

**Preliminaries**

**Project Dates**

ID	Activity Description	Early Start	Early Finish	Cal. ID	Total Float
01R0000002	Tender Issue Date	26JUN07A		2	
01R0000004	Tender Closing Date	05OCT07A		2	
01R0000006	Letter of Acceptance Issued Date	14DEC07		2	0
01R0000008	Contract Commencement Date	28DEC07		2	0
01R0000010	Completion of Section 1 of the Works		27JUL11*	2	0
01R0000012	Completion of Section 2 of the Works		27JUL11*	2	0
01R0000014	Completion of Section 3 of the Works		27JUL11*	2	0
01R0000016	Completion of Section 4 of the Works		27JUL11*	2	0
01R0000018	Completion of Section 5 of the Works		27JUL11*	2	0
01R0000020	Completion of Section 6 of the Works		27JUL11*	2	0
01R0000022	Completion of Section 7 of the Works		26JUL12*	2	0

14 days after LOA

1308 days from DOC including DOC  
 1308 days from DOC including DOC  
 1308 days from DOC including DOC  
 1308 days from DOC including DOC  
 1308 days from DOC including DOC  
 1308 days from DOC including DOC  
 1673 days from DOC including DOC

ID	Activity Description	Early Start	Early Finish	Cal. ID	Total Float
01R00A0102	Possession Portion A - 90d of DOC	26MAR08		2	0
01R00A0104	Handover of Portion A		13MAY11	2	75
01R00B0102	Possession of Portion B - 90d of DOC	26MAR08		2	0
01R00B0104	Handover of Portion B		16JUL11	2	11
01R00C0102	Possession of Portion C - 90d of DOC	26MAR08		2	0
01R00C0104	Handover of Portion C		05MAY11	2	83
01R00D0102	Possession of Portion D on DOC	28DEC07		2	0
01R00D0104	Handover of Portion D		17JUN11	2	40
01R00E0102	Possession of Portion E - 650d of DOC	07OCT09		2	0
01R00E0104	Handover of Portion E		17JUN11	2	40
01R00F0102	Possession of Portion F on DOC	28DEC07		2	0
01R00F0104	Handover of Portion F		28JAN11	2	180
01R00G0102	Possession of Portion G - 700d of DOC	26NOV09		2	0
01R00G0104	Handover of Portion G		02JUN11	2	55
01R00I0102	Possession of Portion I on DOC	28DEC07		2	0
01R00I0104	Handover of Portion I		27JUL11	2	0
01R00J0102	Possession of Portion J	01DEC08*		2	0
01R00J0104	Handover of Portion J		12JUN09*	2	0
01R0H10102	Possession of Portion H1 on DOC	28DEC07		2	0

♦ The exact date to be agreed with WSD  
 ♦ WSD Tunnel Shutdown ER 4.2.10 (f) allows 50 days from the date of

Sheet 1 of 42

Date	Revision 1	Checked	Approved
13FEB08			

Maeda-CREC-SELL JV  
 CONTRACT NO. DC/2007/12  
 Design and Construction of  
 Tsuen Wan Drainage Tunnel  
 Draft Works Programme

Start Date	Early Bar
29JUN07	
Finish Date	Progress Bar
24SEP12	
Run Date	Critical Activity
14DEC07	
13FEB08 17:51	

ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
01R0H10104	Handover of Portion H1	0		24SEP12	2	0
01R0H20102	Possession of Portion H2 - 300d of DOC	0	22OCT08		2	0
01R0H20104	Handover of Portion H2	0		24SEP12	2	0

ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
01R1000202	S1-Works in Portions A to F except works in S2-7	1,308	28DEC07	27JUL11	2	0
01R1000204	S1-Maintenance Period (365 days)	365	28JUL11	26JUL12	2	0
01R20A0206	S2-Slope Stabilization works within Portion A	1,218	26MAR08	26JUL11	2	0
01R20A0208	S2-Maintenance Period (365 days)	365	27JUL11	25JUL12	2	0
01R30B0210	S3-Slope Stabilization works within Portion B	1,218	26MAR08	26JUL11	2	0
01R30B0212	S3-Maintenance Period (365 days)	365	27JUL11	25JUL12	2	0
01R40C0214	S4-Slope Stabilization works within Portion C	1,218	26MAR08	26JUL11	2	0
01R40C0216	S4-Maintenance Period (365 days)	365	27JUL11	25JUL12	2	0
01R50D0218	S5-Slope Stabilization works within Portion D	1,308	28DEC07	27JUL11	2	0
01R50D0220	S5-Maintenance Period (365 days)	365	28JUL11	26JUL12	2	0
01R60G0222	S6-Works within Portion G	608	26NOV09	26JUL11	2	0
01R60G0224	S6-Maintenance Period (365 days)	365	27JUL11	25JUL12	2	0
01R7000226	S7-Landscape softworks & establishment works	1,673	28DEC07	26JUL12	2	0
01R7000228	S7-Maintenance Period (30 days)	30	27JUL12	25AUG12	2	0

ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
01R0000302	Provide temporary accommodation	7	28DEC07	03JAN08	2	1
01R0000304	Design the SO's principle office	30	28DEC07	26JAN08	2	1
01R0000305	Erect Hoarding/Signboard/Gate/Fencing	35	28JAN08	11MAR08	1	0
01R0000306	Erect SO's principle office in Portion H1/H2	60	28JAN08	14APR08	1	0
01R0000308	Provide secondary offices, directed by SO	64	14MAR08	16MAY08	2	0
01R0000310	Provide transport for the SO as per App. ER,M	90	28DEC07	26MAR08	2	0
01R0000311	Provide survey equipments as per App. ER,M	30	28DEC07	26JAN08	2	0
01R0000314	Maintain & Service the Principle Office	1,594	15APR08	25AUG12	2	0
01R0000316	Maintain & Service the Secondary Office	1,585	24APR08	25AUG12	2	0
01R0000318	Maintain & Service the transportation	1,688	12JAN08	25AUG12	2	0
01R0000319	Maintain & Service the survey equipments	1,673	27JAN08	25AUG12	2	0
01R0000320	Demolish & removal of Principle Office	30	26AUG12	24SEP12	2	0

to the satisfaction of the SO ER 12.3.1 refers  
to the satisfaction of SO submit detailed proposal within 3 weeks of LDA  
at Portons H & I  
to the satisfaction of the SO  
not more than 2 months after the instruction  
ER 12.4; 3 nos. vehicles within 14 days of DOC2 nos. vehicles after 3 months of DOC  
within 1 month of DOC  
to the satisfaction of SO  
to the satisfaction of the SO

Activity Description	Orig. Dur.	Early Start	Early Finish	Cal. ID	Total Float
01R0000502 Prepare/Submit draft Works Programme	7	14DEC07	20DEC07	2	0
01R0000504 SO's review/comment on draft Works Programme	14	21DEC07	03JAN08	2	0
01R0000506 Prepare/Submit 1st 3-Month Rolling Programme	14	14DEC07	27DEC07	2	7
01R0000508 Submit Detailed Works Programme	7	04JAN08	10JAN08	2	0
01R0000510 SO's Approval of Works Programme	7	11JAN08	17JAN08	2	0
01R0000512 Monthly Update for all Programme	1,682	18JAN08	25AUG12	2	0
01R0000514 Contractor's Monthly Progress Report	1,678	22JAN08	25AUG12	2	0
<b>Safety Plan (per SCC1)</b>					
01R0000602 Submit draft Safety Plan	14	14DEC07	27DEC07	2	0
01R0000604 Hold an ad hoc meeting with RE on Safety Plan	7	28DEC07	03JAN08	2	7
01R0000606 Submit 6 copies of the Safety Plan	35	14DEC07	17JAN08	2	0
01R0000608 Submit updated safety organization chart monthly	1,682	18JAN08	25AUG12	2	0
17R0000602 Fulfill all relevant safety obligation	1,703	28DEC07	25AUG12	2	0
<b>Contractors All Insurances</b>					
01R0000704 Submit documents for all insurances are effected	21	14DEC07	03JAN08	2	0
<b>Quality System (per SCC9)</b>					
01R0000802 Appoint a Quality Manager	14	28DEC07	10JAN08	2	0
01R0000804 Submit proposed Quality System for SO's consent	28	14DEC07	10JAN08	2	0
01R0000806 Submit QSSP for approval of the SO	28	28DEC07	24JAN08	2	0
01R0000808 Maintain & update Quality System	1,675	25JAN08	25AUG12	2	0
<b>EM/Environmental</b>					
01R0000902 Nominate Environmental Officer	14	14DEC07	27DEC07	2	0
01R0000903 Establish a billing account for disposal	21	14DEC07	03JAN08	2	0
01R0000904 Submit draft EMP	21	14DEC07	03JAN08	2	0
01R0000906 Revise draft EMP within 7 days of SO's notice	14	04JAN08	17JAN08	2	0
01R0000908 Submit final version of EMP	45	14DEC07	27JAN08	2	0
01R0000910 Review/update/submit EMP monthly	1,642	28JAN08	26JUL12	2	0
01R0000912 Employ IET	21	14DEC07	03JAN08	2	0
01R0000914 Submit Baseline Monitoring Plan	21	28DEC07	17JAN08	2	0
01R0000915 Seek for EPD's Agreement on WQML & schedule	21	18JAN08	07FEB08	2	0
01R0000916 Carry out baseline monitoring	37	31JAN08	07MAR08	2	0
01R0000918 Prepare/submit reports for baseline monitoring	20	27FEB08	17MAR08	2	0
01R0000920 Impact monitoring & reporting	1,592	18MAR08	26JUL12	2	0
17R0000902 Fulfill all relevant environmental obligation	1,673	28DEC07	26JUL12	2	0

to be  
within 14 days of LOA  
within 7 days from the submission of DSP  
within 35 days of LOA  
as per SCC9, SCC10 & SCC45  
as per SCC 74 within 14 days of DOC  
within 28 days of LDA  
within 28 days of DOC  
as per ER B.1 Clause 174A1(2)  
per Notes to Tenderer (AA)  
SCC69, within 21 days of LOA  
as per SCC69  
as per SCC69, within 45 days of LOA  
to the approval of the SO  
for approval of the SO & EPD  
for approval of the SO

Activity Description	Orig Dur	Early Start	Early Finish	Ca ID	Total Float
01R0001002 Nominate IUIMS co-ordinator	7	14DEC07	20DEC07	2	0
01R0001004 SO approve IUIMS co-ordinator	14	21DEC07	03JAN08	2	21
01R0001006 Submit brand name of UGS detection equipment	7	28DEC07	03JAN08	2	22
01R0001008 Utilities detection & report to the SO	21	04JAN08	24JAN08	2	22
01R0001010 Liaison with UUs prior to apply XP	21	04JAN08	24JAN08	2	21
01R0001012 Application of XP through the SO/DSD	7	25JAN08	31JAN08	2	22
01R0001014 Process XP Application by HYD & others	20	01FEB08	20FEB08	2	22
01R0001016 Issue of XP	0		20FEB08	2	22

**Pre-construction condition survey**

01R0001102 Appoint a Qualified Structural Engineer	30	28DEC07	26JAN08	2	4
01R0001104 Submit nos. & extent of the affected EBS	30	28DEC07	26JAN08	2	4
01R0001106 Carry out pre-construction condition survey	72	28JAN08	28APR08	1	3
01R0001108 Prepare/submit reports for pre-construction C.S.	72	05FEB08	07MAY08	1	3

**Management of Sub-contractors as per SCC 24**

01R0001202 Appoint Traffic Consultant/Traffic Engineer	14	14DEC07	27DEC07	2	7
01R0001204 Eng's Approval of Traffic Consultant	7	28DEC07	03JAN08	2	7
01R0001206 Prepare/submit TTA Schemes (ingress & egress)	14	04JAN08	17JAN08	2	7
01R0001216 Obtain endorsement of TTA schemes from TMLG	21	18JAN08	07FEB08	2	7
01R0001234 Approval of TTA schemes by the Authorities	28	08FEB08	06MAR08	2	7

**ICE**

01R0001302 Submit a Sub-contractor Management Plan	30	14DEC07	12JAN08	2	0
01R0001304 Submit Quarterly the Updated SMP	1,597	12APR08	25AUG12	2	0

**Tree**

01R0001502 Appoint Landscape Specialist Contractor	14	14DEC07	27DEC07	2	83
01R0001504 SO's Approval of Landscape Contractor	7	28DEC07	03JAN08	2	83
01R0001506 Nominate competent person to oversee tree works	45	14DEC07	27JAN08	2	59
01R0001510 Obtain Tree Removal Permit by Others	90	28DEC07	26MAR08	2	0
01R0001512 Remove / Transplant Trees start	0	27MAR08		2	0

**Survey**

01R0001602 Appoint Surveyors	14	28DEC07	10JAN08	2	17
01R0001604 SO's Approval of Surveyor	7	11JAN08	17JAN08	2	17
01R0001608 Initial Survey	28	18JAN08	22FEB08	1	14
01R0001610 Maintain & carry out survey works	1,000	23FEB08	11JUL11	1	14

as per SCC83; within 7 days of LOA/Internet Interface Utility Management System  
 as per ER.B1 1.59; within 7 days of DOC  
 ER.B1 1.18A3(1); not less than 17 working days  
 as per ER. B1 1.61;  
 as per ER. B1 1.61; within 30 days of DOC  
 DDA Submission  
 HYD & Police ER.B1 1.15 (9) refers  
 within 30 days of LOA  
 ER.B1 26.02A; within 45 days of LOA  
 ER 1.5.3 (2); within 3 mths from DOC  
 ER 1.5.3(2) within 3 months from DOC

ID	Activity Description	DU	Early Start	Early Finish	Call Total
01R0001802	Submit Smart Card Sys for SO's Approval	7	28DEC07	03JAN08	2
01R0001804	Install & start Operating Smart-Card System	60	28DEC07	25FEB08	2
01R0001806	Operate & Maintain Smart-Card System	1,643	28FEB08	25AUG12	2

ID	Activity Description	DU	Early Start	Early Finish	Call Total
01R0001902	Procurement of G.I./Grouting Sub-contractor	60	14DEC07	11FEB08	2
01R0001904	Procurement of Spoil Disposal Sub-contractor	60	14DEC07	11FEB08	2
01R0001906	Procurement of Earthwork Sub-contractor	60	14DEC07	11FEB08	2
01R0001908	Procurement of Concrete Supplier	45	14DEC07	27JAN08	2
01R0001910	Procurement of Re-bar Supplier	90	14DEC07	12MAR08	2
01R0001912	Procurement of Soil Nailing Sub-contractor	60	28DEC07	25FEB08	2
01R0001914	Procurement of Piling Sub-contractor	90	14DEC07	12MAR08	2
01R0001916	Procurement of Pre-cast Lining Sub-contractor	80	14DEC07	02MAR08	2
01R0001918	Procurement of R.C. Works Sub-contractor	90	14DEC07	12MAR08	2
01R0001920	Procurement of Drainage works Sub-contractor	90	14DEC07	12MAR08	2
01R0001922	Procurement of Steelworks Sub-contractor	90	14DEC07	08APR08	1
01R0001924	Procurement of Comm. Syst. Sub-contractor	45	17MAY08	30JUN08	2
01R0001925	Procurement of Flow Monit. Syst. Sub-contractor	45	17MAY08	30JUN08	2
01R0001926	Procurement of Pipe Jacking Sub-contractor	45	09OCT08	22NOV08	2
01R0001928	Submit Contractor's Management Team	0	0	10JAN08	2
01R0001930	Submit Photographer for Monthly Progress Photo	0	27JAN08	25APR08	2
01R0001932	Install Project Signboards at Potions A, B, C & D	120	28DEC07	25APR08	2
01R0001934	Develop/implement TDMS	60	22JUN08	20AUG08	2
01R0001936	Procurement & delivery of Communication System	180	03JAN09	01JUL09	2
01R0001938	Procurement/delivery of Flow Monitoring Devices	120	30OCT08	26FEB09	2
01R0001940	Prepare/submit Operation & Maintenance Manual	90	02AUG11	30OCT11	2
01R0001942	Prepare/submit As-built Drawings	90	28JUL11	25OCT11	2
01R0001944	Produce 2 documentary video for tunnel	30	28JUL11	26AUG11	2

ID	Activity Description	DU	Early Start	Early Finish	Call Total
01R0002202	Prepare/submit preliminary CRA	366	14DEC07	13DEC08	2
01R0002204	SO's acceptance of preliminary CRA	420	08MAR08	01MAY09	2
01R0002206	Prepare/submit detailed CRA	418	20APR08	11JUN09	2
01R0002208	SO's acceptance of detailed CRA	455	28JUN08	25SEP09	2

ID	Activity Description	DU	Early Start	Early Finish	Call Total
01R0002302	Prepare/submit a physical model as per ER 4.4.8	90	14DEC07	12MAR08	2
01R0002304	Prepare/submit a 3-D animation model	90	14DEC07	12MAR08	2

As per ER.B30 30.06(2)

Including temporary works

Per SCC 74

Per ER10.7

Representation of the TDMS to the SO & DSD before 3 months of the Tunnel excavation

As per ER4.4.11

As per ER4.4.12

ER 4.4.13

AIP submission

DDA submission

the acceptance of the SO

the acceptance of the SO as per ER's Note 4.4.9



ID	Activity Description	Orig. Dur.	Early Start	Early Finish	Chg. ID	Total Float
01R0002402	Propose the design of web page	30	28DEC07	26JAN08	2	0
01R0002404	Produce the web page for approval of SO	30	27JAN08	25FEB08	2	0
01R0002406	SO's approval of web page	30	26FEB08	26MAR08	2	0
01R0002408	Submit updated web pages monthly	1,613	27MAR08	25AUG12	2	0

ID	Activity Description	Orig. Dur.	Early Start	Early Finish	Chg. ID	Total Float
01R0002501	1R 1; On provision of SO's Accommodation	0		14APR08	2	1,624
01R0002502	1R 2; On providing documents of effected CWI	0		03JAN08	2	1,726
01R0002503	1R 3; On providing documents of effected TPI	0		03JAN08	2	1,726
01R0002504	1R 4; On P-providing documents of effected PII	0		03JAN08	2	1,726
01R0002505	1R 5; On delivery of all Land Transport for SO	0		26MAR08	2	1,643
01R0002506	1R 6; On install. of computer facilities for SO	0		14APR08	2	1,624
01R0002507	1R 7; On accept. of detailed CRA incl. PCS	0		25SEP09	2	1,095
01R0002508	1R 8; On acceptance of Physical Model by the SO	0		12MAR08	2	1,657
01R0002509	1R 9; On acceptance of 3-D Animation Model	0		12MAR08	2	1,657
01R0002510	1R 10; On satisf. operation of CCTV for 3 mth	0		31JUL08	2	1,516
01R0002511	1R 11; On acceptance of O&MM	0		30OCT11	2	330
01R0002512	1R 12; On acceptance of as-built drwgs.	0		25OCT11	2	335
01R0002513	1R 13; On acceptance of T.R/Video/Brouchure	0		26AUG11	2	395
01R0002514	1R 14; On complete all wks for 3 mth frm DOC	0		27MAR08	2	1,582
01R0002515	1R 15; On complete all wks for 6 mth frm DOC	0		26JUN08	2	1,491
01R0002516	1R 16; On complete all wks for 9 mth frm DOC	0		25SEP08	2	1,400
01R0002517	1R 17; On complete all wks for 12 mth frm DOC	0		26DEC08	2	1,308
01R0002518	1R 18; On complete all wks for 15 mth frm DOC	0		27MAR09	2	1,217
01R0002519	1R 19; On complete all wks for 18 mth frm DOC	0		26JUN09	2	1,126
01R0002520	1R 20; On complete all wks for 21 mth frm DOC	0		25SEP09	2	1,035
01R0002521	1R 21; On complete all wks for 24 mth frm DOC	0		26DEC09	2	943
01R0002522	1R 22; On complete all wks for 27 mth frm DOC	0		27MAR10	2	852
01R0002523	1R 23; On complete all wks for 30 mth frm DOC	0		26JUN10	2	761
01R0002524	1R 24; On complete all wks for 33 mth frm DOC	0		25SEP10	2	670
01R0002525	1R 25; On complete all wks for 36 mth frm DOC	0		26DEC10	2	578
01R0002526	1R 26; On complete all wks for 39 mth frm DOC	0		27MAR11	2	487
01R0002527	1R 27; On complete all wks for 42 mth frm DOC	0		26JUN11	2	396
01R0002528	1R 28; On complete all wks for 45 mth frm DOC	0		25SEP11	2	305
01R0002529	1R 29; On issuance of completion certificates	0		13AUG11	2	408
01R0002530	1R 30; On complete all wks for 3 mth frm CMP	0		26OCT11	2	334
01R0002531	1R 31; On complete all wks for 6 mth frm CMP	0		25JAN12	2	243
01R0002532	1R 32; On complete all wks for 9 mth frm CMP	0		25APR12	2	152
01R0002533	1R 33; On issuance of maintenance certificate	0		25AUG12	2	30

**Schedule of Milestones for Cost Centre No. 16R**

ID	Activity Description	Early Start	Early Finish	Cal	Total	Cal	ID	Float
16R7003001	16R 1; On completion of landscape wks; Portion A	0	13MAY11	2	500			
16R7003002	16R 2; On completion of landscape wks; Portion B	0	16JUL11	2	436			
16R7003003	16R 3; On completion of landscape wks; Portion C	0	05MAY11	2	508			
16R7003004	16R 4; On completion of landscape wks; Portion D	0	17JUN11	2	465			
16R7003005	16R 5; On completion of establish wks; Portion A	0	12MAY12	2	135			
16R7003006	16R 6; On completion of establish wks; Portion B	0	15JUL12	2	71			
16R7003007	16R 7; On completion of establish wks; Portion C	0	04MAY12	2	143			
16R7003008	16R 8; On completion of establish wks; Portion D	0	16JUN12	2	100			

**Schedule of Milestones for Cost Centre No. 17R**

ID	Activity Description	Early Start	Early Finish	Cal	Total	Cal	ID	Float
17R0003101	17R 1; On complet of all wks for 3 mth frm DOC	0	27MAR08	2	1,642			
17R0003102	17R 2; On complet of all wks for 6 mth frm DOC	0	26JUN08	2	1,551			
17R0003103	17R 3; On complet of all wks for 9 mth frm DOC	0	26SEP08	2	1,459			
17R0003104	17R 4; On complet of all wks for 12 mth frm DOC	0	26DEC08	2	1,368			
17R0003105	17R 5; On complet of all wks for 15 mth frm DOC	0	27MAR09	2	1,277			
17R0003106	17R 6; On complet of all wks for 18 mth frm DOC	0	27JUN09	2	1,185			
17R0003107	17R 7; On complet of all wks for 21 mth frm DOC	0	26SEP09	2	1,094			
17R0003108	17R 8; On complet of all wks for 24 mth frm DOC	0	26DEC09	2	1,003			
17R0003109	17R 9; On complet of all wks for 27 mth frm DOC	0	28MAR10	2	911			
17R0003110	17R 10; On complet all wks for 30 mth frm DOC	0	27JUN10	2	820			
17R0003111	17R 11; On complet all wks for 33 mth frm DOC	0	26SEP10	2	729			
17R0003112	17R 12; On complet all wks for 36 mth frm DOC	0	26DEC10	2	638			
17R0003113	17R 13; On complet all wks for 39 mth frm DOC	0	28MAR11	2	546			
17R0003114	17R 14; On complet all wks for 42 mth frm DOC	0	27JUN11	2	455			
17R0003115	17R 15; On complet all wks for 45 mth frm DOC	0	26SEP11	2	364			
17R0003116	17R 16; On complet all wks for 48 mth frm DOC	0	26DEC11	2	273			
17R0003117	17R 17; On complet of all wks for 3 mth frm CMP	0	26OCT11	2	334			
17R0003118	17R 18; On complet of all wks for 6 mth frm CMP	0	25JAN12	2	243			
17R0003119	17R 19; On complet of all wks for 9 mth frm CMP	0	26APR12	2	151			
17R0003120	17R 20; On issuance of maintenance certificate	0	25AUG12	2	30			

**Design/Design Check for Permanent Works**

Permanently Proposed Design File

ID	Activity Description	Early Start	Early Finish	Cal	Total	Cal	ID	Float
02L10D0102	Employ Independent Designer	7	14DEC07	20DEC07	2	2		
02L10D0104	Prepare & submit Project Design Plan (PDP)	28	14DEC07	10JAN08	2	2		
02L10D0106	SO's review & comment on PDP	28	11JAN08	07FEB08	2	2		
02L10D0108	Provide further information of (PDP)	14	08FEB08	21FEB08	2	17		
02L10D0110	SO approves PDP	14	22FEB08	06MAR08	2	17		
02L10D0112	Employ Independent Design Checker	14	28DEC07	10JAN08	2	1		

for the approval of the SO Assume Contract Award on 1/12/07  
 per ER 5.4.1, within 28 days of LOA

of all safety & env. obligations 3 mths frm DOC  
 of all safety & env. obligations 6 mths frm DOC  
 of all safety & env. obligations 9 mths frm DOC  
 of all safety & env. obligations 12 mths frm DOC  
 of all safety & env. obligations 15 mths frm DOC  
 of all safety & env. obligations 18 mths frm DOC  
 of all safety & env. obligations 21 mths frm DOC  
 of all safety & env. obligations 24 mths frm DOC  
 of all safety & env. obligations 27 mths frm DOC  
 of all safety & env. obligations 30 mths frm DOC  
 of all safety & env. obligations 33 mths frm DOC  
 of all safety & env. obligations 36 mths frm DOC  
 of all safety & env. obligations 39 mths frm DOC  
 of all safety & env. obligations 42 mths frm DOC  
 of all safety & env. obligations 45 mths frm DOC  
 of all safety & env. obligations 48 mths frm DOC  
 of all safety & env. obligations 3 mths frm DOM excl. Section 7  
 of all safety & env. obligations 6 mths frm DOM excluding Section 7  
 of all safety & env. obligations 9 mths frm DOM excluding Section 7 certificate

ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
02L1DD00114	Approval of Design Checker by the SO	28	11JAN08	07FEB08	2	1
<b>Design Packages for Work Submittal</b>						
<b>Temp. Access Rd Design at P. D; +14mPD to +69mPD</b>						
02L1DD0102	Design preparation by the Designer	14	17JAN08	30JAN08	2	2
02L1DD0104	Design certification by the Design Checker	14	01FEB08	14FEB08	2	1
02L1DD0106	Design submission for the SO's approval	1	15FEB08	15FEB08	1	1
02L1DD0108	Design review by the SO	28	16FEB08	14MAR08	2	2
02L1DD0110	Obtain design approval from the SO	0		14MAR08	2	2
<b>Boulder Assessment &amp; Design for Stabili. Measure</b>						
02L1DD0302	Design preparation for the AIP submission	15	31JAN08	14FEB08	2	3
02L1DD0304	Design (AIP) certification by the Design Checker	14	15FEB08	28FEB08	2	19
02L1DD0306	Design (AIP) submission for the SO's approval	1	29FEB08	29FEB08	1	16
02L1DD0308	Design (AIP) review by the SO	14	01MAR08	14MAR08	2	19
02L1DD0310	Obtain design (AIP) approval from the SO	0		14MAR08	2	19
02L1DD0312	AIP submission for rel. authorities' approval	1	15MAR08	15MAR08	1	13
02L1DD0314	Design (AIP) review by the rel. authorities	28	16MAR08	12APR08	2	20
02L1DD0316	Obtain rel. authorities' approval for AIP	1	14APR08	14APR08	1	16
02L1DD0318	Obtain SO's consent for design (AIP)	0		15APR08	2	20
02L1DD0320	Design preparation for the DDA submission	30	24MAR08	22APR08	2	20
02L1DD0322	Design (DDA) certification by the Design Checker	14	23APR08	06MAY08	2	20
02L1DD0324	Design (DDA) submission for the SO's approval	1	07MAY08	07MAY08	1	16
02L1DD0326	Design (DDA) review by the SO	14	08MAY08	21MAY08	2	20
02L1DD0328	Obtain design (DDA) approval from the SO	0		21MAY08	2	20
02L1DD0330	DDA submission for rel. authorities' approval	1	22MAY08	22MAY08	1	16
02L1DD0332	Design (DDA) review by the rel. authorities	28	23MAY08	19JUN08	2	20
02L1DD0334	Obtain rel. authorities' approval for DDA	1	20JUN08	20JUN08	1	16
02L1DD0336	Obtain SO's consent for design (DDA)	0		21JUN08	2	20
<b>Site Formation Design; +69mPD to +40mPD</b>						
02L1DD0402	Design preparation for the AIP submission	14	17JAN08	30JAN08	2	2
02L1DD0404	Design (AIP) certification by the Design Checker	14	27JAN08	09FEB08	2	2
02L1DD0406	Design (AIP) submission for the SO's approval	1	11FEB08	11FEB08	1	1
02L1DD0408	Design (AIP) review by the SO	14	12FEB08	25FEB08	2	1
02L1DD0410	Obtain design (AIP) approval from the SO	0		25FEB08	2	1
02L1DD0412	AIP submission for rel. authorities' approval	1	26FEB08	26FEB08	1	1
02L1DD0414	Design (AIP) review by the rel. authorities	12	27FEB08	09MAR08	2	1
02L1DD0416	Obtain rel. authorities' approval for AIP	1	10MAR08	10MAR08	1	1
02L1DD0418	Obtain SO's consent for design (AIP)	0		11MAR08	2	1
02L1DD0420	Design preparation for the DDA submission	14	05MAR08	18MAR08	2	1
02L1DD0422	Design (DDA) certification by the Design Checker	14	12MAR08	25MAR08	2	1
02L1DD0424	Design (DDA) submission for the SO's approval	1	26MAR08	26MAR08	1	1
02L1DD0426	Design (DDA) review by the SO	14	27MAR08	09APR08	2	1
02L1DD0428	Obtain design (DDA) approval from the SO	0		09APR08	2	1



ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
02L1DD0430	DDA submission for rel. authorities' approval	1	10APR08	10APR08	1	1
02L1DD0432	Design (DDA) review by the rel. authorities	12	11APR08	22APR08	2	1
02L1DD0434	Obtain rel. authorities's approval for DDA	1	23APR08	23APR08	1	1
02L1DD0436	Obtain SO's consent for design (DDA)	0		24APR08	2	1
<b>Site Formation Design; +40mPD to +24mPD</b>						
02L1DD0502	Design preparation for the AIP submission	14	15FEB08	28FEB08	2	3
02L1DD0504	Design (AIP) certification by the Design Checker	14	29FEB08	13MAR08	2	3
02L1DD0506	Design (AIP) submission for the SO's approval	1	14MAR08	14MAR08	1	2
02L1DD0508	Design (AIP) review by the SO	14	15MAR08	28MAR08	2	3
02L1DD0510	Obtain design (AIP) approval from the SO	0		28MAR08	2	3
02L1DD0512	AIP submission for rel. authorities' approval	1	29MAR08	29MAR08	1	2
02L1DD0514	Design (AIP) review by the rel. authorities	21	30MAR08	19APR08	2	3
02L1DD0516	Obtain rel. authorities's approval for AIP	1	21APR08	21APR08	1	2
02L1DD0518	Obtain SO's consent for design (AIP)	0		22APR08	2	2
02L1DD0520	Design preparation for the DDA submission	14	16APR08	29APR08	2	2
02L1DD0522	Design (DDA) certification by the Design Checker	14	30APR08	13MAY08	2	2
02L1DD0524	Design (DDA) submission for the SO's approval	1	14MAY08	14MAY08	1	2
02L1DD0526	Design (DDA) review by the SO	14	15MAY08	28MAY08	2	2
02L1DD0528	Obtain design (DDA) approval from the SO	0		28MAY08	2	2
02L1DD0530	DDA submission for rel. authorities' approval	1	29MAY08	29MAY08	1	2
02L1DD0532	Design (DDA) review by the rel. authorities	21	30MAY08	19JUN08	2	3
02L1DD0534	Obtain rel. authorities's approval for DDA	1	20JUN08	20JUN08	1	2
02L1DD0536	Obtain SO's consent for design (DDA)	0		21JUN08	2	3
<b>Site Formation Design; +24mPD to 14mPD</b>						
02L1DD0602	Design preparation for the AIP submission	14	29FEB08	13MAR08	2	25
02L1DD0604	Design (AIP) certification by the Design Checker	14	14MAR08	27MAR08	2	25
02L1DD0606	Design (AIP) submission for the SO's approval	1	28MAR08	28MAR08	1	20
02L1DD0608	Design (AIP) review by the SO	14	29MAR08	11APR08	2	25
02L1DD0610	Obtain design (AIP) approval from the SO	0		11APR08	2	25
02L1DD0612	AIP submission for rel. authorities' approval	1	12APR08	12APR08	1	20
02L1DD0614	Design (AIP) review by the rel. authorities	28	13APR08	10MAY08	2	25
02L1DD0616	Obtain rel. authorities's approval for AIP	1	13MAY08	13MAY08	1	20
02L1DD0618	Obtain SO's consent for design (AIP)	0		14MAY08	2	23
02L1DD0620	Design preparation for the DDA submission	14	08MAY08	21MAY08	2	23
02L1DD0622	Design (DDA) certification by the Design Checker	14	22MAY08	04JUN08	2	23
02L1DD0624	Design (DDA) submission for the SO's approval	1	05JUN08	05JUN08	1	19
02L1DD0626	Design (DDA) review by the SO	14	06JUN08	19JUN08	2	24
02L1DD0628	Obtain design (DDA) approval from the SO	0		19JUN08	2	24
02L1DD0630	DDA submission for rel. authorities' approval	1	20JUN08	20JUN08	1	19
02L1DD0632	Design (DDA) review by the rel. authorities	28	21JUN08	18JUL08	2	24
02L1DD0634	Obtain rel. authorities's approval for DDA	1	19JUL08	19JUL08	1	20
02L1DD0636	Obtain SO's consent for design (DDA)	0		21JUL08	2	23

ID	Activity Description	Orig Dur	Early Start	Early Finish	Ca Total	Float
<b>TBM Launching Chamber Design</b>						
02L1DD0702	Design preparation for the AIP submission	15	14MAR08	28MAR08	2	36
02L1DD0704	Design (AIP) certification by the Design Checker	15	29MAR08	12APR08	2	36
02L1DD0706	Design (AIP) submission for the SO's approval	1	14APR08	14APR08	1	28
02L1DD0708	Design (AIP) review by the SO	30	15APR08	14MAY08	2	35
02L1DD0710	Obtain design (AIP) approval from the SO	0		14MAY08	2	35
02L1DD0712	AIP submission for rel. authorities' approval	1	15MAY08	15MAY08	1	29
02L1DD0714	Design (AIP) review by the rel. authorities	28	16MAY08	12JUN08	2	35
02L1DD0716	Obtain rel. authorities's approval for AIP	1	13JUN08	13JUN08	1	29
02L1DD0718	Obtain SO's consent for design (AIP)	0		14JUN08	2	35
02L1DD0720	Design preparation for the DDA submission	30	23MAY08	21JUN08	2	35
02L1DD0722	Design (DDA) certification by the Design Checker	15	22JUN08	06JUL08	2	35
02L1DD0724	Design (DDA) submission for the SO's approval	1	07JUL08	07JUL08	1	30
02L1DD0726	Design (DDA) review by the SO	30	08JUL08	06AUG08	2	35
02L1DD0728	Obtain design (DDA) approval from the SO	0		06AUG08	2	35
02L1DD0730	DDA submission for rel. authorities' approval	1	07AUG08	07AUG08	1	30
02L1DD0732	Design (DDA) review by the rel. authorities	28	08AUG08	04SEP08	2	35
02L1DD0734	Obtain rel. authorities's approval for DDA	1	05SEP08	05SEP08	1	27
02L1DD0736	Obtain SO's consent for design (DDA)	0		06SEP08	2	36
<b>Hopper Foundation Design</b>						
02L1DD0802	Design preparation by the Designer	15	28MAY08	11JUN08	2	47
02L1DD0804	Design certification by the Design Checker	15	12JUN08	26JUN08	2	77
02L1DD0806	Design submission for the SO's approval	1	27JUN08	27JUN08	1	65
02L1DD0808	Design review by the SO	30	28JUN08	27JUL08	2	77
02L1DD0810	Obtain design approval from the SO	0		27JUL08	2	77
<b>Steel Platform &amp; Hopper Design</b>						
02L1DD0902	Design preparation by the Designer	30	12JUN08	11JUL08	2	47
02L1DD0904	Design certification by the Design Checker	15	12JUL08	26JUL08	2	47
02L1DD0906	Design submission for the SO's approval	1	28JUL08	28JUL08	1	40
02L1DD0908	Design review by the SO	30	29JUL08	27AUG08	2	46
02L1DD0910	Obtain design approval from the SO	0		27AUG08	2	46
<b>Overhead Gantry Support &amp; Noise Enclosure Design</b>						
02L1DD1002	Design preparation by the Designer	30	28APR08	27MAY08	2	47
02L1DD1004	Design certification by the Design Checker	15	28MAY08	11JUN08	2	60
02L1DD1006	Design submission for the SO's approval	1	12JUN08	12JUN08	1	50
02L1DD1008	Design review by the SO	30	13JUN08	12JUL08	2	60
02L1DD1010	Obtain design approval from the SO	0		12JUL08	2	60
02L1DD1012	Design submission for rel. authorities' approval	1	14JUL08	14JUL08	1	51
02L1DD1014	Design review by the rel. authorities	28	15JUL08	11AUG08	2	59
02L1DD1016	Obtain design approval from rel. authorities'	1	12AUG08	12AUG08	1	48
02L1DD1018	Obtain SO's consent for design	0		13AUG08	2	60



ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
02L1FF0106	Design (AIP) submission for the SO's approval	1	25MAR08	25MAR08	1	1
02L1FF0108	Design (AIP) review by the SO	60	26MAR08	24MAY08	2	1
02L1FF0110	Obtain design (AIP) approval from the SO	0		24MAY08	2	1
02L1FF0112	AIP submission for rel. authorities' approval	1	26MAY08	26MAY08	1	0
02L1FF0114	Design (AIP) review by the rel. authorities	28	27MAY08	23JUN08	2	0
02L1FF0116	Obtain rel. authorities' approval for AIP	1	24JUN08	24JUN08	1	0
02L1FF0118	Obtain SO's consent for design (AIP)	0		25JUN08	2	0
02L1FF0120	Design preparation for the DDA submission	30	03JUN08	02JUL08	2	0
02L1FF0122	Design (DDA) certification by the Design Checker	15	03JUL08	17JUL08	2	0
02L1FF0124	Design (DDA) submission for the SO's approval	1	18JUL08	18JUL08	1	0
02L1FF0126	Design (DDA) review by the SO	60	19JUL08	16SEP08	2	0
02L1FF0128	Obtain design (DDA) approval from the SO	0		16SEP08	2	0
02L1FF0130	DDA submission for rel. authorities' approval	1	17SEP08	17SEP08	1	0
02L1FF0132	Design (DDA) review by the rel. authorities	28	18SEP08	15OCT08	2	0
02L1FF0134	Obtain rel. authorities' approval for DDA	1	16OCT08	16OCT08	1	0
02L1FF0136	Obtain SO's consent for design (DDA)	0		17OCT08	2	0
<b>Impact Assessment on WSD Yau Kam Tau WTW</b>						
02L1FF0202	Design preparation for the AIP submission	30	09MAR08	07APR08	2	107
02L1FF0204	Design (AIP) certification by the Design Checker	15	09APR08	22APR08	2	107
02L1FF0206	Design (AIP) submission for the SO's approval	1	23APR08	23APR08	1	88
02L1FF0208	Design (AIP) review by the SO	45	24APR08	07JUN08	2	107
02L1FF0210	Obtain design (AIP) approval from the SO	0		07JUN08	2	107
02L1FF0212	AIP submission for rel. authorities' approval	1	10JUN08	10JUN08	1	88
02L1FF0214	Design (AIP) review by the rel. authorities	28	11JUN08	08JUL08	2	105
02L1FF0216	Obtain rel. authorities' approval for AIP	1	09JUL08	09JUL08	1	87
02L1FF0218	Obtain SO's consent for design (AIP)	0		10JUL08	2	105
02L1FF0220	Design preparation for the DDA submission	30	18JUN08	17JUL08	2	105
02L1FF0222	Design (DDA) certification by the Design Checker	15	18JUL08	01AUG08	2	105
02L1FF0224	Design (DDA) submission for the SO's approval	1	02AUG08	02AUG08	1	87
02L1FF0226	Design (DDA) review by the SO	45	03AUG08	16SEP08	2	105
02L1FF0228	Obtain design (DDA) approval from the SO	0		16SEP08	2	105
02L1FF0230	DDA submission for rel. authorities' approval	1	17SEP08	17SEP08	1	86
02L1FF0232	Design (DDA) review by the rel. authorities	28	18SEP08	15OCT08	2	106
02L1FF0234	Obtain rel. authorities' approval for DDA	1	16OCT08	16OCT08	1	85
02L1FF0236	Obtain SO's consent for design (DDA)	0		17OCT08	2	107
<b>Impact Assessment on WSD Tai Lam Chung WT No. 3</b>						
02L1FF0302	Design preparation for the AIP submission	30	08FEB08	08MAR08	2	3
02L1FF0304	Design (AIP) certification by the Design Checker	15	09MAR08	23MAR08	2	3
02L1FF0306	Design (AIP) submission for the SO's approval	1	25MAR08	25MAR08	1	2
02L1FF0308	Design (AIP) review by the SO	50	26MAR08	14MAY08	2	2
02L1FF0310	Obtain design (AIP) approval from the SO	0		14MAY08	2	2
02L1FF0312	AIP submission for rel. authorities' approval	1	15MAY08	15MAY08	1	2

ID	Activity Description	Child Dur	Early Start	Early Finish	CSI ID	Total Float
02L1FF0314	Design (AIP) review by the rel. authorities	28	16MAY08	12JUN08	2	3
02L1FF0316	Obtain rel. authorities' approval for AIP	1	13JUN08	13JUN08	1	2
02L1FF0318	Obtain SO's consent for design (AIP)	0		14JUN08	2	3
02L1FF0320	Design preparation for the DDA submission	30	23MAY08	21JUN08	2	3
02L1FF0322	Design (DDA) certification by the Design Checker	15	22JUN08	06JUL08	2	3
02L1FF0324	Design (DDA) submission for the SO's approval	1	07JUL08	07JUL08	1	3
02L1FF0326	Design (DDA) review by the SO	50	08JUL08	26AUG08	2	3
02L1FF0328	Obtain design (DDA) approval from the SO	0		26AUG08	2	3
02L1FF0330	DDA submission for rel. authorities' approval	1	27AUG08	27AUG08	1	3
02L1FF0332	Design (DDA) review by the rel. authorities	28	28AUG08	24SEP08	2	4
02L1FF0334	Obtain rel. authorities' approval for DDA	1	25SEP08	25SEP08	1	3
02L1FF0336	Obtain SO's consent for design (DDA)	0		26SEP08	2	5

<b>Impact Assessment on KCRC West Rail Tunnel</b>						
ID	Activity Description	Child Dur	Early Start	Early Finish	CSI ID	Total Float
02L1FF0402	Design preparation for the AIP submission	30	08APR08	07MAY08	2	190
02L1FF0404	Design (AIP) certification by the Design Checker	15	08MAY08	22MAY08	2	190
02L1FF0406	Design (AIP) submission for the SO's approval	1	23MAY08	23MAY08	1	158
02L1FF0408	Design (AIP) review by the SO	60	24MAY08	22JUL08	2	191
02L1FF0410	Obtain design (AIP) approval from the SO	0		22JUL08	2	191
02L1FF0412	AIP submission for rel. authorities' approval	1	23JUL08	23JUL08	1	155
02L1FF0414	Design (AIP) review by the rel. authorities	28	24JUL08	20AUG08	2	191
02L1FF0416	Obtain rel. authorities' approval for AIP	1	21AUG08	21AUG08	1	155
02L1FF0418	Obtain SO's consent for design (AIP)	0		22AUG08	2	192
02L1FF0420	Design preparation for the DDA submission	30	31JUL08	29AUG08	2	192
02L1FF0422	Design (DDA) certification by the Design Checker	15	30AUG08	13SEP08	2	192
02L1FF0424	Design (DDA) submission for the SO's approval	1	16SEP08	16SEP08	1	155
02L1FF0426	Design (DDA) review by the SO	60	17SEP08	15NOV08	2	190
02L1FF0428	Obtain design (DDA) approval from the SO	0		15NOV08	2	190
02L1FF0430	DDA submission for rel. authorities' approval	1	17NOV08	17NOV08	1	150
02L1FF0432	Design (DDA) review by the rel. authorities	28	18NOV08	15DEC08	2	189
02L1FF0434	Obtain rel. authorities' approval for DDA	1	16DEC08	16DEC08	1	149
02L1FF0436	Obtain SO's consent for design (DDA)	0		17DEC08	2	189

<b>Impact Assessment on WSD Tsuen Wan Reservoir G.</b>						
ID	Activity Description	Child Dur	Early Start	Early Finish	CSI ID	Total Float
02L1FF0502	Design preparation for the AIP submission	30	08MAY08	06JUN08	2	251
02L1FF0504	Design (AIP) certification by the Design Checker	15	07JUN08	21JUN08	2	251
02L1FF0506	Design (AIP) submission for the SO's approval	1	23JUN08	23JUN08	1	205
02L1FF0508	Design (AIP) review by the SO	60	24JUN08	22AUG08	2	250
02L1FF0510	Obtain design (AIP) approval from the SO	0		22AUG08	2	250
02L1FF0512	AIP submission for rel. authorities' approval	1	23AUG08	23AUG08	1	201
02L1FF0514	Design (AIP) review by the rel. authorities	28	24AUG08	20SEP08	2	251
02L1FF0516	Obtain rel. authorities' approval for AIP	1	22SEP08	22SEP08	1	200
02L1FF0518	Obtain SO's consent for design (AIP)	0		23SEP08	2	251
02L1FF0520	Design preparation for the DDA submission	30	01SEP08	30SEP08	2	251



ID	Activity Description	Orig Bur	Early Start	Early Finish	Cal ID	Total Float
02L1FF0522	Design (DDA) certification by the Design Checker	15	01OCT08	15OCT08	2	251
02L1FF0524	Design (DDA) submission for the SO's approval	1	16OCT08	16OCT08	1	202
02L1FF0526	Design (DDA) review by the SO	60	17OCT08	15DEC08	2	251
02L1FF0528	Obtain design (DDA) approval from the SO	0		15DEC08	2	251
02L1FF0530	DDA submission for rel. authorities' approval	1	16DEC08	16DEC08	1	201
02L1FF0532	Design (DDA) review by the rel. authorities	28	17DEC08	13JAN09	2	251
02L1FF0534	Obtain rel. authorities's approval for DDA	1	14JAN09	14JAN09	1	204
02L1FF0536	Obtain SO's consent for design (DDA)	0		15JAN09	2	251

Design Activities for Vertical Portion A						
Temp. Steel Decking Design Over Shing Mun Nullah						
ID	Activity Description	Orig Bur	Early Start	Early Finish	Cal ID	Total Float
02L1AA0102	Design preparation by the Designer	14	08FEB08	21FEB08	2	22
02L1AA0104	Design certification by the Design Checker	14	22FEB08	06MAR08	2	29
02L1AA0106	Design submission for the SO's approval	1	07MAR08	07MAR08	1	21
02L1AA0108	Design review by the SO	28	08MAR08	04APR08	2	29
02L1AA0110	Obtain design approval from the SO	0		04APR08	2	29
E/S Design for Spiral Ramp/Cascade/Box Culvert						
02L1AA0202	Design preparation for the AIP submission	15	22FEB08	07MAR08	2	22
02L1AA0204	Design (AIP) certification by the Design Checker	15	08MAR08	22MAR08	2	22
02L1AA0206	Design (AIP) submission for the SO's approval	1	25MAR08	25MAR08	1	16
02L1AA0208	Design (AIP) review by the SO	21	26MAR08	15APR08	2	20
02L1AA0210	Obtain design (AIP) approval from the SO	0		15APR08	2	20
02L1AA0212	AIP submission for rel. authorities' approval	1	16APR08	16APR08	1	16
02L1AA0214	Design (AIP) review by the rel. authorities	21	17APR08	07MAY08	2	20
02L1AA0216	Obtain rel. authorities's approval for AIP	1	08MAY08	08MAY08	1	16
02L1AA0218	Obtain SO's consent for design (AIP)	0		09MAY08	2	20
02L1AA0220	Design preparation for the DDA submission	30	17APR08	16MAY08	2	20
02L1AA0222	Design (DDA) certification by the Design Checker	15	17MAY08	31MAY08	2	20
02L1AA0226	Design (DDA) submission for the SO's approval	1	02JUN08	02JUN08	1	16
02L1AA0228	Design (DDA) review by the SO	21	03JUN08	23JUN08	2	20
02L1AA0230	Obtain design (DDA) approval from the SO	0		23JUN08	2	20
02L1AA0232	DDA submission for rel. authorities' approval	1	24JUN08	24JUN08	1	16
02L1AA0234	Design (DDA) review by the rel. authorities	21	25JUN08	15JUL08	2	20
02L1AA0236	Obtain rel. authorities's approval for DDA	1	16JUL08	16JUL08	1	17
02L1AA0238	Obtain SO's consent for design (DDA)	0		17JUL08	2	20
Temp. Platform Design for H-Piling						
02L1AA0302	Design preparation by the Designer	15	22FEB08	07MAR08	2	627
02L1AA0304	Design certification by the Design Checker	15	08MAR08	22MAR08	2	1,618
02L1AA0306	Design submission for the SO's approval	1	25MAR08	25MAR08	1	1,312
02L1AA0308	Design review by the SO	28	26MAR08	22APR08	2	1,616
Cascade & Box Culvert Design for Portion A						
02L1AA0402	Design preparation for the AIP submission	30	08MAR08	06APR08	2	627

ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Final
02L1AA0404	Design (AIP) certification by the Design Checker	15	07APR08	21APR08	2	627
02L1AA0406	Design (AIP) submission for the SO's approval	1	22APR08	22APR08	1	511
02L1AA0408	Design (AIP) review by the SO	60	23APR08	21JUN08	2	628
02L1AA0410	Obtain design (AIP) approval from the SO	0		21JUN08	2	628
02L1AA0412	AIP submission for rel. authorities' approval	1	23JUN08	23JUN08	1	511
02L1AA0414	Design (AIP) review by the rel. authorities	28	24JUN08	21JUL08	2	627
02L1AA0416	Obtain rel. authorities' approval for AIP	1	22JUL08	22JUL08	1	508
02L1AA0418	Obtain SO's consent for design (AIP)	0		23JUL08	2	628
02L1AA0420	Design preparation for the DDA submission	30	01JUL08	30JUL08	2	628
02L1AA0422	Design (DDA) certification by the Design Checker	15	31JUL08	14AUG08	2	628
02L1AA0424	Design (DDA) submission for the SO's approval	1	15AUG08	15AUG08	1	507
02L1AA0426	Design (DDA) review by the SO	60	16AUG08	14OCT08	2	628
02L1AA0428	Obtain design (DDA) approval from the SO	0		14OCT08	2	628
02L1AA0430	DDA submission for rel. authorities' approval	1	15OCT08	15OCT08	1	507
02L1AA0432	Design (DDA) review by the rel. authorities	28	16OCT08	12NOV08	2	628
02L1AA0434	Obtain rel. authorities' approval for DDA	1	13NOV08	13NOV08	1	507
02L1AA0436	Obtain SO's consent for design (DDA)	0		14NOV08	2	628
<b>Overhead Gantry Design for Retrieval of TBM</b>						
02L1AA0502	Design preparation by the Designer	15	07APR08	21APR08	2	694
02L1AA0504	Design certification by the Design Checker	15	22APR08	06MAY08	2	694
02L1AA0506	Design submission for the SO's approval	1	07MAY08	07MAY08	1	566
02L1AA0508	Design review by the SO	30	08MAY08	06JUN08	2	699
02L1AA0510	Obtain design approval from the SO	0		06JUN08	2	699
<b>Design Packages for Work in Portion B</b>						
<b>Temp. Platform Design for RCD for Air Vent Shaft</b>						
02L1BB0302	Design preparation by the Designer	15	07MAR08	21MAR08	2	17
02L1BB0304	Design certification by the Design Checker	15	22MAR08	05APR08	2	17
02L1BB0306	Design submission for the SO's approval	1	07APR08	07APR08	1	14
02L1BB0308	Design review by the SO	28	08APR08	05MAY08	2	16
02L1BB0310	Obtain design approval from the SO	0		05MAY08	2	16
<b>ELS Design for Intake Structure Construction</b>						
02L1BB0402	Design preparation by the Designer	15	22MAR08	05APR08	2	162
02L1BB0404	Design certification by the Design Checker	15	06APR08	20APR08	2	162
02L1BB0406	Design submission for the SO's approval	1	21APR08	21APR08	1	134
02L1BB0408	Design review by the SO	28	22APR08	19MAY08	2	162
02L1BB0410	Obtain design approval from the SO	0		19MAY08	2	162
<b>Temp. Support Design for MAAMAS/VDS/DC/AVS</b>						
02L1BB0502	Design preparation for the AIP submission	30	07MAR08	05APR08	2	25
02L1BB0504	Design (AIP) certification by the Design Checker	15	06APR08	20APR08	2	25
02L1BB0506	Design (AIP) submission for the SO's approval	1	21APR08	21APR08	1	20
02L1BB0508	Design (AIP) review by the SO	60	22APR08	20JUN08	2	25

ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
02L1BB0510	Obtain design (AIP) approval from the SO	0		20JUN08	2	25
02L1BB0512	AIP submission for rel. authorities' approval	1	21JUN08	21JUN08	1	20
02L1BB0514	Design (AIP) review by the rel. authorities	15	22JUN08	06JUL08	2	25
02L1BB0516	Obtain rel. authorities's approval for AIP	1	07JUL08	07JUL08	1	22
02L1BB0518	Obtain SO's consent for design (AIP)	0		08JUL08	2	25
02L1BB0520	Design preparation for the DDA submission	30	16JUN08	15JUL08	2	25
02L1BB0522	Design (DDA) certification by the Design Checker	15	16JUL08	30JUL08	2	25
02L1BB0524	Design (DDA) submission for the SO's approval	1	31JUL08	31JUL08	1	21
02L1BB0526	Design (DDA) review by the SO	60	01AUG08	29SEP08	2	25
02L1BB0528	Obtain design (DDA) approval from the SO	0		29SEP08	2	25
02L1BB0530	DDA submission for rel. authorities' approval	1	30SEP08	30SEP08	1	20
02L1BB0532	Design (DDA) review by the rel. authorities	28	01OCT08	28OCT08	2	26
02L1BB0534	Obtain rel. authorities's approval for DDA	1	29OCT08	29OCT08	1	22
02L1BB0536	Obtain SO's consent for design (DDA)	0		30OCT08	2	26

**Temp. Support Design for MA and MAMT Connection**

02L1BB0602	Design preparation for the AIP submission	30	21APR08	20MAY08	2	527
02L1BB0604	Design (AIP) certification by the Design Checker	15	21MAY08	04JUN08	2	804
02L1BB0606	Design (AIP) submission for the SO's approval	1	05JUN08	05JUN08	1	653
02L1BB0608	Design (AIP) review by the SO	60	06JUN08	04AUG08	2	804
02L1BB0610	Obtain design (AIP) approval from the SO	0		04AUG08	2	804
02L1BB0612	AIP submission for rel. authorities' approval	1	05AUG08	05AUG08	1	652
02L1BB0614	Design (AIP) review by the rel. authorities	15	06AUG08	20AUG08	2	804
02L1BB0616	Obtain rel. authorities's approval for AIP	1	21AUG08	21AUG08	1	652
02L1BB0618	Obtain SO's consent for design (AIP)	0		22AUG08	2	804
02L1BB0620	Design preparation for the DDA submission	30	31JUL08	29AUG08	2	804
02L1BB0622	Design (DDA) certification by the Design Checker	15	30AUG08	13SEP08	2	804
02L1BB0624	Design (DDA) submission for the SO's approval	1	16SEP08	16SEP08	1	652
02L1BB0626	Design (DDA) review by the SO	60	17SEP08	15NOV08	2	803
02L1BB0628	Obtain design (DDA) approval from the SO	0		15NOV08	2	803
02L1BB0630	DDA submission for rel. authorities' approval	1	17NOV08	17NOV08	1	651
02L1BB0632	Design (DDA) review by the rel. authorities	28	18NOV08	15DEC08	2	802
02L1BB0634	Obtain rel. authorities's approval for DDA	1	16DEC08	16DEC08	1	648
02L1BB0636	Obtain SO's consent for design (DDA)	0		17DEC08	2	803

**Permanent Design for MA/MAS/VDS/DC/AVS**

02L1BB0702	Design preparation for the AIP submission	30	21MAY08	19JUN08	2	527
02L1BB0704	Design (AIP) certification by the Design Checker	15	20JUN08	04JUL08	2	730
02L1BB0706	Design (AIP) submission for the SO's approval	1	05JUL08	05JUL08	1	591
02L1BB0708	Design (AIP) review by the SO	60	06JUL08	03SEP08	2	730
02L1BB0710	Obtain design (AIP) approval from the SO	0		03SEP08	2	730
02L1BB0712	AIP submission for rel. authorities' approval	1	04SEP08	04SEP08	1	592
02L1BB0714	Design (AIP) review by the rel. authorities	15	05SEP08	19SEP08	2	730
02L1BB0716	Obtain rel. authorities's approval for AIP	1	20SEP08	20SEP08	1	592

ID	Activity Description	Orig. Dur.	Early Start	Early Finish	Cal. ID	Total Cal. Float
02L1BB0718	Obtain SO's consent for design (AIP)	0	22SEP08	2	729	
02L1BB0720	Design preparation for the DDA submission	30	31AUG08	29SEP08	2	729
02L1BB0722	Design (DDA) certification by the Design Checker	15	30SEP08	14OCT08	2	729
02L1BB0724	Design (DDA) submission for the SO's approval	1	15OCT08	15OCT08	1	592
02L1BB0726	Design (DDA) review by the SO	60	16OCT08	14DEC08	2	729
02L1BB0728	Obtain design (DDA) approval from the SO	0	14DEC08	2	729	
02L1BB0730	DDA submission for rel. authorities' approval	1	15DEC08	15DEC08	1	591
02L1BB0732	Design (DDA) review by the rel. authorities	28	16DEC08	12JAN09	2	729
02L1BB0734	Obtain rel. authorities' approval for DDA	1	13JAN09	13JAN09	1	591
02L1BB0736	Obtain SO's consent for design (DDA)	0	14JAN09	2	729	

**Permanent Design for MA and MAMT Connection**

02L1BB0802	Design preparation for AIP submission	30	20JUN08	19JUL08	2	527
02L1BB0804	Design (AIP) certification by the Design Checker	15	20JUL08	03AUG08	2	527
02L1BB0806	Design (AIP) submission for the SO's approval	1	04AUG08	04AUG08	1	429
02L1BB0808	Design (AIP) review by the SO	60	05AUG08	03OCT08	2	527
02L1BB0810	Obtain design (AIP) approval from the SO	0	03OCT08	2	527	
02L1BB0812	AIP submission for rel. authorities' approval	1	04OCT08	04OCT08	1	427
02L1BB0814	Design (AIP) review by the rel. authorities	15	05OCT08	19OCT08	2	527
02L1BB0816	Obtain rel. authorities' approval for AIP	1	20OCT08	20OCT08	1	429
02L1BB0818	Obtain SO's consent for design (AIP)	0	21OCT08	2	531	
02L1BB0820	Design preparation for the DDA submission	30	29SEP08	28OCT08	2	531
02L1BB0822	Design (DDA) certification by the Design Checker	15	29OCT08	12NOV08	2	531
02L1BB0824	Design (DDA) submission for the SO's approval	1	13NOV08	13NOV08	1	428
02L1BB0826	Design (DDA) review by the SO	60	14NOV08	12JAN09	2	531
02L1BB0828	Obtain design (DDA) approval from the SO	0	12JAN09	2	531	
02L1BB0830	DDA submission for rel. authorities' approval	1	13JAN09	13JAN09	1	428
02L1BB0832	Design (DDA) review by the rel. authorities	28	14JAN09	10FEB09	2	531
02L1BB0834	Obtain rel. authorities' approval for DDA	1	11FEB09	11FEB09	1	430
02L1BB0836	Obtain SO's consent for design (DDA)	0	12FEB09	2	531	

**Boulder Assessment & Design of Stabfl. Measure**

02L1BB0902	Design preparation for the AIP submission	15	06APR08	20APR08	2	50
02L1BB0904	Design (AIP) certification by the Design Checker	15	21APR08	05MAY08	2	50
02L1BB0906	Design (AIP) submission for the SO's approval	1	06MAY08	06MAY08	1	41
02L1BB0908	Design (AIP) review by the SO	21	07MAY08	27MAY08	2	50
02L1BB0910	Obtain design (AIP) approval from the SO	0	27MAY08	2	50	
02L1BB0912	AIP submission for rel. authorities' approval	1	28MAY08	28MAY08	1	41
02L1BB0914	Design (AIP) review by the rel. authorities	28	29MAY08	25JUN08	2	50
02L1BB0916	Obtain rel. authorities' approval for AIP	1	26JUN08	26JUN08	1	42
02L1BB0918	Obtain SO's consent for design (AIP)	0	27JUN08	2	50	
02L1BB0920	Design preparation for the DDA submission	30	05JUN08	04JUL08	2	50
02L1BB0922	Design (DDA) certification by the Design Checker	15	05JUL08	19JUL08	2	50
02L1BB0924	Design (DDA) submission for the SO's approval	1	21JUL08	21JUL08	1	42

ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
02L1BB0926	Design (DDA) review by the SO	21	22JUL08	11AUG08	2	49
02L1BB0928	Obtain design (DDA) approval from the SO	0		11AUG08	2	49
02L1BB0930	DDA submission for rel. authorities' approval	1	12AUG08	12AUG08	1	41
02L1BB0932	Design (DDA) review by the rel. authorities	28	13AUG08	09SEP08	2	50
02L1BB0934	Obtain rel. authorities' approval for DDA	1	10SEP08	10SEP08	1	40
02L1BB0936	Obtain SO's consent for design (DDA)	0		11SEP08	2	50

Design Packages to Work in Position						
<b>ELS Design for Intake Structure Construction</b>						
02L1CC0102	Design preparation by the Designer	15	08FEB08	22FEB08	2	30
02L1CC0104	Design certification by the Design Checker	15	23FEB08	08MAR08	2	30
02L1CC0106	Design submission for the SO's approval	1	10MAR08	10MAR08	1	21
02L1CC0108	Design review by the SO	28	11MAR08	07APR08	2	29
02L1CC0110	Obtain design approval from the SO	0		07APR08	2	29

Temp. Support Design for MA/MAS/VS/DC/AVS						
02L1CC0302	Design preparation for the AIP submission	30	09MAR08	07APR08	2	262
02L1CC0304	Design (AIP) certification by the Design Checker	15	08APR08	22APR08	2	262
02L1CC0306	Design (AIP) submission for the SO's approval	1	23APR08	23APR08	1	215
02L1CC0308	Design (AIP) review by the SO	60	24APR08	22JUN08	2	262
02L1CC0310	Obtain design (AIP) approval from the SO	0		22JUN08	2	262
02L1CC0312	AIP submission for rel. authorities' approval	1	23JUN08	23JUN08	1	215
02L1CC0314	Design (AIP) review by the rel. authorities	15	24JUN08	08JUL08	2	262
02L1CC0316	Obtain rel. authorities' approval for AIP	1	09JUL08	09JUL08	1	216
02L1CC0318	Obtain SO's consent for design (AIP)	0		10JUL08	2	263
02L1CC0320	Design preparation for the DDA submission	30	18JUN08	17JUL08	2	263
02L1CC0322	Design (DDA) certification by the Design Checker	15	18JUL08	01AUG08	2	263
02L1CC0324	Design (DDA) submission for the SO's approval	1	02AUG08	02AUG08	1	212
02L1CC0326	Design (DDA) review by the SO	60	03AUG08	01OCT08	2	263
02L1CC0328	Obtain design (DDA) approval from the SO	0		01OCT08	2	263
02L1CC0330	DDA submission for rel. authorities' approval	1	02OCT08	02OCT08	1	211
02L1CC0332	Design (DDA) review by the rel. authorities	28	03OCT08	30OCT08	2	263
02L1CC0334	Obtain rel. authorities' approval for DDA	1	31OCT08	31OCT08	1	211
02L1CC0336	Obtain SO's consent for design (DDA)	0		01NOV08	2	263

Temp. Support Design for MA and MA/MT Connection						
02L1CC0402	Design preparation for the AIP submission	30	08MAY08	06JUN08	2	395
02L1CC0404	Design (AIP) certification by the Design Checker	15	07JUN08	21JUN08	2	395
02L1CC0406	Design (AIP) submission for the SO's approval	1	23JUN08	23JUN08	1	320
02L1CC0408	Design (AIP) review by the SO	60	24JUN08	22AUG08	2	394
02L1CC0410	Obtain design (AIP) approval from the SO	0		22AUG08	2	394
02L1CC0412	AIP submission for rel. authorities' approval	1	23AUG08	23AUG08	1	320
02L1CC0414	Design (AIP) review by the rel. authorities	15	24AUG08	07SEP08	2	394
02L1CC0416	Obtain rel. authorities' approval for AIP	1	08SEP08	08SEP08	1	319
02L1CC0418	Obtain SO's consent for design (AIP)	0		09SEP08	2	394



ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
02L1CC0420	Design preparation for the DDA submission	30	18AUG08	16SEP08	2	394
02L1CC0422	Design (DDA) certification by the Design Checker	15	17SEP08	01OCT08	2	394
02L1CC0424	Design (DDA) submission for the SO's approval	1	02OCT08	02OCT08	1	320
02L1CC0426	Design (DDA) review by the SO	60	03OCT08	01DEC08	2	394
02L1CC0428	Obtain design (DDA) approval from the SO	0		01DEC08	2	394
02L1CC0430	DDA submission for rel. authorities' approval	1	02DEC08	02DEC08	1	319
02L1CC0432	Design (DDA) review by the rel. authorities	28	03DEC08	30DEC08	2	394
02L1CC0434	Obtain rel. authorities' approval for DDA	1	31DEC08	31DEC08	1	320
02L1CC0436	Obtain SO's consent for design (DDA)	0		02JAN09	2	394
<b>Permanent Design for MA/MAS/VDS/DC/AVS</b>						
02L1CC0502	Design preparation for the AIP submission	30	08APR08	07MAY08	2	285
02L1CC0504	Design (AIP) certification by the Design Checker	15	08MAY08	22MAY08	2	285
02L1CC0506	Design (AIP) submission for the SO's approval	1	23MAY08	23MAY08	1	233
02L1CC0508	Design (AIP) review by the SO	60	24MAY08	22JUL08	2	285
02L1CC0510	Obtain design (AIP) approval from the SO	0		22JUL08	2	285
02L1CC0512	AIP submission for rel. authorities' approval	1	23JUL08	23JUL08	1	229
02L1CC0514	Design (AIP) review by the rel. authorities	15	24JUL08	07AUG08	2	285
02L1CC0516	Obtain rel. authorities' approval for AIP	1	08AUG08	08AUG08	1	229
02L1CC0518	Obtain SO's consent for design (AIP)	0		09AUG08	2	285
02L1CC0520	Design preparation for the DDA submission	30	18JUL08	16AUG08	2	285
02L1CC0522	Design (DDA) certification by the Design Checker	15	17AUG08	31AUG08	2	285
02L1CC0524	Design (DDA) submission for the SO's approval	1	01SEP08	01SEP08	1	229
02L1CC0526	Design (DDA) review by the SO	60	02SEP08	31OCT08	2	286
02L1CC0528	Obtain design (DDA) approval from the SO	0		31OCT08	2	286
02L1CC0530	DDA submission for rel. authorities' approval	1	01NOV08	01NOV08	1	231
02L1CC0532	Design (DDA) review by the rel. authorities	28	02NOV08	29NOV08	2	286
02L1CC0534	Obtain rel. authorities' approval for DDA	1	01DEC08	01DEC08	1	231
02L1CC0536	Obtain SO's consent for design (DDA)	0		02DEC08	2	286
<b>Permanent Design for MA and MA/MT Connection</b>						
02L1CC0602	Design preparation for the AIP submission	30	07JUN08	06JUL08	2	414
02L1CC0604	Design (AIP) certification by the Design Checker	15	07JUL08	21JUL08	2	414
02L1CC0606	Design (AIP) submission for the SO's approval	1	22JUL08	22JUL08	1	338
02L1CC0608	Design (AIP) review by the SO	60	23JUL08	20SEP08	2	414
02L1CC0610	Obtain design (AIP) approval from the SO	0		20SEP08	2	414
02L1CC0612	AIP submission for rel. authorities' approval	1	22SEP08	22SEP08	1	335
02L1CC0614	Design (AIP) review by the rel. authorities	15	23SEP08	07OCT08	2	413
02L1CC0616	Obtain rel. authorities' approval for AIP	1	08OCT08	08OCT08	1	337
02L1CC0618	Obtain SO's consent for design (AIP)	0		09OCT08	2	413
02L1CC0620	Design preparation for the DDA submission	30	17SEP08	16OCT08	2	413
02L1CC0622	Design (DDA) certification by the Design Checker	15	17OCT08	31OCT08	2	413
02L1CC0624	Design (DDA) submission for the SO's approval	1	01NOV08	01NOV08	1	337
02L1CC0626	Design (DDA) review by the SO	60	02NOV08	31DEC08	2	414

ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
02L1CC0628	Obtain design (DDA) approval from the SO	0		31DEC08	2	414
02L1CC0630	DDA submission for rel. authorities' approval	1	02JAN09	02JAN09	1	334
02L1CC0632	Design (DDA) review by the rel. authorities	28	03JAN09	30JAN09	2	413
02L1CC0634	Obtain rel. authorities' approval for DDA	1	31JAN09	31JAN09	1	337
02L1CC0636	Obtain SO's consent for design (DDA)	0		02FEB09	2	413

**Boulder Assessment & Design for Stabili. Measure**

02L1CC0702	Design preparation for the AIP submission	15	23FEB08	08MAR08	2	262
02L1CC0704	Design (AIP) certification by the Design Checker	15	09MAR08	23MAR08	2	319
02L1CC0706	Design (AIP) submission for the SO's approval	1	25MAR08	25MAR08	1	259
02L1CC0708	Design (AIP) review by the SO	28	26MAR08	22APR08	2	318
02L1CC0710	Obtain design (AIP) approval from the SO	0		22APR08	2	318
02L1CC0712	AIP submission for rel. authorities' approval	1	23APR08	23APR08	1	260
02L1CC0714	Design (AIP) review by the rel. authorities	28	24APR08	21MAY08	2	319
02L1CC0716	Obtain rel. authorities' approval for AIP	1	22MAY08	22MAY08	1	261
02L1CC0718	Obtain SO's consent for design (AIP)	0		23MAY08	2	319
02L1CC0720	Design preparation for the DDA submission	30	01MAY08	30MAY08	2	319
02L1CC0722	Design (DDA) certification by the Design Checker	15	31MAY08	14JUN08	2	319
02L1CC0724	Design (DDA) submission for the SO's approval	1	16JUN08	16JUN08	1	259
02L1CC0726	Design (DDA) review by the SO	28	17JUN08	14JUL08	2	321
02L1CC0728	Obtain design (DDA) approval from the SO	0		14JUL08	2	321
02L1CC0730	DDA submission for rel. authorities' approval	1	15JUL08	15JUL08	1	259
02L1CC0732	Design (DDA) review by the rel. authorities	28	16JUL08	12AUG08	2	321
02L1CC0734	Obtain rel. authorities' approval for DDA	1	13AUG08	13AUG08	1	259
02L1CC0736	Obtain SO's consent for design (DDA)	0		14AUG08	2	322

**Design Packages to Volcan. Portion C**

**Drainage Impact Assessment**

02L1GG0102	Design preparation for the AIP submission	30	15AUG08	13SEP08	2	322
02L1GG0104	Design (AIP) certification by the Design Checker	15	14SEP08	28SEP08	2	322
02L1GG0106	Design (AIP) submission for the SO's approval	1	29SEP08	29SEP08	1	260
02L1GG0108	Design (AIP) review by the SO	60	30SEP08	28NOV08	2	322
02L1GG0110	Obtain design (AIP) approval from the SO	0		28NOV08	2	322
02L1GG0112	AIP submission for rel. authorities' approval	1	29NOV08	29NOV08	1	260
02L1GG0114	Design (AIP) review by the rel. authorities	15	30NOV08	14DEC08	2	323
02L1GG0116	Obtain rel. authorities' approval for AIP	1	15DEC08	15DEC08	1	260
02L1GG0118	Obtain SO's consent for design (AIP)	0		16DEC08	2	323
02L1GG0120	Design preparation for the DDA submission	30	24NOV08	23DEC08	2	323
02L1GG0122	Design (DDA) certification by the Design Checker	15	24DEC08	07JAN09	2	323
02L1GG0124	Design (DDA) submission for the SO's approval	1	08JAN09	08JAN09	1	263
02L1GG0126	Design (DDA) review by the SO	60	09JAN09	09MAR09	2	323
02L1GG0128	Obtain design (DDA) approval from the SO	0		09MAR09	2	323
02L1GG0130	DDA submission for rel. authorities' approval	1	10MAR09	10MAR09	1	263
02L1GG0132	Design (DDA) review by the rel. authorities	28	11MAR09	07APR09	2	323

IB	Activity Description	Orig Dtl	Early Start	Early Finish	Cal ID	Total Float
02L1GG0134	Obtain rel. authorities' approval for DDA	1	08APR09	08APR09	1	261
02L1GG0136	Obtain SO's consent for design (DDA)	0		09APR09	2	323

**Temp. Platform Design for H-Piling at Portion G**

02L1GG0202	Design preparation for the AIP submission	30	14SEP08	13OCT08	2	439
02L1GG0204	Design (AIP) certification by the Design Checker	15	14OCT08	28OCT08	2	439
02L1GG0206	Design (AIP) submission for the SO's approval	1	29OCT08	29OCT08	1	356
02L1GG0208	Design (AIP) review by the SO	28	30OCT08	26NOV08	2	439
02L1GG0210	Obtain design (AIP) approval from the SO	0		26NOV08	2	439
02L1GG0220	Design preparation for the DDA submission	30	11NOV08	10DEC08	2	439
02L1GG0222	Design (DDA) certification by the Design Checker	15	11DEC08	25DEC08	2	439
02L1GG0224	Design (DDA) submission for the SO's approval	1	27DEC08	27DEC08	1	354
02L1GG0226	Design (DDA) review by the SO	28	28DEC08	24JAN09	2	438
02L1GG0228	Obtain design (DDA) approval from the SO	0		24JAN09	2	438

**ELS Design for Pipe Jacking at Portion G**

02L1GG0302	Design preparation for the AIP submission	15	14OCT08	28OCT08	2	630
02L1GG0304	Design (AIP) certification by the Design Checker	15	29OCT08	12NOV08	2	630
02L1GG0306	Design (AIP) submission for the SO's approval	1	13NOV08	13NOV08	1	509
02L1GG0308	Design (AIP) review by the SO	28	14NOV08	11DEC08	2	630
02L1GG0310	Obtain design (AIP) approval from the SO	0		11DEC08	2	630
02L1GG0320	Design preparation for the DDA submission	30	26NOV08	25DEC08	2	630
02L1GG0322	Design (DDA) certification by the Design Checker	15	26DEC08	09JAN09	2	630
02L1GG0324	Design (DDA) submission for the SO's approval	1	10JAN09	10JAN09	1	510
02L1GG0326	Design (DDA) review by the SO	28	11JAN09	07FEB09	2	631
02L1GG0328	Obtain design (DDA) approval from the SO	0		07FEB09	2	631

**Design Package for ELS Works**

**Design for Communication System**

02L1FE0102	Design preparation for the AIP submission	15	01JUL08	15JUL08	2	466
02L1FE0104	Design (AIP) certification by the Design Checker	15	16JUL08	30JUL08	2	466
02L1FE0106	Design (AIP) submission for the SO's approval	1	31JUL08	31JUL08	1	379
02L1FE0108	Design (AIP) review by the SO	30	01AUG08	30AUG08	2	466
02L1FE0110	Obtain design (AIP) approval from the SO	0		30AUG08	2	466
02L1FE0112	AIP submission for rel. authorities' approval	1	01SEP08	01SEP08	1	379
02L1FE0114	Design (AIP) review by the rel. authorities	28	02SEP08	29SEP08	2	465
02L1FE0116	Obtain rel. authorities' approval for AIP	1	30SEP08	30SEP08	1	377
02L1FE0118	Obtain SO's consent for design (AIP)	0		02OCT08	2	464
02L1FE0120	Design preparation for the DDA submission	30	17SEP08	16OCT08	2	464
02L1FE0122	Design (DDA) certification by the Design Checker	15	17OCT08	31OCT08	2	464
02L1FE0124	Design (DDA) submission for the SO's approval	1	01NOV08	01NOV08	1	377
02L1FE0126	Design (DDA) review by the SO	30	02NOV08	01DEC08	2	464
02L1FE0128	Obtain design (DDA) approval from the SO	0		01DEC08	2	464
02L1FE0130	DDA submission for rel. authorities' approval	1	02DEC08	02DEC08	1	375
02L1FE0132	Design (DDA) review by the rel. authorities	28	03DEC08	30DEC08	2	464

ID: 02L1FE0134, 02L1FE0136, 02L1FE0202, 02L1FE0204, 02L1FE0206, 02L1FE0208, 02L1FE0210, 02L1FE0220, 02L1FE0222, 02L1FE0224, 02L1FE0226, 02L1FE0228, 02L10D1002, 02L10D1004, 02L10D1006, 02L10D1008, 02L10D1010, 02L10D1012, 02L10D1014, 02L10D1016, 02L10D1018, 02L10D1020, 02L10D1022, 02L10D1024, 02L10D1026, 02L10D1028, 02L10D1030, 02L10D1032, 02L10D1034, 02L10D1036, 02L10D1038, 02L10D1040, 02L10D1042, 02L10D1044, 02L10D1046  
 Activity Description: Obtain rel. authorities's approval for DDA, Obtain SO's consent for design (DDA), Design preparation for the AIP submission, Design (AIP) certification by the Design Checker, Design (AIP) submission for the SO's approval, Design (AIP) review by the SO, Obtain design (AIP) approval from the SO, Design preparation for the DDA submission, Design (DDA) certification by the Design Checker, Design (DDA) submission for the SO's approval, Design (DDA) review by the SO, Obtain design (DDA) approval from the SO, 2L 1; On submission of PDP to the SO, 2L 2; On acceptance of PDP by the SO, 2L 3; On submission of AIP to the SO; Portion A, 2L 4; On acceptance of AIP by the SO; Portion A, 2L 5; On submission of DDA to the SO; Portion A, 2L 6; On acceptance of DDA by the SO; Portion A, 2L 7; On submission of AIP to the SO; Portion B, 2L 8; On acceptance of AIP by the SO; Portion B, 2L 9; On submission of DDA to the SO; Portion B, 2L 10; On acceptance of DDA by the SO; Portion B, 2L 11; On submission of AIP to the SO; Portion C, 2L 12; On acceptance of AIP by the SO; Portion C, 2L 13; On submission of DDA to the SO; Portion C, 2L 14; On acceptance of DDA by the SO; Portion C, 2L 15; On acceptance of AIP by the SO; Portion D, 2L 16; On acceptance of DDA by the SO; Portion D, 2L 17; On submission of AIP to the SO; Portion F, 2L 18; On acceptance of AIP by the SO; Portion F, 2L 19; On submission of DDA to the SO; Portion F, 2L 20; On acceptance of DDA by the SO; Portion F, 2L 21; On acceptance of AIP by the SO; Portion G, 2L 22; On acceptance of DDA by the SO; Portion G, 2L 23; On completion of all works under this CC

ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
02L1FE0134	Obtain rel. authorities's approval for DDA	1	31DEC08	31DEC08	1	373
02L1FE0136	Obtain SO's consent for design (DDA)	0		02JAN09	2	464
<b>Design for Flow Measurement System</b>						
02L1FE0202	Design preparation for the AIP submission	15	01JUL08	15JUL08	2	816
02L1FE0204	Design (AIP) certification by the Design Checker	15	16JUL08	30JUL08	2	816
02L1FE0206	Design (AIP) submission for the SO's approval	1	31JUL08	31JUL08	1	682
02L1FE0208	Design (AIP) review by the SO	30	01AUG08	30AUG08	2	816
02L1FE0210	Obtain design (AIP) approval from the SO	0		30AUG08	2	816
02L1FE0220	Design preparation for the DDA submission	30	15AUG08	13SEP08	2	816
02L1FE0222	Design (DDA) certification by the Design Checker	15	14SEP08	28SEP08	2	816
02L1FE0224	Design (DDA) submission for the SO's approval	1	29SEP08	29SEP08	1	664
02L1FE0226	Design (DDA) review by the SO	30	30SEP08	29OCT08	2	818
02L1FE0228	Obtain design (DDA) approval from the SO	0		29OCT08	2	818

ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
02L10D1002	2L 1; On submission of PDP to the SO	0		10JAN08	2	1,719
02L10D1004	2L 2; On acceptance of PDP by the SO	0		06MAR08	2	1,663
02L10D1006	2L 3; On submission of AIP to the SO; Portion A	0		22APR08	2	1,616
02L10D1008	2L 4; On acceptance of AIP by the SO; Portion A	0		21JUN08	2	1,556
02L10D1010	2L 5; On submission of DDA to the SO; Portion A	0		15AUG08	2	1,501
02L10D1012	2L 6; On acceptance of DDA by the SO; Portion A	0		14OCT08	2	1,441
02L10D1014	2L 7; On submission of AIP to the SO; Portion B	0		04AUG08	2	1,512
02L10D1016	2L 8; On acceptance of AIP by the SO; Portion B	0		03OCT08	2	1,452
02L10D1018	2L 9; On submission of DDA to the SO; Portion B	0		13NOV08	2	1,411
02L10D1020	2L 10; On acceptance of DDA by the SO; Portion B	0		12JAN09	2	1,351
02L10D1022	2L 11; On submission of AIP to the SO; Portion C	0		22JUL08	2	1,525
02L10D1024	2L 12; On acceptance of AIP by the SO; Portion C	0		20SEP08	2	1,465
02L10D1026	2L 13; On submission of DDA to the SO; Portion C	0		01NOV08	2	1,423
02L10D1028	2L 14; On acceptance of DDA by the SO; Portion C	0		31DEC08	2	1,363
02L10D1030	2L 15; On acceptance of AIP by the SO; Portion D	0		09NOV08	2	1,415
02L10D1032	2L 16; On acceptance of DDA by the SO; Portion D	0		18MAR09	2	1,286
02L10D1034	2L 17; On submission of AIP to the SO; Portion F	0		25MAR08	2	1,644
02L10D1036	2L 18; On acceptance of AIP by the SO; Portion F	0		24MAY08	2	1,584
02L10D1038	2L 19; On submission of DDA to the SO; Portion F	0		18JUL08	2	1,529
02L10D1040	2L 20; On acceptance of DDA by the SO; Portion F	0		16SEP08	2	1,469
02L10D1042	2L 21; On acceptance of AIP by the SO; Portion G	0		11DEC08	2	1,383
02L10D1044	2L 22; On acceptance of DDA by the SO; Portion G	0		07FEB09	2	1,325
02L10D1046	2L 23; On completion of all works under this CC	0		18MAR09	2	1,286

ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
<b>Construction of Main Tunnel</b>						
<b>Geotechnical Instrumentation</b>						
3DL1FT0202	Obtain Tunnel Design (DDA) approval from the SO	0		17OCT08	1	0
3DL1FT0206	Installation of Geotechnical Instrumentation	260	18OCT08	02SEP09	1	0
3DL1FT0208	Maintain/monitor geotechnical instrumentation	1,104	01NOV08	26JUL12	1	0
<b>TBM Manufacture &amp; Testing/Delivery</b>						
3AL1FT0302	TBM & Excavation Sys Procurement	30	14DEC07	12JAN08	2	0
3AL1FT0304	TBM design & manufacturing	252	21DEC07	28AUG08	2	0
3AL1FT0306	TBM workshop tests	7	29AUG08	04SEP08	2	0
3AL1FT0308	TBM dismounting & packing	21	05SEP08	25SEP08	2	0
3AL1FT0310	TBM shipment to Hong Kong	45	26SEP08	09NOV08	2	0
<b>Manufacture Pre-cast Lining/Delivery</b>						
3AL1FT0402	Procure sub-contract for segment lining	0		03MAR08	1	7
3AL1FT0403	Design preparation of MT for AIP submission	0		08MAR08	1	2
3AL1FT0404	Design of segment mould	60	09MAR08	07MAY08	2	3
3AL1FT0406	Manufacture of segment moulds	180	08MAY08	03NOV08	2	3
3AL1FT0408	Prepare/submit QA Sys & Fabrication MS	60	08MAY08	06JUL08	2	89
3AL1FT0410	SO approve QA system & Fabrication MS	28	07JUL08	07AUG08	1	75
3AL1FT0412	Approval of Tunnel Lining Design	0		17OCT08	2	20
3AL1FT0416	Manufacture of segments	320	04NOV08	01DEC09	1	3
3AL1FT0418	Delivery of Segments	320	09DEC08	08JAN10	1	3
<b>Strengthening Works at ER's WSD for Main Tunnel</b>						
10ARIJT052	Approval of Impact Assessment Report by SO/WSD	0		26SEP08	2	5
10ARIJT053	Obtain WSD's agreement for Tunnel Shutdown Date	0		01OCT08	2	0
10ARIJT054	Tunnel Shutdown Commences	0	01DEC08*		2	0
10ARIJT055	Preparatory works; temp. ventilation & lighting	3	01DEC08	03DEC08	1	51
10ARIJT056	Carry out strengthening works	56	04DEC08	16FEB09	1	51
10ARIJT057	Subsequent inspection by SO/WSD	2	17FEB09	18FEB09	1	51
10ARIJT058	WSD Tunnel strats operation	0	19FEB09		1	51
<b>Geotechnical Instrumentation for ER's WSD Tunnel</b>						
3AL1FT0602	Approval of Impact Assessment Report by SO/WSD	0		26SEP08	1	29
3AL1FT0604	Procure/delivery of instrumentations	90	27SEP08	15JAN09	1	29
3AL1FT0612	Obtain WSD's agreement for Tunnel Shutdown date	0		22FEB09	2	0
3AL1FT0614	WSD Tunnel shutdown for instrumentation works	0	24APR09		2	0
3AL1FT0616	Joint survey & geo. instrumentations; daytime	3	24APR09	26APR09	2	0



ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
3AL1FT0618	Verify method statement	3	24APR09	26APR09	2	0
3AL1FT0620	Monitoring of geotechnical instrumentation	45*	27APR09	10JUN09	2	0
3AL1FT0622	Subsequent Inspection/ repair damages (if any)	2	11JUN09	12JUN09	2	0
3AL1FT0624	WSD Tunnel starts operation	0	13JUN09		2	0

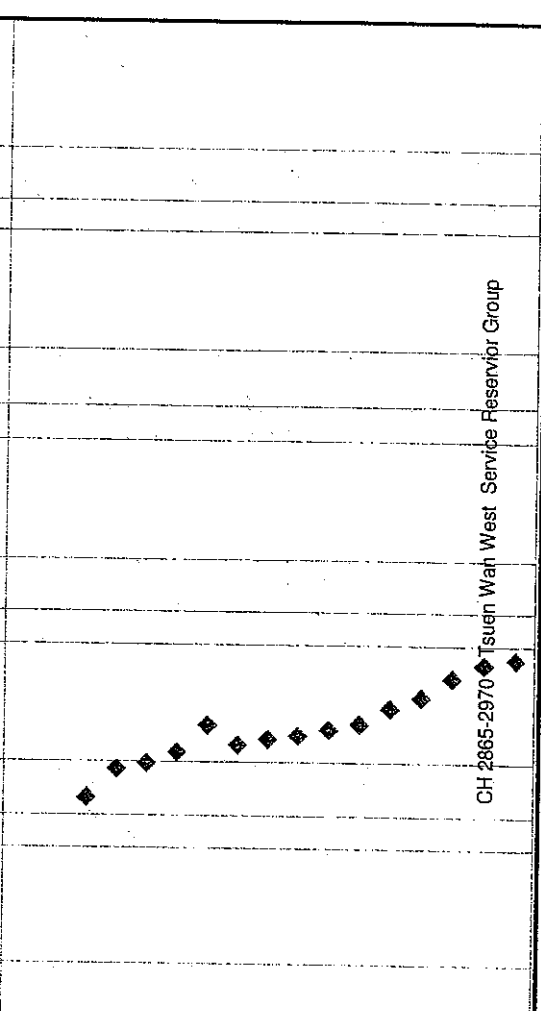
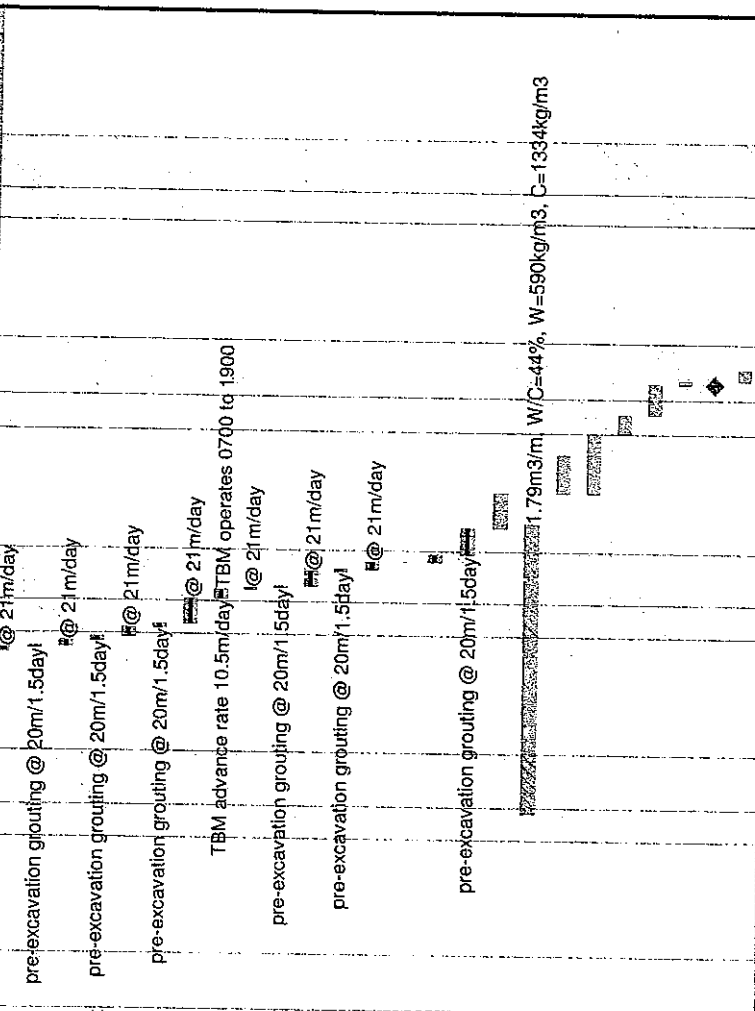
**TBM Assembly & Initial Drilling Day Time Work**

3AL1FT0700	Carry out grouting trials from the surface at F1	30	26MAY08	30JUN08	1	109
3AL1FT0702	TBM initial assembly & start-up test	25	10NOV08	08DEC08	1	0
3AL1FT0704	TBM mobilization to tunnel face (CH5085)	2	09DEC08	10DEC08	1	0
3AL1FT0706	Install back-up system (3 decks + 3 platforms)	7	11DEC08	18DEC08	1	0
3AL1FT0708	TBM advances; CH5085-5075	2	19DEC08	20DEC08	1	0
3AL1FT0710	TBM advances; P7 CH5075-5033	11	22DEC08	06JAN09	1	0
3AL1FT0712	Install back-up system (6 decks)	10	07JAN09	17JAN09	1	0
3AL1FT0714	TBM advances; P7 CH5033-5005	7	19JAN09	29JAN09	1	0
3AL1FT0716	Install back-up system (1 decks)	1	30JAN09	30JAN09	1	0
3AL1FT0718	TBM advances; CH 5005-5000	1	31JAN09	31JAN09	1	0
3AL1FT0719	TBM advances; WSDYKWTW/F6c CH5000-4963	9	02FEB09	11FEB09	1	0
3AL1FT0720	Conveyor belt sys	10	12FEB09	23FEB09	1	0
3AL1FT0722	Install noise enclosure	20	12FEB09	06MAR09	1	0

**Main Tunnel Works Day & Night Work**

3AL1FT0802	Apply to EPD for CNP for 24 hrs. tunnel work	14	23OCT08	05NOV08	2	76
3AL1FT0804	EPD process/approve CNP application	45	06NOV08	20DEC08	2	76
3AL1FT0806	TBM advances; WSD YKWTW/F6c CH4963-4830	16	07MAR09	25MAR09	1	0
3AL1FT0808	TBM advances; CH4830-4760	3	26MAR09	28MAR09	1	0
3AL1FT0810	TBM advances; F6b CH4760-4740	3	30MAR09	01APR09	1	0
3AL1FT0812	TBM advances; CH4740-4555	9	02APR09	16APR09	1	0
3AL1FT0814	TBM advances; F6a CH4555-4510	6	17APR09	23APR09	1	0
3AL1FT0816	TBM advances; CH4510-4460	2	24APR09	25APR09	1	0
3AL1FT0818	TBM advances; WSD T3/P6 CH4460-4250	36	27APR09	10JUN09	1	0
3AL1FT0820	TBM advances; P6 CH4250-4220	4	11JUN09	15JUN09	1	8
3AL1FT0822	TBM advances; CH4220-3840	18	16JUN09	07JUL09	1	8
3AL1FT0824	TBM advances; P5 CH3840-3820	3	08JUL09	10JUL09	1	8
3AL1FT0826	TBM advances CH3820-3575	12	11JUL09	24JUL09	1	8
3AL1FT0828	TBM advances; P4 CH3575-3525	6	25JUL09	31JUL09	1	8
3AL1FT0830	TBM advances; CH3525-3308	10	01AUG09	12AUG09	1	8
3AL1FT0832	TBM advances; Noise sensitive area CH3308-3175	13	13AUG09	27AUG09	1	8
3AL1FT0834	TBM advances; P3/Noise sensitive area CH3175-3143	6	28AUG09	03SEP09	1	8
3AL1FT0836	TBM advances; P3 CH3143-3125	2	04SEP09	05SEP09	1	8
3AL1FT0838	TBM advances; CH3125-2970	7	07SEP09	14SEP09	1	8
3AL1FT0840	TBM advances; WSD WS Reservoir CH2970-2865	13	15SEP09	29SEP09	1	8

2009  
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31  
 2012  
 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC  
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31



ID	Activity Description	Orig Dur	Early Start	Early Finish	Earl Float	Cal Total ID
3AL1FT0842	TBM advances; CH2865-2765	5	30SEP09	07OCT09	1	8
3AL1FT0844	TBM advances; F5 CH2765-2745	3	08OCT09	10OCT09	1	8
3AL1FT0846	TBM advances; CH2745-2685	8	12OCT09	20OCT09	1	8
3AL1FT0848	TBM advances; F4 CH2585-2535	6	21OCT09	28OCT09	1	8
3AL1FT0850	TBM advances; CH2535-2255	13	29OCT09	12NOV09	1	8
3AL1FT0852	TBM advances; F3 CH2255-2205	6	13NOV09	19NOV09	1	8
3AL1FT0854	TBM advances; CH2205-1449	36	20NOV09	04JAN10	1	8
3AL1FT0856	TBM advances; Noise sensitive area CH1449-1295	15	05JAN10	21JAN10	1	8
3AL1FT0858	TBM advances; CH1295-1250	2	22JAN10	23JAN10	1	8
3AL1FT0860	TBM advances; F2 CH1250-1230	3	25JAN10	27JAN10	1	8
3AL1FT0862	TBM advances; CH1230-795	21	28JAN10	24FEB10	1	8
3AL1FT0864	TBM advances; P2 CH795-770	3	25FEB10	27FEB10	1	8
3AL1FT0866	TBM advances; CH770-540	11	01MAR10	12MAR10	1	8
3AL1FT0868	TBM advances; P1 CH540-530	1	13MAR10	13MAR10	1	8
3AL1FT0870	TBM advances; CH530-300	11	15MAR10	26MAR10	1	8
3AL1FT0872	TBM advances; F1 CH300-0	37	27MAR10	14MAY10	1	8
3AL1FT0873	Desemby & demobilization of TBM	50*	15MAY10	15JUL10	1	17
3AL1FT0874	Back grouting (daytime); CH5100-00	414	22DEC08	20MAY10	1	116
3AL1FT0876	Complete maintenance access & dry weather channel	60	16JUL10	24SEP10	1	129
3AL1FT0878	Installation of communication system (Daytime)	90	16JUL10	01NOV10	1	71
3AL1FT0880	Testing & Commissioning; daytime	28	02NOV10	03DEC10	1	71
3AL1FT0882	Authorities' inspection/remedial works; daytime	45	04DEC10	28JAN11	1	71
3AL1FT0884	Contractor serve notice for Works completion	7	29JAN11	04FEB11	2	577
3AL1FT0886	Handover of Portion F	0		28JAN11	1	144
3AL1FT0888	SO issues completion certificate	21	05FEB11	25FEB11	2	577

**Schedule of Milestones for Cos Centre No. 6-R**

ID	Activity Description	Orig Dur	Early Start	Early Finish	Earl Float	Cal Total ID
6AR1FT0902	6aR 1; On completion of grouting at P7	0		29JAN09	2	1,334
6AR1FT0904	6aR 2; On completion of grouting at F6c	0		25MAR09	2	1,279
6AR1FT0906	6aR 3; On completion of grouting at F6b	0		01APR09	2	1,272
6AR1FT0908	6aR 4; On completion of grouting at F6a	0		29APR09	2	1,250
6AR1FT0910	6aR 5; On completion of grouting at WSD T. 3	0		10JUN09	2	1,202
6AR1FT0912	6aR 6; On completion of 20% grout by lth at P6	0		07MAY09	2	1,236
6AR1FT0914	6aR 7; On completion of 40% grout by lth at P6	0		16MAY09	2	1,227
6AR1FT0916	6aR 8; On completion of 60% grout by lth at P6	0		26MAY09	2	1,217
6AR1FT0918	6aR 9; On completion of 80% grout by lth at P6	0		05JUN09	2	1,207
6AR1FT0920	6aR 10; On completion of grouting works at P6	0		15JUN09	2	1,197
6AR1FT0922	6aR 11; On completion of grouting wks at P5	0		10JUL09	2	1,172
6AR1FT0924	6aR 12; On completion of grouting wks at P4	0		31JUL09	2	1,151
6AR1FT0926	6aR 13; On completion of grouting wks at P3	0		05SEP09	2	1,115
6AR1FT0928	6aR 14; On completion of grouting wks at WSD's	0		29SEP09	2	1,091
6AR1FT0930	6aR 15; On completion of grouting wks at F5	0		10OCT09	2	1,080

2008 2009 2010 2011 2012  
 01 JAN 01 02 JAN 03 JAN 04 JAN 05 JAN 06 JAN 07 JAN 08 JAN 09 JAN 10 JAN 11 JAN 12 JAN 13 JAN 14 JAN 15 JAN 16 JAN 17 JAN 18 JAN 19 JAN 20 JAN 21 JAN 22 JAN 23 JAN 24 JAN 25 JAN 26 JAN 27 JAN 28 JAN 29 JAN 30 JAN 31  
 02 FEB 01 02 FEB 03 FEB 04 FEB 05 FEB 06 FEB 07 FEB 08 FEB 09 FEB 10 FEB 11 FEB 12 FEB 13 FEB 14 FEB 15 FEB 16 FEB 17 FEB 18 FEB 19 FEB 20 FEB 21 FEB 22 FEB 23 FEB 24 FEB 25 FEB 26 FEB 27 FEB 28 FEB 29 FEB 30  
 03 MAR 01 02 MAR 03 MAR 04 MAR 05 MAR 06 MAR 07 MAR 08 MAR 09 MAR 10 MAR 11 MAR 12 MAR 13 MAR 14 MAR 15 MAR 16 MAR 17 MAR 18 MAR 19 MAR 20 MAR 21 MAR 22 MAR 23 MAR 24 MAR 25 MAR 26 MAR 27 MAR 28 MAR 29 MAR 30 MAR 31  
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 08 AUG 01 02 AUG 03 AUG 04 AUG 05 AUG 06 AUG 07 AUG 08 AUG 09 AUG 10 AUG 11 AUG 12 AUG 13 AUG 14 AUG 15 AUG 16 AUG 17 AUG 18 AUG 19 AUG 20 AUG 21 AUG 22 AUG 23 AUG 24 AUG 25 AUG 26 AUG 27 AUG 28 AUG 29 AUG 30  
 09 SEP 01 02 SEP 03 SEP 04 SEP 05 SEP 06 SEP 07 SEP 08 SEP 09 SEP 10 SEP 11 SEP 12 SEP 13 SEP 14 SEP 15 SEP 16 SEP 17 SEP 18 SEP 19 SEP 20 SEP 21 SEP 22 SEP 23 SEP 24 SEP 25 SEP 26 SEP 27 SEP 28 SEP 29 SEP 30  
 10 OCT 01 02 OCT 03 OCT 04 OCT 05 OCT 06 OCT 07 OCT 08 OCT 09 OCT 10 OCT 11 OCT 12 OCT 13 OCT 14 OCT 15 OCT 16 OCT 17 OCT 18 OCT 19 OCT 20 OCT 21 OCT 22 OCT 23 OCT 24 OCT 25 OCT 26 OCT 27 OCT 28 OCT 29 OCT 30  
 11 NOV 01 02 NOV 03 NOV 04 NOV 05 NOV 06 NOV 07 NOV 08 NOV 09 NOV 10 NOV 11 NOV 12 NOV 13 NOV 14 NOV 15 NOV 16 NOV 17 NOV 18 NOV 19 NOV 20 NOV 21 NOV 22 NOV 23 NOV 24 NOV 25 NOV 26 NOV 27 NOV 28 NOV 29 NOV 30  
 12 DEC 01 02 DEC 03 DEC 04 DEC 05 DEC 06 DEC 07 DEC 08 DEC 09 DEC 10 DEC 11 DEC 12 DEC 13 DEC 14 DEC 15 DEC 16 DEC 17 DEC 18 DEC 19 DEC 20 DEC 21 DEC 22 DEC 23 DEC 24 DEC 25 DEC 26 DEC 27 DEC 28 DEC 29 DEC 30 DEC 31  
 13 JAN 01 14 JAN 02 15 JAN 03 16 JAN 04 17 JAN 05 18 JAN 06 19 JAN 07 20 JAN 08 21 JAN 09 22 JAN 10 23 JAN 11 24 JAN 12 25 JAN 13 26 JAN 14 27 JAN 15 28 JAN 16 29 JAN 17 30 JAN 18 31 JAN 19 30 JAN 20 31 JAN 21 30 JAN 22 31 JAN 23 30 JAN 24 31 JAN 25 30 JAN 26 31 JAN 27 30 JAN 28 31 JAN 29 30 JAN 30 31 JAN 31 30

ID	Activity Description	Orig Dur	Early Start	Early Finisht	Cal ID	Total Float
6AR1FT0932	6aR 16; On completion of grouting wks at F4	0		28OCT09	2	1,062
6AR1FT0934	6aR 17; On completion of grouting wks at F3	0		19NOV09	2	1,040
6AR1FT0936	6aR 18; On completion of grouting wks at F2	0		27JAN10	2	971
6AR1FT0938	6aR 19; On completion of grouting wks at P2	0		27FEB10	2	940
6AR1FT0940	6aR 20; On completion of grouting wks at P1	0		13MAR10	2	926
6AR1FT0942	6aR 21; On completion of 10% grout by lift at F1	0		31MAR10	2	908
6AR1FT0944	6aR 22; On completion of 20% grout by lift at F1	0		09APR10	2	899
6AR1FT0946	6aR 23; On completion of 30% grout by lift at F1	0		14APR10	2	894
6AR1FT0948	6aR 24; On completion of 40% grout by lift at F1	0		19APR10	2	889
6AR1FT0950	6aR 25; On completion of 50% grout by lift at F1	0		23APR10	2	885
6AR1FT0952	6aR 26; On completion of 60% grout by lift at F1	0		28APR10	2	880
6AR1FT0954	6aR 27; On completion of 70% grout by lift at F1	0		04MAY10	2	874
6AR1FT0956	6aR 28; On completion of 80% grout by lift at F1	0		10MAY10	2	868
6AR1FT0958	6aR 29; On completion of 90% grout by lift at F1	0		11MAY10	2	867
6AR1FT0960	6aR 30; On completion of grouting works at F1	0		14MAY10	2	864
6AR1FT0970	6aR 31; On completion of all works under this CC	0		20MAY10	2	858

**Schedule of Milestones to Coast Centre No. 3aL**

3AL1FT1002	3aL 1; On providing evidence of procuring TBM	0		19JAN08	2	1,710
3AL1FT1004	3aL 2; On providing evidence of TBM Factory Test	0		04SEP08	2	1,481
3AL1FT1006	3aL 3; On delivery of all parts of TBM to the SI	0		09NOV08	2	1,415
3AL1FT1008	3aL 4; On completion of site comm. & test. of TB	0		08DEC08	2	1,386
3AL1FT1010	3aL 5; On completion of 5% perm. tunnel lining	0		25MAR09	2	1,279
3AL1FT1012	3aL 6; On completion of 10% perm. tunnel lining	0		09APR09	2	1,264
3AL1FT1014	3aL 7; On completion of 15% perm. tunnel lining	0		22MAY09	2	1,221
3AL1FT1016	3aL 8; On completion of 20% perm. tunnel lining	0		22JUN09	2	1,190
3AL1FT1018	3aL 9; On completion of 25% perm. tunnel lining	0		10JUL09	2	1,172
3AL1FT1020	3aL 10; On completion of 30% perm. tunnel lining	0		24JUL09	2	1,158
3AL1FT1022	3aL 11; On completion of 35% perm. tunnel lining	0		10AUG09	2	1,141
3AL1FT1024	3aL 12; On completion of 40% perm. tunnel lining	0		09SEP09	2	1,111
3AL1FT1026	3aL 13; On completion of 45% perm. tunnel lining	0		03OCT09	2	1,087
3AL1FT1028	3aL 14; On completion of 50% perm. tunnel lining	0		24OCT09	2	1,066
3AL1FT1030	3aL 15; On completion of 55% perm. tunnel lining	0		09NOV09	2	1,050
3AL1FT1032	3aL 16; On completion of 60% perm. tunnel lining	0		27NOV09	2	1,032
3AL1FT1034	3aL 17; On completion of 65% perm. tunnel lining	0		09DEC09	2	1,020
3AL1FT1036	3aL 18; On completion of 70% perm. tunnel lining	0		21DEC09	2	1,008
3AL1FT1038	3aL 19; On completion of 75% perm. tunnel lining	0		22JAN10	2	976
3AL1FT1040	3aL 20; On completion of 80% perm. tunnel lining	0		05FEB10	2	962
3AL1FT1042	3aL 21; On completion of 85% perm. tunnel lining	0		01MAR10	2	938
3AL1FT1044	3aL 22; On completion of 90% perm. tunnel lining	0		15MAR10	2	924
3AL1FT1046	3aL 23; On completion of 95% perm. tunnel lining	0		07APR10	2	901
3AL1FT1048	3aL 24; On completion of perm. tunnel lining	0		14MAY10	2	864

under this Coast Centre

ID	Activity Description	Orig. Dur.	Entry Start	Entry Finish	Cal ID	Total Float
3AL1FT1050	3aL 25; On completion of maint. access/flow chan	0	24SEP10	2	731	
3AL1FT1052	3aL 26; On completion of provision of communic.	0	01NOV10	2	693	
3AL1FT1054	3aL 27; On completion of all works under this CC	0	28JAN11	2	605	

**Schedule of Milestones for Cost Centre No. 3aL**

3DL10T1202	3dL 1; On complet. of install geo instrument.	0	02SEP09	2	1,118	
3DL10T1204	3dL 2; Maint./monit. geo. inst. for 12 mth	0	26DEC08	2	1,368	
3DL10T1206	3dL 3; Maint./monitor geo. inst. for 24	0	26DEC09	2	1,003	
3DL10T1208	3dL 4; Maint./monitor geo. inst. for 36	0	26DEC10	2	638	
3DL10T1210	3dL 5; Maint./monitor geo. inst. for 48	0	26DEC11	2	273	
3DL10T1212	3dL 6; On completion of maint. & monit. of geo.	0	26JUL12	2	60	
3DL10T1214	3dL 7; On installation of FMD at Portion A	0	12MAR11	2	562	
3DL10T1216	3dL 8; On installation of FMD at Portion B	0	10JUN11	2	472	
3DL10T1218	3dL 9; On installation of FMD at Portion C	0	05MAR11	2	569	
3DL10T1220	3dL 10; On installation of FMD at Portion D	0	19MAY11	2	494	
3DL10T1222	3dL 11; On completion of maint. & monit. of FMD	0	26JUL12	2	60	
3DL10T1224	3dL 12; On completion of all works under this CC	0	26JUL12	2	60	

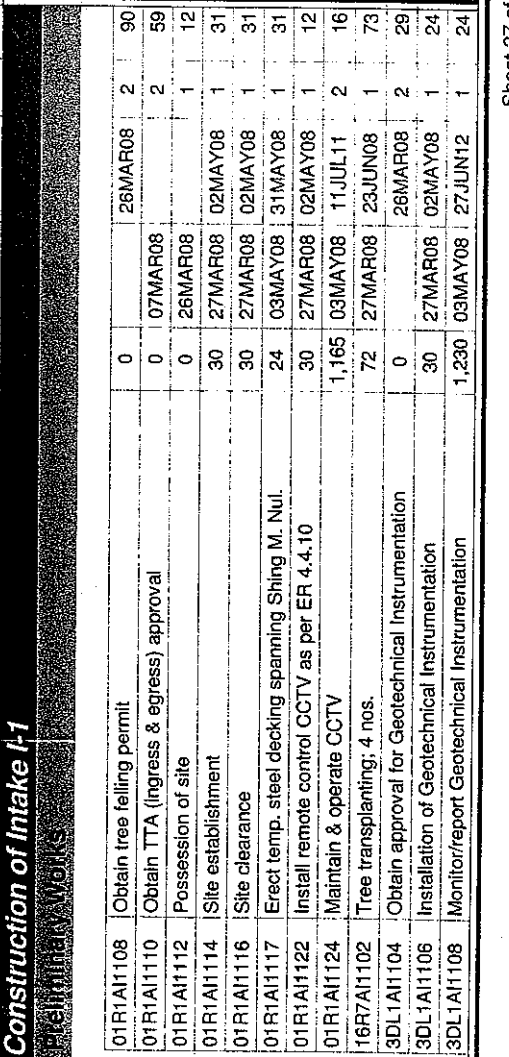
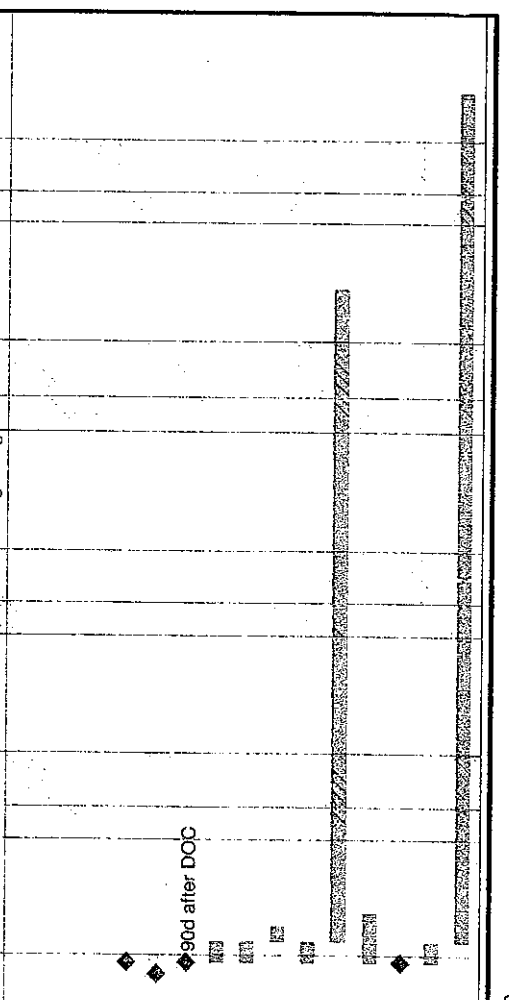
**Schedule of Milestones for Cost Centre No. 10aR**

10AR1JT131	10aR 1; On installation of temp. ventilation	0	03DEC08	2	1,391	
10AR1JT132	10aR 2; On installation temp. lighting	0	03DEC08	2	1,391	
10AR1JT133	10aR 3; On completion of 25% strengthening wks	0	20DEC08	2	1,374	
10AR1JT134	10aR 4; On completion of 50% strengthening wks	0	10JAN09	2	1,353	
10AR1JT135	10aR 5; On completion of 75% strengthening wks	0	31JAN09	2	1,332	
10AR1JT136	10aR 6; On completion of strengthening works	0	16FEB09	2	1,316	
10AR1JT137	10aR 7; On rechange of the water after wrk comp	0	18FEB09	2	1,314	

**Construction of Intake I-1**

**Preliminary Works**

01R1AI1108	Obtain tree felling permit	0	26MAR08	2	90		
01R1AI1110	Obtain TTA (ingress & egress) approval	0	07MAR08	2	59		
01R1AI1112	Possession of site	0	26MAR08	1	12		
01R1AI1114	Site establishment	30	27MAR08	02MAY08	1	31	
01R1AI1116	Site clearance	30	27MAR08	02MAY08	1	31	
01R1AI1117	Erect temp. steel decking spanning Shing M. Nul	24	03MAY08	31MAY08	1	31	
01R1AI1122	Install remote control CCTV as per ER 4.4-10	30	27MAR08	02MAY08	1	12	
01R1AI1124	Maintain & operate CCTV	1,165	03MAY08	11JUL11	2	16	
16R7AI1102	Tree transplanting; 4 nos.	72	27MAR08	23JUN08	1	73	
3DL1AI1104	Obtain approval for Geotechnical Instrumentation	0	26MAR08	2	29		
3DL1AI1106	Installation of Geotechnical Instrumentation	30	27MAR08	02MAY08	1	24	
3DL1AI1108	Monitor/report Geotechnical Instrumentation	1,230	03MAY08	27JUN12	1	24	



Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
<b>Piling Works</b>					
07R1A11202 Erect piling platform	24	19JUN08	17JUL08	1	17
07R1A11204 Install 273 mm dia. temp. pipe piles; 175 nos.	36	18JUL08	28AUG08	1	17
11R2A11206 350mm dia. pre-bored H-piles; 66 nos.	36	29AUG08	19OCT08	1	17
11R2A11208 Construct skin wall/access platforms; Portion A	72	02JUL10	24SEP10	1	198
<b>Remain Soil Nailing Works</b>					
11R2A11302 Erect scaffolding & working platform	24	03MAY08	31MAY08	1	57
11R2A11304 Install test nails & proof loading test; 2 nos.	12	02JUN08	16JUN08	1	57
11R2A11306 Soil nailing at western side; 28 nos.	12	17JUN08	30JUN08	1	57
11R2A11308 Soil nailing at eastern side; 122 nos.	24	17JUN08	15JUL08	1	57
11R2A11310 Construct soil nail heads; 150 nos.	24	16JUL08	12AUG08	1	57
<b>Construction of Spiral Ramp &amp; Cascade</b>					
<b>Excavation from Existing GL to +103.5mPD</b>					
04L1A11402 Bulk excavation; soil (80m3)	4	16SEP08	19SEP08	1	17
04L1A11404 Install test tie-back & proof load test; 1 no.	10	20SEP08	02OCT08	1	17
04L1A11406 Install working tie-backs; 10 nos.	10	03OCT08	15OCT08	1	17
<b>Excavation from +103.5mPD to +100.5mPD</b>					
04L1A11408 Bulk excavation; soil (240m3)	4	16OCT08	20OCT08	1	17
04L1A11410 Install test tie-back & proof load test; 1 no.	10	21OCT08	31OCT08	1	17
04L1A11412 Install working tie-backs; 10 nos.	10	01NOV08	12NOV08	1	17
<b>Excavation from +100.5mPD to +97.5mPD</b>					
04L1A11414 Bulk excavation; soil (510m3)	6	13NOV08	19NOV08	1	17
04L1A11416 Install test tie-back & proof load test; 1 no.	10	20NOV08	01DEC08	1	17
04L1A11418 Install working tie-backs; 22 nos.	10	02DEC08	12DEC08	1	17
<b>Excavation from +97.5mPD to +94.5mPD</b>					
04L1A11420 Bulk excavation; soil (950m3)	12	13DEC08	29DEC08	1	17
04L1A11422 Install test tie-back & proof load test; 1 no.	10	30DEC08	10JAN09	1	17
04L1A11424 Install working tie-backs; 37 nos.	12	12JAN09	24JAN09	1	17
<b>Excavation from +94.5mPD to +91.5mPD</b>					
04L1A11426 Bulk excavation; soil (1130m3)	12	29JAN09	11FEB09	1	17
04L1A11428 Bulk excavation; rock (650m3)	24	12FEB09	11MAR09	1	17
04L1A11430 Install test tie-back & proof load test; 1 no.	10	05FEB09	16FEB09	1	19
04L1A11432 Install working tie-backs; 43 nos.	18	17FEB09	09MAR09	1	19
<b>Excavation from +91.5mPD to +88.5mPD</b>					
04L1A11434 Bulk excavation; soil (1860m3)	18	12MAR09	01APR09	1	17
04L1A11436 Bulk excavation; rock (420m3)	18	26MAR09	20APR09	1	17
04L1A11438 Install test tie-back & proof load test; 1 no.	10	26MAR09	07APR09	1	17
04L1A11440 Install working tie-backs; 27 nos.	12	08APR09	24APR09	1	17

ID	Activity Description	Orig. Dur.	Early Start	Early Finish	Cal. ID	Total Float
<b>Excavation from +88.5mPD to +72.5mPD; North</b>						
04L1A11442	Bulk excavation; rock (6300m3)	110	25APR09	04SEP09	1	17
07R1A11444	Bulk excavation for vehicular access; 1400m3	30	01AUG09	04SEP09	1	17
07R1A11446	Construct vehicular access	36	05SEP09	19OCT09	1	17
<b>Excavation to Bottom Level to south west of SR</b>						
04L1A11448	Bulk excavation; rock (5300m3)	88	20OCT09	03FEB10	1	71
<b>Construction of Spiral Ramp Structure</b>						
07R1A11402	Raft foundation	12	20OCT09	03NOV09	1	17
07R1A11404	Construct RC spiral ramp	192	04NOV09	30JUN10	1	17
07R1A11406	Construct RC spiral ramp top	12	02JUL10	15JUL10	1	17
<b>Dismantle &amp; removal of TBM</b>						
04L1A11450	Install temporary steel works for removal of TBM	24	16APR10	14MAY10	1	17
04L1A11452	Disassembly & demobilization of TBM	50	15MAY10	15JUL10	1	17
<b>Construction of Cascade Structure</b>						
04L1A11454	Construct box culvert & cascade	72	16JUL10	09OCT10	1	17

ID	Activity Description	Orig. Dur.	Early Start	Early Finish	Cal. ID	Total Float
<b>Modification of Existing Channel to Dry Season</b>						
07R1A11502	Modify channel bed & construct weir; Phase 1	36	01NOV10	11DEC10	1	0
07R1A11504	Modify channel bed and orifice; Phase 2	36	13DEC10	26JAN11	1	61
07R1A11506	Modify channel bed and orifice; Phase 3	36	27JAN11	12MAR11	1	61
<b>Remaining Works to be Handover</b>						
07R1A11602	Backfill & compaction above box culvert; Port. A	72	11OCT10	06JAN11	1	90
07R1A11606	Finishing & reinstatement works; Portion A	48	14FEB11	11APR11	1	61
07R1A11608	Pre-handover inspections and remedial works	48	14MAR11	13MAY11	1	61
07R1A11610	Contractor serve notice for Works completion	7	14MAY11	20MAY11	2	412
07R1A11612	SO issues completion certificate	21	21MAY11	10JUN11	2	412
16R7A11602	Landscaping works at Portion A	72	14FEB11	13MAY11	1	62
16R7A11604	Establishment Works at Portion A	365	14MAY11	12MAY12	2	75
3DL1A11602	Install flow measurement devices at Intake I-1	24	14FEB11	12MAR11	1	82
3DL1A11604	Maintain & monitor flow monitoring	365	13MAR11	11MAR12	2	137
<b>Schedule of Milestones at Cost Centre No. 1</b>						
04L1A11802	4L 1; On completion of 50% excavation	0		24APR09	2	1,249
04L1A11804	4L 2; On completion of excavation	0		03FEB10	2	964
04L1A11806	4L 3; On completion of 25% concreting	0		05AUG10	2	781
04L1A11808	4L 4; On completion of 50% concreting	0		26AUG10	2	760
04L1A11810	4L 5; On completion of 75% concreting	0		16SEP10	2	739
04L1A11812	4L 6; On completion of Cascade	0		09OCT10	2	716
04L1A11814	4L 7; On completion of connecting BC	0		19OCT09	2	1,071
04L1A11816	4L 8; On completion of all works under this CC	0		13MAY11	2	500



ID: 2008, 2009, 2010, 2011, 2012  
 BUREAU OF WATER RESOURCES, DIVISION OF WATER SUPPLY AND IRRIGATION, 1501 S. GARDEN ST., SUITE 100, ANAHEIM, CA 92805-4804  
 TEL: 714.911.1120 FAX: 714.911.1120  
 714.911.1120 FAX: 714.911.1120  
 2008 2009 2010 2011 2012  
 BUREAU OF WATER RESOURCES, DIVISION OF WATER SUPPLY AND IRRIGATION, 1501 S. GARDEN ST., SUITE 100, ANAHEIM, CA 92805-4804  
 TEL: 714.911.1120 FAX: 714.911.1120  
 714.911.1120 FAX: 714.911.1120

**Schedule of Milestones for Cost Centre No. 7R**

Activity Description	Orig. Dur.	Early Start	Early Finish	Cal. ID	Total Float
07R1A1902 7R 1; On completion of trash grills	0		12MAR11	2	562
07R1A1904 7R 2; On completion of 25% excavation	0		29DEC08	2	1,365
07R1A1906 7R 3; On completion of 50% excavation	0		11MAR09	2	1,293
07R1A1908 7R 4; On completion of 75% excavation	0		02JUN09	2	1,210
07R1A1910 7R 5; On completion of all excavation	0		04SEP09	2	1,116
07R1A1912 7R 6; On completion of spiral ramp to +80mPD	0		22DEC09	2	1,007
07R1A1914 7R 7; On completion of spiral ramp to +90mPD	0		02MAR10	2	937
07R1A1916 7R 8; On completion of spiral ramp to +100mPD	0		10MAY10	2	868
07R1A1918 7R 9; On completion of spiral access ramp	0		15JUL10	2	802
07R1A1920 7R 10; On completion of all works under this CC	0		13MAY11	2	500

**Schedule of Milestones for Cost Centre No. 11R**

11R2A11R02 11R 1; On completion of soil nailing works	0		12AUG08	2	1,504
11R2A11R04 11R 2; On completion of piling at platform	0		19SEP08	2	1,466
11R2A11R06 11R 3; On completion of piling at branch access	0		13OCT08	2	1,442
11R2A11R08 11R 4; On completion of all works under this CC	0		24SEP10	2	731

**Construction of Intake I-2**

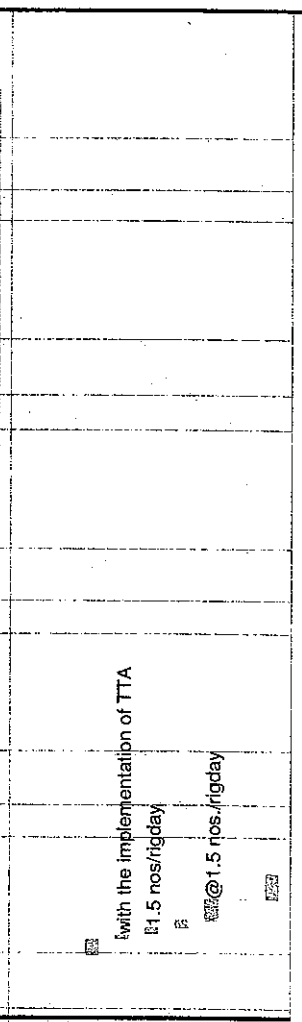
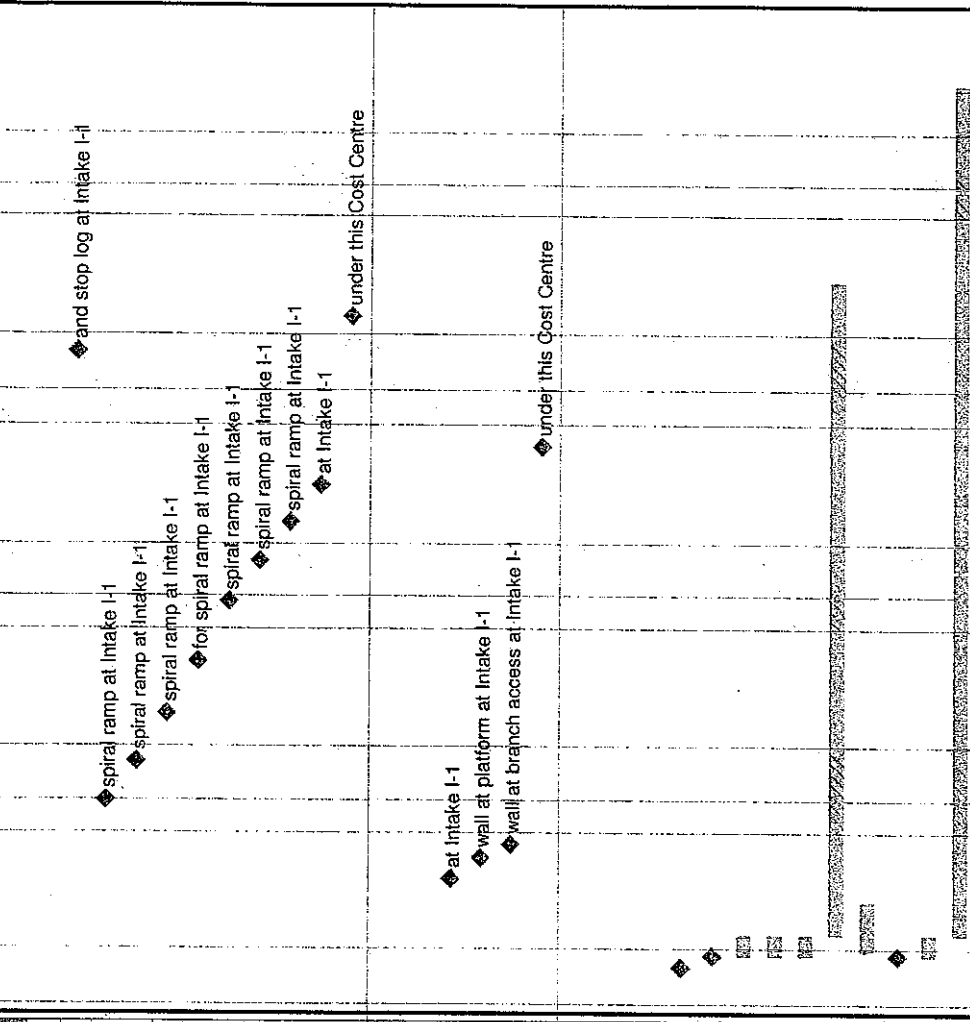
**Preliminary Works**

01R1B12108 Obtain TTA (ingress & egress) approval	0		06MAR08	2	36
01R1B12110 Possession of Portion B -90d of DOC	0	26MAR08		2	15
01R1B12112 Site establishment	30	27MAR08	02MAY08	1	13
01R1B12114 Site clearance	30	27MAR08	02MAY08	1	13
01R1B12116 Install remote control CCTV as per ER 4.4.10	30	27MAR08	02MAY08	1	12
01R1B12118 Maintain & operate CCTV	1,165	03MAY08	11JUL11	2	16
16R7B12002 Tree transplanting; 1 no.	72	03APR08	30JUN08	1	398
3DL1B12104 Obtain approval for Geotechnical Instrumentation	0		26MAR08	2	16
3DL1B12106 Installation of Geotechnical Instrumentation	30	27MAR08	02MAY08	1	13
3DL1B12108 Monitor/report Geotechnical Instrumentation	1,230	03MAY08	27JUN12	1	24

**Stream Diversion Approach Channel/H-Pile Wall**

**Phase 1, Stg 1-Construct 550 dia. H-Pile Wall**

12R3B12202 Form temp. access ramp along west side of stream	24	05APR08	03MAY08	1	13
12R3B12204 Mobilize piling rig & set up	6	05MAY08	10MAY08	1	13
12R3B12206 15 nos. pre-bored H-piles at southern end	10	13MAY08	23MAY08	1	13
12R3B12208 Remove southern access ramp (tail)	12	24MAY08	06JUN08	1	13
12R3B12210 Remaining 44 nos. pre-bored H-piles	30	07JUN08	14JUL08	1	298
12R3B12212 Demolize piling rig	1	15JUL08	15JUL08	1	298
12R3B12214 Excavate for skin wall & remove temp. access	40	16JUL08	30AUG08	1	298



ID	Activity Description	On Dur	Early Start	Early Finish	Car ID	Total Float
12R3BI2216	Construct skin wall; 45m; Portion B	40	30JUL08	13SEP08	1	298
<b>Phase 1, Stg 3-Flatten exist. Stream Bed at West</b>						
08R1BI2202	Construct temp. concrete block bund	12	01NOV08*	14NOV08	1	0
08R1BI2204	Excavate for new low flow channel	12	15NOV08	28NOV08	1	236
08R1BI2206	Construct new low flow channel	24	29NOV08	29DEC08	1	236
08R1BI2208	Remove temp. concrete block bund	12	30DEC08	13JAN09	1	236
<b>Phase 2, Stg 1 - Const. Approach Channel at East</b>						
08R1BI2210	Construct temp. concrete block bund	6	02NOV09*	07NOV09	1	0
08R1BI2212	Excavate for L-shaped retaining wall	12	09NOV09	21NOV09	1	175
08R1BI2214	Construct L-shaped retaining wall	18	23NOV09	12DEC09	1	175
08R1BI2216	Excavate eastern portion of guide wall & slab	12	14DEC09	29DEC09	1	175
08R1BI2218	Construct eastern portion of guide wall & slab	18	30DEC09	20JAN10	1	175
08R1BI2220	Remove temp. concrete block bund	6	21JAN10	27JAN10	1	175
<b>Phase 2, Stg 2 - Const. Approach Channel at West</b>						
08R1BI2222	Construct temp. concrete block bund	6	28JAN10	03FEB10	1	175
08R1BI2224	Excavate for western portion guide wall & slab	12	04FEB10	20FEB10	1	175
08R1BI2226	Construct western portion of guide wall & slab	24	22FEB10	20MAR10	1	175
08R1BI2228	Remove concrete block bund	6	22MAR10	27MAR10	1	175
<b>Phase 4 - Construct Remaining Approach Channel</b>						
08R1BI2234	Construct temp. concrete block bund	6	18APR11	27APR11	1	8
08R1BI2236	Complete guide wall between A.C. & V.S.	12	28APR11	12MAY11	1	8
08R1BI2238	Remove temp. concrete block bund	6	13MAY11	19MAY11	1	8
<b>Excavate, Construct, Gravel Drop Shaft</b>						
<b>Phase 1, Stg 2 - Form temp. access ramp to VS</b>						
05L1BI2304	Setting up	6	05SEP08	11SEP08	1	13
05L1BI2306	Probing & curtain grouting around shaft	24	12SEP08	13OCT08	1	13
05L1BI2310	Construct ELS around shaft	18	14OCT08	03NOV08	1	13
<b>Phase 3, Stg 1 - Const. Vortex Shaft/Trash Grill</b>						
05L1BI2316	Construct temp. concrete block bund	6	01NOV10*	06NOV10	1	0
05L1BI2318	Excavate for vortex shaft & guide wall	24	27NOV10	24DEC10	1	13
05L1BI2320	Construct vortex shaft & guide wall	36	28DEC10	11FEB11	1	13
08R1BI2122	Construct trash grill	12	12FEB11	25FEB11	1	13
12R3BI2124	Construction of boulder traps; 7nos.	24	12FEB11	11MAR11	1	13
<b>Phase 3, Stg 2 - Construct Rem. West. Guide Wall</b>						
08R1BI2126	Relocate temp. concrete block bund	4	12MAR11	16MAR11	1	13
08R1BI2128	Excavate/const. rem. western guide wall	15	17MAR11	02APR11	1	13
08R1BI2134	Remove temp. concrete block bund	6	04APR11	11APR11	1	13
05L1BI2312	Mechanical excavation for drop shaft; 32m	160	11NOV08	30MAY09	1	13
05L1BI2314	Construct drop shaft; 34m	32	21OCT10	26NOV10	1	13

ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
<b>Excavate &amp; Construct Air Vent Shaft</b>						
<b>Phase 1, Stg 2- Form temp. access ramp to VS</b>						
05L1B12302	Form temp. access ramp; Lo Wai Rd to Drop Shaft	24	07JUN08	07JUL08	1	13
05L1B12402	Construct temp. platform for RCD	10	08JUL08	18JUL08	1	13
05L1B12404	Mobilize & set up plans for RCD excavation	6	19JUL08	25JUL08	1	13
05L1B12406	Excavate by RCD; 34m @ 1m/day	34	26JUL08	03SEP08	1	13
05L1B12408	Demobilize RCD	1	04SEP08	04SEP08	1	13
05L1B12410	Dismante & remove temp platform	6	04NOV08	10NOV08	1	13
35L1B12412	Construct air vent shaft; 34m	34	27NOV10	08JAN11	1	67
<b>Excavate &amp; Construct Man Access Shaft</b>						
05L1B12502	Construct ELS around shaft	24	01NOV08	28NOV08	1	0
05L1B12504	Probing & curtain grouting around shaft	24	29NOV08	29DEC08	1	443
05L1B12512	Mechanical excavation for man access shaft; 38m	190	30DEC08	21AUG09	1	443
05L1B12514	Construct man access shaft including stairs; 38m	76	27NOV10	02MAR11	1	67
<b>Excavate &amp; Construct De-aeration Chamber</b>						
05L1B12602	Mechanical excavation for chamber; 22.5m	132	01JUN09	05NOV09	1	13
05L1B12604	Construct de-aeration chamber	32	10SEP10	20OCT10	1	13
<b>Excavate &amp; Construct Adit Tunnel</b>						
35L1B12102	Mechanical excavation for Adit Tunnel	200	06NOV09	13JUL10	1	13
35L1B12104	Construct adit tunnel; 60m	50	14JUL10	09SEP10	1	13
35L1B12106	Mechanical excavation breakthrough	12	12JAN11	25JAN11	1	38
35L1B12108	Construct collar between MT & AT	36	26JAN11	11MAR11	1	38
<b>Excavate &amp; Construct Man Access Tunnel</b>						
05L1B12802	Mechanical excavation for Man Access Tunnel	240	06NOV09	28AUG10	1	109
05L1B12804	Mechanical excavation breakthrough	3	30AUG10	01SEP10	1	109
05L1B12806	Construct man access tunnel; 35m	36	27NOV10	11JAN11	1	38
<b>Remaining Works Prior to Handover</b>						
08R1B12102	Finishing & reinstatement works; Portion B	48	18APR11	17JUN11	1	8
08R1B12103	Pre-handover inspections and remedial works	48	20MAY11	16JUL11	1	8
08R1B12104	Contractor serve notice for Works completion	7	17JUL11	23JUL11	2	348
08R1B12105	SO issues completion certificate	21	24JUL11	13AUG11	2	348
16R7B12102	Landscaping works at Portion B	72	18APR11	16JUL11	1	8
16R7B12104	Establishment Works at Portion B	365	17JUL11	15JUL12	2	11
3DL1B12101	Install flow measurement devices at Intake I-2	24	13MAY11	10JUN11	1	11

Activity Description	Orig Bur	Early Start	Early Finish	Cal ID	Total Float
3DL1B12103 T & C for flow measurement system	28	11JUN11	14JUL11	1	11
3DL1B12105 Maintain & monitor flow monitoring	365	11JUN11	09JUN12	2	47

**Schedule of Milestones for Cos Centre No 3b**

3BL1B12A02	3bL 1; On establishing tunnelling equipments	0	05NOV09	2	1,054
3BL1B12A04	3bL 2; On completion of 12.5% perm. tunnel linin	0	20JUL10	2	797
3BL1B12A06	3bL 3; On completion of 25% perm. tunnel lining	0	27JUL10	2	790
3BL1B12A08	3bL 4; On completion of 37.5% perm. tunnel linin	0	04AUG10	2	782
3BL1B12A10	3bL 5; On completion of 50% perm. tunnel lining	0	11AUG10	2	775
3BL1B12A12	3bL 6; On completion of 62.5% perm. tunnel linin	0	19AUG10	2	767
3BL1B12A14	3bL 7; On completion of 75% perm. tunnel lining	0	26AUG10	2	760
3BL1B12A16	3bL 8; On completion of 87.5% perm. tunnel linin	0	02SEP10	2	753
3BL1B12A18	3bL 9; On completion of perm. tunnel lining	0	09SEP10	2	746
3BL1B12A20	3bL 10; On completion of all works under this CC	0	11MAR11	2	563

**Schedule of Milestones for Cos Centre No 5L**

05L1B12M02	5L 1; On completion of 25% of excavation	0	30MAY09	2	1,213
05L1B12M04	5L 2; On completion of 50% of excavation	0	14SEP09	2	1,106
05L1B12M06	5L 3; On completion of 75% of excavation	0	09MAR10	2	930
05L1B12M08	5L 4; On completion of all excavation	0	28AUG10	2	758
05L1B12M10	5L 5; On completion of drop shaft & vortex shaft	0	11FEB11	2	591
05L1B12M12	5L 6; On completion of de-aeration chamber	0	20OCT10	2	705
05L1B12M14	5L 7; On completion of air vent shaft	0	08JAN11	2	625
05L1B12M16	5L 8; On completion of man access shaft	0	02MAR11	2	572
05L1B12M18	5L 9; On completion of man access acit	0	11JAN11	2	622
05L1B12M20	5L 10; On completion of all works under this CC	0	16JUL11	2	436

**Schedule of Milestones for Cos Centre No 8R**

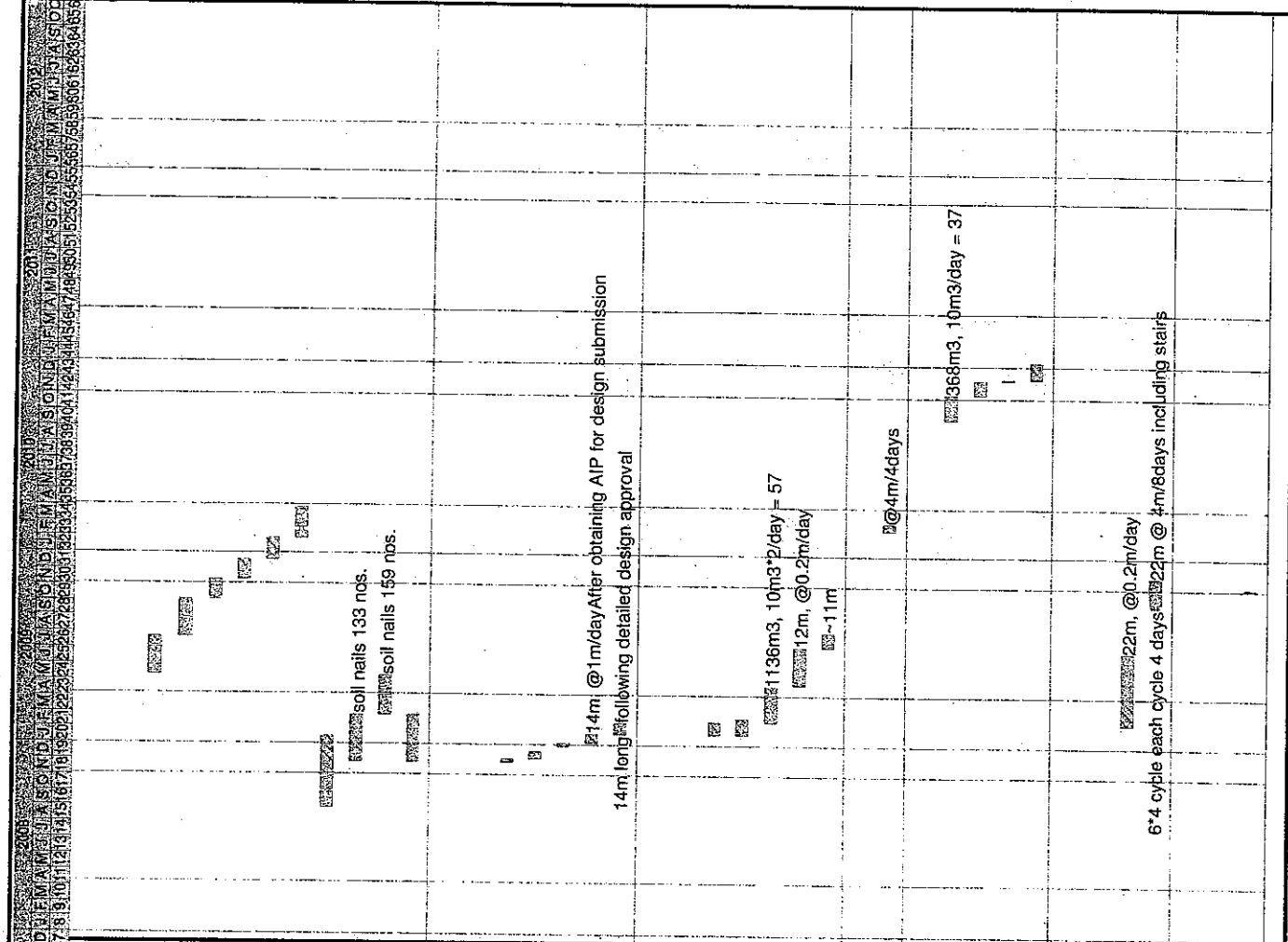
08R1B12R02	8R 1; On completion of approach channel	0	12MAY11	2	501
08R1B12R04	8R 2; On completion of trash grill	0	25FEB11	2	577
08R1B12R06	8R 3; On completion of all works under this CC	0	16JUL11	2	436

**Schedule of Milestones for Cos Centre No 12R**

12R3B12S02	12R 1; On completion of 50% pile retain. wall	0	14JUL08	2	1,533
12R3B12S04	12R 2; On completion of pile retain. wall	0	13SEP08	2	1,472
12R3B12S06	12R 3; On completion of boulder traps	0	11MAR11	2	563
12R3B12S08	12R 4; On completion of all works under this CC	0	16JUL11	2	436

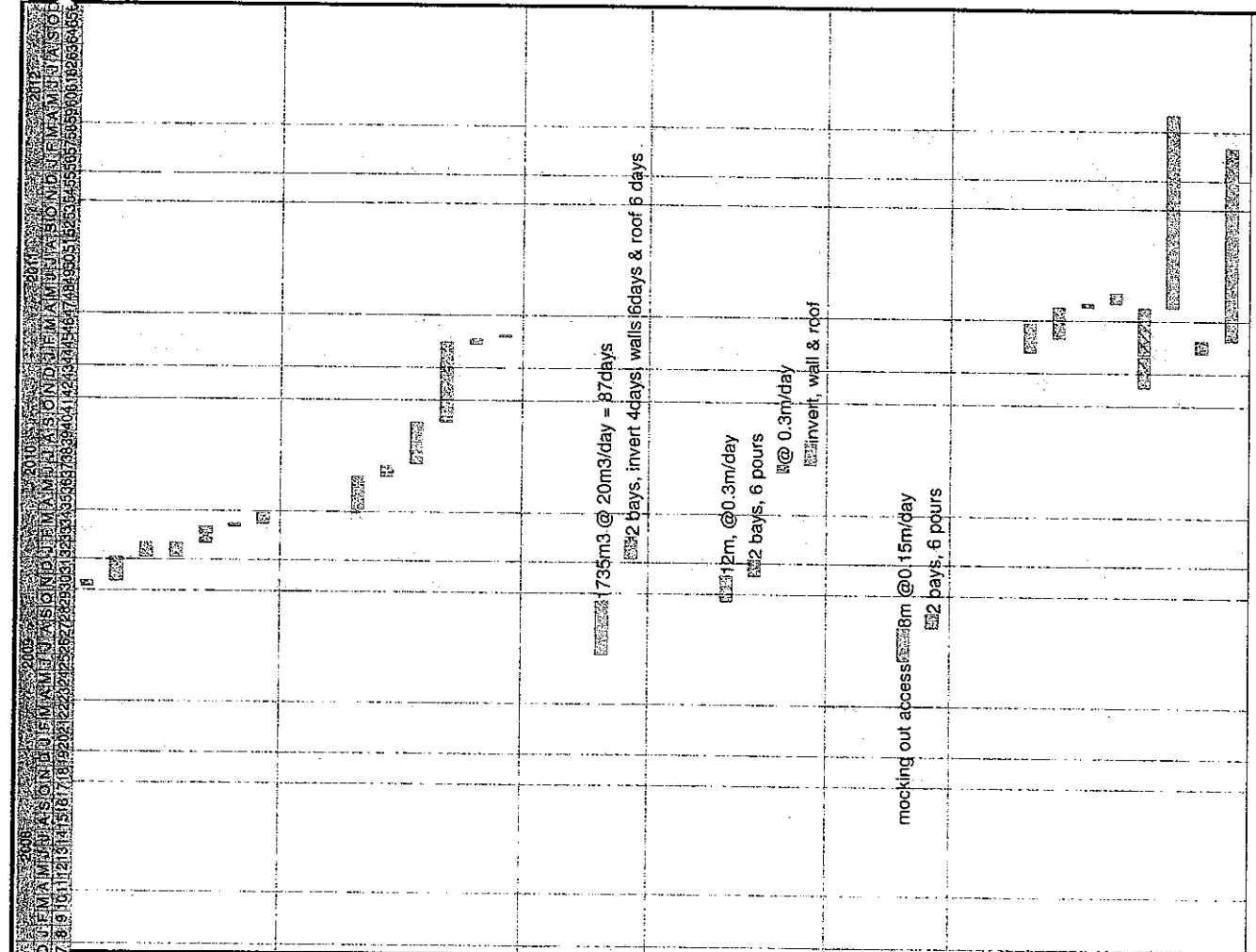
equipment for tunnelling at Intake I-2	◆				
◆ for Adit Tunnel at Intake I-2	◆				
◆ for Adit Tunnel at Intake I-2	◆				
◆ for Adit Tunnel at Intake I-2	◆				
◆ for Adit Tunnel at Intake I-2	◆				
◆ for Adit Tunnel at Intake I-2	◆				
◆ for Adit Tunnel at Intake I-2	◆				
◆ for Adit Tunnel at Intake I-2	◆				
◆ under this Cost Centre	◆				
◆ below G.L. except for Adit at Intake I-2	◆				
◆ below G.L. except for Adit at Intake I-2	◆				
◆ below G.L. except for Adit Intake I-2	◆				
◆ vortex shaft at Intake I-2	◆				
◆ chamber at Intake I-2	◆				
◆ shaft at Intake I-2	◆				
◆ shaft at Intake I-2	◆				
◆ adit at Intake I-2	◆				
◆ under this Cost Centre	◆				
channel and associated decking at Intake I-2	◆				
◆ at Intake I-2	◆				
◆ under this Cost Centre	◆				
◆ wall at Intake I-2	◆				
◆ wall at Intake I-2	◆				
◆ traps at Intake I-2	◆				
◆ under this Cost Centre	◆				





ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
<b>Construction of Lower part of Access Road</b>						
09R1CI3402	Cut rock slope to 80 deg.; 2800m3	60	13MAY09	23JUL09	1	274
09R1CI3406	Construction of Drainage System; CH0-260	60	24JUL09	02OCT09	1	274
09R1CI3408	Backfill & prepare road formation; CH0-260	30	03OCT09	09NOV09	1	274
09R1CI3410	Laying of Sub-base/Road Kerbs; CH0-260	32	10NOV09	16DEC09	1	274
09R1CI3412	Concrete paving; CH0-260	32	17DEC09	26JAN10	1	274
09R1CI3414	Reinstate temporary Access Road	48	27JAN10	26MAR10	1	274
13R1CI3402	Boulder Treatment; 5050m3	112	28AUG08	12JAN09	1	288
13R1CI3404	Excavate & install soil nail (NW Turning Area)	72	26NOV08	24FEB09	1	274
13R1CI3406	Excavate & install soil nails (SE Portion)	60	25FEB09	12MAY09	1	274
16R7CI3402	Tree transplanting (group 3A); 16 nos.	72	26NOV08	24FEB09	1	274
<b>Excavate &amp; Construct Air Vent Shaft</b>						
<b>Phase 1</b>						
06L1CI3502	Modify & flatten the stream bed	6	26NOV08	02DEC08	1	78
06L1CI3504	Construct temporary concrete block wall bund	12	03DEC08	16DEC08	1	78
06L1CI3506	Mobilization & setting up of RCD rig	6	27DEC08	03JAN09	1	71
06L1CI3508	Drilling for air vent shaft	14	05JAN09	20JAN09	1	71
06L1CI3510	Construction of air vent shaft	14	21JAN09	09FEB09	1	192
<b>Excavate &amp; Construct Drop Shaft</b>						
<b>Phase 1</b>						
06L1CI3602	Probing & curtain grouting	18	21JAN09	13FEB09	1	71
06L1CI3604	Construct temp. rain shelter & bund	24	21JAN09	20FEB09	1	71
06L1CI3606	Bulk excavation for Vortex (southern portion)	57	14FEB09	25APR09	1	71
06L1CI3608	Bulk excavation for drop shaft	60	27APR09	09JUL09	1	71
06L1CI3610	Construction of vortex (southern portion)	24	10JUL09	06AUG09	1	71
<b>Phase 2</b>						
06L1CI3612	Construction of drop shaft	12	19FEB10	04MAR10	1	83
<b>Phase 3</b>						
06L1CI3614	Bulk excavation for Vortex (northern portion)	37	21SEP10	05NOV10	1	106
06L1CI3616	Construction of vortex (northern portion)	24	06NOV10	03DEC10	1	106
06L1CI3618	Relocate flood wall within vortex	4	04DEC10	08DEC10	1	106
06L1CI3620	Construct remaining of the vortex	24	09DEC10	08JAN11	1	106
<b>Excavate &amp; Construct Man Access Shaft</b>						
<b>Phase 1</b>						
06L1CI3706	Bulk excavation for man access shaft	110	14FEB09	30JUN09	1	170
06L1CI3708	Construction of man access shaft	44	30SEP09	23NOV09	1	170
<b>Modification of Streambeds (Dry Season Works)</b>						
<b>Phase 2</b>						
09R1CI3802	Construct temporary sand bag bund	6	02NOV09	07NOV09	1	0





ID	Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
09R1C18804	Removal of large boulders	10	09NOV09	19NOV09	1	67
09R1C18806	Excavation of the stream bed	36	20NOV09	04JAN10	1	67
09R1C18808	Laying of granular filter	24	05JAN10	01FEB10	1	91
09R1C18810	Laying of rock armour	24	05JAN10	01FEB10	1	67
09R1C18812	Construction of boulder trap; 7 nos.	24	02FEB10	04MAR10	1	67
09R1C18814	Removal of sand bag bund	4	05MAR10	09MAR10	1	67
09R1C18816	Construct temporary concrete block bund	18	10MAR10	30MAR10	1	67
<b>Excavate &amp; Construct Approach Channel</b>						
<b>Phase 3</b>						
09R1C18902	Excavation of the Stream Bed	54	31MAR10	08JUN10	1	67
09R1C18904	Laying Granular Filter within Stream Bed	18	09JUN10	30JUN10	1	67
09R1C18908	Open excavation for Approach Channel	69	02JUL10	20SEP10	1	67
09R1C18910	Construction of Approach Channel	122	21SEP10	19FEB11	1	67
09R1C18912	Construction of trash grill	12	14FEB11	26FEB11	1	67
09R1C18914	Removal of concrete block bund	6	28FEB11	05MAR11	1	67
<b>Excavate &amp; Construct De-aeration Chamber</b>						
<b>Phase 2</b>						
06L1C13102	Excavation for de-aeration chamber	87	10JUL09	21OCT09	1	83
06L1C13104	Construction of de-aeration chamber	32	09JAN10	18FEB10	1	83
<b>Excavate &amp; Construct Adit Tunnel</b>						
<b>Phase 2</b>						
3CL1C13102	Mechanical excavation for Adit Tunnel	40	22OCT09	08DEC09	1	83
3CL1C13104	Construction of Adit Tunnel	24	09DEC09	08JAN10	1	83
3CL1C13106	Mechanical excavation breakthrough	12	22JUN10	06JUL10	1	206
3CL1C13108	Construct collar between MT & AT	36	07JUL10	17AUG10	1	206
<b>Excavate &amp; Construct Man Access Tunnel</b>						
<b>Phase 2</b>						
06L1C13122	Mechanical excavation for man access tunnel	53	02JUL09	01SEP09	1	170
06L1C13124	Construction of man access tunnel	24	02SEP09	29SEP09	1	170
<b>Remaining Works Prior to Handover to Client</b>						
09R1C13142	Finishing & reinstatement works; Portion C	48	07FEB11	02APR11	1	67
09R1C13143	Pre-handover inspections and remedial works	48	07MAR11	05MAY11	1	67
09R1C13144	Contractor serve notice for Works completion	7	06MAY11	12MAY11	2	480
09R1C13146	SO issues completion certificate	21	13MAY11	02JUN11	2	480
16R7C13142	Landscaping works at Portion C	120	06DEC10	05MAY11	1	68
16R7C13144	Establishment Works at Portion C	365	06MAY11	04MAY12	2	83
3DL1C13141	Install flow measurement devices at intake I-3	24	07FEB11	05MAR11	1	88
3DL1C13143	Maintain & monitor flow monitoring	365	06MAR11	04MAR12	2	144



ID	Activity Description	Orig Dur	Early Start	Early Finish	Cat IB	Cat Total
1394CI3S07	13R 7; On completion of 40% piles by number	0	27JUN08	27JUN08	2	1,550
1394CI3S08	13R 8; On completion of 50% piles by number	0	09JUL08	09JUL08	2	1,538
1394CI3S09	13R 9; On completion of 60% piles by number	0	19JUL08	19JUL08	2	1,528
1394CI3S10	13R 10; On completion of 70% piles by number	0	30JUL08	30JUL08	2	1,517
1394CI3S11	13R 11; On completion of 80% piles by number	0	07AUG08	07AUG08	2	1,509
1394CI3S12	13R 12; On completion of 90% piles by number	0	28AUG08	28AUG08	2	1,488
1394CI3S13	13R 13; On completion of all piling works	0	19SEP08	19SEP08	2	1,466
1394CI3S14	13R 14; On completion of boulder traps	0	04MAR10	04MAR10	2	935
1394CI3S15	13R 15; On completion of all work under this CC	0	26MAR10	26MAR10	2	913

**Construction of Outfall O-1**

**Preliminary Works**

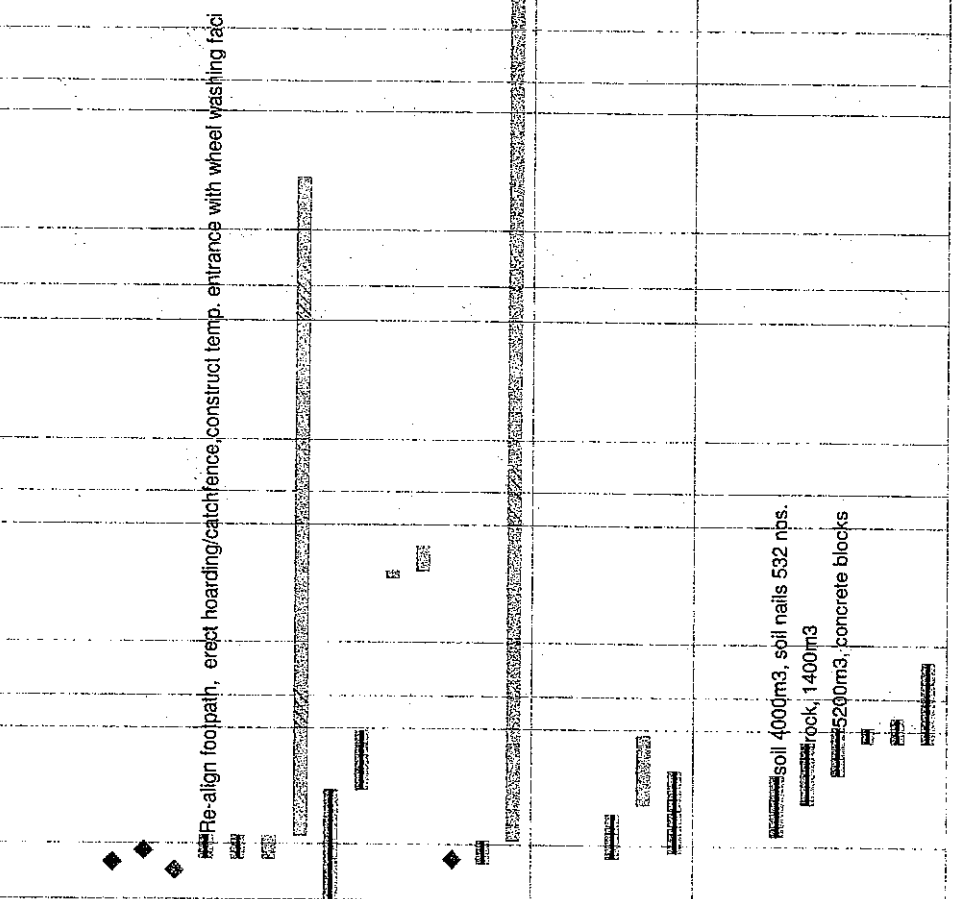
01R1DO0108	Obtain TTA (ingress & egress) approval	0	06MAR08	06MAR08	2	7
01R1DO0110	Obtain tree felling permit	0	26MAR08	26MAR08	2	0
01R1DO0112	Obtain excavation permit	0	20FEB08	20FEB08	2	22
01R1DO0114	Site establishment	30	14MAR08	22APR08	1	0
01R1DO0116	Site clearance	30	14MAR08	22APR08	1	0
01R1DO0118	Install remote control CCTV as per ER 4.4.10	30	14MAR08	22APR08	1	13
01R1DO0120	Maintain & operate CCTV	1,175	23APR08	11JUL11	2	16
01R1DO0126	Application/approval for temp. CLP Power Supply	200	28DEC07	14JUL08	2	9
01R1DO0128	Establish temp. CLP power sub-station	90	15JUL08	30OCT08	1	8
01R1DO0130	Apply for Marine Permit for Works at Portion E	14	30JUL09	12AUG09	2	58
01R1DO0132	Obtain marine permit from Marine Department	45	13AUG09	26SEP09	2	58
3DL1DO0104	Obtain approval for Geotechnical Instrumentation	0	14MAR08	14MAR08	2	2
3DL1DO0106	Installation of Geotechnical Instrumentation	30	08MAR08	16APR08	1	1
3DL1DO0108	Monitor/report Geotechnical Instrumentation	1,250	17APR08	06JUL12	1	17

**Form Temporary Access/Tree Felling**

10R1DO0202	Form 80m long (+14 to +69mPD) temp. access road	60	18MAR08	02JUN08	1	0
14R1DO0202	Existing boulder stabilization works	100	23JUN08	21OCT08	1	16
16R7DO0202	Tree transplanting; 164 nos.	120	28MAR08	20AUG08	1	0

**Form Temporary Launching Platform**

10R1DO0302	Cut slope (69 to 41mPD)/install perm. soil nails	90	26APR08	13AUG08	1	0
10R1DO0304	Cut slope & form launching platform; 41 to 24mPD	90	25JUN08	11OCT08	1	0
10R1DO0306	Cut rock benching & form platform; 14 to 24mPD	72	14AUG08	08NOV08	1	0
3AL1DO0302	Excavate TBM launching chamber; 15m long	24	19OCT08	08NOV08	1	0
3AL1DO0304	Install crane/gantry facilities	40	13OCT08	27NOV08	1	0
3AL1DO0306	Install steel platform, hopper & other facilities	120	13OCT08	07MAR09	1	0



**Construct Spiral Ramp & Assoc. Vehicular Access**

10R1DO0402	Install 273mm dia. temp. pipe piles; 40 nos.	12	07MAR09	20MAR09	1	40
10R1DO0404	Mechanical excavation for spiral ramp	120	21MAR09	17AUG09	1	40
10R1DO0408	Excavation for vehicular access underneath CPR	48	18AUG09	14OCT09	1	40
10R1DO0410	Construct base for vehicular access	8	15OCT09	23OCT09	1	40
10R1DO0412	Construct wall & roof for vehicular access	16	24OCT09	12NOV09	1	40
10R1DO0414	Construct base of spiral ramp; Outfall O-1	12	13NOV09	26NOV09	1	40
10R1DO0416	Construct spiral ramp; +4.5 to +24mPD at O-1	120	27NOV09	27APR10	1	40
10R1DO0420	Construct spiral ramp top; Outfall O-1	12	28APR10	12MAY10	1	40
10R1DO0422	Construct vehicular access bet. tunnel & s. ramp	24	13MAY10	10JUN10	1	40
10R1DO0424	Commission of Spiral Ramp	12	11JUN10	25JUN10	1	40

**Construct Lower Pan Box Culvert & Open Channel**

10R1DO0502	Site possession of Portion E-650d of DOC	0	08OCT09		2	47
10R1DO0504	Divert exist. outfall "W" under CPR arch bridge	36	08OCT09	19NOV09	1	39
10R1DO0506	Excavate & form pipe roofing platform @+2.3mPD	24	20NOV09	17DEC09	1	39
10R1DO0508	Install 273mm dia. temp. pile for pipe roofing	48	18DEC09	18FEB10	1	39
10R1DO0510	Excavate for box-culvert; 2 cells	44	19FEB10	15APR10	1	39
10R1DO0512	Construct base slabs of box culvert; 2 cells	20	16APR10	10MAY10	1	39
10R1DO0514	Construct wall & roof of box culvert; 2 cells	40	11MAY10	28JUN10	1	39
10R1DO0515	Install 273mm dia. temp. pile for pipe roofing	48	29JUN10	24AUG10	1	39
10R1DO0516	Excavate for box-culvert; 2 cells	44	25AUG10	18OCT10	1	39
10R1DO0518	Construct base slabs of box culvert; 2 cells	20	19OCT10	10NOV10	1	39
10R1DO0520	Construct wall & roof of box culvert; 2 cells	40	11NOV10	29DEC10	1	39
10R1DO0522	Excavate for open channel	24	30DEC10	27JAN11	1	39
10R1DO0524	Construct channel toe below 2.3mPD	24	14JAN11	14FEB11	1	39
10R1DO0526	Construct open channel at 2.3 mPD	24	28JAN11	28FEB11	1	39
10R1DO0528	Reinstate existing outfall "W"	6	01MART11	07MART11	1	39

**Construct Portal Head & Associated Structures**

10R1DO0602	Excavation/formation for tapered open channel	24	07JUL10	03AUG10	1	8
10R1DO0604	Construct tapered open channel	48	04AUG10	29SEP10	1	74
10R1DO0606	Dismantle & removal of tower crane	12	18DEC10	04JAN11	1	8
3AL1DO0602	Dismantle/remove TBM backup system	30	15MAY10	21JUN10	1	8
3AL1DO0604	Construct permanent lining for CH5100-5085	12	25JUN10	06JUL10	1	8
3AL1DO0606	Construct portal head wall	24	07JUL10	03AUG10	1	8

**Construct Cascade Upper Pan Box Culvert**

10R1DO0702	Form temp. working platform	12	04AUG10	17AUG10	1	8
10R1DO0704	Drive temp. sheet piles along footpath	12	18AUG10	31AUG10	1	8

240 nos. \*13m long  
 740m<sup>3</sup> soil & 4000m<sup>3</sup> rock including temp. supports measures.  
 sheet pile roofing & lagging ~180m<sup>2</sup> soil 640m<sup>3</sup>

2940m<sup>3</sup>  
 for 2 cells; 105 nos.  
 soil 2900m<sup>3</sup>  
 Concrete 180m<sup>3</sup>  
 concrete 390m<sup>3</sup>  
 for 2 cells; 105 nos.  
 soil 2900m<sup>3</sup>  
 Concrete 160m<sup>3</sup>  
 concrete 390m<sup>3</sup>

including gantry crane  
 For TBM Launching Chamber

B2\*40\*4m<sup>2</sup>

ID	Activity Description	Orig Dur	Earlv Start	Earlv Finish	Cal ID	Total Float
10R1DO0706	Excavate for box culvert (upper part)	66	01SEP10	19NOV10	1	8
10R1DO0708	Construct box-culvert (upper part)	66	15OCT10	04JAN11	1	8
10R1DO0710	Excavate for cascade construction	36	05JAN11	18FEB11	1	8
10R1DO0712	Construct cascade	48	19FEB11	16APR11	1	8
10R1DO0714	Construct retaining wall, baffle, railing etc.	48	19FEB11	16APR11	1	33

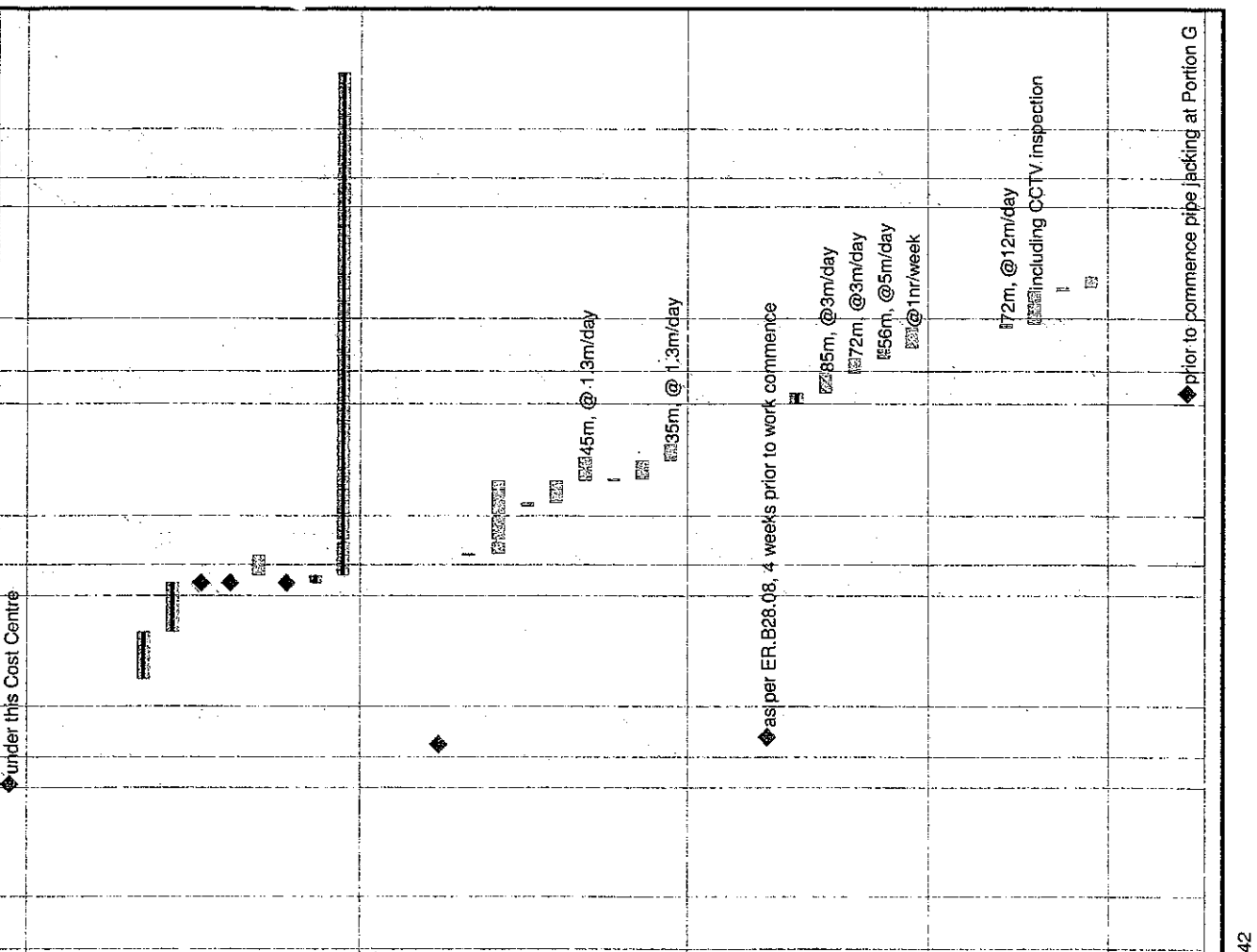
ID	Activity Description	Orig Dur	Earlv Start	Earlv Finish	Cal ID	Total Float
10R1DO0804	Excavate & formation for 100m*16m slab	72	11MAY10	05AUG10	1	93
10R1DO0806	Construct concrete apron with pre-cast RC slabs	72	26MAY10	19AUG10	1	93
10R1DO0808	Installation of precast stepped blocks	144	06AUG10	27JAN11	1	93
10R1DO0810	Removal of platform & formation	12	08MAR11	21MAR11	1	39
10R1DO0812	Install remain. Concrete apron for rem. Area	12	22MAR11	04APR11	1	39
14R5DO0802	Removal of sea wall armour	72	26APR10	22JUL10	1	93

ID	Activity Description	Orig Dur	Earlv Start	Earlv Finish	Cal ID	Total Float
10R1DO0904	Finishing & reinstatement works; Portion D	48	19MAR11	19MAY11	1	33
10R1DO0906	Pre-handover inspections and remedial works	48	18APR11	17JUN11	1	33
10R1DO0908	Contractor serve notice for Works completion	7	18JUN11	24JUN11	2	437
10R1DO0910	SO issues completion certificate	21	25JUN11	15JUL11	2	437
16R7DO0902	Landscaping works at Portion D	120	19JAN11	17JUN11	1	33
16R7DO0904	Establishment Works at Portion D	365	18JUN11	16JUN12	2	40
3DLDO0902	Install flow measurement devices at Outfall O-1	24	18APR11	19MAY11	1	29
3PLDO0904	Maintain & monitor flow monitoring	365	20MAY11	18MAY12	2	69

ID	Activity Description	Orig Dur	Earlv Start	Earlv Finish	Cal ID	Total Float
10R1DO1002	10R 1; On completion of 20% excavation works	0		09JUL08	2	1,538
10R1DO1004	10R 2; On completion of 40% excavation works	0		03SEP08	2	1,482
10R1DO1006	10R 3; On completion of 60% excavation works	0		08NOV08	2	1,416
10R1DO1008	10R 4; On completion of 80% excavation works	0		14OCT09	2	1,076
10R1DO1010	10R 5; On completion all excavation works	0		18FEB11	2	584
10R1DO1012	10R 6; On completion of cascade structure	0		16APR11	2	527
10R1DO1014	10R 7; On completion of spiral ramp to +16mPD	0		23FEB10	2	944
10R1DO1016	10R 8; On completion of spiral access ramp	0		25JUN10	2	822
10R1DO1018	10R 9; On completion box-culvert & open channel	0		07MAR11	2	567
10R1DO1020	10R 10; On completion of seabed protection wks	0		04APR11	2	539
10R1DO1022	10R 11; On completion of all works under this CC	0		17JUN11	2	465

ID	Activity Description	Orig Dur	Earlv Start	Earlv Finish	Cal ID	Total Float
14R5DO1102	14R 1; On complet. of remove exist. rock armour	0		23JUL10	2	795
14R5DO1104	14R 2; On complet. of 50% soil nailing by number	0		20JUN08	2	1,557
14R5DO1106	14R 3; On completion all soiling works	0		13AUG08	2	1,503





Activity Description	Orig Dur	Early Start	Early Finish	Cal ID	Total Float
14R5DO1108 14R 4; On completion of all works under this CC	0	08NOV08	2	1,416	
<b>Drainage Improvement Works at Portion G</b>					
<b>Preliminary Works</b>					
01R6GG0102 Prepare/submit Drainage Assessment Report	90	30MAY09	27AUG09	2	6
01R6GG0104 DAF reviewed/approved by SO and DSD	90	28AUG09	25NOV09	2	6
01R6GG0112 Obtain TTA (ingress & egress) approval	0		25NOV09	2	6
01R6GG0114 Possession of Portion G - 700d of DOC	0	26NOV09		2	6
01R6GG0116 Site clearance/Site Establishment	30	10DEC09	16JAN10	1	62
3DL6GG0104 Obtain approval for Geotechnical Instrumentation	0		25NOV09	2	6
3DL6GG0106 Installation of Geotechnical Instrumentation	12	26NOV09	09DEC09	1	5
3DL6GG0108 Monitor/report Geotechnical Instrumentation	770	10DEC09	20JUL12	1	5
<b>Piling Works</b>					
15R6GG0200 Obtain SO's consent for temp. works design	0		24JAN09	1	351
15R6GG0202 Mobilization & set up for temp. platform	3	18JAN10	20JAN10	1	62
15R6GG0204 Construct steel working platform for H-piling	110	21JAN10	08JUN10	1	62
15R6GG0206 Mobilization & set up for H-piling; Wall 1	3	23APR10	26APR10	1	62
15R6GG0208 52 nos. 600mm dia. H-piles; Wall 1 @ 1.5 nr/day	35	27APR10	08JUN10	1	62
15R6GG0210 Excavate & construct skin wall 1 at Portion G	35	09JUN10	21JUL10	1	62
15R6GG0212 Mobilization & set up for H-piling; Wall 2	3	09JUN10	11JUN10	1	62
15R6GG0214 40 nos. 600mm dia. H-piles; Wall 2 @ 1.5 nr/day	27	12JUN10	15JUL10	1	62
15R6GG0216 Excavate & construct skin wall 2 at Portion G	27	16JUL10	16AUG10	1	62
<b>Drainage Improvement Works</b>					
15R6GG0301 Obtain approval of ELS design package incl MS	0		07FEB09	2	631
15R6GG0302 Install ELS & excavate shaft for pipe jacking	18	01NOV10*	20NOV10	1	0
15R6GG0304 Construct 1.5m dia. drainage by pipe jacking	30	22NOV10	28DEC10	1	44
15R6GG0306 Construct 1.5m dia. drainage by open trenching	24	29DEC10	26JAN11	1	44
15R6GG0308 Construct .75m & 1.5m U and Stepped Channel	12	27JAN11	12FEB11	1	44
15R6GG0310 Construct 3 nos. manhole & 2 nos. catchpit	35	14FEB11	25MAR11	1	44
<b>Remaining Works to be Handover to Client</b>					
15R6GG0312 Reinstate carriageway & footway	6	26MAR11	01APR11	1	44
15R6GG0402 Pre-handover inspections and remedial works	48	02APR11	02JUN11	1	44
15R6GG0404 Contractor serve notice for Works completion	7	03JUN11	09JUN11	2	452
15R6GG0408 SO issues completion certificate	21	10JUN11	30JUN11	2	452
<b>Schedule of Milestones to Cost Centre No 15R</b>					
15R6GG0502 15R 1; On completion of all temp. works	0		20NOV10	2	674



ID	Activity Description	On Dur	Early Start	Early Finish	Cal ID	Total Float													
15R6GG0504	15R 2; On completion of 25% of pipejacking	0		30NOV10	2	664													
15R6GG0506	15R 3; On completion of 50% of pipejacking	0		08DEC10	2	656													
15R6GG0508	15R 4; On completion of 75% of pipejacking	0		17DEC10	2	647													
15R6GG0510	15R 5; On completion of all pipejacking	0		28DEC10	2	636													
15R6GG0512	15R 6; On completion of all wks under this CC	0		02JUN11	2	480													

- ◆ pipe jacking method at Portion G
- ◆ pipe jacking method at Portion G
- ◆ pipe jacking method at Portion G
- ◆ pipe jacking method at Portion G
- ◆ under this Cost Centre