseline Bar
Remaining Work | Baseline Milestone
Critical Remaining Work | Milestone

Monthly Progress Updated as of 31 July 2013

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
Structure								
S5002203	WB: Excavation for Pilecap & Beam	21	01-Aug-15	25-Aug-15	01-Aug-15	25-Aug-15	21	-88
S5002206	WB: Pilecap and Tie Beam	40	06-Aug-15	21-Sep-15	06-Aug-15	21-Sep-15	40	-88
S5002300	WB: Ground Floor Slab	26	22-Sep-15	24-Oct-15	22-Sep-15	24-Oct-15	26	-88
S5002380	WB: Superstructure	100	26-Oct-15	26-Feb-16	26-Oct-15	26-Feb-16	100	-73
S5002400	WB: Mezzanine Floor at +8.85	20	26-Oct-15	17-Nov-15	26-Oct-15	17-Nov-15	20	-88
S5002450	WB: First Floor at +13.65	30	18-Nov-15	22-Dec-15	18-Nov-15	22-Dec-15	30	-88
S5002500	WB: Second Floor at +18.65	30	23-Dec-15	28-Jan-16	23-Dec-15	28-Jan-16	30	-88
S5002550	WB: Roof Top at +22.75	20	29-Jan-16	26-Feb-16	29-Jan-16	26-Feb-16	20	-88
S5002560	WB: Water Tightness Test	14	27-Feb-16	14-Mar-16	27-Feb-16	14-Mar-16	14	-88
Architectural Finishes								
S5002600	WB: Building Finishes	164	29-Jan-16	20-Aug-16	29-Jan-16	20-Aug-16	164	-71
S5002610	WB: Block Work	48	29-Jan-16	30-Mar-16	29-Jan-16	30-Mar-16	48	-88
S5002620	WB: Window and Door	36	03-Mar-16	16-Apr-16	03-Mar-16	16-Apr-16	36	-88
S5002630	WB: Plaster and Tile	48	05-Mar-16	04-May-16	05-Mar-16	04-May-16	48	-88
S5002640	WB: Finishes to Roof	75	12-Mar-16	14-Jun-16	12-Mar-16	14-Jun-16	75	-63
S5002650	WB: Painting	48	02-Apr-16	02-Jun-16	02-Apr-16	02-Jun-16	48	-88
S5002660	WB: Shanghai Rendering	80	18-Apr-16	23-Jul-16	18-Apr-16	23-Jul-16	80	-88
S5002670	WB: Irrigation System	18	31-May-16	21-Jun-16	31-May-16	21-Jun-16	18	-50
S5002680	WB: Synthetic Timber Cladding	64	03-Jun-16	18-Aug-16	03-Jun-16	18-Aug-16	64	-88
S5002690	WB: Landscape on Roof	30	22-Jun-16	27-Jul-16	22-Jun-16	27-Jul-16	30	-50
S5002695	WB: Site Clearance	24	19-Aug-16	15-Sep-16	19-Aug-16	15-Sep-16	24	-88
Procurement, Manufacture and Delivery								
S5002905	WB: Procurement and delivery of E&M Equipment / Material	390	16-Nov-14	10-Dec-15	16-Nov-14	10-Dec-15	390	-30
S5002910	WB: Procure Balancing Machine for Centrifuge	60	16-Nov-14	14-Jan-15	16-Nov-14	14-Jan-15	60	-30
S5002915	WB: Manufacture Balancing Machine for Centrifuge	210	15-Jan-15	12-Aug-15	15-Jan-15	12-Aug-15	210	-30
S5002920	WB: FAT for Balancing Machine for Centrifuge	60	13-Aug-15	11-Oct-15	13-Aug-15	11-Oct-15	60	-30
S5002925	WB: Delivery of Balancing Machine for Centrifuge	60	12-Oct-15	10-Dec-15	12-Oct-15	10-Dec-15	60	-30
S5002930	WB: Procure various E&M Equipment / Material	50	15-Jan-15	05-Mar-15	15-Jan-15	05-Mar-15	50	-15
S5002935	WB: Manufacture various E&M Equipment / Material	180	06-Mar-15	01-Sep-15	06-Mar-15	01-Sep-15	180	-15
S5002940	WB: FAT Test for various E&M Equipment / Material	40	02-Sep-15	11-Oct-15	02-Sep-15	11-Oct-15	40	-15
S5002945	WB: Delivery of various E&M Equipment / Materials	60	12-Oct-15	10-Dec-15	12-Oct-15	10-Dec-15	60	-15
S5002950	WB: Procurement of Travelling Crane	40	06-Mar-15	14-Apr-15	06-Mar-15	14-Apr-15	40	6
S5002955	WB: Manufacturing of Travelling Crane	160	15-Apr-15	21-Sep-15	15-Apr-15	21-Sep-15	160	6
S5002960	WB: FAT Test for Travelling Crane	45	22-Sep-15	05-Nov-15	22-Sep-15	05-Nov-15	45	6
S5002965	WB: Delivery of Travelling Crane	35	06-Nov-15	10-Dec-15	06-Nov-15	10-Dec-15	35	6
E&M Installation and T&C								
S5002968	WB: E&M installation	90	27-Feb-16	17-Jun-16	27-Feb-16	17-Jun-16	90	-73
S5002970	WB: Installation of Travelling Crane	50	27-Feb-16	28-Apr-16	27-Feb-16	28-Apr-16	50	-55
S5002980	WB: Building Services	60	02-Apr-16	17-Jun-16	02-Apr-16	17-Jun-16	60	-38
S5002985	WB: Site Acceptance Test (SAT)	30	18-Jun-16	23-Jul-16	18-Jun-16	23-Jul-16	30	-73
S5002990	WB: Testing and Commissioning	31	25-Jul-16	29-Aug-16	25-Jul-16	29-Aug-16	31	-73
S5002995	WB: Submit As-constructed Drawings	90	30-Aug-16	27-Nov-16	30-Aug-16	27-Nov-16	90	-87
Southern Sludge Cake Silo								
Piling Works								
S5003010	SSCS: Predrilling Works for Piling	18	02-Aug-14	22-Aug-14	02-Aug-14	22-Aug-14	18	-89
S5003020	SSCS: Submit Predrilling Report for Piling	12	23-Aug-14	05-Sep-14	23-Aug-14	05-Sep-14	12	-89
S5003030	SSCS: Confirm Founding Level of Piles	6	06-Sep-14	13-Sep-14	06-Sep-14	13-Sep-14	6	-89
S5003032	SSCS: Prebored H-pile (SC-67 to SC-154, 88 nos)	150	15-Sep-14	18-Mar-15	15-Sep-14	18-Mar-15	150	-89

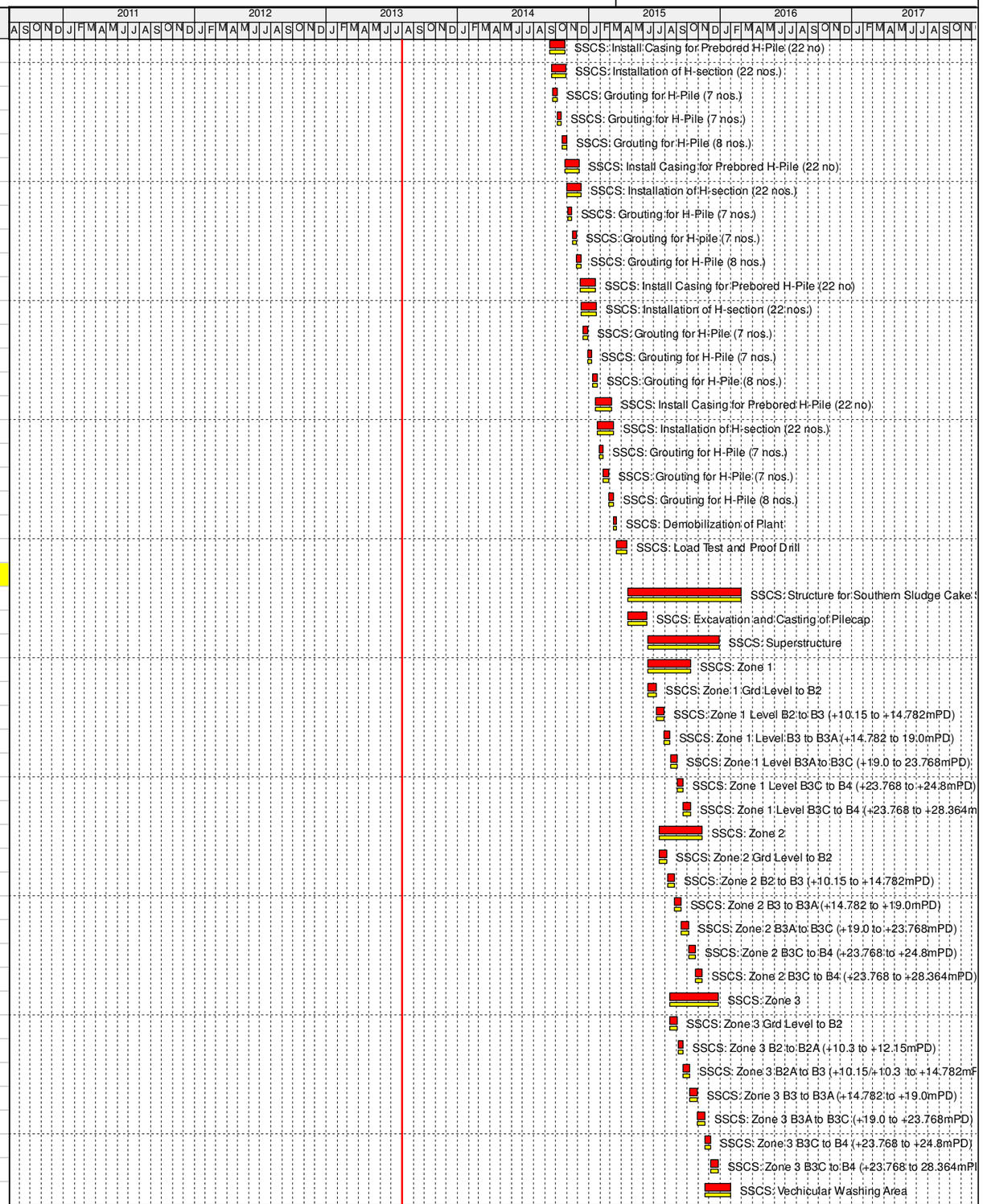


Actual Work | Remaining Work | Critical Remaining Work | Project Baseline Bar | Baseline Milestone | Milestone

Monthly Progress Updated as of 31 July 2013

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S5003034	SSCS: Install Casing for Prebored H-Pile (22 no)	35	15-Sep-14	27-Oct-14	15-Sep-14	27-Oct-14	35	-89
S5003040	SSCS: Installation of H-section (22 nos.)	34	19-Sep-14	30-Oct-14	19-Sep-14	30-Oct-14	34	-89
S5003042	SSCS: Grouting for H-Pile (7 nos.)	10	23-Sep-14	06-Oct-14	23-Sep-14	06-Oct-14	10	-89
S5003044	SSCS: Grouting for H-Pile (7 nos.)	10	07-Oct-14	17-Oct-14	07-Oct-14	17-Oct-14	10	-89
S5003046	SSCS: Grouting for H-Pile (8 nos.)	12	18-Oct-14	31-Oct-14	18-Oct-14	31-Oct-14	12	-89
S5003048	SSCS: Install Casing for Prebored H-Pile (22 no)	35	28-Oct-14	06-Dec-14	28-Oct-14	06-Dec-14	35	-89
S5003050	SSCS: Installation of H-section (22 nos.)	34	01-Nov-14	10-Dec-14	01-Nov-14	10-Dec-14	34	-89
S5003052	SSCS: Grouting for H-Pile (7 nos.)	10	05-Nov-14	15-Nov-14	05-Nov-14	15-Nov-14	10	-89
S5003054	SSCS: Grouting for H-pile (7 nos.)	10	17-Nov-14	27-Nov-14	17-Nov-14	27-Nov-14	10	-89
S5003056	SSCS: Grouting for H-Pile (8 nos.)	12	28-Nov-14	11-Dec-14	28-Nov-14	11-Dec-14	12	-89
S5003058	SSCS: Install Casing for Prebored H-Pile (22 no)	35	08-Dec-14	20-Jan-15	08-Dec-14	20-Jan-15	35	-89
S5003060	SSCS: Installation of H-section (22 nos.)	34	12-Dec-14	23-Jan-15	12-Dec-14	23-Jan-15	34	-89
S5003062	SSCS: Grouting for H-Pile (7 nos.)	10	16-Dec-14	29-Dec-14	16-Dec-14	29-Dec-14	10	-89
S5003064	SSCS: Grouting for H-Pile (7 nos.)	10	30-Dec-14	10-Jan-15	30-Dec-14	10-Jan-15	10	-89
S5003066	SSCS: Grouting for H-Pile (8 nos.)	12	12-Jan-15	24-Jan-15	12-Jan-15	24-Jan-15	12	-89
S5003068	SSCS: Install Casing for Prebored H-Pile (22 no)	35	21-Jan-15	06-Mar-15	21-Jan-15	06-Mar-15	35	-89
S5003070	SSCS: Installation of H-section (22 nos.)	34	26-Jan-15	10-Mar-15	26-Jan-15	10-Mar-15	34	-89
S5003072	SSCS: Grouting for H-Pile (7 nos.)	10	29-Jan-15	09-Feb-15	29-Jan-15	09-Feb-15	10	-89
S5003074	SSCS: Grouting for H-Pile (7 nos.)	10	10-Feb-15	25-Feb-15	10-Feb-15	25-Feb-15	10	-89
S5003076	SSCS: Grouting for H-Pile (8 nos.)	12	26-Feb-15	11-Mar-15	26-Feb-15	11-Mar-15	12	-89
S5003078	SSCS: Demobilization of Plant	6	12-Mar-15	18-Mar-15	12-Mar-15	18-Mar-15	6	-89
S5003080	SSCS: Load Test and Proof Drill	24	19-Mar-15	18-Apr-15	19-Mar-15	18-Apr-15	24	-89
Structure								
S5003105	SSCS: Structure for Southern Sludge Cake Silo	256	20-Apr-15	27-Feb-16	20-Apr-15	27-Feb-16	256	-89
S5003110	SSCS: Excavation and Casting of Pilecap	45	20-Apr-15	12-Jun-15	20-Apr-15	12-Jun-15	45	-89
S5003115	SSCS: Superstructure	165	13-Jun-15	29-Dec-15	13-Jun-15	29-Dec-15	165	-89
S5003120	SSCS: Zone 1	100	13-Jun-15	12-Oct-15	13-Jun-15	12-Oct-15	100	-89
S5003122	SSCS: Zone 1 Grd Level to B2	20	13-Jun-15	08-Jul-15	13-Jun-15	08-Jul-15	20	-80
S5003124	SSCS: Zone 1 Level B2 to B3 (+10.15 to +14.782mPD)	17	09-Jul-15	28-Jul-15	09-Jul-15	28-Jul-15	17	-80
S5003126	SSCS: Zone 1 Level B3 to B3A (+14.782 to 19.0mPD)	16	29-Jul-15	15-Aug-15	29-Jul-15	15-Aug-15	16	-80
S5003128	SSCS: Zone 1 Level B3A to B3C (+19.0 to 23.768mPD)	16	17-Aug-15	03-Sep-15	17-Aug-15	03-Sep-15	16	-80
S5003130	SSCS: Zone 1 Level B3C to B4 (+23.768 to +24.8mPD)	14	04-Sep-15	19-Sep-15	04-Sep-15	19-Sep-15	14	-80
S5003132	SSCS: Zone 1 Level B3C to B4 (+23.768 to +28.364mPD)	17	21-Sep-15	12-Oct-15	21-Sep-15	12-Oct-15	17	-80
S5003150	SSCS: Zone 2	100	16-Jul-15	12-Nov-15	16-Jul-15	12-Nov-15	100	-89
S5003152	SSCS: Zone 2 Grd Level to B2	20	16-Jul-15	07-Aug-15	16-Jul-15	07-Aug-15	20	-89
S5003162	SSCS: Zone 2 B2 to B3 (+10.15 to +14.782mPD)	17	08-Aug-15	27-Aug-15	08-Aug-15	27-Aug-15	17	-89
S5003164	SSCS: Zone 2 B3 to B3A (+14.782 to +19.0mPD)	16	28-Aug-15	15-Sep-15	28-Aug-15	15-Sep-15	16	-89
S5003166	SSCS: Zone 2 B3A to B3C (+19.0 to +23.768mPD)	16	16-Sep-15	06-Oct-15	16-Sep-15	06-Oct-15	16	-89
S5003176	SSCS: Zone 2 B3C to B4 (+23.768 to +24.8mPD)	14	07-Oct-15	23-Oct-15	07-Oct-15	23-Oct-15	14	-89
S5003178	SSCS: Zone 2 B3C to B4 (+23.768 to +28.364mPD)	17	24-Oct-15	12-Nov-15	24-Oct-15	12-Nov-15	17	-89
S5003190	SSCS: Zone 3	111	15-Aug-15	26-Dec-15	15-Aug-15	26-Dec-15	111	-89
S5003192	SSCS: Zone 3 Grd Level to B2	19	15-Aug-15	05-Sep-15	15-Aug-15	05-Sep-15	19	-77
S5003202	SSCS: Zone 3 B2 to B2A (+10.3 to +12.15mPD)	12	07-Sep-15	19-Sep-15	07-Sep-15	19-Sep-15	12	-77
S5003212	SSCS: Zone 3 B2A to B3 (+10.15/+10.3 to +14.782mPD)	15	21-Sep-15	09-Oct-15	21-Sep-15	09-Oct-15	15	-77
S5003214	SSCS: Zone 3 B3 to B3A (+14.782 to +19.0mPD)	17	10-Oct-15	30-Oct-15	10-Oct-15	30-Oct-15	17	-77
S5003216	SSCS: Zone 3 B3A to B3C (+19.0 to +23.768mPD)	17	31-Oct-15	19-Nov-15	31-Oct-15	19-Nov-15	17	-77
S5003218	SSCS: Zone 3 B3C to B4 (+23.768 to +24.8mPD)	14	20-Nov-15	05-Dec-15	20-Nov-15	05-Dec-15	14	-77
S5003220	SSCS: Zone 3 B3C to B4 (+23.768 to 28.364mPD)	17	07-Dec-15	26-Dec-15	07-Dec-15	26-Dec-15	17	-77
S5003230	SSCS: Vechicular Washing Area	60	19-Nov-15	29-Jan-16	19-Nov-15	29-Jan-16	60	-89



Actual Work | Project Baseline Bar
Remaining Work | Baseline Milestone
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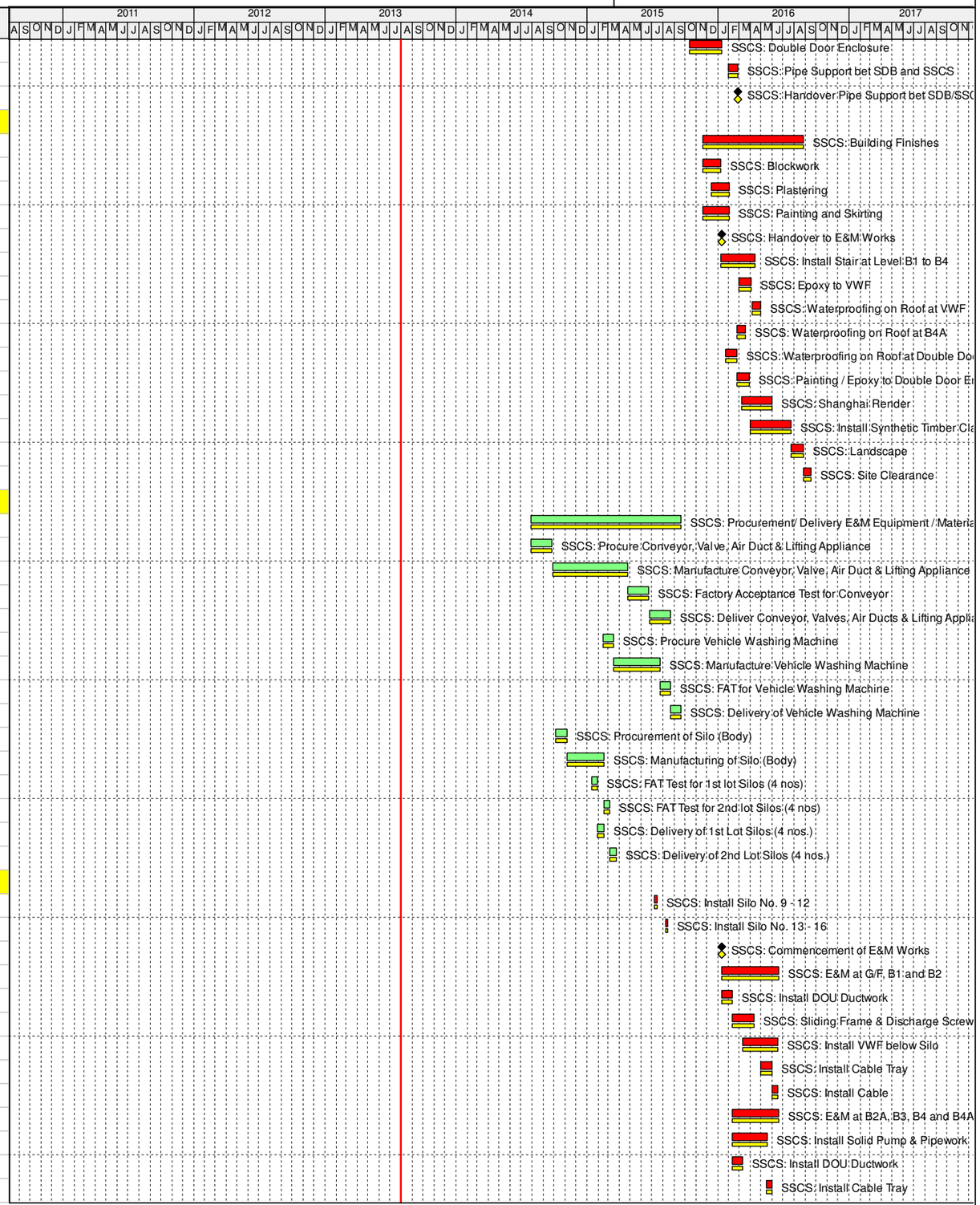
Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S5003240	SSCS: Double Door Enclosure	75	13-Oct-15	11-Jan-16	13-Oct-15	11-Jan-16	75	-89
S5003245	SSCS: Pipe Support bet SDB and SSCS	18	30-Jan-16	25-Feb-16	30-Jan-16	25-Feb-16	18	-89
S5003248	SSCS: Handover Pipe Support bet SDB/SSCS to E&M	0		25-Feb-16		25-Feb-16	0	-89
Architecture Finishes								
S5003250	SSCS: Building Finishes	226	21-Nov-15	26-Aug-16	21-Nov-15	26-Aug-16	226	-89
S5003300	SSCS: Blockwork	40	21-Nov-15	08-Jan-16	21-Nov-15	08-Jan-16	40	-81
S5003310	SSCS: Plastering	40	15-Dec-15	01-Feb-16	15-Dec-15	01-Feb-16	40	-39
S5003320	SSCS: Painting and Skirting	60	21-Nov-15	01-Feb-16	21-Nov-15	01-Feb-16	60	-81
S5003330	SSCS: Handover to E&M Works	0		11-Jan-16		11-Jan-16	0	-89
S5003340	SSCS: Install Stair at Level B1 to B4	75	09-Jan-16	14-Apr-16	09-Jan-16	14-Apr-16	75	-75
S5003350	SSCS: Epoxy to VWF	30	29-Feb-16	02-Apr-16	29-Feb-16	02-Apr-16	30	-89
S5003360	SSCS: Waterproofing on Roof at VWF	21	05-Apr-16	30-Apr-16	05-Apr-16	30-Apr-16	21	-89
S5003370	SSCS: Waterproofing on Roof at B4A	21	23-Feb-16	17-Mar-16	23-Feb-16	17-Mar-16	21	-75
S5003380	SSCS: Waterproofing on Roof at Double Door Enclosure	21	23-Jan-16	22-Feb-16	23-Jan-16	22-Feb-16	21	-86
S5003390	SSCS: Painting / Epoxy to Double Door Enclosure	30	23-Feb-16	28-Mar-16	23-Feb-16	28-Mar-16	30	-86
S5003400	SSCS: Shanghai Render	70	07-Mar-16	01-Jun-16	07-Mar-16	01-Jun-16	70	-89
S5003410	SSCS: Install Synthetic Timber Cladding	90	01-Apr-16	22-Jul-16	01-Apr-16	22-Jul-16	90	-89
S5003420	SSCS: Landscape	30	23-Jul-16	26-Aug-16	23-Jul-16	26-Aug-16	30	-89
S5003430	SSCS: Site Clearance	18	27-Aug-16	17-Sep-16	27-Aug-16	17-Sep-16	18	-89
Procurement, Manufacture and Delivery								
S5003510	SSCS: Procurement/ Delivery E&M Equipment / Material	420	29-Jul-14	21-Sep-15	29-Jul-14	21-Sep-15	420	20
S5003520	SSCS: Procure Conveyor, Valve, Air Duct & Lifting Appliance	60	29-Jul-14	26-Sep-14	29-Jul-14	26-Sep-14	60	50
S5003530	SSCS: Manufacture Conveyor, Valve, Air Duct & Lifting Appliance	210	27-Sep-14	24-Apr-15	27-Sep-14	24-Apr-15	210	50
S5003535	SSCS: Factory Acceptance Test for Conveyor	60	25-Apr-15	23-Jun-15	25-Apr-15	23-Jun-15	60	50
S5003540	SSCS: Deliver Conveyor, Valves, Air Ducts & Lifting Appliance	60	24-Jun-15	22-Aug-15	24-Jun-15	22-Aug-15	60	50
S5003550	SSCS: Procure Vehicle Washing Machine	30	14-Feb-15	15-Mar-15	14-Feb-15	15-Mar-15	30	20
S5003555	SSCS: Manufacture Vehicle Washing Machine	130	16-Mar-15	23-Jul-15	16-Mar-15	23-Jul-15	130	20
S5003565	SSCS: FAT for Vehicle Washing Machine	30	24-Jul-15	22-Aug-15	24-Jul-15	22-Aug-15	30	20
S5003575	SSCS: Delivery of Vehicle Washing Machine	30	23-Aug-15	21-Sep-15	23-Aug-15	21-Sep-15	30	20
S5003585	SSCS: Procurement of Silo (Body)	30	07-Oct-14	05-Nov-14	07-Oct-14	05-Nov-14	30	27
S5003590	SSCS: Manufacturing of Silo (Body)	105	06-Nov-14	18-Feb-15	06-Nov-14	18-Feb-15	105	27
S5003595	SSCS: FAT Test for 1st lot Silos (4 nos)	15	15-Jan-15	29-Jan-15	15-Jan-15	29-Jan-15	15	28
S5003596	SSCS: FAT Test for 2nd lot Silos (4 nos)	15	19-Feb-15	05-Mar-15	19-Feb-15	05-Mar-15	15	27
S5003600	SSCS: Delivery of 1st Lot Silos (4 nos.)	20	30-Jan-15	18-Feb-15	30-Jan-15	18-Feb-15	20	28
S5003610	SSCS: Delivery of 2nd Lot Silos (4 nos.)	20	06-Mar-15	25-Mar-15	06-Mar-15	25-Mar-15	20	27
E&M Installation and T&C								
S5003570	SSCS: Install Silo No. 9 - 12	7	09-Jul-15	15-Jul-15	09-Jul-15	15-Jul-15	7	-112
S5003580	SSCS: Install Silo No. 13 - 16	7	08-Aug-15	14-Aug-15	08-Aug-15	14-Aug-15	7	-108
S5004000	SSCS: Commencement of E&M Works	0	12-Jan-16		12-Jan-16		0	-110
S5004010	SSCS: E&M at G/F, B1 and B2	160	12-Jan-16	19-Jun-16	12-Jan-16	19-Jun-16	160	-110
S5004020	SSCS: Install DOU Ductwork	30	12-Jan-16	10-Feb-16	12-Jan-16	10-Feb-16	30	-110
S5004030	SSCS: Sliding Frame & Discharge Screw Conveyor	60	11-Feb-16	10-Apr-16	11-Feb-16	10-Apr-16	60	-110
S5004040	SSCS: Install VWF below Silo	100	10-Mar-16	17-Jun-16	10-Mar-16	17-Jun-16	100	-110
S5004050	SSCS: Install Cable Tray	32	30-Apr-16	31-May-16	30-Apr-16	31-May-16	32	-110
S5004060	SSCS: Install Cable	17	01-Jun-16	17-Jun-16	01-Jun-16	17-Jun-16	17	-110
S5004070	SSCS: E&M at B2A, B3, B4 and B4A	132	09-Feb-16	19-Jun-16	09-Feb-16	19-Jun-16	132	-108
S5004080	SSCS: Install Solid Pump & Pipework	100	09-Feb-16	18-May-16	09-Feb-16	18-May-16	100	-108
S5004090	SSCS: Install DOU Ductwork	30	09-Feb-16	09-Mar-16	09-Feb-16	09-Mar-16	30	-108
S5004100	SSCS: Install Cable Tray	18	15-May-16	01-Jun-16	15-May-16	01-Jun-16	18	-108



Actual Work | Remaining Work | Critical Remaining Work | Project Baseline Bar | Baseline Milestone | Milestone

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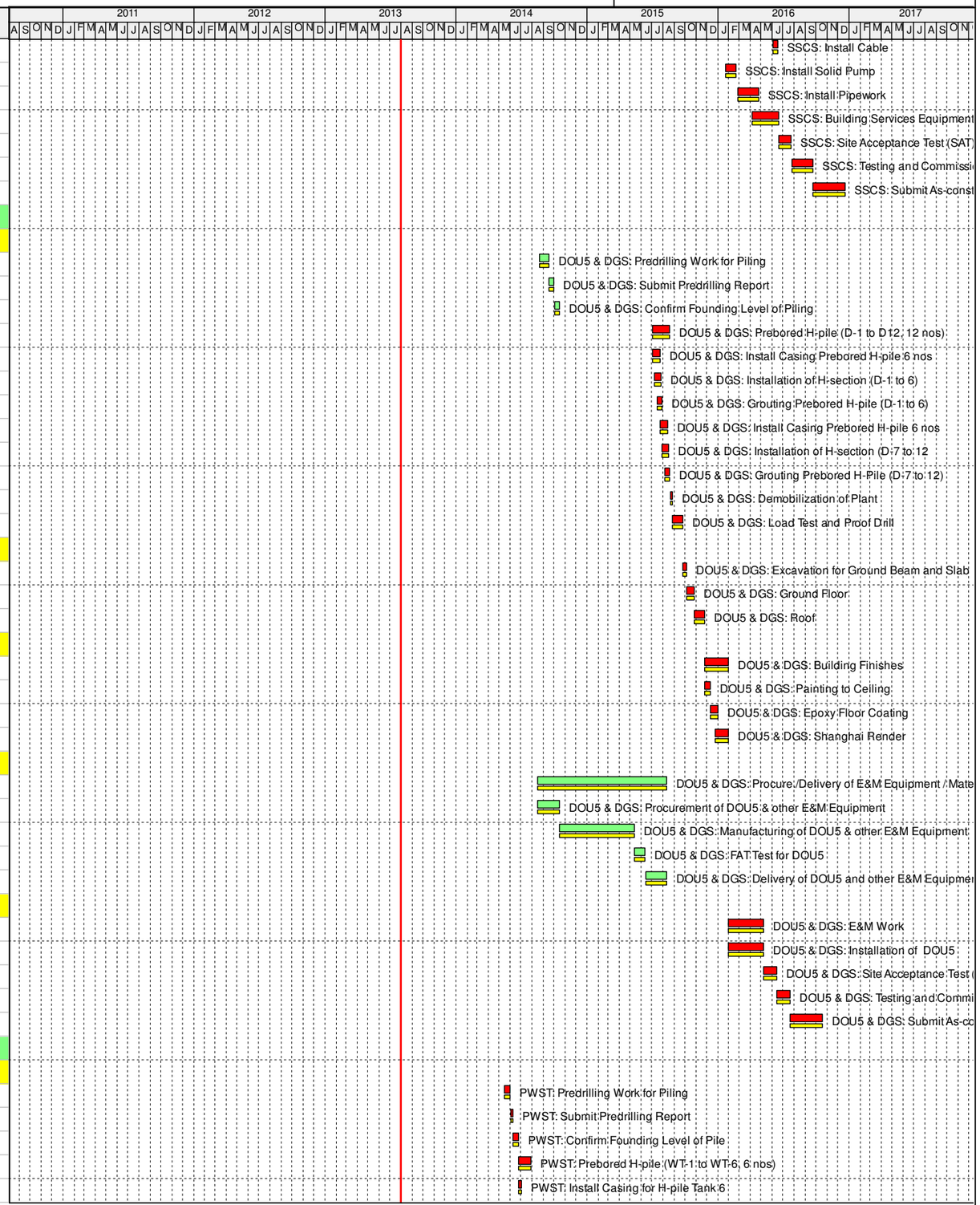
Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S5004110	SSCS: Install Cable	14	02-Jun-16	15-Jun-16	02-Jun-16	15-Jun-16	14	-108
S5004120	SSCS: Install Solid Pump	30	22-Jan-16	20-Feb-16	22-Jan-16	20-Feb-16	30	-107
S5004130	SSCS: Install Pipework	60	26-Feb-16	25-Apr-16	26-Feb-16	25-Apr-16	60	-112
S5004140	SSCS: Building Services Equipment	75	06-Apr-16	19-Jun-16	06-Apr-16	19-Jun-16	75	-112
S5004150	SSCS: Site Acceptance Test (SAT)	35	20-Jun-16	24-Jul-16	20-Jun-16	24-Jul-16	35	-112
S5004160	SSCS: Testing and Commissioning	60	25-Jul-16	22-Sep-16	25-Jul-16	22-Sep-16	60	-112
S5004170	SSCS: Submit As-constructed Drawings	90	23-Sep-16	21-Dec-16	23-Sep-16	21-Dec-16	90	-111
Deodourization Unit 5 and DG Store								
Piling Works								
S5008110	DOU5 & DGS: Predrilling Work for Piling	20	23-Aug-14	16-Sep-14	23-Aug-14	16-Sep-14	20	89
S5008120	DOU5 & DGS: Submit Predrilling Report	12	17-Sep-14	30-Sep-14	17-Sep-14	30-Sep-14	12	89
S5008130	DOU5 & DGS: Confirm Founding Level of Piling	12	03-Oct-14	16-Oct-14	03-Oct-14	16-Oct-14	12	89
S5008210	DOU5 & DGS: Prebored H-pile (D-1 to D12, 12 nos)	42	03-Jul-15	20-Aug-15	03-Jul-15	20-Aug-15	42	-59
S5008220	DOU5 & DGS: Install Casing Prebored H-pile 6 nos	18	03-Jul-15	23-Jul-15	03-Jul-15	23-Jul-15	18	-59
S5008225	DOU5 & DGS: Installation of H-section (D-1 to 6)	16	09-Jul-15	27-Jul-15	09-Jul-15	27-Jul-15	16	-55
S5008230	DOU5 & DGS: Grouting Prebored H-pile (D-1 to 6)	14	15-Jul-15	30-Jul-15	15-Jul-15	30-Jul-15	14	-55
S5008250	DOU5 & DGS: Install Casing Prebored H-pile 6 nos	18	24-Jul-15	13-Aug-15	24-Jul-15	13-Aug-15	18	-59
S5008255	DOU5 & DGS: Installation of H-section (D-7 to 12	16	30-Jul-15	17-Aug-15	30-Jul-15	17-Aug-15	16	-59
S5008265	DOU5 & DGS: Grouting Prebored H-Pile (D-7 to 12)	14	05-Aug-15	20-Aug-15	05-Aug-15	20-Aug-15	14	-59
S5008266	DOU5 & DGS: Demobilization of Plant	6	21-Aug-15	27-Aug-15	21-Aug-15	27-Aug-15	6	-59
S5008267	DOU5 & DGS: Load Test and Proof Drill	25	28-Aug-15	25-Sep-15	28-Aug-15	25-Sep-15	25	-59
Structure								
S5008290	DOU5 & DGS: Excavation for Ground Beam and Slab	6	26-Sep-15	05-Oct-15	26-Sep-15	05-Oct-15	6	-59
S5008300	DOU5 & DGS: Ground Floor	18	06-Oct-15	27-Oct-15	06-Oct-15	27-Oct-15	18	-59
S5008350	DOU5 & DGS: Roof	24	28-Oct-15	24-Nov-15	28-Oct-15	24-Nov-15	24	-59
Architecture Finishes								
S5008400	DOU5 & DGS: Building Finishes	55	25-Nov-15	29-Jan-16	25-Nov-15	29-Jan-16	55	-59
S5008410	DOU5 & DGS: Painting to Ceiling	14	25-Nov-15	10-Dec-15	25-Nov-15	10-Dec-15	14	-59
S5008420	DOU5 & DGS: Epoxy Floor Coating	18	11-Dec-15	02-Jan-16	11-Dec-15	02-Jan-16	18	-59
S5008430	DOU5 & DGS: Shanghai Render	30	24-Dec-15	29-Jan-16	24-Dec-15	29-Jan-16	30	-59
Procurement and Delivery								
S5008500	DOU5 & DGS: Procure./Delivery of E&M Equipment / Material	360	17-Aug-14	11-Aug-15	17-Aug-14	11-Aug-15	360	100
S5008510	DOU5 & DGS: Procurement of DOU5 & other E&M Equipment	60	17-Aug-14	15-Oct-14	17-Aug-14	15-Oct-14	60	100
S5008520	DOU5 & DGS: Manufacturing of DOU5 & other E&M Equipment	210	16-Oct-14	13-May-15	16-Oct-14	13-May-15	210	100
S5008525	DOU5 & DGS: FAT Test for DOU5	30	14-May-15	12-Jun-15	14-May-15	12-Jun-15	30	100
S5008530	DOU5 & DGS: Delivery of DOU5 and other E&M Equipment	60	13-Jun-15	11-Aug-15	13-Jun-15	11-Aug-15	60	100
E&M Installation and T&C								
S5008560	DOU5 & DGS: E&M Work	75	30-Jan-16	06-May-16	30-Jan-16	06-May-16	75	-59
S5008570	DOU5 & DGS: Installation of DOU5	75	30-Jan-16	06-May-16	30-Jan-16	06-May-16	75	-59
S5008575	DOU5 & DGS: Site Acceptance Test (SAT)	30	07-May-16	13-Jun-16	07-May-16	13-Jun-16	30	-59
S5008650	DOU5 & DGS: Testing and Commissioning	30	14-Jun-16	19-Jul-16	14-Jun-16	19-Jul-16	30	-59
S5008700	DOU5 & DGS: Submit As-constructed Drawings	90	20-Jul-16	17-Oct-16	20-Jul-16	17-Oct-16	90	-72
Process Water Storage Tank								
Piling Works								
S5009140	PWST: Predrilling Work for Piling	15	15-May-14	31-May-14	15-May-14	31-May-14	15	-67
S5009150	PWST: Submit Predrilling Report	6	03-Jun-14	09-Jun-14	03-Jun-14	09-Jun-14	6	-67
S5009160	PWST: Confirm Founding Level of Pile	12	10-Jun-14	23-Jun-14	10-Jun-14	23-Jun-14	12	-67
S5009180	PWST: Prebored H-pile (WT-1 to WT-6, 6 nos)	30	24-Jun-14	29-Jul-14	24-Jun-14	29-Jul-14	30	-67
S5009182	PWST: Install Casing for H-pile Tank 6	8	24-Jun-14	03-Jul-14	24-Jun-14	03-Jul-14	8	-67



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Activity ID	Activity Name	Original Duration	Target Start	Target Finish	Start	Finish	Rem Dur	Total Float
S5009185	PWST: Installation of H-section (WT-1 to 3)	6	28-Jun-14	05-Jul-14	28-Jun-14	05-Jul-14	6	-67
S5009188	PWST: Grouting for H-pile at Tank 6 (WT-1 to 3)	6	04-Jul-14	10-Jul-14	04-Jul-14	10-Jul-14	6	-67
S5009190	PWST: Install Casing for H-pile Tank 7	8	11-Jul-14	19-Jul-14	11-Jul-14	19-Jul-14	8	-67
S5009192	PWST: Installation of H-section (WT-4 to WT-6)	6	17-Jul-14	23-Jul-14	17-Jul-14	23-Jul-14	6	-67
S5009194	PWST: Grouting for H-pile at Tank 7 (WT-4 to 6)	6	23-Jul-14	29-Jul-14	23-Jul-14	29-Jul-14	6	-67
S5009198	PWST: Load Test and Proof Drill	20	30-Jul-14	21-Aug-14	30-Jul-14	21-Aug-14	20	-67
Structure								
S5009205	PWST: Structure	122	30-Jul-14	22-Dec-14	30-Jul-14	22-Dec-14	122	-67
S5009210	PWST: Base of Northern Water Tank	14	30-Jul-14	14-Aug-14	30-Jul-14	14-Aug-14	14	-67
S5009310	PWST: Wall Stem of Northern Water Tank	40	15-Aug-14	03-Oct-14	15-Aug-14	03-Oct-14	40	-65
S5009410	PWST: Roof of Northern Water Tank	18	04-Oct-14	24-Oct-14	04-Oct-14	24-Oct-14	18	-65
S5009420	PWST: Plinth and Kerb on Roof at North Tank	6	25-Oct-14	31-Oct-14	25-Oct-14	31-Oct-14	6	-65
S5009430	PWST: Remove Support inside Northern Water Tank	18	25-Oct-14	14-Nov-14	25-Oct-14	14-Nov-14	18	-65
S5009440	PWST: Water Tightness Test to Northern Tank	12	15-Nov-14	28-Nov-14	15-Nov-14	28-Nov-14	12	-65
S5009540	PWST: Base of Southern Water Tank	14	15-Aug-14	30-Aug-14	15-Aug-14	30-Aug-14	14	-67
S5009550	PWST: Wall stem of Southern Water Tank	40	01-Sep-14	20-Oct-14	01-Sep-14	20-Oct-14	40	-67
S5009560	PWST: Roof of Southern Water Tank	18	21-Oct-14	10-Nov-14	21-Oct-14	10-Nov-14	18	-67
S5009570	PWST: Remove Support inside Southern Water Tank	18	11-Nov-14	01-Dec-14	11-Nov-14	01-Dec-14	18	-67
S5009580	PWST: Plinth and Kerb on Roof at South Tank	6	11-Nov-14	17-Nov-14	11-Nov-14	17-Nov-14	6	-67
S5009590	PWST: Water Tightness Test to Southern Tank	18	02-Dec-14	22-Dec-14	02-Dec-14	22-Dec-14	18	-67
Architecture Finishes								
S5009600	PWST: Finishes to Water Tanks	24	30-Mar-15	29-Apr-15	30-Mar-15	29-Apr-15	24	-18
Procurement, Manufacture and Delivery								
S5009650	PWST: Procurement and Delivery of E&M Equipment /Material	360	31-Jul-13	25-Jul-14	31-Jul-13	25-Jul-14	360	67
S5009660	PWST: Procure Tanks & other E&M Equipment / Material	60	31-Jul-13	28-Sep-13	31-Jul-13	28-Sep-13	60	67
S5009670	PWST: Manufacture Tanks & other E&M Equipment / Material	210	29-Sep-13	26-Apr-14	29-Sep-13	26-Apr-14	210	67
S5009675	PWST: Factory Acceptance Test for Tanks	30	27-Apr-14	26-May-14	27-Apr-14	26-May-14	30	67
S5009680	PWST: Delivery of Tanks & other E&M Equipment / Material	60	27-May-14	25-Jul-14	27-May-14	25-Jul-14	60	67
E&M Installation and T&C								
S5009712	PWST: Install Hydro-pneumatic Tank(2 nos)	20	23-Dec-14	17-Jan-15	23-Dec-14	17-Jan-15	20	-67
S5009714	PWST: E&M Installation to Water Tanks	30	23-Dec-14	29-Jan-15	23-Dec-14	29-Jan-15	30	-47
S5009720	PWST: Modify watermain connection to new structure	30	19-Jan-15	26-Feb-15	19-Jan-15	26-Feb-15	30	-67
S5009725	PWST: Site Acceptance Test (SAT)	14	27-Feb-15	14-Mar-15	27-Feb-15	14-Mar-15	14	-67
S5009730	PWST: Testing and Commissioning	12	16-Mar-15	28-Mar-15	16-Mar-15	28-Mar-15	12	-67
S5009740	PWST: Submit As-constructed Drawings	90	30-Apr-15	28-Jul-15	30-Apr-15	28-Jul-15	90	-25
External (Civil) Works								
Initial Works								
S5009735	Submit/Approve TTA Scheme for Section 5 -Stage 1	90	12-Mar-14	02-Jul-14	12-Mar-14	02-Jul-14	90	-39
S5009752	Implement TTA Scheme for Section 5 - Stage 1	14	24-Jul-14	08-Aug-14	24-Jul-14	08-Aug-14	14	-39
S5009756	Submit/Approve TTA Scheme for Section 5 -Stage 2	70	08-Dec-14	06-Mar-15	08-Dec-14	06-Mar-15	70	-25
S5009765	Implement TTA Scheme for Section 5 - Stage 2	14	15-Apr-15	30-Apr-15	15-Apr-15	30-Apr-15	14	-25
S5009835	Liaise with MPS Contractor to Construct CUF	24	29-Jun-15	27-Jul-15	29-Jun-15	27-Jul-15	24	107
Pipe Works								
S5009750	Centrate pipe to manhole MH7	80	28-Nov-14	09-Mar-15	28-Nov-14	09-Mar-15	80	-89
S5009760	Fresh / Salt Water / Process Watermains	92	20-Jul-15	06-Nov-15	20-Jul-15	06-Nov-15	92	-89
S5009820	Sodium Hypochlorite Pipe at CEPT	120	17-Feb-15	18-Jul-15	17-Feb-15	18-Jul-15	120	-89
Road and Drain								
S5009810	Zone C3 - Storm Drain bet S8 to S9 & Gullies	75	28-Jun-14	25-Sep-14	28-Jun-14	25-Sep-14	75	-67
S5009816	Zone C3 - Ducting around Tank 6 & 7	30	26-Sep-14	01-Nov-14	26-Sep-14	01-Nov-14	30	-67

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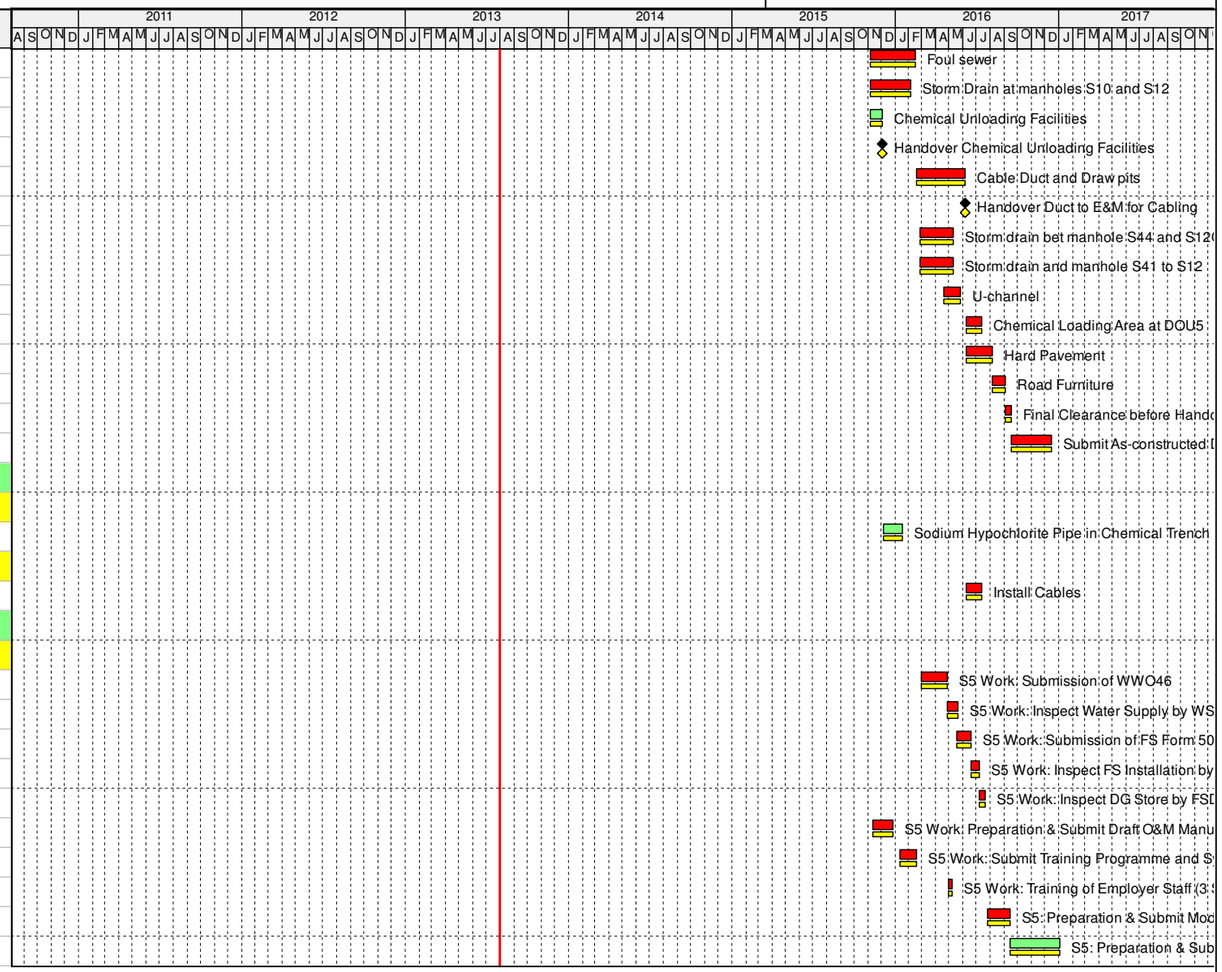
S5009825	Foul sewer	80	07-Nov-15	16-Feb-16	07-Nov-15	16-Feb-16	80	-89
S5009830	Storm Drain at manholes S10 and S12	75	07-Nov-15	04-Feb-16	07-Nov-15	04-Feb-16	75	-89
S5009840	Chemical Unloading Facilities	24	07-Nov-15	04-Dec-15	07-Nov-15	04-Dec-15	24	22
S5009845	Handover Chemical Unloading Facilities	0		04-Dec-15		04-Dec-15	0	22
S5009850	Cable Duct and Draw pits	90	17-Feb-16	06-Jun-16	17-Feb-16	06-Jun-16	90	-89
S5009856	Handover Duct to E&M for Cabling	0		06-Jun-16		06-Jun-16	0	-80
S5009860	Storm drain bet manhole S44 and S12C	60	27-Feb-16	11-May-16	27-Feb-16	11-May-16	60	-68
S5009870	Storm drain and manhole S41 to S12	60	27-Feb-16	11-May-16	27-Feb-16	11-May-16	60	-80
S5009880	U-channel	30	20-Apr-16	26-May-16	20-Apr-16	26-May-16	30	-80
S5009890	Chemical Loading Area at DOU5	30	07-Jun-16	13-Jul-16	07-Jun-16	13-Jul-16	30	-89
S5009950	Hard Pavement	50	07-Jun-16	05-Aug-16	07-Jun-16	05-Aug-16	50	-89
S5009960	Road Furniture	24	06-Aug-16	02-Sep-16	06-Aug-16	02-Sep-16	24	-89
S5009970	Final Clearance before Handover	12	03-Sep-16	17-Sep-16	03-Sep-16	17-Sep-16	12	-89
S5009980	Submit As-constructed Drawings	90	18-Sep-16	16-Dec-16	18-Sep-16	16-Dec-16	90	-107
External (E&M) Works								
Piping and Ducting								
S5009770	Sodium Hypochlorite Pipe in Chemical Trench	35	05-Dec-15	16-Jan-16	05-Dec-15	16-Jan-16	35	22
Road and Drain								
S5009855	Install Cables	30	07-Jun-16	13-Jul-16	07-Jun-16	13-Jul-16	30	-80
Statutory Inspection and Training								
E&M: Testing and Commissionings								
S5010110	S5 Work: Submission of WWO46	48	29-Feb-16	27-Apr-16	29-Feb-16	27-Apr-16	48	-66
S5010120	S5 Work: Inspect Water Supply by WSD	18	28-Apr-16	20-May-16	28-Apr-16	20-May-16	18	-66
S5010130	S5 Work: Submission of FS Form 501	28	17-May-16	20-Jun-16	17-May-16	20-Jun-16	28	-39
S5010140	S5 Work: Inspect FS Installation by FSD	14	20-Jun-16	06-Jul-16	20-Jun-16	06-Jul-16	14	-39
S5010150	S5 Work: Inspect DG Store by FSD	12	07-Jul-16	20-Jul-16	07-Jul-16	20-Jul-16	12	-39
S5010210	S5 Work: Preparation & Submit Draft O&M Manuals	40	11-Nov-15	28-Dec-15	11-Nov-15	28-Dec-15*	40	-25
S5010220	S5 Work: Submit Training Programme and Syllabus	28	13-Jan-16	19-Feb-16	13-Jan-16	19-Feb-16	28	-24
S5010230	S5 Work: Training of Employer Staff (3 Sessions)	6	29-Apr-16	06-May-16	29-Apr-16	06-May-16	6	-55
S5010250	S5: Preparation & Submit Modified O&M Manuals	45	25-Jul-16	14-Sep-16	25-Jul-16	14-Sep-16	45	-12
S5010260	S5: Preparation & Submit Final O&M Manuals	90	15-Sep-16	04-Jan-17	15-Sep-16	04-Jan-17*	90	68

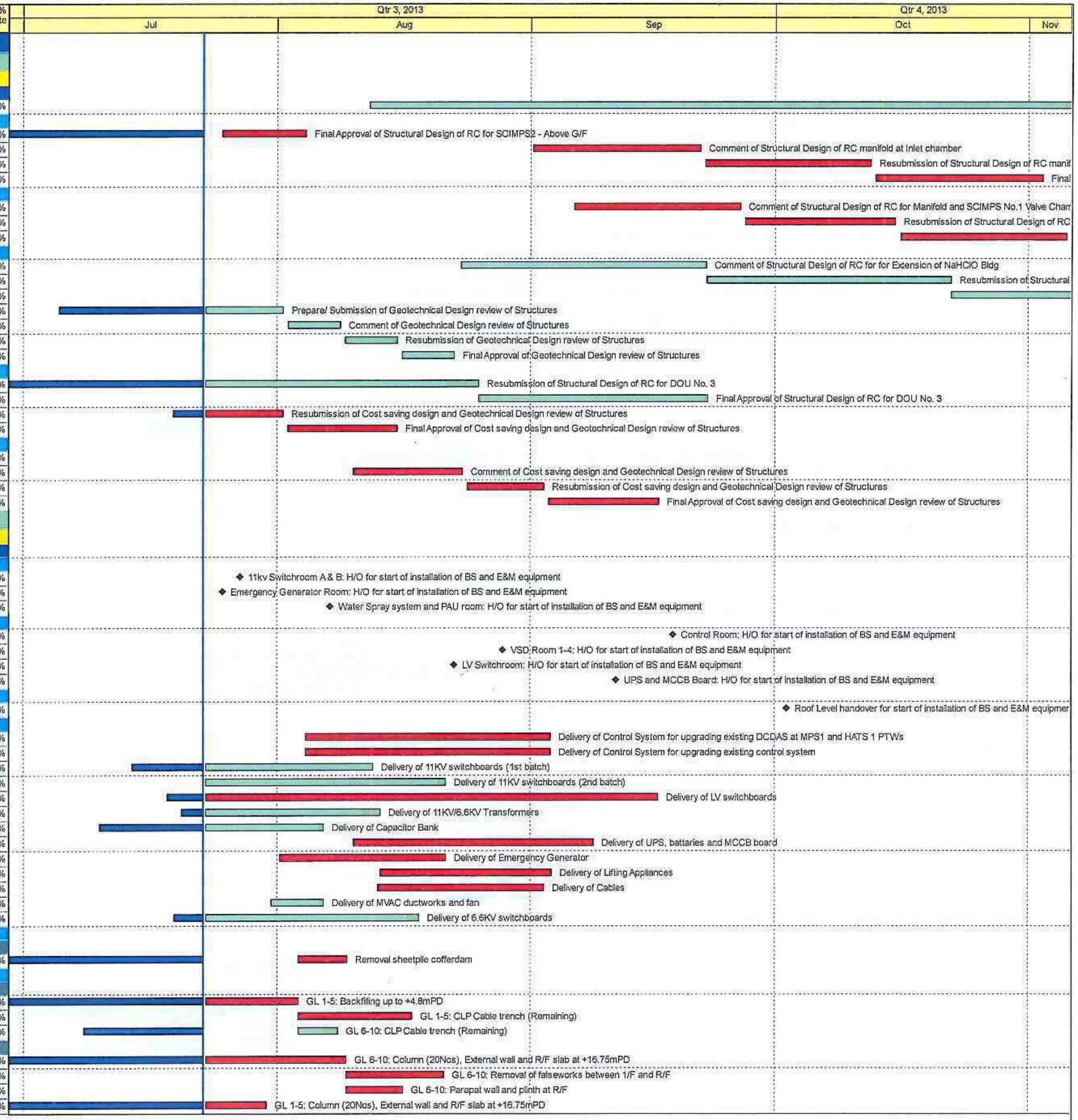


Actual Work | Remaining Work | Critical Remaining Work | Project Baseline Bar | Baseline Milestone | Milestone

Monthly Progress Updated as of 31 July 2013

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Activity % Complete
C10TGP03RTGP (R3)						
Civil and Geotechnical Submission						
Contractor Design, Submission and Approval						
Detailed Design Approval (DDA) Submission for Structural/ Builder Works						
CCD00250	Prepare/ Submission of Architecture and Builder Works Design	180	12-Aug-2013	07-Feb-2014	115	0%
DDA4 (SCIMPS2 and Inlet Chamber)						
CCD00155	Final Approval of Structural Design of RC for SCIMPS2 - Above G/F	21	20-Jun-2013 A	04-Aug-2013	-44	50%
CCD00175	Comment of Structural Design of RC manifold at Inlet chamber	21	01-Sep-2013	21-Sep-2013	-67	0%
CCD00185	Resubmission of Structural Design of RC manifold at Inlet chamber	21	22-Sep-2013	12-Oct-2013	-67	0%
CCD00215	Final approval of Structural Design of RC manifold at Inlet chamber	21	13-Oct-2013	02-Nov-2013	-67	0%
DDA5 (SCIMPS No. 1 Valve Chamber)						
CCD00132	Comment of Structural Design of RC for Manifold and SCIMPS No.1 V	21	06-Sep-2013	26-Sep-2013	-91	0%
CCD00133	Resubmission of Structural Design of RC for Manifold and SCIMPS No	19	27-Sep-2013	15-Oct-2013	-91	0%
CCD00134	Final Approval of Structural Design of RC for Manifold and SCIMPS No	21	16-Oct-2013	05-Nov-2013	-91	0%
DDA9 (Extension of NaHClO Bldg)						
CCD00162	Comment of Structural Design of RC for for Extension of NaHClO Bldg	30	23-Aug-2013	22-Sep-2013	11	0%
CCD00163	Resubmission of Structural Design of RC for Extension of NaHClO Bld	30	22-Sep-2013	22-Oct-2013	11	0%
CCD00164	Final Approval of Structural Design of RC for Extension of NaHClO Bld	30	22-Oct-2013	21-Nov-2013	11	0%
CCD00370	Prepare/ Submission of Geotechnical Design review of Structures	28	05-Jul-2013 A	01-Aug-2013	94	64.29%
CCD00380	Comment of Geotechnical Design review of Structures	7	02-Aug-2013	08-Aug-2013	94	0%
CCD00390	Resubmission of Geotechnical Design review of Structures	7	09-Aug-2013	15-Aug-2013	94	0%
CCD00400	Final Approval of Geotechnical Design review of Structures	7	16-Aug-2013	22-Aug-2013	94	0%
DDA11 (DOU No. 3 and DOU No. 1b)						
CCD00222	Resubmission of Structural Design of RC for DOU No. 3	45	21-Jun-2013 A	25-Aug-2013	215	25%
CCD00223	Final Approval of Structural Design of RC for DOU No. 3	28	25-Aug-2013	22-Sep-2013	215	0%
CCD00470	Resubmission of Cost saving design and Geotechnical Design review	14	19-Jul-2013 A	01-Aug-2013	-28	28.57%
CCD00480	Final Approval of Cost saving design and Geotechnical Design review	14	02-Aug-2013	15-Aug-2013	-28	0%
DDA13 (Service Ducts)						
CCD00780	Comment of Structural Design of RC for for Service Ducts	30	13-Nov-2013	13-Dec-2013	107	0%
CCD00820	Comment of Cost saving design and Geotechnical Design review of S	14	10-Aug-2013	23-Aug-2013	-60	0%
CCD00830	Resubmission of Cost saving design and Geotechnical Design review	10	24-Aug-2013	02-Sep-2013	-60	0%
CCD00840	Final Approval of Cost saving design and Geotechnical Design review	14	03-Sep-2013	16-Sep-2013	-60	0%
Infrastructure Construction Works						
Works for Section 2						
Portion 4 (Switchgear Building)						
Interface between Civil/ ABWF/ E&M works (Ground Floor)						
SGB0040	11kv Switchroom A & B: H/O for start of installation of BS and E&M eq	0		27-Jul-2013	14	0%
SGB0050	Emergency Generator Room: H/O for start of installation of BS and E&	0		25-Jul-2013	8	0%
SGB0055	Water Spray system and PAU room: H/O for start of installation of BS	0		07-Aug-2013	-12	0%
Interface between Civil/ ABWF/ E&M works (First Floor)						
SGB0060	Control Room: H/O for start of installation of BS and E&M equipment	0		18-Sep-2013	-42	0%
SGB0070	VSD Room 1-4: H/O for start of installation of BS and E&M equipment	0		28-Aug-2013	-39	0%
SGB0080	LV Switchroom: H/O for start of installation of BS and E&M equipment	0		22-Aug-2013	5	0%
SGB0085	UPS and MCCB Board: H/O for start of installation of BS and E&M eq	0		11-Sep-2013	-6	0%
Interface between Civil/ ABWF/ E&M works (Roof Floor)						
SGB0090	Roof Level handover for start of installation of BS and E&M equipment	0		02-Oct-2013	-11	0%
Procurement/ Order/ Manufacturing/ Delivery						
P302570	Delivery of Control System for upgrading existing DCDAS at MPS1 and	30	04-Aug-2013	03-Sep-2013	-27	0%
P302600	Delivery of Control System for upgrading existing control system	30	04-Aug-2013	03-Sep-2013	-27	0%
P402060	Delivery of 11KV switchboards (1st batch)	30	14-Jul-2013 A	12-Aug-2013	10	30%
P402065	Delivery of 11KV switchboards (2nd batch)	30	23-Jul-2013	21-Aug-2013	10	0%
P402090	Delivery of LV switchboards	60	18-Jul-2013 A	16-Sep-2013	-6	7%
P402120	Delivery of 11KV/6.6KV Transformers	25	20-Jul-2013 A	13-Aug-2013	23	12%
P402123	Delivery of Capacitor Bank	28	10-Jul-2013 A	06-Aug-2013	42	46.43%
P402127	Delivery of UPS, batteries and MCCB board	30	10-Aug-2013	08-Sep-2013	-4	0%
P402150	Delivery of Emergency Generator	21	01-Aug-2013	21-Aug-2013	-5	0%
P402180	Delivery of Lifting Appliances	21	13-Aug-2013	03-Sep-2013	-3	0%
P402240	Delivery of Cables	21	13-Aug-2013	02-Sep-2013	-21	0%
P905770	Delivery of MVAC ductworks and fan	7	31-Jul-2013	06-Aug-2013	7	0%
P906000	Delivery of 6.6KV switchboards	30	19-Jul-2013 A	18-Aug-2013	13	12.67%
Foundation Works						
Excavation and Lateral Support for Substructure						
P401340	Removal sheetpile cofferdam	10	25-Jun-2013 A	09-Aug-2013	-8	50%
R.C. Works						
Substructure						
P401209	GL 1-5: Backfilling up to +4.8mPD	18	26-Jun-2013 A	03-Aug-2013	-8	40%
P401210	GL 1-5: CLP Cable trench (Remaining)	12	03-Aug-2013	17-Aug-2013	-8	0%
P902350	GL 6-10: CLP Cable trench (Remaining)	12	08-Jul-2013 A	08-Aug-2013	0	70%
Superstructure						
P902395	GL 6-10: Column (20Nos), External wall and R/F slab at +16.75mPD	28	25-Jun-2013 A	09-Aug-2013	-36	45%
P902400	GL 6-10: Removal of falseworks between 1/F and R/F	10	09-Aug-2013	21-Aug-2013	-36	0%
P902410	GL 6-10: Parapet wall and plinth at R/F	6	09-Aug-2013	16-Aug-2013	-8	0%
P902439	GL 1-5: Column (20Nos), External wall and R/F slab at +16.75mPD	28	25-Jun-2013 A	30-Jul-2013	-34	75%



Actual Work ◆ ◆ Milestone

Remaining Work

Critical Remaining Work

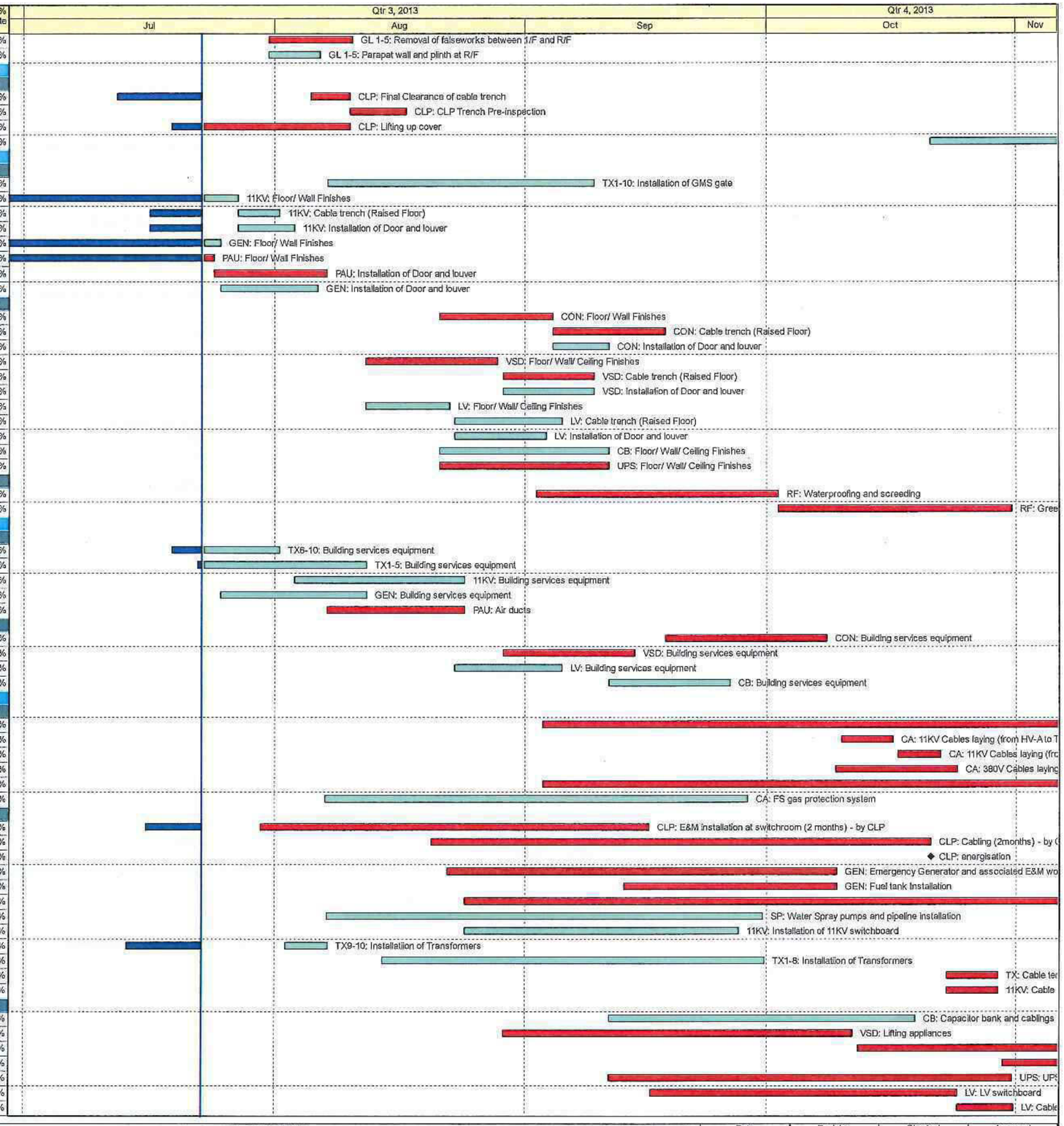
Contract No. DC/2009/10

HATS Stage 2A - Upgrading works at StoneCutters Island Sewage Treatement Works

Three Months Rolling Programme (24 Jul 2013 to 24 Oct 2013)

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Activity % Complete
P902440	GL 1-5: Removal of falseworks between 1/F and R/F	10	31-Jul-2013	10-Aug-2013	-34	0%
P902450	GL 1-5: Parapat wall and plinth at R/F	6	31-Jul-2013	06-Aug-2013	1	0%
External Works						
CLP cable trench						
A1235	CLP: Final Clearance of cable trench	15	12-Jul-2013 A	10-Aug-2013	-8	70%
A1240	CLP: CLP Trench Pre-inspection	6	10-Aug-2013	17-Aug-2013	-8	0%
A1250	CLP: Lifting up cover	19	19-Jul-2013 A	10-Aug-2013	-2	15.63%
A1260	CLP: Sand Bedding	18	21-Oct-2013	11-Nov-2013	10	0%
Builder and finishes Works						
Ground Floor						
P405025	TX1-10: Installation of GMS gate	28	07-Aug-2013	09-Sep-2013	61	0%
P405030	11KV: Floor/ Wall Finishes	15	27-Jun-2013 A	27-Jul-2013	6	70%
P405035	11KV: Cable trench (Raised Floor)	10	16-Jul-2013 A	01-Aug-2013	8	55%
P405037	11KV: Installation of Door and louver	6	16-Jul-2013 A	03-Aug-2013	6	0%
P405041	GEN: Floor/ Wall Finishes	15	25-Jun-2013 A	25-Jul-2013	7	85%
P405050	PAU: Floor/ Wall Finishes	15	14-Jun-2013 A	24-Jul-2013	-10	90%
P405055	PAU: Installation of Door and louver	12	24-Jul-2013	07-Aug-2013	-10	0%
P405060	GEN: Installation of Door and louver	10	25-Jul-2013	06-Aug-2013	7	0%
First Floor						
P405090	CON: Floor/ Wall Finishes	12	21-Aug-2013	04-Sep-2013	-36	0%
P405095	CON: Cable trench (Raised Floor)	12	04-Sep-2013	18-Sep-2013	-36	0%
P405097	CON: Installation of Door and louver	6	04-Sep-2013	11-Sep-2013	32	0%
P405110	VSD: Floor/ Wall/ Ceiling Finishes	15	12-Aug-2013	28-Aug-2013	-34	0%
P405115	VSD: Cable trench (Raised Floor)	10	29-Aug-2013	09-Sep-2013	-8	0%
P405117	VSD: Installation of Door and louver	10	29-Aug-2013	09-Sep-2013	34	0%
P405201	LV: Floor/ Wall/ Ceiling Finishes	10	12-Aug-2013	22-Aug-2013	4	0%
P405205	LV: Cable trench (Raised Floor)	12	23-Aug-2013	05-Sep-2013	37	0%
P405207	LV: Installation of Door and louver	10	23-Aug-2013	03-Sep-2013	39	0%
P405360	CB: Floor/ Wall/ Ceiling Finishes	18	21-Aug-2013	11-Sep-2013	5	0%
P405370	UPS: Floor/ Wall/ Ceiling Finishes	18	21-Aug-2013	11-Sep-2013	-5	0%
Roof Floor						
P405300	RF: Waterproofing and screeding	24	02-Sep-2013	02-Oct-2013	-8	0%
P405310	RF: Green Roof installation	24	02-Oct-2013	31-Oct-2013	-5	0%
Building Service installation						
Ground Floor						
P405504	TX6-10: Building services equipment	12	19-Jul-2013 A	01-Aug-2013	61	25%
P405505	TX1-5: Building services equipment	18	22-Jul-2013 A	12-Aug-2013	21	3.33%
P405510	11KV: Building services equipment	18	03-Aug-2013	24-Aug-2013	6	0%
P405520	GEN: Building services equipment	15	25-Jul-2013	12-Aug-2013	7	0%
P405525	PAU: Air ducts	15	07-Aug-2013	24-Aug-2013	-10	0%
First Floor						
P405530	CON: Building services equipment	15	18-Sep-2013	08-Oct-2013	-36	0%
P405535	VSD: Building services equipment	15	29-Aug-2013	14-Sep-2013	-34	0%
P405540	LV: Building services equipment	12	23-Aug-2013	05-Sep-2013	4	0%
P405545	CB: Building services equipment	12	11-Sep-2013	26-Sep-2013	5	0%
Electrical and Mechanical Installation						
Basement Floor						
P904100	CA: Cable Containment Installation	60	03-Sep-2013	14-Nov-2013	-18	0%
P904101	CA: 11KV Cables laying (from HV-A to TX-9)	5	10-Oct-2013	16-Oct-2013	-4	0%
P904102	CA: 11KV Cables laying (from HV-B to TX-10)	5	17-Oct-2013	22-Oct-2013	-4	0%
P904112	CA: 380V Cables laying (from TX 9-10 to LV switchboard))	12	09-Oct-2013	24-Oct-2013	-5	0%
P904150	CA: Others Cables	60	03-Sep-2013	14-Nov-2013	-18	0%
P904190	CA: FS gas protection system	45	07-Aug-2013	28-Sep-2013	18	0%
Ground Floor						
P904015	CLP: E&M installation at switchroom (2 months) - by CLP	50	16-Jul-2013 A	16-Sep-2013	-10	17.4%
P904020	CLP: Cabling (2months) - by CLP	50	20-Aug-2013	21-Oct-2013	-10	0%
P904025	CLP: energisation	0		21-Oct-2013	-10	0%
P904030	GEN: Emergency Generator and associated E&M works	40	22-Aug-2013	09-Oct-2013	-1	0%
P904035	GEN: Fuel tank Installation	21	13-Sep-2013	09-Oct-2013	0	0%
P904060	PAU: PAU and Fans	60	24-Aug-2013	06-Nov-2013	-10	0%
P904065	SP: Water Spray pumps and pipeline installation	45	07-Aug-2013	30-Sep-2013	17	0%
P904160	11KV: Installation of 11KV switchboard	28	24-Aug-2013	27-Sep-2013	6	0%
P904170	TX9-10: Installation of Transformers	12	13-Jul-2013 A	07-Aug-2013	61	59.17%
P904180	TX1-8: Installation of Transformers	40	14-Aug-2013	30-Sep-2013	20	0%
P904260	TX: Cable termination	6	23-Oct-2013	29-Oct-2013	-4	0%
P904420	11KV: Cable termination	6	23-Oct-2013	29-Oct-2013	-4	0%
First Floor						
P904000	CB: Capacitor bank and cablings	30	11-Sep-2013	19-Oct-2013	5	0%
P904110	VSD: Lifting appliances	38	29-Aug-2013	11-Oct-2013	-34	0%
P904115	VSD: VSD panels	38	12-Oct-2013	23-Nov-2013	-34	0%
P904116	VSD: Cables installation and termination	30	30-Oct-2013	03-Dec-2013	-34	0%
P904120	UPS: UPS, Battary and MCCB board	40	11-Sep-2013	31-Oct-2013	-5	0%
P904130	LV: LV switchboard	30	16-Sep-2013	24-Oct-2013	-5	0%
P904430	LV: Cable termination	6	24-Oct-2013	31-Oct-2013	-5	0%



Actual Work
Remaining Work
Critical Remaining Work
◆ Milestone

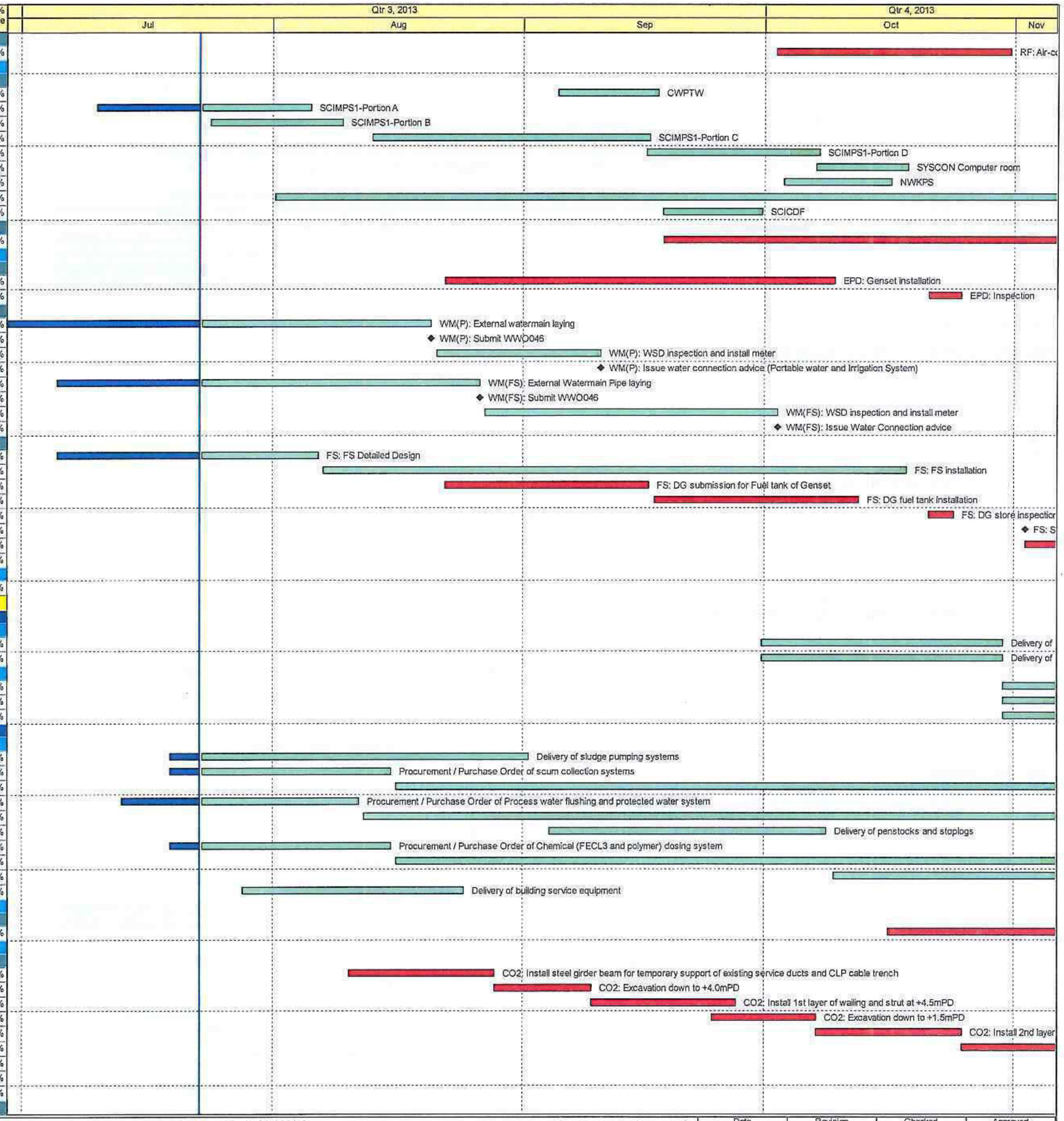
Contract No. DC/2009/10

HATS Stage 2A - Upgrading works at StoneCutters Island Sewage Treatement Works

Three Months Rolling Programme (24 Jul 2013 to 24 Oct 2013)

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Activity % Complete
Roof Floor						
P410010	RF: Air-conditioning units and heat exchangers	24	02-Oct-2013	31-Oct-2013	-8	0%
Instrumentation and Control Automation (ICA) installation						
Upgrading works for Existing DCDAS at HATS Stage 1						
P430090	CWPTW	13	05-Sep-2013*	17-Sep-2013	67	0%
P430110	SCIMPS1-Portion A	27	10-Jul-2013 A	05-Aug-2013	110	48.15%
P430120	SCIMPS1-Portion B	17	24-Jul-2013*	09-Aug-2013	106	0%
P430130	SCIMPS1-Portion C	35	13-Aug-2013*	16-Sep-2013	68	0%
P430140	SCIMPS1-Portion D	22	16-Sep-2013*	07-Oct-2013	47	0%
P430150	SYSCON Computer room	12	07-Oct-2013*	18-Oct-2013	36	0%
P430160	NWKPS	14	03-Oct-2013*	16-Oct-2013	38	0%
P430170	NWKPTW	113	01-Aug-2013*	21-Nov-2013	2	0%
P430180	SCICDF	13	18-Sep-2013*	30-Sep-2013	54	0%
Hardware Installation at New Switchgear Building						
P420000	CON: Console installation	50	18-Sep-2013	19-Nov-2013	-36	0%
Statutory Submission and Inspection						
Environmental Protection Department (EPD)						
P451065	EPD: Genset installation	40	22-Aug-2013	09-Oct-2013	-1	0%
P451070	EPD: Inspection	4	21-Oct-2013	25-Oct-2013	-10	0%
Water Supply Department (WSD)						
P449030	WM(P): External watermain laying	45	28-Jun-2013 A	20-Aug-2013	12	44.44%
P449040	WM(P): Submit WWO046	0		20-Aug-2013	14	0%
P449050	WM(P): WSD inspection and install meter	18	21-Aug-2013	10-Sep-2013	12	0%
P449060	WM(P): Issue water connection advice (Portable water and Irrigation S	0		10-Sep-2013	15	0%
P451020	WM(FS): External Watermain Pipe laying	45	05-Jul-2013 A	26-Aug-2013	9	33.33%
P451030	WM(FS): Submit WWO046	0		26-Aug-2013	9	0%
P451040	WM(FS): WSD inspection and install meter	30	27-Aug-2013	02-Oct-2013	9	0%
P451050	WM(FS): Issue Water Connection advice	0		02-Oct-2013	9	0%
Fire Service Department (FSD)						
P440030	FS: FS Detailed Design	28	05-Jul-2013 A	06-Aug-2013	3	53.57%
P440040	FS: FS installation	60	07-Aug-2013	18-Oct-2013	3	0%
P440045	FS: DG submission for Fuel tank of Genset	22	22-Aug-2013	16-Sep-2013	-3	0%
P440047	FS: DG fuel tank installation	21	17-Sep-2013	12-Oct-2013	-3	0%
P440048	FS: DG store inspection	3	21-Oct-2013	24-Oct-2013	-9	0%
P440050	FS: Submit Form 314 and Form 501	0		02-Nov-2013	-10	0%
P440060	FS: Inspection	12	02-Nov-2013	16-Nov-2013	-10	0%
P440070	FS: Defect rectification	3	16-Nov-2013	20-Nov-2013	-10	0%
Testing and Commissioning						
P400200	Testing and commissioning for ICA system in SGB Control room	40	19-Nov-2013	08-Jan-2014	-36	0%
Works for Section 3						
Portion 1 (Existing CEPT tanks)						
Procurement/ Order/ Manufacturing/ Delivery						
P106130	Delivery of Scum Collectioin System	30	30-Sep-2013	30-Oct-2013	11	0%
P106160	Delivery of FRP mid tank baffles	30	30-Sep-2013	30-Oct-2013	11	0%
Electrical and Mechanical Installation						
P106170	PST #9, #11, #13, #15 - Installation of 1st scum collection system	30	30-Oct-2013	04-Dec-2013	9	0%
P106180	PST #9, #11, #13, #15 - Installation of 1st FRP baffles	30	30-Oct-2013	04-Dec-2013	9	0%
P106190	PST #9, #11, #13, #15 - Installation of 1st control units and associated	30	30-Oct-2013	04-Dec-2013	9	0%
Portion 3 (Extension of CEPT Tank)						
Procurement/ Order/ Manufacturing/ Delivery						
P301730	Delivery of sludge pumping systems	45	19-Jul-2013 A	01-Sep-2013	193	8.89%
P301731	Procurement / Purchase Order of scum collection systems	28	19-Jul-2013 A	15-Aug-2013	27	14.29%
P301732	Manufacturing of scum collection systems	150	16-Aug-2013	12-Jan-2014	27	0%
P301740	Procurement / Purchase Order of Process water flushing and protect	30	13-Jul-2013 A	11-Aug-2013	58	33.33%
P301750	Manufacturing of Process water flushing and protected water system	120	12-Aug-2013	09-Dec-2013	58	0%
P301790	Delivery of penstocks and stoplogs	35	04-Sep-2013	08-Oct-2013	288	0%
P301800	Procurement / Purchase Order of Chemical (FECL3 and polymer) dos	28	19-Jul-2013 A	15-Aug-2013	65	14.29%
P301810	Manufacturing of Chemical (FECL3 and polymer) dosing system	120	16-Aug-2013	13-Dec-2013	65	0%
P301850	Delivery of Lifting Appliance	90	09-Oct-2013	07-Jan-2014	83	0%
P301880	Delivery of building service equipment	28	28-Jul-2013	24-Aug-2013	209	0%
Foundation Works						
Extension/ trimming of Existing Daido Piles						
P902600	Extension for M1 to M 59 (40Nos)	21	16-Oct-2013	08-Nov-2013	-41	0%
Excavation and Lateral Support for Substructure						
Cofferdam No. 2 (GL34-35, A)						
P904300	CO2: Install steel girder beam for temporary support of existing servic	15	10-Aug-2013	28-Aug-2013	-26	0%
P904310	CO2: Excavation down to +4.0mPD	10	28-Aug-2013	09-Sep-2013	-26	0%
P904320	CO2: Install 1st layer of walling and strut at +4.5mPD	15	09-Sep-2013	27-Sep-2013	-26	0%
P904330	CO2: Excavation down to +1.5mPD	10	24-Sep-2013	07-Oct-2013	-26	0%
P904340	CO2: Install 2nd layer of walling and strut at +2.0mPD	15	07-Oct-2013	25-Oct-2013	-26	0%
P904360	CO2: Excavation down to -1.0mPD	10	25-Oct-2013	06-Nov-2013	-26	0%
P904370	CO2: Install 3rd layer of walling and strut at -1.5mPD	15	06-Nov-2013	23-Nov-2013	-26	0%
P904380	CO2: Steel lagging under existing service ducts	15	06-Nov-2013	23-Nov-2013	-26	0%
P904390	CO2: Excavation down to final excavation level -3.4mPD	12	16-Nov-2013	30-Nov-2013	-26	0%
Cofferdam No. 3 (GL33-38, B1)						



Actual Work ◆ Milestone

Remaining Work

Critical Remaining Work

Contract No. DC/2009/10

HATS Stage 2A - Upgrading works at StoneCutters Island Sewage Treatement Works

Three Months Rolling Programme (24 Jul 2013 to 24 Oct 2013)

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Activity % Complete
P322300	CO3: Install sheetpile cofferdam	15	23-Jul-2013	08-Aug-2013	-20	0%
P322310	CO3: Excavation down to +4.0mPD	7	03-Sep-2013	10-Sep-2013	-41	0%
P322320	CO3: Install 1st layer walling and strut at +4.5mPD	10	11-Sep-2013	23-Sep-2013	-41	0%
P322330	CO3: Excavation down formation level to +1.8mPD	7	24-Sep-2013	02-Oct-2013	-41	0%
Cofferdam No. 4 (GL33-38, B3-B6)						
P322400	CO4: Install cantilever sheetpile cofferdam	12	09-Aug-2013	22-Aug-2013	-8	0%
P322430	CO4: Excavation down formation level to +2.5mPD	10	03-Oct-2013	15-Oct-2013	-41	0%
R.C. Works						
P300185	Erection of tower crane TC2	45	19-Jul-2013 A	20-Aug-2013	122	45%
Substructure						
P330216	CEPT(N): Pile cap (GL32)_B	18	23-Jul-2013	12-Aug-2013	1	0%
P330225	CEPT(N): Pile cap (GL33)_A	14	19-Jul-2013 A	03-Aug-2013	-22	21.43%
P330226	CEPT(N): Pile cap (GL33)_B	18	23-Jul-2013	12-Aug-2013	1	0%
P330235	CEPT(N): 700mm thk. bottom slab at +6.0mPD_Bay 1	15	10-Jul-2013 A	26-Jul-2013	-30	75%
P330245	CEPT(N): 700mm thk. bottom slab at +6.0mPD_Bay 2	15	26-Jul-2013	13-Aug-2013	-30	0%
P330255	CEPT(N): 700mm thk. bottom slab at +6.0mPD_Bay 3	15	13-Aug-2013	30-Aug-2013	-30	0%
P330265	CEPT(N): 700mm thk. bottom slab at +6.0mPD_Bay 4	15	30-Aug-2013	17-Sep-2013	-30	0%
P330285	CEPT(N): 700mm thk. bottom slab at +6.0mPD_Bay 5	15	17-Sep-2013	07-Oct-2013	-30	0%
P330295	CEPT(N): 700mm thk. bottom slab at +6.0mPD_Bay 6	15	07-Oct-2013	25-Oct-2013	-16	0%
P333013	CEPT(S): Pile cap (GL31)_B	18	05-Jul-2013 A	02-Aug-2013	-24	45%
P333015	CEPT(S): Pile cap (GL32)_A	14	05-Jul-2013 A	24-Jul-2013	-13	90%
P333017	CEPT(S): Pile cap (GL32)_B	18	02-Aug-2013	23-Aug-2013	-24	0%
P333020	CEPT(S): Pile cap (GL33)_A	14	22-Jul-2013 A	08-Aug-2013	-13	7.14%
P333022	CEPT(S): Pile cap (GL33)_B	18	08-Aug-2013	29-Aug-2013	-13	0%
P333030	CEPT(S): Bottom deck at +6.0mPD_Bay 1	15	23-Jul-2013	08-Aug-2013	-41	0%
P333035	CEPT(S): Bottom deck at +6.0mPD_Bay 2	15	09-Aug-2013	26-Aug-2013	-41	0%
P333045	CEPT(S): Bottom deck at +6.0mPD_Bay 3	15	27-Aug-2013	12-Sep-2013	-41	0%
P333055	CEPT(S): Bottom deck at +6.0mPD_Bay 4	15	13-Sep-2013	02-Oct-2013	-41	0%
P333065	CEPT(S): Bottom deck at +6.0mPD_Bay 5	15	03-Oct-2013	21-Oct-2013	-41	0%
P333075	CEPT(S): Bottom deck at +6.0mPD_Bay 6	15	22-Oct-2013	07-Nov-2013	132	0%
P334000	DC: Open excavation GL 33-38, GL B9-B8	6	23-Jul-2013	29-Jul-2013	-41	0%
P334005	DC: Ground Beam and pile caps at GL B9-B8	18	30-Jul-2013	19-Aug-2013	-41	0%
P334010	DC: Backfilling for pile caps and ground beams GL B9-B8	12	20-Aug-2013	02-Sep-2013	-41	0%
P334011	DC: Ground Beam and pile caps at GL GL B1-B6	35	03-Oct-2013	13-Nov-2013	-34	0%
P334012	DC: Backfilling for pile caps and ground beams GL B1-B6	14	14-Nov-2013	29-Nov-2013	-34	0%
P334018	DC: Dismolish part of existing ADFswitchroom	12	03-Sep-2013	16-Sep-2013	61	0%
P335045	DC: Underground 400mm drainage pipes	24	19-Jul-2013 A	29-Aug-2013	-39	12.5%
P335050	DC: Ground floor slab at +5.3mPD	45	30-Aug-2013	24-Oct-2013	-39	0%
P338010	FLOC: Pile head preparation	22	09-Nov-2013	04-Dec-2013	-41	0%
Superstructure						
P300560	CEPT(S): Channel wall_G29 (From +6.6 to +10.5mPD)_Bay 1-3	34	13-Sep-2013	26-Oct-2013	67	0%
P300563	CEPT(S): Channel wall_G30 (From +6.6 to +10.5mPD)_Bay 1-3	21	03-Oct-2013	28-Oct-2013	-26	0%
P300566	CEPT(S): Channel wall_G31 (From +6.6 to +10.5mPD)_Bay 1-3	21	22-Oct-2013	14-Nov-2013	-41	0%
P300569	CEPT(S): Channel wall_G32 (From +6.6 to +10.5mPD)_Bay 1-3	21	29-Oct-2013	21-Nov-2013	-26	0%
P300572	CEPT(S): Channel wall_G33 (From +6.6 to +10.5mPD)_Bay 1-3	21	15-Nov-2013	09-Dec-2013	-41	0%
P300575	CEPT(S): Upper channel deck at +10.5mPD_Bay 1-3	35	08-Nov-2013	18-Dec-2013	132	0%
P300578	CEPT(S): Upper channel deck at +10.5mPD_Bay 4-6	35	15-Nov-2013	27-Dec-2013	-20	0%
P330210	CEPT(N): Channel wall_G29 (From +6.6 to +10.5mPD)_Bay 1-3	34	30-Aug-2013	11-Oct-2013	78	0%
P330211	CEPT(N): Channel wall_G30 (From +6.6 to +10.5mPD)_Bay 1-3	21	17-Sep-2013	15-Oct-2013	-15	0%
P330212	CEPT(N): Channel wall_G31 (From +6.6 to +10.5mPD)_Bay 1-3	21	07-Oct-2013	01-Nov-2013	-30	0%
P330213	CEPT(N): Channel wall_G32 (From +6.6 to +10.5mPD)_Bay 1-3	21	15-Oct-2013	08-Nov-2013	-15	0%
P330223	CEPT(N): Channel wall_G33 (From +6.6 to +10.5mPD)_Bay 1-3	21	01-Nov-2013	26-Nov-2013	-30	0%
P330231	CEPT(N): Upper channel deck at +10.5mPD_Bay 1-3	35	25-Oct-2013	05-Dec-2013	-16	0%
P330232	CEPT(N): Upper channel deck at +10.5mPD_Bay 4-6	35	01-Nov-2013	12-Dec-2013	-9	0%
P330233	CEPT(N): Upper channel deck at +10.5mPD_Bay 7-9	35	08-Nov-2013	19-Dec-2013	-15	0%
P330290	DC: Columns	24	25-Oct-2013	21-Nov-2013	-39	0%
Effluent Culvert Connection works						
P300275	Dry Season 2013	0	01-Oct-2013*		25	0%
P300280	Construction of bulkhead wall at existing Northern culvert and installati	45	02-Oct-2013	23-Nov-2013	20	0%
Disturbution Channel Connection works						
P904935	Construction of bulkhead wall at existing disturbution channels	45	19-Oct-2013	10-Dec-2013	51	0%
Portion 4 (Main Pumping Station)						
Submission of design of E&M works						
P301250	Approval/ comment for the CMS of Piping system for recirculation	28	05-Jul-2013 A	01-Aug-2013	124	64.29%
P301254	Approval/ comment for the CMS of Piping system for centrate flow	28	05-Jul-2013 A	01-Aug-2013	-10	64.29%
P301256	Approval/ comment for the CMS of Piping system for NWK overflow	28	05-Jul-2013 A	01-Aug-2013	111	64.29%
P301260	DDA No. 34 - Air Mixing system of wet well (AIP No. 5)	21	05-Jul-2013 A	25-Jul-2013	20	85.71%
P301270	Approval/ comment for the DDA of Air Mixing system of wet well	30	19-Jul-2013 A	17-Aug-2013	16	13.33%
P301400	Approval/ comment for the DDA of Ventilation system of MPS2	90	05-Jul-2013 A	02-Oct-2013	5	20%
P301562	Approval/ Comment for the DDA of DCS system design	35	19-Jul-2013 A	22-Aug-2013	238	11.43%
Procurement/ Order/ Manufacturing/ Delivery						
P302300	Delivery of Main Sewage Pump Motors	61	21-Jul-2013 A	19-Sep-2013	189	3.28%
P302330	Delivery of VSD for Main Sewage Pumps	61	18-Jul-2013 A	16-Sep-2013	57	8.2%

Actual Work
Remaining Work
Critical Remaining Work
◆ Milestone

Contract No. DC/2009/10

HATS Stage 2A - Upgrading works at StoneCutters Island Sewage Treatement Works

Three Months Rolling Programme (24 Jul 2013 to 24 Oct 2013)

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Activity % Complete
P302340	Procurement / Purchase Order of Lifting Appliance	25	19-Jul-2013 A	12-Aug-2013	-2	16%
P302350	Manufacturing of Lifting Appliance	120	13-Aug-2013	10-Dec-2013	-2	0%
P302390	Delivery of Cooling water system for pump bearing and motors	30	28-Aug-2013	26-Sep-2013	13	0%
P302421	Procurement / Purchase Order of Piping system for NWK overflow	25	02-Aug-2013	26-Aug-2013	111	0%
P302422	Manufacturing of Piping system for NWK overflow	90	27-Aug-2013	24-Nov-2013	111	0%
P302430	Procurement / Purchase Order of Piping system for recirculation	30	02-Aug-2013	31-Aug-2013	124	0%
P302431	Manufacturing of Piping system for recirculation	90	01-Sep-2013	29-Nov-2013	124	0%
P302440	Procurement / Purchase Order of Piping system for centrate flow	30	02-Aug-2013	31-Aug-2013	-10	0%
P302441	Manufacturing of Piping system for centrate flow	90	01-Sep-2013	29-Nov-2013	-10	0%
P302445	Manufacturing of flushing water system for MPS and inlet chamber	120	05-Jul-2013 A	02-Nov-2013	212	14.17%
P302446	Delivery of flushing water system for MPS and inlet chamber	30	03-Nov-2013	02-Dec-2013	212	0%
P302460	Procurement / Purchase Order of Air Mixing system of wet well	30	18-Aug-2013	16-Sep-2013	16	0%
P302470	Manufacturing of Air Mixing system of wet well	120	17-Sep-2013	14-Jan-2014	16	0%
P302540	Delivery of Control System for DCS and Interfacing control system	30	23-Sep-2013	22-Oct-2013	105	0%
P302610	Procurement / Purchase Order of Ventilation system of MPS	24	03-Oct-2013	26-Oct-2013	5	0%
P302620	Manufacturing of Ventilation system of MPS	90	27-Oct-2013	24-Jan-2014	5	0%
P302640	Procurement / Purchase Order of Fire service of MPS	32	19-Jul-2013 A	19-Aug-2013	23	12.5%
P302650	Manufacturing of Fire service of MPS	120	20-Aug-2013	17-Dec-2013	23	0%
P302690	Delivery of Plumbing system	50	30-Oct-2013	18-Dec-2013	221	0%
P302710	Manufacturing of Drainage System	150	19-Jul-2013 A	15-Dec-2013	117	2.67%
Interface between Civil/ ABWF/ E&M works (Access Floor No. 3, -10.0mPD)						
MPS0030	Access Floor No. 3 (-10.0mPD) interface for start of installation of BS	0		29-Oct-2013	258	0%
R.C. Works						
Access Floor No. 3 (-10.0mPD)						
P902710	AC3: Lift well and Staircase No 3 (-10.0 to -2.0mPD)	30	05-Jul-2013 A	24-Aug-2013	9	5%
P903120	AC3: Dismantle scaffold for -10.0mPD floor slabs	12	23-Jul-2013	05-Aug-2013	180	0%
Access Floor No. 4 (-2.0mPD)						
P902800	AC4: Lift well & staircase No. 3 (-2.0 to +5.9mPD)	24	24-Aug-2013	23-Sep-2013	9	0%
P903140	AC4: Dismantle scaffold for -2.0mPD floor slab	12	03-Sep-2013	17-Sep-2013	159	0%
Ground floor slab (+5.9mPD)						
P902860	GF: Wet well (4.0m H, +5.5 to +10.4mPD)	21	01-Aug-2013	26-Aug-2013	-53	0%
P902870	GF: Wet well (4.2m H, +10.4 to +14.65mPD)	21	26-Aug-2013	19-Sep-2013	-53	0%
P902880	GF: Flow channel at +14.65mPD	18	19-Sep-2013	12-Oct-2013	31	0%
P902890	GF: Wet well (4.0m H, +14.65 to +18.65mPD)	21	19-Sep-2013	17-Oct-2013	-53	0%
P902900	GF: Staircase No. 1& 2 (+5.9 to +20.4mPD)	45	23-Jul-2013	12-Sep-2013	1	0%
P902910	GF: Lift Well (+5.9 to +20.4mPD)	32	23-Sep-2013	01-Nov-2013	9	0%
P902920	GF: Column C2 (1-4) up to +20.4mPD	18	05-Aug-2013	24-Aug-2013	-36	0%
P902930	GF: Column C2 (5-8) up to +20.4mPD	18	03-Sep-2013	24-Sep-2013	-36	0%
P903040	GF: Perimeter Wall (+5.9 to +20.4mPD)	60	08-Jul-2013 A	30-Sep-2013	-6	2%
P903650	GF: Wet well (4.0m H, +18.65 to +22.0mPD)	21	17-Oct-2013	11-Nov-2013	-36	0%
1/f slab (+20.4mPD)						
P902940	1F: +20.4mPD Floor slab and beam (RHS)	18	17-Oct-2013	07-Nov-2013	-53	0%
P902950	1F: +20.4mPD Floor slab and beam (LHS)	18	07-Nov-2013	28-Nov-2013	-52	0%
P902960	1F: Wet well (+22.0 to +25.9mPD)	18	11-Nov-2013	02-Dec-2013	-36	0%
P903000	1F: Staircase No. 1 and No. 2 (+20.4 to +25.9mPD)	28	07-Nov-2013	10-Dec-2013	-43	0%
P903010	1F: Lift Well (+22.0 to +25.9mPD)	21	15-Nov-2013	10-Dec-2013	-3	0%
P903020	1F: Column C2 (1-4) up to +25.9mPD	12	07-Nov-2013	21-Nov-2013	-53	0%
P903050	1F: Perimeter Wall (+20.4 to +25.9mPD)	60	17-Oct-2013	28-Dec-2013	-18	0%
Builder and finishes Works						
Access Floor No. 3 (-10.0mPD)						
P400525	AC3: Wall/ celling finishes (fair face)	36	19-Jul-2013 A	29-Oct-2013	159	8.33%
Building Service Installation						
Access Floor No. 1 (-32.0mPD)						
P400280	AC1: Building services equipment	45	23-Jul-2013	12-Sep-2013	-45	0%
Access Floor No. 2 (-19.0mPD)						
P400350	AC2: Building services equipment	36	06-Aug-2013	16-Sep-2013	180	0%
Access Floor No. 3 (-10.0mPD)						
P400360	AC3: Building services equipment	36	29-Oct-2013	10-Dec-2013	207	0%
Electrical and Machainical installation						
P400311	Installation of VSD panels and associated cabling works (at switchgea	230	17-Sep-2013	30-Jun-2014	46	0%
Access Floor No. 1 (-32.0mPD)						
P903760	AC1: Main Sewage Pumps pipeworks (Main Sewage Pump No.1 & 2)	55	23-Jul-2013	25-Sep-2013	8	0%
P903770	AC1: Main Sewage Pumps pipeworks (Main Sewage Pump No.3 & 4)	55	26-Sep-2013	30-Nov-2013	8	0%
P903795	AC1: Main Sewage Pump No.1 - 4 (RHS)	200	13-Sep-2013	21-May-2014	-45	0%
P904410	AC1: Cooling Water Pipeworks for Pump Bearings	90	27-Sep-2013	15-Jan-2014	10	0%
Access Floor No. 2 (-19.0mPD)						
P903830	AC2: Pipeworks and associated cabling works (Main Sewage Pump N	24	26-Sep-2013	25-Oct-2013	161	0%
Access Floor No. 3 (-10.0mPD)						
P903960	AC3: Pipeworks and associated cabling works (Main Sewage Pump N	24	29-Oct-2013	26-Nov-2013	159	0%
Instrumentation and Control Automation (ICA) Installation						
P409000	NWK PTW: DCS Installation	80	23-Aug-2013	27-Nov-2013	292	0%
P409050	DOU1B: DCS installation	50	07-Oct-2013	04-Dec-2013	255	0%
Statutory Submission and Inspection						
Water Supplier Department (WSD)						
P402600	WM(P): Submission of WWO542 (Portable water and Irrigation Water)	80	04-Nov-2013	22-Jan-2014	208	0%

Actual Work
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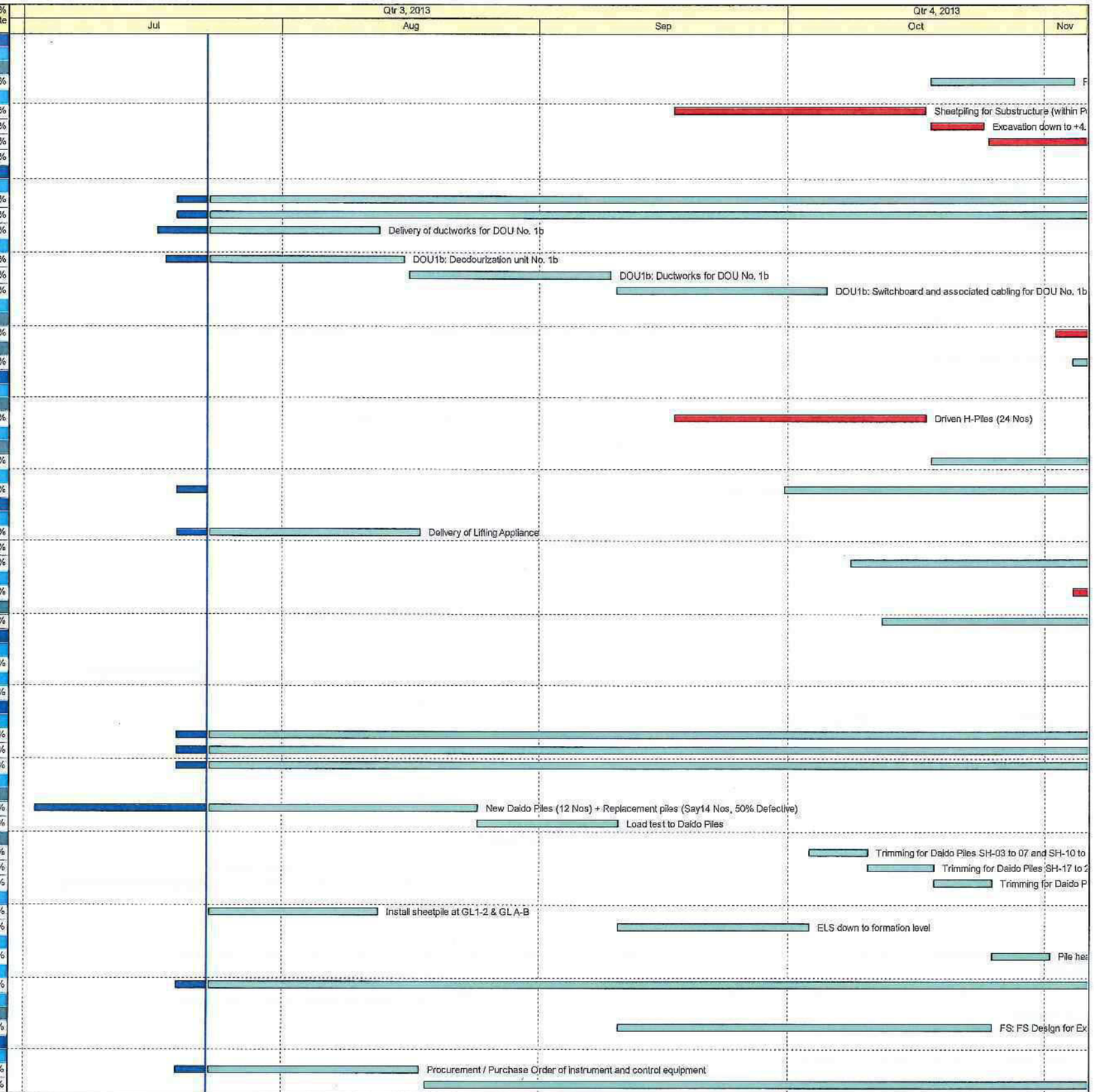
Contract No. DC/2009/10

HATS Stage 2A - Upgrading works at StoneCutters Island Sewage Treatement Works

Three Months Rolling Programme (24 Jul 2013 to 24 Oct 2013)

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Activity % Complete
Portion 4 (Main flow Culvert)						
Foundation Works						
Driven H-Pile						
P903430	Pile Load Test for working pile	15	18-Oct-2013	04-Nov-2013	12	0%
Excavation and Lateral Support Works for Substructure (Near MPS2)						
P903130	Sheetpiling for Substructure (within Portion 4)	24	17-Sep-2013	17-Oct-2013	-51	0%
P903440	Excavation down to +4.0mPD	6	18-Oct-2013	24-Oct-2013	-51	0%
P903450	Install 1st layer of walling and strut at +4.5mPD	15	25-Oct-2013	11-Nov-2013	-51	0%
P903460	Excavation down to +1.5mPD	12	08-Nov-2013	21-Nov-2013	-51	0%
Portion 4 (Deodourization Unit No. 3 & 1b and Odour duct bridge)						
Procurement/ Order/ Manufacturing/ Delivery						
P403090	Manufacturing of equipment for DOU No. 3	240	19-Jul-2013 A	15-Mar-2014	57	1.67%
P403120	Manufacturing of ductworks for DOU No. 3	240	19-Jul-2013 A	15-Mar-2014	89	1.67%
P403190	Delivery of ductworks for DOU No. 1b	30	17-Jul-2013 A	12-Aug-2013	357	30%
Electrical and Machanical Installation						
P401680	DOU1b: Deodourization unit No. 1b	30	18-Jul-2013 A	15-Aug-2013	286	30%
P401681	DOU1b: Ductworks for DOU No. 1b	21	16-Aug-2013	09-Sep-2013	286	0%
P401682	DOU1b: Switchboard and associated cabling for DOU No. 1b	21	10-Sep-2013	05-Oct-2013	286	0%
Statutory Submission and Inspection						
Fire Service Department (FSD)						
P905190	FS: FS Design for Dry system	45	02-Nov-2013	16-Dec-2013	-10	0%
Water Supplier Department (WSD)						
P905120	WM(P): Submission of WWO542 (Process Water)	80	04-Nov-2013	22-Jan-2014	22	0%
Portion 4 (Service Ducts)						
Foundation Works						
Driven H-pile						
P903540	Driven H-Piles (24 Nos)	24	17-Sep-2013	17-Oct-2013	-51	0%
Excavation and lateral support for substructure						
Service Duct (Type 1)						
P400550	ELS for service duct at CH0-20	18	18-Oct-2013	07-Nov-2013	162	0%
Civil Works						
P400570	Dia 100-32mm Watermain laying	75	19-Jul-2013 A	27-Dec-2013	256	4%
Portion 5 (Inlet Chamber)						
Procurement/ Order/ Manufacturing/ Delivery						
P501500	Delivery of Lifting Appliance	30	19-Jul-2013 A	17-Aug-2013	270	13.33%
P501560	Delivery of pipeworks	40	07-Nov-2013	17-Dec-2013	156	0%
P501620	Delivery of building service equipment	50	08-Oct-2013	27-Nov-2013	76	0%
R.C. Works						
P400631	R.C. works for Manifold of cast-in puddle flange for connection of valv	180	04-Nov-2013	16-Jun-2014	-55	0%
Diaphgram Wall opening						
P400635	Breaking Diaphgram wall for twin wet well inlet pipes	60	12-Oct-2013	23-Dec-2013	73	0%
Portion 6 (Valve Chamber)						
Procurement/ Order/ Manufacturing/ Delivery						
P501800	Delivery of drainage and flushing water pumping system	63	07-Nov-2013	09-Jan-2014	161	0%
R.C. Works						
P600010	Site Clearance	12	06-Nov-2013	19-Nov-2013	-75	0%
Portion 8 (Extension of Sodium Hypochlorite Storage Compound)						
Procurement/ Order/ Manufacturing/ Delivery						
P801150	Manufacturing of NaOCl Storage Tanks	180	19-Jul-2013 A	14-Jan-2014	10	2.22%
P801180	Manufacturing of valves and pipeworks	210	19-Jul-2013 A	13-Feb-2014	99	1.9%
P801210	Manufacturing of chemical pumps and associated equipment	270	19-Jul-2013 A	14-Apr-2014	39	1.48%
Foundation Works						
Re-driving test for existing daido Piles						
P800180	New Daido Piles (12 Nos) + Replacement piles (Say14 Nos, 50% Defi	36	02-Jul-2013 A	24-Aug-2013	25	20%
P800240	Load test to Daido Piles	14	24-Aug-2013	10-Sep-2013	25	0%
Trimming/ Extension of existing daido piles						
P905430	Trimming for Daido Piles SH-03 to 07 and SH-10 to 14	6	03-Oct-2013	10-Oct-2013	25	0%
P905440	Trimming for Daido Piles SH-17 to 21 and SH-24 to 28	6	10-Oct-2013	18-Oct-2013	25	0%
P905450	Trimming for Daido Piles SH-31 to 33 and SH-36 to 38	6	18-Oct-2013	25-Oct-2013	25	0%
Excavation and Lateral Support for Substructure						
P802070	Install sheetpile at GL1-2 & GLA-B	18	23-Jul-2013	12-Aug-2013	50	0%
P802080	ELS down to formation level	18	10-Sep-2013	03-Oct-2013	25	0%
R.C. Works						
P905465	Pile head preparation	6	25-Oct-2013	01-Nov-2013	25	0%
Structural Steel Works						
P800100	Fabrication of Structural steel	120	19-Jul-2013 A	09-Dec-2013	155	2.5%
Statutory Submission and Inspection						
Fire Sevice Department (FSD)						
P905620	FS: FS Design for Extension/ Modification of Fire Service system	45	10-Sep-2013	25-Oct-2013	248	0%
Sai Ying Pun Junction Shaft						
Procurement/ Order/ Manufacturing/ Delivery						
P801260	Procurement / Purchase Order of instrument and control equipment	30	19-Jul-2013 A	17-Aug-2013	54	13.33%
P801270	Manufacturing of instrument and control equipment	180	18-Aug-2013	13-Feb-2014	54	0%



Actual Work ◆ ◆ Milestone
Remaining Work
Critical Remaining Work

Contract No. DC/2009/10

HATS Stage 2A - Upgrading works at StoneCutters Island Sewage Treatement Works

Three Months Rolling Programme (24 Jul 2013 to 24 Oct 2013)

Date	Revision	Checked	Approved