From:	scottobrien@lowerchurchillproject.ca
To:	Michael Harris
Subject:	Fwd: Andritz Submission on Acceleration Late lAst night
Date:	Saturday, December 5, 2015 12:45:44 PM
Attachments:	_.png _.png _.png AH Letter PM 081.pdf Appendix A - proposed spillway acceleration schedule Dec 4 2015.pdf Spillway Acceleration Proposal Dec 4 2015 .pdf

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Scott O'Brien

Project Manager - Muskrat Falls Generation

PROJECT DELIVERY TEAM

Lower Churchill Project

t. **709 570-5987** c. **709-764-6537**

e. **ScottO'Brien@lowerchurchillproject.ca**

w. **muskratfalls.nalcorenergy.com**

Begin forwarded message:

From: "Frank Gillespie" <FrankGillespie@lowerchurchillproject.ca>

Date: December 5, 2015 at 12:42:55 PM NST

To: "Peter Tsekouras" <PeterTsekouras@lowerchurchillproject.ca>, "Andrew Whitty" <AndrewWhitty@lowerchurchillproject.ca>

Cc: "Scott O'Brien" <ScottOBrien@lowerchurchillproject.ca>, "Bruce Drover" <BruceDrover@lowerchurchillproject.ca>

Subject: Andritz Submission on Acceleration Late lAst night

(See attached file: AH Letter PM 081.pdf)(See attached file: Appendix A - proposed spillway acceleration schedule Dec 4 2015.pdf)(See attached file: Spillway Acceleration Proposal Dec 4 2015 .pdf)

These are the relevant files from the Andritz submission last night

Frank Gillespie P. Eng

Area Manager Powerhouse Mechanical & Electrical (Consultant)

PROJECT DELIVERY TEAM

Lower Churchill Project

t. **(709) 778-6660** c. **(709) 689-3156** f. **709 754 0787**

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December 4th, 2015 **AH-Letter–PM-081**

Muskrat Falls Corporation
Lower Churchill Project Muskrat Falls Corporation
350 Torbay Road Plaza, Suite No. 2
St. John's, NL, A1A 4E1

Attention: Scott O'Brien – Project Manager, Muskrat Falls Generation

Reference: CH0032: Supply and Install Powerhouse and Spillway Hydro-Mechanical Equipment

Subject: **1)** Agreement CH0032-001. Supply and Install Powerhouse and Spillway Hydro – Mechanical Equipment

2) AH Proposal for Acceleration of Spillway Installation Schedule to meet River Diversion Requirements on/or before 30 June, 2016

Dear Mr. O'Brien,

Andritz Hydro is pleased to provide the attached Acceleration Proposal for Spillway Installation Schedule. This Proposal includes progress made in discussions in St. John's on Friday, November 27, 2015 and takes into account AH Negotiation Meeting Presentation dated November 27, 2015; LCP Change Order 010, dated November 10, 2015; and AH letter PM – 076, dated November 24, 2015.

This Proposal includes a total price including Part A Firm, Part B Variable and Part C Bonus. AH proposes a revised acceleration schedule starting November 12, 2015 with Completion defined in Proposal on a best efforts basis, on/or before June 30, 2016. The Scope of Work is described for partial completion required for river diversion by June 30, 2016, and Milestone M4 Work for completion after June 30, 2016.

This Proposal also sets out basic principles for discussion and agreement for acceleration schedule, hourly rates, productivity factor, winter conditions, night shift, learning curve, crowding, additional equipment and tooling, and additional supervision and indirects. The detailed Cost Estimate assumptions and pre-requisites are included in this Proposal.

This Proposal results from an almost 9 month delay (258 days) on the spillway civil work at Site and responds to LCP's request for an AH Acceleration Proposal.

Andritz Hydro Canada Inc.
6100, aut. Transcanadienne
Pointe-Claire, Qc, Canada, H9R 1B9
Phone: 514 428 6822
Fax: 514 428 6713
www.andritz-hydro.com
william.mavromatis@andritz.com

Many discussions and documents have been exchanged over the last 4 months, and it is hoped that this Proposal accommodates most of the important concerns of LCP and AH, and provides agreement on the accelerated schedule to facilitate accomplishing the overall schedule. Looking forward to our discussion on December 8 at the AH offices in Pointe Claire.

Yours Truly,

Bill Mavromatis
Project Manager
Andritz Hydro Canada Inc.

ATTACHMENTS: 1) Proposal for Acceleration of Spillway Installation Schedule (18 pages)
2) Appendix A - Proposed Acceleration Schedule in .pdf format (21 Pages)
3) P6 .XER electronic file of Proposed Acceleration Schedule (via Aconex)

CC: Frank Gillespie, LCP Deputy Company Representative/Area Manager
Bruce Drover, LCP Package Leader - Hydro Mechanical Equipment
Line Tremblay, LCP Senior Contract Administrator
Mathieu Bertrand - Installation Coordinator
Nicole Hu – AH Commercial Manager
Jean-Francois Harpin – AH Large Hydro Manager Operations
Daniel Bernier – AH Muskrat Falls Site Manager

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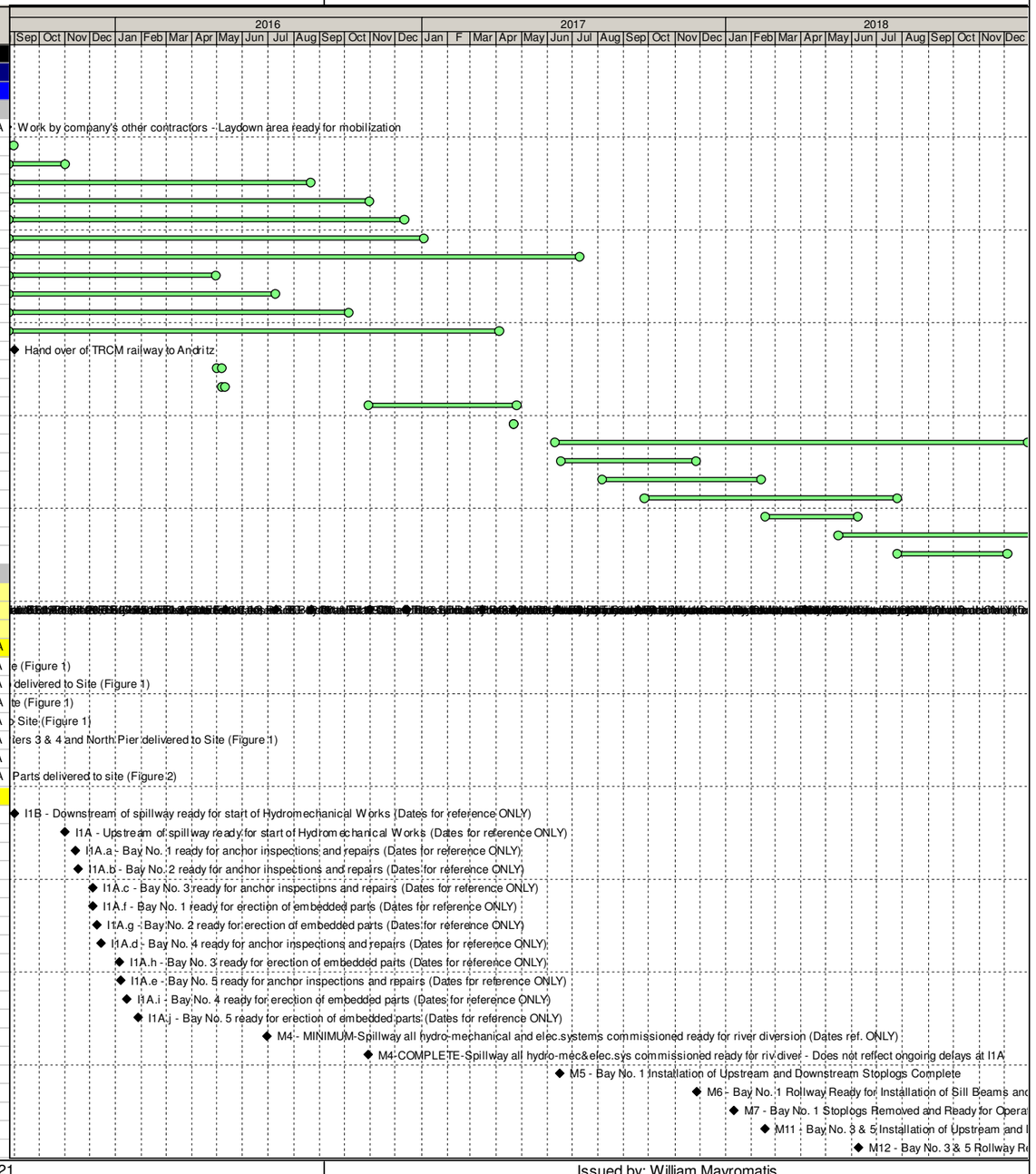
CH0032-Gates-Spillway Diversion Accelerated

PROPOSED-Rev-3

04-Dec-15 17:17

Activity ID	Activity Name	At Completion Duration	Start	Finish
Total		1391.0d	25-Oct-13 A	24-Feb-19
CH0032---12 Muskrat Falls Gates December 4 2015 ACCELERATED		1391.0d	25-Oct-13 A	24-Feb-19
CH0032---12.0 Project Management		1391.0d	25-Oct-13 A	24-Feb-19
CH0032---12.0.1 Company's Other Contractor as advised by client		1244.0d	24-Aug-15 A	29-Jan-19
A34100	Work by company's other contractors - Laydown area ready for mobilization	0.0d		24-Aug-15 A
A0525	Work by company's other contractors - Spillway Downstream (I1B)	7.0d	25-Aug-15	31-Aug-15
A0520	Work by company's other contractors - Spillway Upstream (I1A)	68.0d	25-Aug-15	31-Oct-15
A32630	Work by company's other contractors - for Draft Tube structure (I9)	352.0d	25-Aug-15	21-Aug-16
A32635	Work by company's other contractors - for Draft Tube structure (I10)	422.0d	25-Aug-15	30-Oct-16
A32640	Work by company's other contractors - for Draft Tube structure (I11)	464.0d	25-Aug-15	11-Dec-16
A32645	Work by company's other contractors - for Intake structure unit 2 (I13)	487.0d	25-Aug-15	03-Jan-17
A32650	Work by company's other contractors - for Intake structure unit 4 (I15)	674.0d	25-Aug-15	09-Jul-17
A0530	Work by company's other contractors - Gantry Crane structure and rails (I7)	238.0d	25-Aug-15	29-Apr-16
A0545	Work by company's other contractors - for Draft Tube structure (I8)	310.0d	25-Aug-15	10-Jul-16
A0550	Work by company's other contractors - for Intake structure unit 1 (I12)	397.0d	25-Aug-15	05-Oct-16
A0555	Work by company's other contractors - for Intake structure unit 3 (I14)	577.0d	25-Aug-15	03-Apr-17
A0515	Hand over of TRCM railway to Andritz	0.0d		01-Sep-15
A0540	Work by company's other contractors - Roof access available to lower the crane	7.0d	30-Apr-16	06-May-16
A0535	Lower the Draft Tube Gantry Crane	4.0d	07-May-16	10-May-16
A0560	Work by company's other contractors - water diversion	179.0d	29-Oct-16	25-Apr-17
A0575	Work by company's other contractors for cofferdams#3 and rock plug removed in order to fill the tailrace with water	0.0d	21-Apr-17	21-Apr-17
A0570	Work by company's other contractors after commissioing of draft tube (M22)	567.0d	10-Jun-17	29-Dec-18
A0565	Work by company's other contractors - for the Rollway Construction Bay 1	163.0d	17-Jun-17	26-Nov-17
A34090	Work by company's other contractors - after roller gates wet test Bay 3 & 5	191.0d	06-Aug-17	12-Feb-18
A34095	Work by company's other contractors - after roller gates wet test Bay 2 & 4	303.3d	25-Sep-17	25-Jul-18
A0585	Work by company's other contractors - for the Rollway Construction Bay 3 & 5	112.0d	17-Feb-18	08-Jun-18
A32660	Work by others after commissioing of Intake (M23)	259.0d	16-May-18	29-Jan-19
A0580	Work by company's other contractors - for the Rollway Construction Bay 2 & 4	132.0d	25-Jul-18	04-Dec-18
CH0032---12.0.2 Schedule Milestones		1391.0d	25-Oct-13 A	24-Feb-19
CH0032---12.0.2.3 General		1937.9d	25-Oct-13 A	24-Feb-19
CH0032---12.0.2.1 Intake and Powerhouse		1327.0d	08-Aug-14 A	06-Apr-18
CH0032---12.0.2.2 Spillway		1234.8d	24-Apr-14 A	16-Jan-19
CH0032---12.0.2.2.1 Delivery		132.0d	24-Apr-14 A	03-Sep-14 A
A0035	M3b-Hydro-Mechanical primary embedded parts for South Pier delivered to Site (Figure 1)	0.0d		24-Apr-14 A
A0030	M3a-Hydro-Mechanical primary embedded parts required for the Spillway Slab delivered to Site (Figure 1)	0.0d		24-Apr-14 A
A0040	M3c-Hydro-Mechanical primary embedded parts for Pier 1 delivered to Site (Figure 1)	0.0d		26-May-14 A
A0045	M3d-Hydro-Mechanical primary embedded parts for Pier 2 delivered to Site (Figure 1)	0.0d		16-Jun-14 A
A0085	M3e-All remaining Hydro-Mechanical primary embedded parts for Piers 3 & 4 and North Pier delivered to Site (Figure 1)	0.0d		28-Jun-14 A
A0105	M3g-All Remaining Spillway Primary Embedded Parts - Rollways	0.0d		28-Jun-14 A
A0100	M3f-All Downstream Stop Log Guide primary Embedded Parts delivered to site (Figure 2)	0.0d		03-Sep-14 A
CH0032---12.0.2.2.2 Installation		881.8d	01-Sep-15	16-Jan-19
A0120	I1B - Downstream of spillway ready for start of Hydromechanical Works (Dates for reference ONLY)	0.0d	01-Sep-15	
A0020	I1A - Upstream of spillway ready for start of Hydromechanical Works (Dates for reference ONLY)	0.0d	01-Nov-15	
A0021	I1A.a - Bay No. 1 ready for anchor inspections and repairs (Dates for reference ONLY)	0.0d	13-Nov-15*	
A0022	I1A.b - Bay No. 2 ready for anchor inspections and repairs (Dates for reference ONLY)	0.0d	17-Nov-15*	
A0023	I1A.c - Bay No. 3 ready for anchor inspections and repairs (Dates for reference ONLY)	0.0d	04-Dec-15*	
A0034	I1A.f - Bay No. 1 ready for erection of embedded parts (Dates for reference ONLY)	0.0d	04-Dec-15*	
A0039	I1A.g - Bay No. 2 ready for erection of embedded parts (Dates for reference ONLY)	0.0d	09-Dec-15*	
A0024	I1A.d - Bay No. 4 ready for anchor inspections and repairs (Dates for reference ONLY)	0.0d	14-Dec-15*	
A0044	I1A.h - Bay No. 3 ready for erection of embedded parts (Dates for reference ONLY)	0.0d	05-Jan-16*	
A0029	I1A.e - Bay No. 5 ready for anchor inspections and repairs (Dates for reference ONLY)	0.0d	07-Jan-16*	
A0049	I1A.i - Bay No. 4 ready for erection of embedded parts (Dates for reference ONLY)	0.0d	14-Jan-16*	
A0054	I1A.j - Bay No. 5 ready for erection of embedded parts (Dates for reference ONLY)	0.0d	27-Jan-16*	
A0050	M4 - MINIMUM-Spillway all hydro-mechanical and elec.systems commissioned ready for river diversion (Dates ref. ONLY)	0.0d		30-Jun-16
A0110	M4-COMPLETE-Spillway all hydro-mec&elec.sys commissioned ready for riv diver - Does not reflect ongoing delays at I1A	0.0d		28-Oct-16
A0055	M5 - Bay No. 1 Installation of Upstream and Downstream Stoplogs Complete	0.0d		16-Jun-17
A0060	M6 - Bay No. 1 Rollway Ready for Installation of Sill Beams and Modification of the Gates	0.0d	27-Nov-17	
A0065	M7 - Bay No. 1 Stoplogs Removed and Ready for Operation	0.0d		11-Jan-18
A0115	M11 - Bay No. 3 & 5 Installation of Upstream and Downstream Stoplogs Complete	0.0d		16-Feb-18
A0090	M12 - Bay No. 3 & 5 Rollway Ready for Installation of Sill Beams and Modification of the Gates	0.0d	09-Jun-18	



WBS Summary ◆ ◆ Milestone

Level of Effort

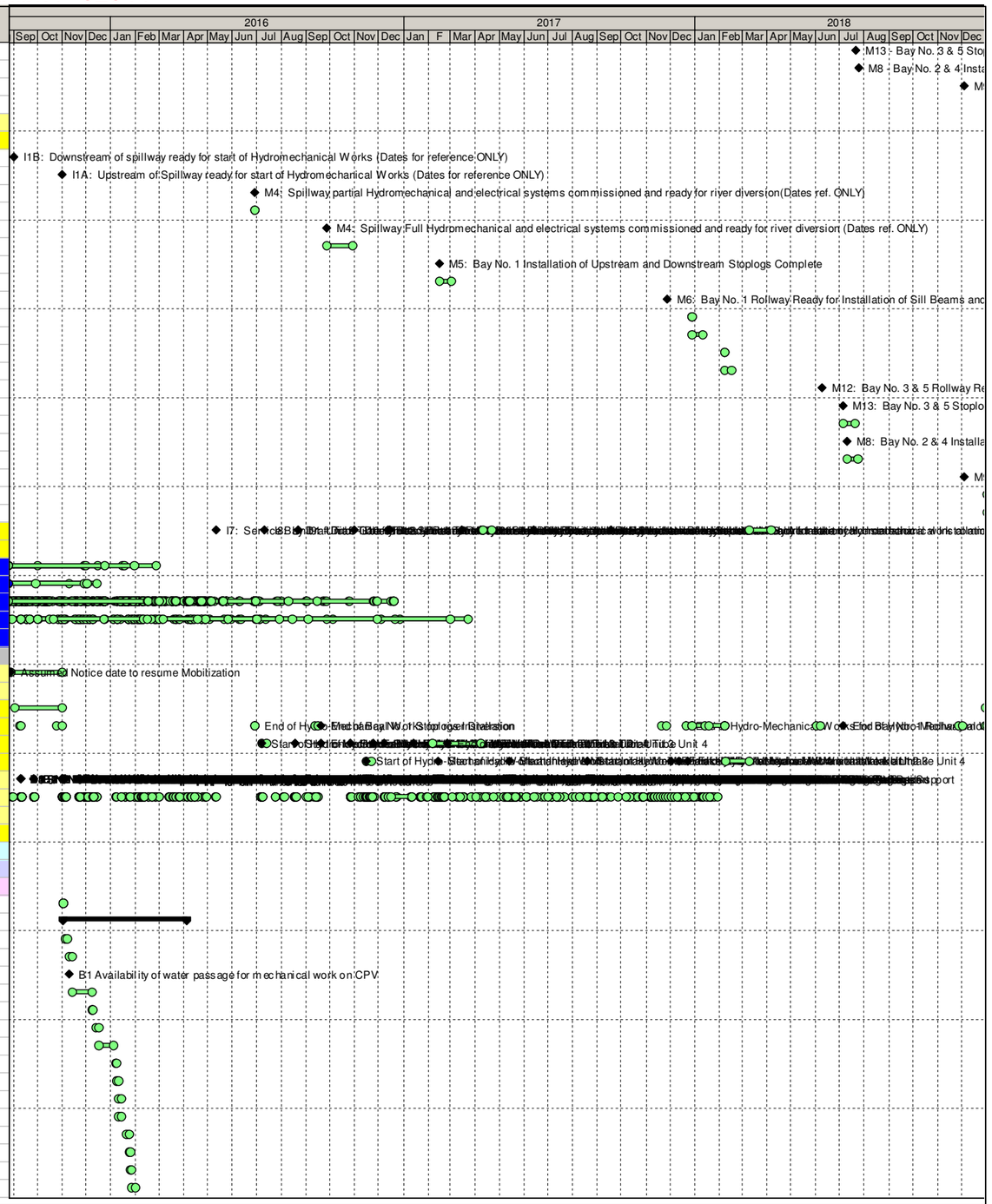
Actual Work

Remaining

Issued by: William Mavromatis

Date	Revision	Checked	Approved
28-Oct-15	PRELIMINARY-Rev-1		
26-Nov-15	PRELIMINARY-Rev-2		
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
A0095	M13 - Bay No. 3 & 5 Stoplogs Removed and Ready for Operation	0.0d		21-Jul-18
A0070	M8 - Bay No. 2 & 4 Installation of Upstream and Downstream Stoplogs Complete	0.0d		25-Jul-18
A0075	M9 - Bay No. 2 & 4 Rollway Ready for Installation of Sill Beams and Modification of the Gates	0.0d	04-Dec-18	
A0080	M10 - Bay No. 2 & 4 Stoplogs Removed and Ready for Operation	0.0d		16-Jan-19
CH0032---12.0.2.MILESTONE MILESTONE-Canmec		1190.8d	10-Jul-14 A	31-Jan-19
CH0032---12.0.2.MILESTONE.Spillway Spillway		880.8d	01-Sep-15	15-Jan-19
CI2900	I1B: Downstream of spillway ready for start of Hydromechanical Works (Dates for reference ONLY)	0.0d	01-Sep-15	
CI2890	I1A: Upstream of Spillway ready for start of Hydromechanical Works (Dates for reference ONLY)	0.0d	01-Nov-15	
CI2910	M4: Spillway partial Hydromechanical and electrical systems commissioned and ready for river diversion(Dates ref. ONLY)	0.0d		29-Jun-16
AH001	AH Walk downs, Corrections & Final Handover- M4 (Partial)	0.0d	29-Jun-16	29-Jun-16
CI2915	M4: Spillway Full Hydromechanical and electrical systems commissioned and ready for river diversion (Dates ref. ONLY)	0.0d		27-Sep-16
AH011	AH Walk downs, Corrections & Final Handover- M4 (Full)	31.3d	27-Sep-16	28-Oct-16
CI2920	M5: Bay No. 1 Installation of Upstream and Downstream Stoplogs Complete	0.0d		15-Feb-17
AH002	AH Walk downs, Corrections & Final Handover- M5	10.4d	15-Feb-17	01-Mar-17
CI2930	M6: Bay No. 1 Rollway Ready for Installation of Sill Beams and Modification of the Gates	0.0d	27-Nov-17	
CI2940	M7: Bay No. 1 Stoplogs Removed and Ready for Operation	0.0d	28-Dec-17	28-Dec-17
AH003	AH Walk downs, Corrections & Final Handover- M7	10.2d	28-Dec-17	11-Jan-18
CI2980	M11: Bay No. 3 & 5 Installation of Upstream and Downstream Stoplogs Complete	0.0d	07-Feb-18	07-Feb-18
AH004	AH Walk downs, Corrections & Final Handover- M11	7.0d	07-Feb-18	15-Feb-18
CI2990	M12: Bay No. 3 & 5 Rollway Ready for Installation of Sill Beams and Modification of the Gates	0.0d	09-Jun-18	
CI3000	M13: Bay No. 3 & 5 Stoplogs Removed and Ready for Operation	0.0d		05-Jul-18
AH005	AH Walk downs, Corrections & Final Handover- M13	12.0d	05-Jul-18	20-Jul-18
CI2950	M8: Bay No. 2 & 4 Installation of Upstream and Downstream Stoplogs Complete	0.0d		10-Jul-18
AH006	AH Walk downs, Corrections & Final Handover- M8	10.3d	10-Jul-18	24-Jul-18
CI2960	M9: Bay No. 2 & 4 Rollway Ready for Installation of Sill Beams and Modification of the Gates	0.0d	04-Dec-18	
CI2970	M10: Bay No. 2 & 4 Stoplogs Removed and Ready for Operation	0.0d	01-Jan-19	01-Jan-19
AH007	AH Walk downs, Corrections & Final Handover- M10	10.0d	01-Jan-19	15-Jan-19
CH0032---12.0.2.MILESTONE.Powerhouse Powerhouse		497.9d	11-May-16	06-Apr-18
CH0032---12.0.2.MILESTONE.General General		1190.8d	10-Jul-14 A	31-Jan-19
CH0032---12.1 Engineering		611.0d	25-Oct-13 A	26-Feb-16
CH0032---12.2 Sourcing		533.0d	28-Nov-13 A	14-Dec-15
CH0032---12.3 Manufacturing		786.0d	17-Dec-13 A	20-Dec-16
CH0032---12.4 Logistics		1055.0d	22-Apr-14 A	22-Mar-17
CH0032---12.5 Installation		1215.0d	30-Jun-14 A	24-Feb-19
CH0032---12.5.1 Site Installation		1215.0d	30-Jun-14 A	24-Feb-19
CH0032---12.5.1.1 Site Coordination		1653.9d	30-Jun-14 A	24-Feb-19
CH0032---12.5.1.SC SITE COORDINATION-		1214.2d	02-Sep-15	29-Jan-19
CH0032---12.5.1.SC.General General Site Coordination		1214.2d	02-Sep-15	29-Jan-19
CH0032---12.5.1.SC.Spillway Spillway Site Coordination		1179.7d	09-Sep-15	01-Jan-19
CH0032---12.5.1.SC.Draft Tube Draft Tube Site Coordination		259.5d	07-Jul-16	08-Apr-17
CH0032---12.5.1.SC.Intake Intake Site Coordination		463.8d	15-Nov-16	09-Mar-18
CH0032---12.5.1.L SITE NEED DATES		830.7d	10-Sep-15	19-Jan-18
CH0032---12.5.1.2 Storage		630.5d	30-Aug-15	29-Jan-18
CH0032---12.5.1.3 Assembly		860.1d	11-Sep-15	30-Dec-18
CH0032---12.5.1.3.SW Spillway Installation		860.1d	11-Sep-15	30-Dec-18
CH0032---12.5.1.3.SW.Diversion Phase Minimum Diversion Phase Work		203.6d	11-Sep-15	23-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1 Bay 1		185.1d	11-Sep-15	29-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.CPV Roller Gate Embedded Parts		140.0d	01-Nov-15	04-Apr-16
CE13920	B1 Receiving & unloading of CPV Embedded Parts at site	1.0d	01-Nov-15	02-Nov-15
CE13910	B1 WBS Summary CPV	140.0d	01-Nov-15	04-Apr-16
CE13930	B1 Threaded rod installation on CPV Embedded Parts	2.0d	04-Nov-15	06-Nov-15
CE13950	B1 Hydro-Mobile work platform installation for CPV Guides	4.0d	09-Nov-15	13-Nov-15
CE13940	B1 Availability of water passage for mechanical work on CPV	0.0d	09-Nov-15	
CO36001	B1 Inspection and repair of anchor guide bolt holes (CO#36)	24.0d	13-Nov-15	07-Dec-15
CE13960	B1 Erection of CPV Embedded Parts	2.0d	07-Dec-15	09-Dec-15
CE13970	B1 Shelter installation for CPV Embedded Parts	4.0d	12-Dec-15	16-Dec-15
CE13980	B1 Bolting CPV Embedded Parts	4.0d	16-Dec-15	04-Jan-16
CE13990	B1 Survey of CPV Embedded Parts	1.0d	06-Jan-16	07-Jan-16
CE14000	B1 Rough Alignment (+/- 1.5 mm) of CPV Guides	3.0d	07-Jan-16	10-Jan-16
CE14030	B1 Cutting of CPV Transition Plates	3.0d	10-Jan-16	13-Jan-16
CE14010	B1 Precision Alignment of CPV Guides	4.0d	10-Jan-16	14-Jan-16
CE14020	B1 Alignment of CPV Sill beam	3.0d	20-Jan-16	23-Jan-16
CE14040	B1 Pre-pour measurements of CPV Embedded Parts	1.0d	23-Jan-16	24-Jan-16
CE14050	B1 Pouring of CPV Sill beam	0.5d	25-Jan-16	26-Jan-16
CE14061	B1 Transition plates installation of CPV Guides	5.5d	26-Jan-16	31-Jan-16

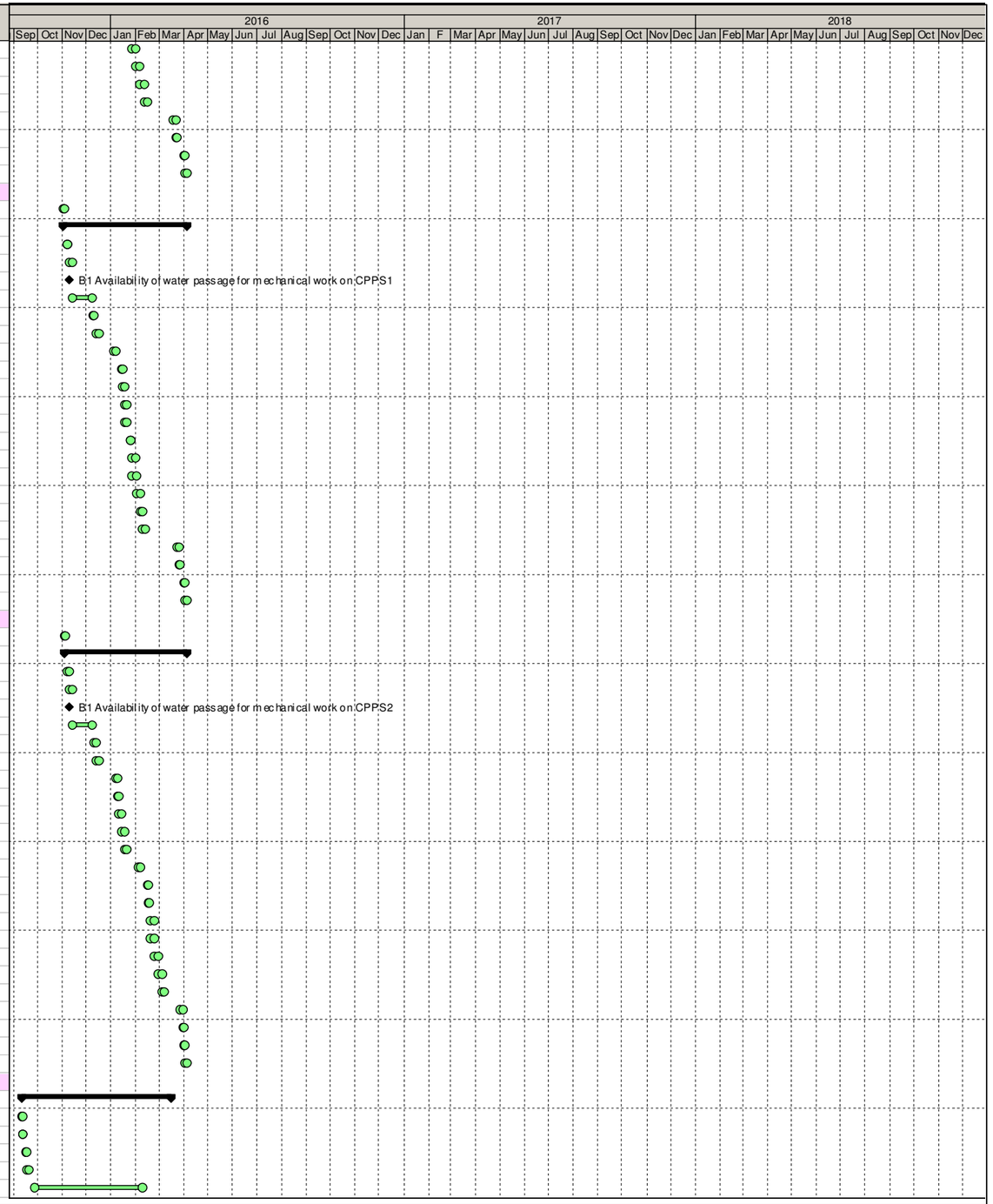


WBS Summary ◆ ◆ Milestone
Level of Effort
Actual Work
Remaining

Issued by: William Mavromatis

Date	Revision	Checked	Approved
28-Oct-15	PRELIMINARY-Rev-1		
26-Nov-15	PRELIMINARY-Rev-2		
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
CE14060	B1 Pouring of CPV Guides	5.5d	26-Jan-16	31-Jan-16
CE14070	B1 Formwork removal, concrete repairs and cleaning for CPV Embedded Parts	5.0d	31-Jan-16	05-Feb-16
CE14080	B1 Post-pour welding of CPV Guide Transition Plates	6.0d	05-Feb-16	11-Feb-16
CE14090	B1 Paint touch-ups of CPV Guides	3.0d	11-Feb-16	14-Feb-16
CE14100	B1 Rectification of CPV Embedded Parts	4.0d	18-Mar-16	22-Mar-16
CE14110	B1 Final measurements of CPV Embedded Parts	1.0d	22-Mar-16	23-Mar-16
CE14120	B1 Hydro-Mobile work platform dismantle for CPV Guides	2.0d	31-Mar-16	02-Apr-16
CE14130	B1 Shelter removal for CPV Embedded Parts	2.0d	02-Apr-16	04-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.CPPS1 Upstream Permanent Stoplogs Guides		139.0d	02-Nov-15	04-Apr-16
CE14150	B1 Receiving & unloading of CPPS1 Embedded Parts at site	1.0d	02-Nov-15	03-Nov-15
CE14140	B1 WBS Summary CPPS1	139.0d	02-Nov-15	04-Apr-16
CE14160	B1 Threaded rod installation on CPPS1 Embedded Parts	1.0d	06-Nov-15	07-Nov-15
CE14180	B1 Hydro-Mobile work platform installation for CPPS1 Guides	4.0d	09-Nov-15	13-Nov-15
CE14170	B1 Availability of water passage for mechanical work on CPPS1	0.0d	09-Nov-15	
CO36002	B1 Inspection and repair of anchor guide bolt holes (CO#36)	24.0d	13-Nov-15	07-Dec-15
CE14190	B1 Erection of CPPS1 Embedded Parts	1.0d	09-Dec-15	10-Dec-15
CE14200	B1 Shelter installation for CPPS1 Embedded Parts	4.0d	12-Dec-15	16-Dec-15
CE14210	B1 Bolting CPPS1 Embedded Parts	2.0d	04-Jan-16	06-Jan-16
CE14220	B1 Survey of CPPS1 Embedded Parts	1.0d	14-Jan-16	15-Jan-16
CE14230	B1 Rough Alignment (+/- 1.5 mm) of CPPS1 Guides	2.0d	15-Jan-16	17-Jan-16
CE14250	B1 Cutting of CPPS1 Transition Plates	3.0d	17-Jan-16	20-Jan-16
CE14240	B1 Precision Alignment of CPPS1 Guides	3.0d	17-Jan-16	20-Jan-16
CE14260	B1 Pre-pour measurements of CPPS1 Embedded Parts	1.0d	24-Jan-16	25-Jan-16
CE14271	B1 Transition plates installation of CPPS1 Guides	5.0d	26-Jan-16	31-Jan-16
CE14270	B1 Pouring of CPPS1 Guides	6.0d	26-Jan-16	01-Feb-16
CE14280	B1 Formwork removal, concrete repairs and cleaning for CPPS1 Embedded Parts	5.0d	01-Feb-16	06-Feb-16
CE14290	B1 Post-pour welding of CPPS1 Guide Transition Plates	3.0d	06-Feb-16	09-Feb-16
CE14300	B1 Paint touch-ups of CPPS1 Guides	3.0d	09-Feb-16	12-Feb-16
CE14310	B1 Rectification of CPPS1 Embedded Parts	2.0d	23-Mar-16	25-Mar-16
CE14320	B1 Final measurements of CPPS1 Embedded Parts	1.0d	25-Mar-16	26-Mar-16
CE14330	B1 Hydro-Mobile work platform dismantle for CPPS1 Guides	2.0d	31-Mar-16	02-Apr-16
CE14340	B1 Shelter removal for CPPS1 Embedded Parts	2.0d	02-Apr-16	04-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.CPPS2 Upstream Temporary Stoplogs Embedded Parts		138.0d	03-Nov-15	04-Apr-16
CE14360	B1 Receiving & unloading of CPPS2 Embedded Parts at site	1.0d	03-Nov-15	04-Nov-15
CE14350	B1 WBS Summary CPPS2	138.0d	03-Nov-15	04-Apr-16
CE14370	B1 Threaded rod installation on CPPS2 Embedded Parts	2.0d	07-Nov-15	09-Nov-15
CE14390	B1 Hydro-Mobile work platform installation for CPPS2 Guides	4.0d	09-Nov-15	13-Nov-15
CE14380	B1 Availability of water passage for mechanical work on CPPS2	0.0d	09-Nov-15	
CO36003	B1 Inspection and repair of anchor guide bolt holes (CO#36)	24.0d	13-Nov-15	07-Dec-15
CE14400	B1 Erection of CPPS2 Embedded Parts	2.0d	10-Dec-15	12-Dec-15
CE14410	B1 Shelter installation for CPPS2 Embedded Parts	4.0d	12-Dec-15	16-Dec-15
CE14420	B1 Bolting CPPS2 Embedded Parts	3.0d	06-Jan-16	09-Jan-16
CE14430	B1 Survey of CPPS2 Embedded Parts	1.0d	09-Jan-16	10-Jan-16
CE14440	B1 Rough Alignment (+/- 1.5 mm) of CPPS2 Guides	3.0d	10-Jan-16	13-Jan-16
CE14450	B1 Precision Alignment of CPPS2 Guides	4.0d	13-Jan-16	17-Jan-16
CE14460	B1 Alignment of CPPS2 Sill beam	3.0d	17-Jan-16	20-Jan-16
CE14470	B1 Cutting of CPPS2 Transition Plates	3.0d	03-Feb-16	06-Feb-16
CE14480	B1 Pre-pour measurements of CPPS2 Embedded Parts	1.0d	15-Feb-16	16-Feb-16
CE14490	B1 Pouring of CPPS2 Sill beam	0.5d	16-Feb-16	17-Feb-16
CE14501	B1 Transition plates installation of CPPS2 Guides	5.5d	18-Feb-16	24-Feb-16
CE14500	B1 Pouring of CPPS2 Guides	5.0d	18-Feb-16	23-Feb-16
CE14510	B1 Formwork removal, concrete repairs and cleaning for CPPS2 Embedded Parts	5.0d	24-Feb-16	29-Feb-16
CE14520	B1 Post-pour welding of CPPS2 Guide Transition Plates	4.0d	29-Feb-16	04-Mar-16
CE14530	B1 Paint touch-ups of CPPS2 Guides	3.0d	04-Mar-16	07-Mar-16
CE14540	B1 Rectification of CPPS2 Embedded Parts	4.0d	26-Mar-16	30-Mar-16
CE14550	B1 Final measurements of CPPS2 Embedded Parts	1.0d	30-Mar-16	31-Mar-16
CE14560	B1 Hydro-Mobile work platform dismantle for CPPS2 Guides	2.0d	31-Mar-16	02-Apr-16
CE14570	B1 Shelter removal for CPPS2 Embedded Parts	2.0d	02-Apr-16	04-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.CPPS4 Downstream Stoplogs Embedded Parts		170.5d	11-Sep-15	15-Mar-16
CE14580	B1 WBS Summary CPPS4	170.5d	11-Sep-15	15-Mar-16
CE14590	B1 Receiving & unloading of CPPS4 Embedded Parts at site	1.0d	11-Sep-15	12-Sep-15
CE14600	B1 Threaded rod installation on CPPS4 Embedded Parts	0.0d	12-Sep-15	12-Sep-15
CE14630	B1 Erection of CPPS4 Embedded Parts	1.0d	16-Sep-15	17-Sep-15
CE14632	B1 Bolting CPPS4 Embedded Parts	2.0d	17-Sep-15	19-Sep-15
CE14633	Delay for upstream acceleration	120.0d	27-Sep-15	09-Feb-16



WBS Summary ◆ ◆ Milestone

Level of Effort

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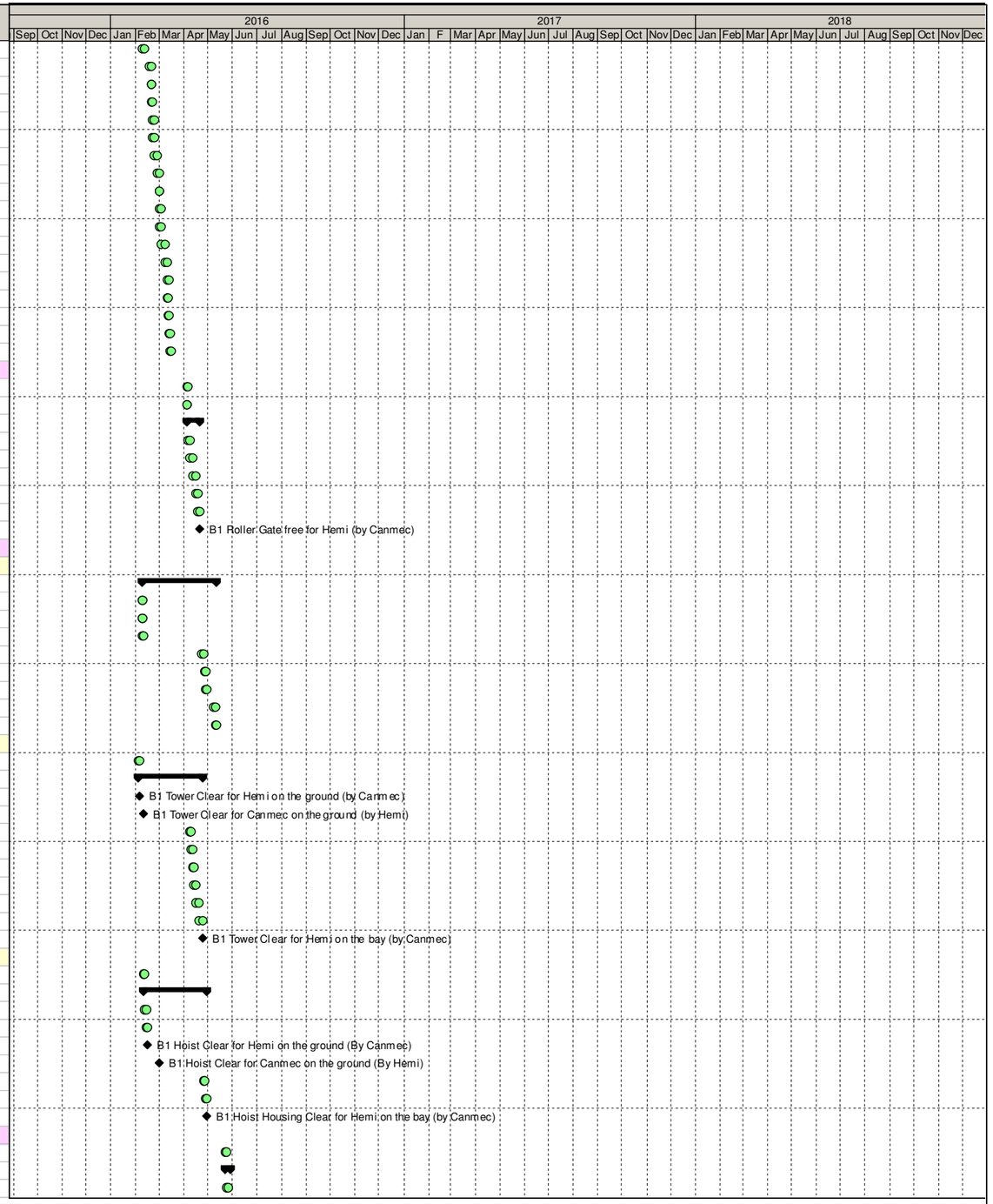
Remaining

Issued by: William Mavromatis

Date	Revision	Checked	Approved
28-Oct-15	PRELIMINARY-Rev-1		
26-Nov-15	PRELIMINARY-Rev-2		
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
CE14635	B1 Hydro-Mobile work platform installation for CPPS4 Guides	2.0d	09-Feb-16	11-Feb-16
CE14640	B1 Shelter installation for CPPS4 Embedded Parts	2.0d	17-Feb-16	19-Feb-16
CE14660	B1 Survey of CPPS4 Embedded Parts	1.0d	19-Feb-16	20-Feb-16
CE14670	B1 Rough Alignment (+/- 1.5 mm) of CPPS4 Guides	1.0d	20-Feb-16	21-Feb-16
CE14700	B1 Cutting of CPPS4 Transition Plates	2.0d	21-Feb-16	23-Feb-16
CE14680	B1 Precision Alignment of CPPS4 Guides	2.0d	21-Feb-16	23-Feb-16
CE14690	B1 Alignment of CPPS4 Sill beam	4.0d	23-Feb-16	27-Feb-16
CE14710	B1 Pre-pour measurements of CPPS4 Embedded Parts	2.0d	27-Feb-16	29-Feb-16
CE14720	B1 Pouring of CPPS4 Sill beam	0.5d	29-Feb-16	01-Mar-16
CE14731	B1 Transition plates installation of CPPS4 Guides	2.0d	01-Mar-16	03-Mar-16
CE14730	B1 Pouring of CPPS4 Guides	2.0d	01-Mar-16	03-Mar-16
CE14740	B1 Formwork removal, concrete repairs and cleaning for CPPS4 Embedded Parts	5.0d	03-Mar-16	08-Mar-16
CE14750	B1 Post-pour welding of CPPS4 Guide Transition Plates	2.0d	08-Mar-16	10-Mar-16
CE14760	B1 Paint touch-ups of CPPS4 Guides	3.0d	10-Mar-16	13-Mar-16
CE14770	B1 Rectification of CPPS4 Embedded Parts	2.0d	10-Mar-16	12-Mar-16
CE14780	B1 Final measurements of CPPS4 Embedded Parts	1.0d	12-Mar-16	13-Mar-16
CE14790	B1 Hydro-Mobile work platform dismantle for CPPS4 Guides	1.0d	13-Mar-16	14-Mar-16
CE14800	B1 Shelter removal for CPPS4 Embedded Parts	1.0d	14-Mar-16	15-Mar-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.CVA Roller Gates		12.0d	04-Apr-16	20-Apr-16
CE14830	B1 Receiving and unloading CVA roller gate sections	1.0d	04-Apr-16	05-Apr-16
CE14820	B1 Roller Gate delay to optimize 300T crane	0.0d	04-Apr-16	04-Apr-16
CE14810	B1 WBS Summary CVA	16.0d	04-Apr-16	20-Apr-16
CE14840	B1 Erection of CVA roller gate sections	3.0d	05-Apr-16	08-Apr-16
CE14850	B1 Bolting of CVA roller gate sections	3.0d	08-Apr-16	11-Apr-16
CE14860	B1 Welding of CVA roller gate sections	4.0d	11-Apr-16	15-Apr-16
CE14870	B1 Paint touch-ups of CVA roller gate	3.0d	15-Apr-16	18-Apr-16
CE14880	B1 Dogging devices installation of CVA roller gate	2.0d	18-Apr-16	20-Apr-16
CE14885	B1 Roller Gate free for Hemi (by Canmec)	0.0d		20-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.2 Installation of Tower - Bridge - Hoist assembly		69.0d	04-Feb-16	11-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.2.CTR Hoist & Bridge		93.0d	08-Feb-16	11-May-16
CE1498	B1 WBS Summary CTR	93.0d	08-Feb-16	11-May-16
CE1499	B1 Receiving and unloading of Hoist Bridge CTR	0.5d	08-Feb-16	09-Feb-16
CE1500	B1 Receiving and unloading of Hoist CTR	0.5d	09-Feb-16	09-Feb-16
CE1501	B1 Install Hoist on Hoist Bridge CTR	1.0d	09-Feb-16	10-Feb-16
CE1502	B1 Erection of Hoist Bridge/Hoist/Walls on towers CTR	2.0d	23-Apr-16	25-Apr-16
CE1503	B1 Bolting of Hoist Bridge CTR	1.0d	26-Apr-16	27-Apr-16
CE1504	B1 Reeving step #1, cable through sheaves CTR	2.0d	27-Apr-16	29-Apr-16
CE1506	B1 Reeving step #2, winding cables on drums CTR	2.0d	08-May-16	10-May-16
CE1507	B1 Cleaning of Hoist House and Hoist CTR	1.0d	10-May-16	11-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.2.CST Towers (South Tower)		80.0d	04-Feb-16	24-Apr-16
CE1491	B1 Receiving and unloading of End Tower CST	1.0d	04-Feb-16	05-Feb-16
CE1490	B1 WBS Summary CST	80.0d	04-Feb-16	24-Apr-16
CE1490	B1 Tower Clear for Hemi on the ground (by Canmec)	0.0d		05-Feb-16
CE1492	B1 Tower Clear for Canmec on the ground (by Hemi)	0.0d	10-Feb-16	
CE1492	B1 Erection of End Tower CST	1.0d	08-Apr-16	09-Apr-16
CE1493	B1 Bolting of End Tower CST	2.0d	09-Apr-16	11-Apr-16
CE1494	B1 Alignment and survey of End Tower CST	2.0d	11-Apr-16	13-Apr-16
CE1495	B1 Grouting base plates of End Tower CST	2.0d	13-Apr-16	15-Apr-16
CE1496	B1 Alignment of End Tower Guide CST	4.0d	15-Apr-16	19-Apr-16
CE1497	B1 Cladding of End Tower CST	5.0d	19-Apr-16	24-Apr-16
CE1497	B1 Tower Clear for Hemi on the bay (by Canmec)	0.0d		24-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.2.CBA Hoist Housing		57.0d	10-Feb-16	29-Apr-16
CE1510	B1 Receiving and unloading of Hoist House CBA	1.0d	10-Feb-16	11-Feb-16
CE1509	B1 WBS Summary CBA	79.0d	10-Feb-16	29-Apr-16
CE1511	B1 Wall erection on Hoist Bridge CBA	2.0d	11-Feb-16	13-Feb-16
CE1512	B1 Bolting of House Walls CBA	2.0d	13-Feb-16	15-Feb-16
CE1512	B1 Hoist Clear for Hemi on the ground (By Canmec)	0.0d		15-Feb-16
CE1512	B1 Hoist Clear for Canmec on the ground (By Hemi)	0.0d	29-Feb-16	
CE1513	B1 Roof erection CBA	1.0d	25-Apr-16	26-Apr-16
CE1514	B1 Bolting of House Roof CBA	2.0d	27-Apr-16	29-Apr-16
CE1514	B1 Hoist Housing Clear for Hemi on the bay (by Canmec)	0.0d		29-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.CPOS1 Upstream Stoplogs S1/S2/S3		7.0d	22-May-16	29-May-16
CE15160	B1 Receiving and unloading of CPOS1/S2/S3 Stoplogs	2.0d	22-May-16	24-May-16
CE15150	B1 WBS Summary CPOS1/S2/S3	7.0d	22-May-16	29-May-16
CE15170	B1 Installation of CPOS1/S2/S3 Stoplogs	2.0d	24-May-16	26-May-16



WBS Summary ◆ ◆ Milestone

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Date	Revision	Checked	Approved
28-Oct-15	PRELIMINARY-Rev-1		
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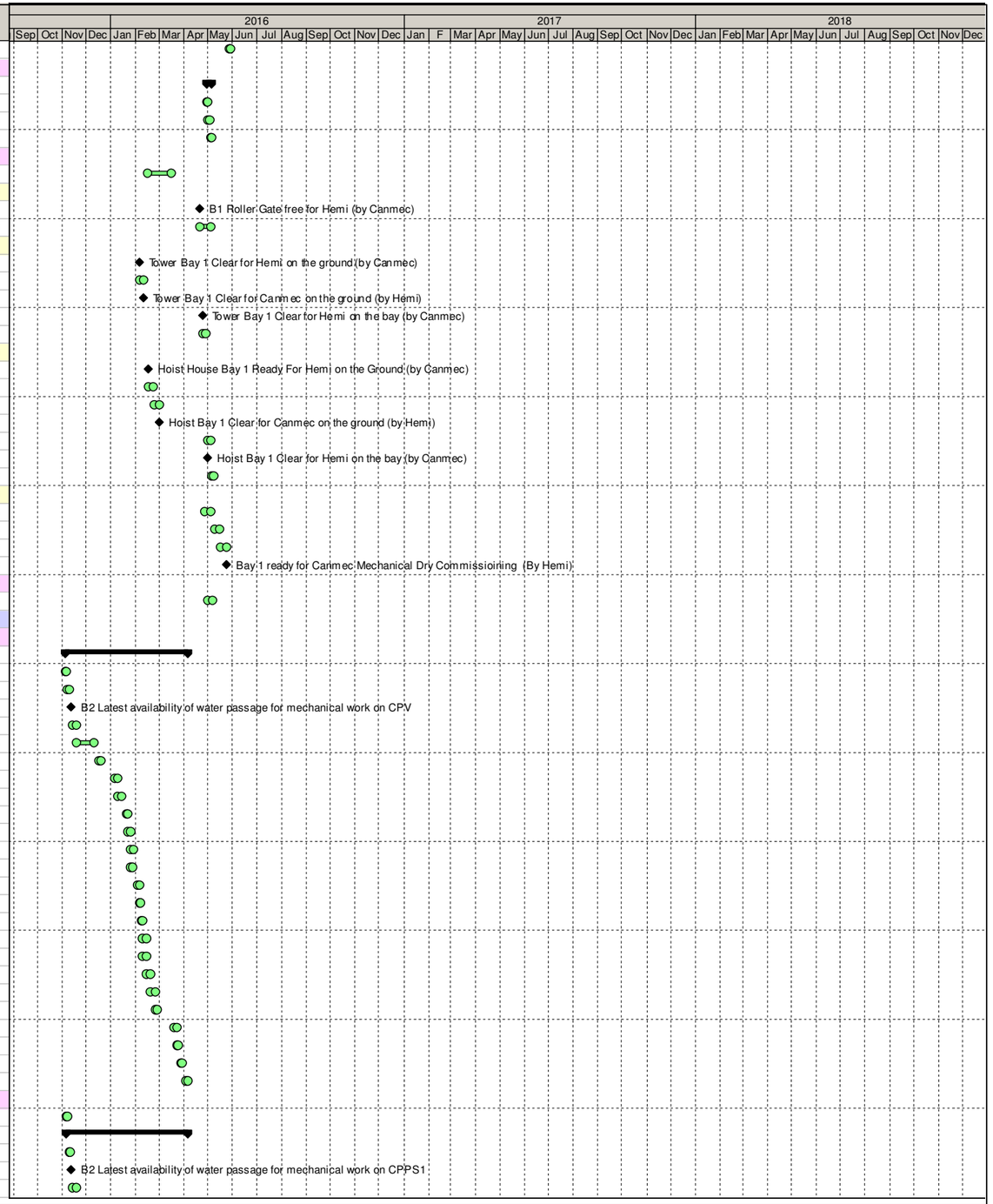
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
CE15190	B1 Storage of CPOS1/S2/S3 Stoplogs	2.0d	27-May-16	29-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.CPOS4 Downstream Stoplogs S4		6.0d	29-Apr-16	05-May-16
CE15200	B1 WBS Summary CPOS4	6.0d	29-Apr-16	05-May-16
CE15210	B1 Receiving and unloading of CPOS4 Stoplogs	1.0d	29-Apr-16	30-Apr-16
CE15220	B1 Installation of CPOS4 Stoplogs	2.0d	30-Apr-16	02-May-16
CE15240	B1 Storage of CPOS4 Stoplogs	1.0d	04-May-16	05-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.1 Installation of Electrical Equipments		76.0d	05-Feb-16	23-May-16
A6240	B1 Spillway - Electrical Equipment	30.0d	15-Feb-16	15-Mar-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.1.1 Gate		10.0d	21-Apr-16	04-May-16
A8155	B1 Roller Gate free for Hemi (by Canmec)	0.0d	21-Apr-16	
BL001	B1 Gates Electrical Installation	10.0d	21-Apr-16	04-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.1.2 Tower		58.0d	05-Feb-16	27-Apr-16
A8485	Tower Bay 1 Clear for Hemi on the ground (by Canmec)	0.0d	05-Feb-16	
A8495	Tower Bay 1 Electrical Installation on the ground	5.0d	05-Feb-16	10-Feb-16
A8505	Tower Bay 1 Clear for Canmec on the ground (by Hemi)	0.0d		10-Feb-16
A8510	Tower Bay 1 Clear for Hemi on the bay (by Canmec)	0.0d	24-Apr-16	
A8515	Tower Bay 1 Electrical Installation on the bay	3.0d	24-Apr-16	27-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.1.3 Hoist		83.0d	16-Feb-16	08-May-16
A7825	Hoist House Bay 1 Ready For Hemi on the Ground (by Canmec)	0.0d	16-Feb-16	
A7830	Installation of Bay1 MCC (Includes lowering into hoist house)	7.0d	16-Feb-16	22-Feb-16
A7835	Installation of Bay 1 Electrical Auxillaries (Includes lowering into hoist house)	7.0d	23-Feb-16	29-Feb-16
A8145	Hoist Bay 1 Clear for Canmec on the ground (by Hemi)	0.0d		29-Feb-16
A7845	Power and Control cabling Pulling in hoist House (Bay 1 Specific)	5.0d	30-Apr-16	04-May-16
A8150	Hoist Bay 1 Clear for Hemi on the bay (by Canmec)	0.0d	30-Apr-16	
A7850	Termination of Bay 1 Hoist house Electrical Equipment (Megger,Glanding,Marking etc))	4.0d	05-May-16	08-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.1.4 Testing		19.9d	26-Apr-16	23-May-16
BL1000	Temporay Power-Genset Installation & Commissioning	7.0d	26-Apr-16	04-May-16
A8500	B1 Electrical Testing	7.0d	09-May-16	15-May-16
A8525	B1 Electrical Commissioning	8.0d	16-May-16	23-May-16
A8520	Bay 1 ready for Canmec Mechanical Dry Commissioining (By Hemi)	0.0d		23-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 1.5 Cable Pulling to Elec Building		7.0d	30-Apr-16	06-May-16
A7855	B1 Install Cable Tray & Cable Pulling to Spillway electrical building	7.0d	30-Apr-16	06-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2 Bay 2		189.9d	12-Sep-15	03-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.CPV Roller Gate Embedded Parts		138.0d	04-Nov-15	05-Apr-16
CE15250	B2 WBS Summary CPV	138.0d	04-Nov-15	05-Apr-16
CE15260	B2 Receiving & unloading of CPV Embedded Parts at site	1.0d	04-Nov-15	05-Nov-15
CE15270	B2 Threaded rod installation on CPV Embedded Parts	2.0d	07-Nov-15	09-Nov-15
CE15280	B2 Latest availability of water passage for mechanical work on CPV	0.0d	12-Nov-15	
CE15290	B2 Hydro-Mobile work platform installation for CPV Guides	4.0d	13-Nov-15	17-Nov-15
CO36004	B2 Inspection and repair of anchor guide bolt holes (CO#36)	23.0d	17-Nov-15	10-Dec-15
CE15300	B2 Erection of CPV Embedded Parts	2.0d	16-Dec-15	18-Dec-15
CE15310	B2 Shelter installation for CPV Embedded Parts	4.0d	05-Jan-16	09-Jan-16
CE15320	B2 Bolting CPV Embedded Parts	4.0d	09-Jan-16	13-Jan-16
CE15330	B2 Survey of CPV Embedded Parts	1.0d	20-Jan-16	21-Jan-16
CE15340	B2 Rough Alignment (+/- 1.5 mm) of CPV Guides	3.0d	21-Jan-16	24-Jan-16
CE15350	B2 Precision Alignment of CPV Guides	4.0d	24-Jan-16	28-Jan-16
CE15370	B2 Cutting of CPV Transition Plates	3.0d	24-Jan-16	27-Jan-16
CE15360	B2 Alignment of CPV Sill beam	3.0d	02-Feb-16	05-Feb-16
CE15380	B2 Pre-pour measurements of CPV Embedded Parts	1.0d	05-Feb-16	06-Feb-16
CE15390	B2 Pouring of CPV Sill beam	0.5d	07-Feb-16	08-Feb-16
CE15400	B2 Pouring of CPV Guides	5.5d	08-Feb-16	13-Feb-16
CE15401	B2 Transition plates installation of CPV Guides	5.5d	08-Feb-16	13-Feb-16
CE15410	B2 Formwork removal, concrete repairs and cleaning for CPV Embedded Parts	5.0d	13-Feb-16	18-Feb-16
CE15420	B2 Post-pour welding of CPV Guide Transition Plates	6.0d	18-Feb-16	24-Feb-16
CE15430	B2 Paint touch-ups of CPV Guides	3.0d	24-Feb-16	27-Feb-16
CE15440	B2 Rectification of CPV Embedded Parts	4.0d	19-Mar-16	23-Mar-16
CE15450	B2 Final measurements of CPV Embedded Parts	1.0d	23-Mar-16	24-Mar-16
CE15460	B2 Hydro-Mobile work platform dismantle for CPV Guides	2.0d	27-Mar-16	29-Mar-16
CE15470	B2 Shelter removal for CPV Embedded Parts	2.0d	03-Apr-16	05-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.CPPS1 Upstream Permanent Stoplogs Guides		137.0d	05-Nov-15	05-Apr-16
CE15490	B2 Receiving & unloading of CPPS1 Embedded Parts at site	1.0d	05-Nov-15	06-Nov-15
CE15480	B2 WBS Summary CPPS1	137.0d	05-Nov-15	05-Apr-16
CE15500	B2 Threaded rod installation on CPPS1 Embedded Parts	1.0d	09-Nov-15	10-Nov-15
CE15510	B2 Latest availability of water passage for mechanical work on CPPS1	0.0d	12-Nov-15	
CE15520	B2 Hydro-Mobile work platform installation for CPPS1 Guides	4.0d	13-Nov-15	17-Nov-15



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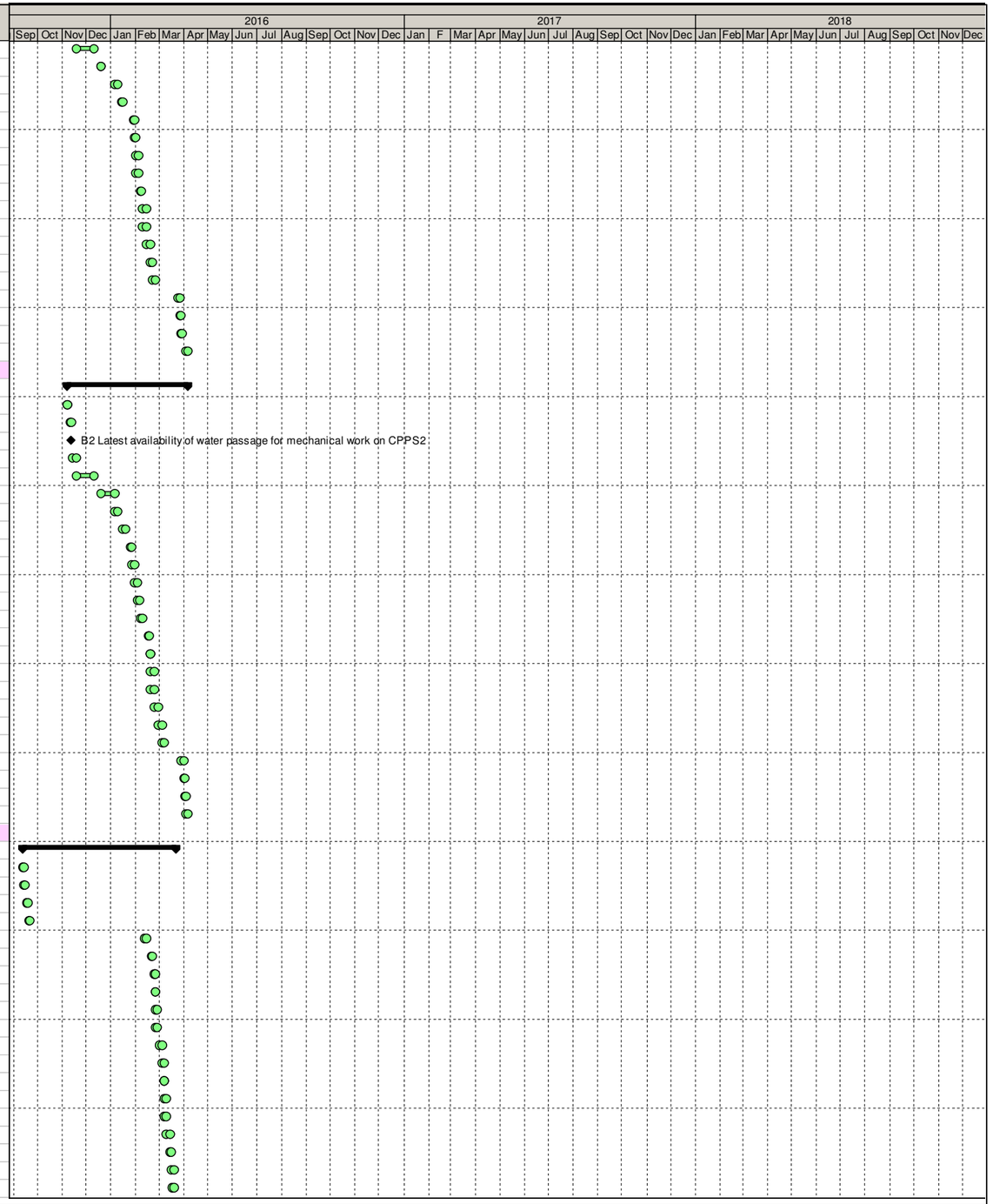
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
CO36005	B2 Inspection and repair of anchor guide bolt holes (CO#36)	23.0d	17-Nov-15	10-Dec-15
CE15530	B2 Erection of CPPS1 Embedded Parts	1.0d	18-Dec-15	19-Dec-15
CE15540	B2 Shelter installation for CPPS1 Embedded Parts	4.0d	05-Jan-16	09-Jan-16
CE15550	B2 Bolting CPPS1 Embedded Parts	2.0d	13-Jan-16	15-Jan-16
CE15560	B2 Survey of CPPS1 Embedded Parts	1.0d	28-Jan-16	29-Jan-16
CE15570	B2 Rough Alignment (+/- 1.5 mm) of CPPS1 Guides	2.0d	29-Jan-16	31-Jan-16
CE15590	B2 Cutting of CPPS1 Transition Plates	3.0d	31-Jan-16	03-Feb-16
CE15580	B2 Precision Alignment of CPPS1 Guides	3.0d	31-Jan-16	03-Feb-16
CE15600	B2 Pre-pour measurements of CPPS1 Embedded Parts	1.0d	06-Feb-16	07-Feb-16
CE15610	B2 Pouring of CPPS1 Guides	5.5d	08-Feb-16	13-Feb-16
CE15611	B2 Transition plates installation of CPPS1 Guides	5.0d	08-Feb-16	13-Feb-16
CE15620	B2 Formwork removal, concrete repairs and cleaning for CPPS1 Embedded Parts	5.0d	13-Feb-16	18-Feb-16
CE15630	B2 Post-pour welding of CPPS1 Guide Transition Plates	3.0d	18-Feb-16	21-Feb-16
CE15640	B2 Paint touch-ups of CPPS1 Guides	3.0d	21-Feb-16	24-Feb-16
CE15650	B2 Rectification of CPPS1 Embedded Parts	2.0d	24-Mar-16	26-Mar-16
CE15660	B2 Final measurements of CPPS1 Embedded Parts	1.0d	26-Mar-16	27-Mar-16
CE15670	B2 Hydro-Mobile work platform dismantle for CPPS1 Guides	2.0d	27-Mar-16	29-Mar-16
CE15680	B2 Shelter removal for CPPS1 Embedded Parts	2.0d	03-Apr-16	05-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.CPPS2 Upstream Temporary Stoplogs Embedded Parts		136.0d	06-Nov-15	05-Apr-16
CE15690	B2 WBS Summary CPPS2	136.0d	06-Nov-15	05-Apr-16
CE15700	B2 Receiving & unloading of CPPS2 Embedded Parts at site	1.0d	06-Nov-15	07-Nov-15
CE15710	B2 Threaded rod installation on CPPS2 Embedded Parts	2.0d	10-Nov-15	12-Nov-15
CE15720	B2 Latest availability of water passage for mechanical work on CPPS2	0.0d	12-Nov-15	
CE15730	B2 Hydro-Mobile work platform installation for CPPS2 Guides	4.0d	13-Nov-15	17-Nov-15
CO36006	B2 Inspection and repair of anchor guide bolt holes (CO#36)	23.0d	17-Nov-15	10-Dec-15
CE15740	B2 Erection of CPPS2 Embedded Parts	2.0d	19-Dec-15	05-Jan-16
CE15750	B2 Shelter installation for CPPS2 Embedded Parts	4.0d	05-Jan-16	09-Jan-16
CE15760	B2 Bolting CPPS2 Embedded Parts	3.0d	15-Jan-16	18-Jan-16
CE15770	B2 Survey of CPPS2 Embedded Parts	1.0d	25-Jan-16	26-Jan-16
CE15780	B2 Rough Alignment (+/- 1.5 mm) of CPPS2 Guides	3.0d	26-Jan-16	29-Jan-16
CE15790	B2 Precision Alignment of CPPS2 Guides	4.0d	29-Jan-16	02-Feb-16
CE15800	B2 Alignment of CPPS2 Sill beam	3.0d	02-Feb-16	05-Feb-16
CE15810	B2 Cutting of CPPS2 Transition Plates	3.0d	06-Feb-16	09-Feb-16
CE15820	B2 Pre-pour measurements of CPPS2 Embedded Parts	1.0d	16-Feb-16	17-Feb-16
CE15830	B2 Pouring of CPPS2 Sill beam	0.5d	18-Feb-16	18-Feb-16
CE15840	B2 Pouring of CPPS2 Guides	5.0d	18-Feb-16	23-Feb-16
CE15841	B2 Transition plates installation of CPPS2 Guides	5.5d	18-Feb-16	24-Feb-16
CE15850	B2 Formwork removal, concrete repairs and cleaning for CPPS2 Embedded Parts	5.0d	24-Feb-16	29-Feb-16
CE15860	B2 Post-pour welding of CPPS2 Guide Transition Plates	4.0d	29-Feb-16	04-Mar-16
CE15870	B2 Paint touch-ups of CPPS2 Guides	3.0d	04-Mar-16	07-Mar-16
CE15880	B2 Rectification of CPPS2 Embedded Parts	4.0d	27-Mar-16	31-Mar-16
CE15890	B2 Final measurements of CPPS2 Embedded Parts	1.0d	31-Mar-16	01-Apr-16
CE15900	B2 Hydro-Mobile work platform dismantle for CPPS2 Guides	2.0d	01-Apr-16	03-Apr-16
CE15910	B2 Shelter removal for CPPS2 Embedded Parts	2.0d	03-Apr-16	05-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.CPPS4 Downstream Stoplogs Embedded Parts		176.5d	12-Sep-15	22-Mar-16
CE15920	B2 WBS Summary CPPS4	176.5d	12-Sep-15	22-Mar-16
CE15930	B2 Receiving & unloading of CPPS4 Embedded Parts at site	1.0d	12-Sep-15	13-Sep-15
CE15940	B2 Threaded rod installation on CPPS4 Embedded Parts	1.0d	13-Sep-15	14-Sep-15
CE15970	B2 Erection of CPPS4 Embedded Parts	1.0d	17-Sep-15	18-Sep-15
CE15972	B2 Bolting CPPS4 Embedded Parts	2.0d	19-Sep-15	21-Sep-15
CE15975	B2 Hydro-Mobile work platform installation for CPPS4 Guides	2.0d	11-Feb-16	13-Feb-16
CE15980	B2 Shelter installation for CPPS4 Embedded Parts	2.0d	19-Feb-16	21-Feb-16
CE16000	B2 Survey of CPPS4 Embedded Parts	1.0d	23-Feb-16	24-Feb-16
CE16010	B2 Rough Alignment (+/- 1.5 mm) of CPPS4 Guides	1.0d	24-Feb-16	25-Feb-16
CE16020	B2 Precision Alignment of CPPS4 Guides	2.0d	25-Feb-16	27-Feb-16
CE16040	B2 Cutting of CPPS4 Transition Plates	2.0d	25-Feb-16	27-Feb-16
CE16030	B2 Alignment of CPPS4 Sill beam	4.0d	29-Feb-16	04-Mar-16
CE16050	B2 Pre-pour measurements of CPPS4 Embedded Parts	2.0d	04-Mar-16	06-Mar-16
CE16060	B2 Pouring of CPPS4 Sill beam	0.5d	06-Mar-16	07-Mar-16
CE16070	B2 Pouring of CPPS4 Guides	2.0d	07-Mar-16	09-Mar-16
CE16071	B2 Transition plates installation of CPPS4 Guides	2.0d	07-Mar-16	09-Mar-16
CE16080	B2 Formwork removal, concrete repairs and cleaning for CPPS4 Embedded Parts	5.0d	09-Mar-16	14-Mar-16
CE16090	B2 Post-pour welding of CPPS4 Guide Transition Plates	2.0d	14-Mar-16	16-Mar-16
CE16100	B2 Paint touch-ups of CPPS4 Guides	3.0d	16-Mar-16	19-Mar-16
CE16110	B2 Rectification of CPPS4 Embedded Parts	2.0d	17-Mar-16	19-Mar-16



WBS Summary ◆ ◆ Milestone
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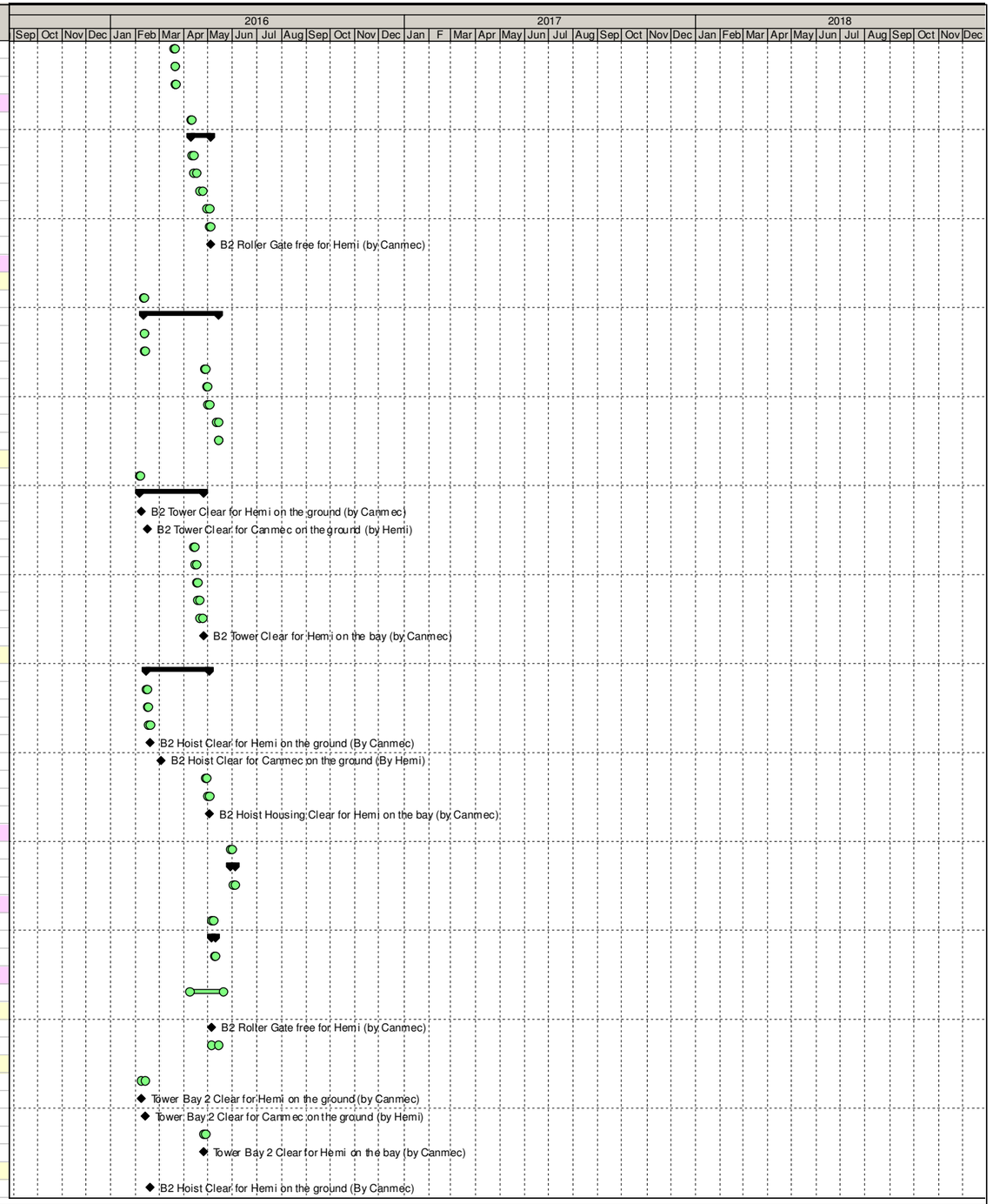
Actual Work
Remaining

Issued by: William Mavromatis

Date	Revision	Checked	Approved
28-Oct-15	PRELIMINARY-Rev-1		
26-Nov-15	PRELIMINARY-Rev-2		
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
CE16120	B2 Final measurements of CPPS4 Embedded Parts	1.0d	19-Mar-16	20-Mar-16
CE16130	B2 Hydro-Mobile work platform dismantle for CPPS4 Guides	1.0d	20-Mar-16	21-Mar-16
CE16140	B2 Shelter removal for CPPS4 Embedded Parts	1.0d	21-Mar-16	22-Mar-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.CVA Roller Gates		17.9d	09-Apr-16	04-May-16
CE16160	B2 Receiving and unloading CVA roller gate sections	1.0d	09-Apr-16	10-Apr-16
CE16150	B2 WBS Summary CVA	25.0d	09-Apr-16	04-May-16
CE16170	B2 Erection of CVA roller gate sections	3.0d	10-Apr-16	13-Apr-16
CE16180	B2 Bolting of CVA roller gate sections	3.0d	13-Apr-16	16-Apr-16
CE16190	B2 Welding of CVA roller gate sections	4.0d	20-Apr-16	24-Apr-16
CE16200	B2 Paint touch-ups of CVA roller gate	3.0d	29-Apr-16	02-May-16
CE16210	B2 Dogging devices installation of CVA roller gate	2.0d	02-May-16	04-May-16
CE16165	B2 Roller Gate free for Hemi (by Canmec)	0.0d		04-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.2 Installation of Tower - Bridge - Hoist assembly		70.1d	05-Feb-16	14-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.2.CTR Hoist & Bridge		94.0d	10-Feb-16	14-May-16
CE1631	B2 Receiving and unloading of Hoist Bridge CTR	0.5d	10-Feb-16	11-Feb-16
CE163(	B2 WBS Summary CTR	94.0d	10-Feb-16	14-May-16
CE163	B2 Receiving and unloading of Hoist CTR	0.5d	11-Feb-16	11-Feb-16
CE163	B2 Install Hoist on Hoist Bridge CTR	1.0d	11-Feb-16	12-Feb-16
CE163	B2 Erection of Hoist Bridge/Hoist/Walls on towers CTR	2.0d	26-Apr-16	28-Apr-16
CE163	B2 Bolting of Hoist Bridge CTR	1.0d	29-Apr-16	30-Apr-16
CE163	B2 Reeving step #1, cable through sheaves CTR	2.0d	30-Apr-16	02-May-16
CE163	B2 Reeving step #2, winding cables on drums CTR	2.0d	11-May-16	13-May-16
CE163	B2 Cleaning of Hoist House and Hoist CTR	1.0d	13-May-16	14-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.2.CST Towers		55.1d	05-Feb-16	25-Apr-16
CE162	B2 Receiving and unloading of Intermediate Tower CST	1.0d	05-Feb-16	06-Feb-16
CE162	B2 WBS Summary CST	79.2d	05-Feb-16	25-Apr-16
CE162	B2 Tower Clear for Hemi on the ground (by Canmec)	0.0d		08-Feb-16
CE162	B2 Tower Clear for Canmec on the ground (by Hemi)	0.0d	15-Feb-16	
CE162	B2 Erection of Intermediate Tower CST	1.0d	13-Apr-16	14-Apr-16
CE162	B2 Bolting of Intermediate Tower CST	2.0d	14-Apr-16	16-Apr-16
CE162	B2 Alignment and survey of Intermediate Tower CST	2.0d	16-Apr-16	18-Apr-16
CE162	B2 Grouting base plates of Intermediate Tower CST	2.0d	18-Apr-16	20-Apr-16
CE162	B2 Alignment of Intermediate Tower Guide CST	4.0d	20-Apr-16	24-Apr-16
CE162	B2 Tower Clear for Hemi on the bay (by Canmec)	0.0d		25-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.2.CBA Hoist Housing		55.9d	13-Feb-16	02-May-16
CE1641	B2 WBS Summary CBA	79.0d	13-Feb-16	02-May-16
CE164	B2 Receiving and unloading of Hoist House CBA	1.0d	13-Feb-16	14-Feb-16
CE164	B2 Wall erection on Hoist Bridge CBA	2.0d	14-Feb-16	16-Feb-16
CE164	B2 Bolting of House Walls CBA	2.0d	16-Feb-16	18-Feb-16
CE164	B2 Hoist Clear for Hemi on the ground (By Canmec)	0.0d		18-Feb-16
CE164	B2 Hoist Clear for Canmec on the ground (By Hemi)	0.0d	03-Mar-16	
CE164	B2 Roof erection CBA	1.0d	28-Apr-16	29-Apr-16
CE164	B2 Bolting of House Roof CBA	2.0d	30-Apr-16	02-May-16
CE164	B2 Hoist Housing Clear for Hemi on the bay (by Canmec)	0.0d		02-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.CPOS1 Upstream Stoplogs S1/S2/S3		5.0d	29-May-16	03-Jun-16
CE16480	B2 Installation of CPOS1/S2/S3 Stoplogs	2.0d	29-May-16	31-May-16
CE16470	B2 WBS Summary CPOS1/S2/S3	5.0d	29-May-16	03-Jun-16
CE16500	B2 Storage of CPOS1/S2/S3 Stoplogs	2.0d	01-Jun-16	03-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.CPOS4 Downstream Stoplogs S4		5.0d	05-May-16	10-May-16
CE16520	B2 Installation of CPOS4 Stoplogs	2.0d	05-May-16	07-May-16
CE16510	B2 WBS Summary CPOS4	5.0d	05-May-16	10-May-16
CE16540	B2 Storage of CPOS4 Stoplogs	1.0d	09-May-16	10-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.1 Installation of Electrical Equipments		80.0d	08-Feb-16	28-May-16
A6245	B2 Spillway - Electrical Equipment	43.0d	08-Apr-16	20-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.1.1 Gate		10.0d	05-May-16	14-May-16
A8170	B2 Roller Gate free for Hemi (by Canmec)	0.0d	05-May-16	
BL002	B2 Gates Electrical Installation	10.0d	05-May-16	14-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.1.3 Tower		58.0d	08-Feb-16	28-Apr-16
A8175	Tower Bay 2 Electrical Installation on the ground	5.0d	08-Feb-16	13-Feb-16
A8185	Tower Bay 2 Clear for Hemi on the ground (by Canmec)	0.0d	08-Feb-16	
A8190	Tower Bay 2 Clear for Canmec on the ground (by Hemi)	0.0d		13-Feb-16
A8180	Tower Bay 2 Electrical Installation on the bay	3.0d	25-Apr-16	28-Apr-16
A8195	Tower Bay 2 Clear for Hemi on the bay (by Canmec)	0.0d	25-Apr-16	
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.1.2 Hoist		59.0d	18-Feb-16	11-May-16
A8200	B2 Hoist Clear for Hemi on the ground (By Canmec)	0.0d	18-Feb-16	



WBS Summary ◆ ◆ Milestone
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28-Oct-15	PRELIMINARY-Rev-1		
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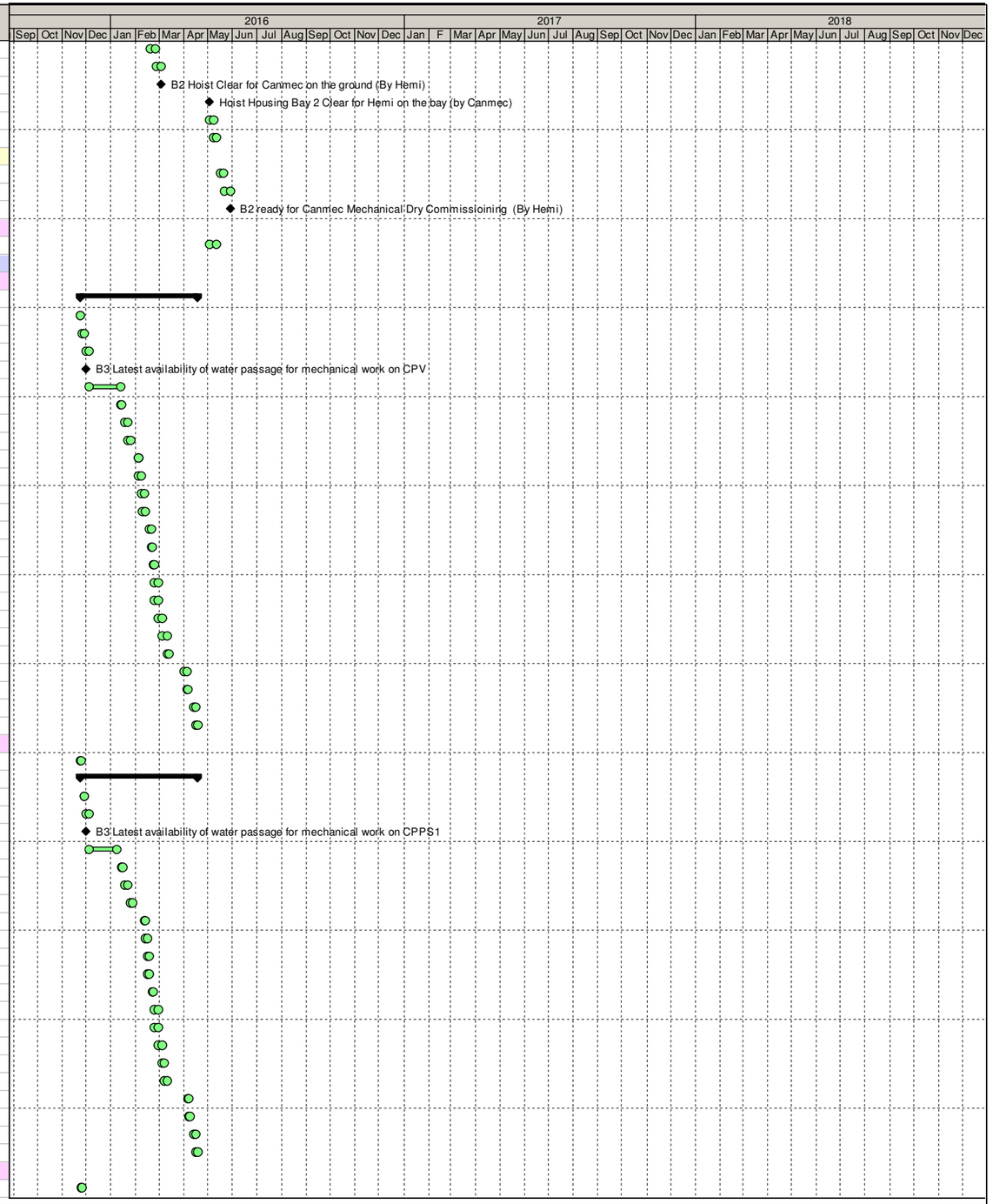
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
A7900	Installation of Bay2 MCC (Includes lowering into hoist house)	7.0d	19-Feb-16	25-Feb-16
A7905	Installation of Bay 2 Electrical Auxillaries (Includes lowering into hoist house)	7.0d	26-Feb-16	03-Mar-16
A8205	B2 Hoist Clear for Canmec on the ground (By Hemi)	0.0d		03-Mar-16
A8210	Hoist Housing Bay 2 Clear for Hemi on the bay (by Canmec)	0.0d	02-May-16	
A7915	Power and Control cabling Pulling in hoist House (Bay 2 Specific)	5.0d	03-May-16	07-May-16
A7920	Termination of Bay 2 Hoist house Electrical Equipment (Megger,Glanding,Marking etc))	4.0d	08-May-16	11-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.1.4 Testing		13.0d	16-May-16	28-May-16
A7925	B2 Electrical Testing	5.0d	16-May-16	20-May-16
A7930	B2 Electrical Commissioning	8.0d	21-May-16	28-May-16
A8160	B2 ready for Canmec Mechanical Dry Commissioining (By Hemi)	0.0d		28-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 2.3 Cable Pulling to Elec Building		7.0d	02-May-16	11-May-16
A8165	B2 Install Cable Tray & Cable Pulling to Spillway electrical building	7.0d	02-May-16	11-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3 Bay 3		192.9d	13-Sep-15	08-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.CPV Roller Gate Embedded Parts		132.0d	22-Nov-15	17-Apr-16
CE16550	B3 WBS Summary CPV	132.0d	22-Nov-15	17-Apr-16
CE16560	B3 Receiving & unloading of CPV Embedded Parts at site	1.0d	22-Nov-15	23-Nov-15
CE16570	B3 Threaded rod installation on CPV Embedded Parts	2.0d	25-Nov-15	27-Nov-15
CE16590	B3 Hydro-Mobile work platform installation for CPV Guides	4.0d	30-Nov-15	04-Dec-15
CE16580	B3 Latest availability of water passage for mechanical work on CPV	0.0d	30-Nov-15	
CO36007	B3 Inspection and repair of anchor guide bolt holes (CO#36)	24.0d	04-Dec-15	12-Jan-16
CE16600	B3 Erection of CPV Embedded Parts	2.0d	12-Jan-16	14-Jan-16
CE16610	B3 Shelter installation for CPV Embedded Parts	4.0d	17-Jan-16	21-Jan-16
CE16620	B3 Bolting CPV Embedded Parts	4.0d	21-Jan-16	25-Jan-16
CE16630	B3 Survey of CPV Embedded Parts	1.0d	03-Feb-16	04-Feb-16
CE16640	B3 Rough Alignment (+/- 1.5 mm) of CPV Guides	3.0d	04-Feb-16	07-Feb-16
CE16650	B3 Precision Alignment of CPV Guides	4.0d	07-Feb-16	11-Feb-16
CE16670	B3 Cutting of CPV Transition Plates	3.0d	09-Feb-16	12-Feb-16
CE16660	B3 Alignment of CPV Sill beam	3.0d	17-Feb-16	20-Feb-16
CE16680	B3 Pre-pour measurements of CPV Embedded Parts	1.0d	20-Feb-16	21-Feb-16
CE16690	B3 Pouring of CPV Sill beam	0.5d	22-Feb-16	23-Feb-16
CE16700	B3 Pouring of CPV Guides	5.5d	23-Feb-16	28-Feb-16
CE16701	B3 Transition plates installation of CPV Guides	5.5d	23-Feb-16	28-Feb-16
CE16710	B3 Formwork removal, concrete repairs and cleaning for CPV Embedded Parts	5.0d	28-Feb-16	04-Mar-16
CE16720	B3 Post-pour welding of CPV Guide Transition Plates	6.0d	04-Mar-16	10-Mar-16
CE16730	B3 Paint touch-ups of CPV Guides	3.0d	10-Mar-16	13-Mar-16
CE16740	B3 Rectification of CPV Embedded Parts	4.0d	31-Mar-16	04-Apr-16
CE16750	B3 Final measurements of CPV Embedded Parts	1.0d	04-Apr-16	05-Apr-16
CE16760	B3 Hydro-Mobile work platform dismantle for CPV Guides	2.0d	13-Apr-16	15-Apr-16
CE16770	B3 Shelter removal for CPV Embedded Parts	2.0d	15-Apr-16	17-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.CPPS1 Upstream Permanent Stoplogs Guides		104.1d	23-Nov-15	17-Apr-16
CE16790	B3 Receiving & unloading of CPPS1 Embedded Parts at site	1.0d	23-Nov-15	24-Nov-15
CE16780	B3 WBS Summary CPPS1	131.0d	23-Nov-15	17-Apr-16
CE16800	B3 Threaded rod installation on CPPS1 Embedded Parts	1.0d	27-Nov-15	28-Nov-15
CE16820	B3 Hydro-Mobile work platform installation for CPPS1 Guides	4.0d	30-Nov-15	04-Dec-15
CE16810	B3 Latest availability of water passage for mechanical work on CPPS1	0.0d	30-Nov-15	
CO36008	B3 Inspection and repair of anchor guide bolt holes (CO#36)	24.0d	04-Dec-15	07-Jan-16
CE16830	B3 Erection of CPPS1 Embedded Parts	1.0d	14-Jan-16	15-Jan-16
CE16840	B3 Shelter installation for CPPS1 Embedded Parts	4.0d	17-Jan-16	21-Jan-16
CE16850	B3 Bolting CPPS1 Embedded Parts	2.0d	25-Jan-16	27-Jan-16
CE16860	B3 Survey of CPPS1 Embedded Parts	1.0d	11-Feb-16	12-Feb-16
CE16870	B3 Rough Alignment (+/- 1.5 mm) of CPPS1 Guides	2.0d	12-Feb-16	14-Feb-16
CE16890	B3 Cutting of CPPS1 Transition Plates	3.0d	14-Feb-16	17-Feb-16
CE16880	B3 Precision Alignment of CPPS1 Guides	3.0d	14-Feb-16	17-Feb-16
CE16900	B3 Pre-pour measurements of CPPS1 Embedded Parts	1.0d	21-Feb-16	22-Feb-16
CE16910	B3 Pouring of CPPS1 Guides	5.5d	23-Feb-16	28-Feb-16
CE16911	B3 Transition plates installation of CPPS1 Guides	5.0d	23-Feb-16	28-Feb-16
CE16920	B3 Formwork removal, concrete repairs and cleaning for CPPS1 Embedded Parts	5.0d	28-Feb-16	04-Mar-16
CE16930	B3 Post-pour welding of CPPS1 Guide Transition Plates	3.0d	04-Mar-16	07-Mar-16
CE16940	B3 Paint touch-ups of CPPS1 Guides	3.0d	07-Mar-16	10-Mar-16
CE16950	B3 Rectification of CPPS1 Embedded Parts	2.0d	05-Apr-16	07-Apr-16
CE16960	B3 Final measurements of CPPS1 Embedded Parts	1.0d	07-Apr-16	08-Apr-16
CE16970	B3 Hydro-Mobile work platform dismantle for CPPS1 Guides	2.0d	13-Apr-16	15-Apr-16
CE16980	B3 Shelter removal for CPPS1 Embedded Parts	2.0d	15-Apr-16	17-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.CPPS2 Upstream Temporary Stoplogs Embedded Parts		130.0d	24-Nov-15	17-Apr-16
CE17000	B3 Receiving & unloading of CPPS2 Embedded Parts at site	1.0d	24-Nov-15	25-Nov-15



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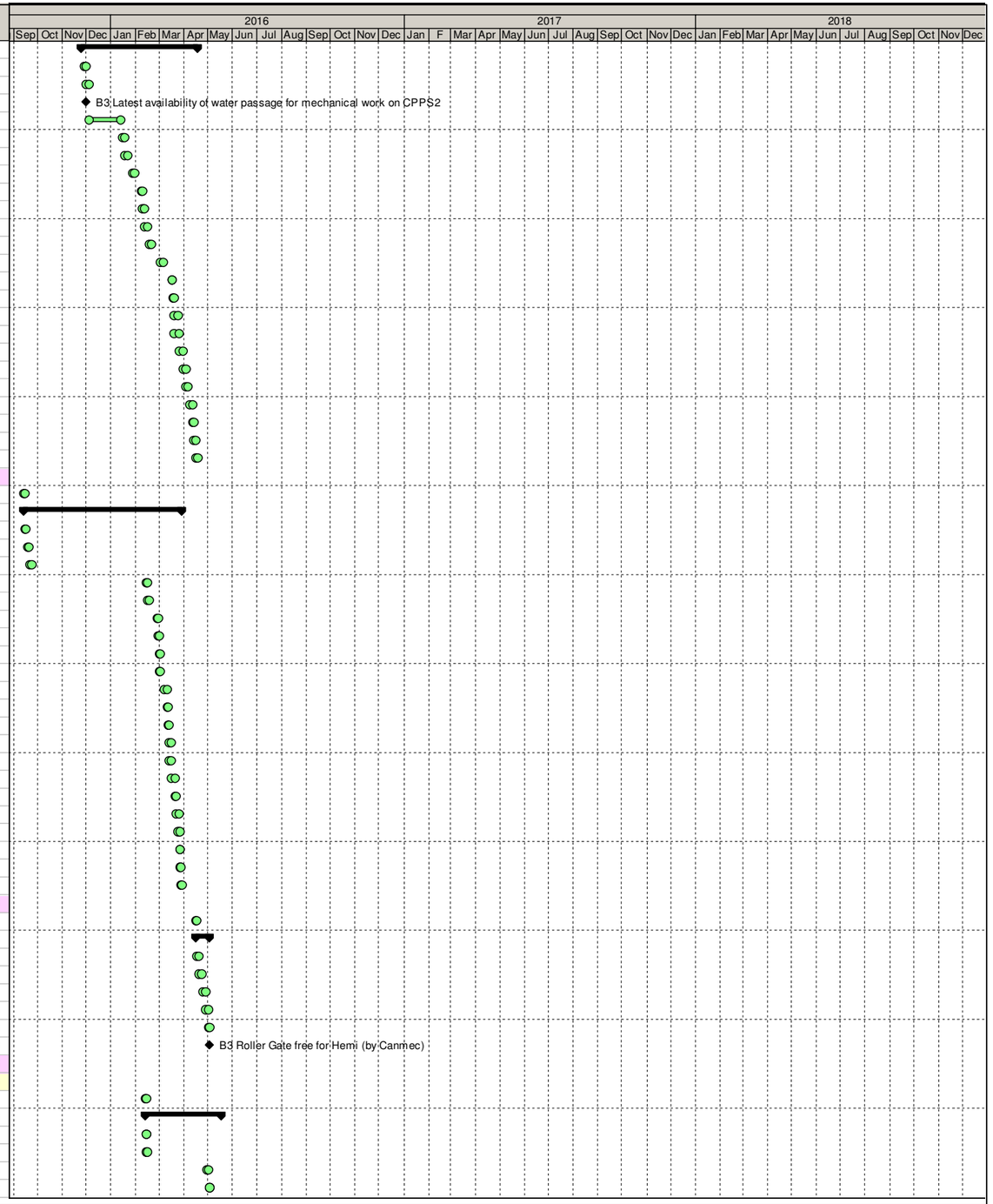
Activity ID	Activity Name	At Completion Duration	Start	Finish
CE16990	B3 WBS Summary CPPS2	130.0d	24-Nov-15	17-Apr-16
CE17010	B3 Threaded rod installation on CPPS2 Embedded Parts	2.0d	28-Nov-15	30-Nov-15
CE17030	B3 Hydro-Mobile work platform installation for CPPS2 Guides	4.0d	30-Nov-15	04-Dec-15
CE17020	B3 Latest availability of water passage for mechanical work on CPPS2	0.0d	30-Nov-15	
CO36009	B3 Inspection and repair of anchor guide bolt holes (CO#36)	24.0d	04-Dec-15	12-Jan-16
CE17040	B3 Erection of CPPS2 Embedded Parts	2.0d	15-Jan-16	17-Jan-16
CE17050	B3 Shelter installation for CPPS2 Embedded Parts	4.0d	17-Jan-16	21-Jan-16
CE17060	B3 Bolting CPPS2 Embedded Parts	3.0d	27-Jan-16	30-Jan-16
CE17070	B3 Survey of CPPS2 Embedded Parts	1.0d	07-Feb-16	08-Feb-16
CE17080	B3 Rough Alignment (+/- 1.5 mm) of CPPS2 Guides	3.0d	08-Feb-16	11-Feb-16
CE17090	B3 Precision Alignment of CPPS2 Guides	4.0d	11-Feb-16	15-Feb-16
CE17100	B3 Alignment of CPPS2 Sill beam	3.0d	17-Feb-16	20-Feb-16
CE17110	B3 Cutting of CPPS2 Transition Plates	3.0d	02-Mar-16	05-Mar-16
CE17120	B3 Pre-pour measurements of CPPS2 Embedded Parts	1.0d	16-Mar-16	17-Mar-16
CE17130	B3 Pouring of CPPS2 Sill beam	0.5d	18-Mar-16	19-Mar-16
CE17140	B3 Pouring of CPPS2 Guides	5.0d	19-Mar-16	24-Mar-16
CE17141	B3 Transition plates installation of CPPS2 Guides	5.5d	19-Mar-16	25-Mar-16
CE17150	B3 Formwork removal, concrete repairs and cleaning for CPPS2 Embedded Parts	5.0d	25-Mar-16	30-Mar-16
CE17160	B3 Post-pour welding of CPPS2 Guide Transition Plates	4.0d	30-Mar-16	03-Apr-16
CE17170	B3 Paint touch-ups of CPPS2 Guides	3.0d	03-Apr-16	06-Apr-16
CE17180	B3 Rectification of CPPS2 Embedded Parts	4.0d	08-Apr-16	12-Apr-16
CE17190	B3 Final measurements of CPPS2 Embedded Parts	1.0d	12-Apr-16	13-Apr-16
CE17200	B3 Hydro-Mobile work platform dismantle for CPPS2 Guides	2.0d	13-Apr-16	15-Apr-16
CE17210	B3 Shelter removal for CPPS2 Embedded Parts	2.0d	15-Apr-16	17-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.CPPS4 Downstream Stoplogs Embedded Parts		182.5d	13-Sep-15	29-Mar-16
CE17230	B3 Receiving & unloading of CPPS4 Embedded Parts at site	1.0d	13-Sep-15	14-Sep-15
CE17220	B3 WBS Summary CPPS4	182.5d	13-Sep-15	29-Mar-16
CE17240	B3 Threaded rod installation on CPPS4 Embedded Parts	1.0d	14-Sep-15	15-Sep-15
CE17270	B3 Erection of CPPS4 Embedded Parts	1.0d	18-Sep-15	19-Sep-15
CE17272	B3 Bolting CPPS4 Embedded Parts	2.0d	21-Sep-15	23-Sep-15
CE17275	B3 Hydro-Mobile work platform installation for CPPS4 Guides	2.0d	13-Feb-16	15-Feb-16
CE17280	B3 Shelter installation for CPPS4 Embedded Parts	2.0d	15-Feb-16	17-Feb-16
CE17300	B3 Survey of CPPS4 Embedded Parts	1.0d	27-Feb-16	28-Feb-16
CE17310	B3 Rough Alignment (+/- 1.5 mm) of CPPS4 Guides	1.0d	28-Feb-16	29-Feb-16
CE17340	B3 Cutting of CPPS4 Transition Plates	2.0d	29-Feb-16	02-Mar-16
CE17320	B3 Precision Alignment of CPPS4 Guides	2.0d	29-Feb-16	02-Mar-16
CE17330	B3 Alignment of CPPS4 Sill beam	4.0d	06-Mar-16	10-Mar-16
CE17350	B3 Pre-pour measurements of CPPS4 Embedded Parts	2.0d	10-Mar-16	12-Mar-16
CE17360	B3 Pouring of CPPS4 Sill beam	0.5d	12-Mar-16	13-Mar-16
CE17370	B3 Pouring of CPPS4 Guides	2.0d	13-Mar-16	15-Mar-16
CE17371	B3 Transition plates installation of CPPS4 Guides	2.0d	13-Mar-16	15-Mar-16
CE17380	B3 Formwork removal, concrete repairs and cleaning for CPPS4 Embedded Parts	5.0d	15-Mar-16	20-Mar-16
CE17390	B3 Post-pour welding of CPPS4 Guide Transition Plates	2.0d	20-Mar-16	22-Mar-16
CE17400	B3 Paint touch-ups of CPPS4 Guides	3.0d	22-Mar-16	25-Mar-16
CE17410	B3 Rectification of CPPS4 Embedded Parts	2.0d	24-Mar-16	26-Mar-16
CE17420	B3 Final measurements of CPPS4 Embedded Parts	1.0d	26-Mar-16	27-Mar-16
CE17430	B3 Hydro-Mobile work platform dismantle for CPPS4 Guides	1.0d	27-Mar-16	28-Mar-16
CE17440	B3 Shelter removal for CPPS4 Embedded Parts	1.0d	28-Mar-16	29-Mar-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.CVA Roller Gates		18.0d	15-Apr-16	03-May-16
CE17460	B3 Receiving and unloading CVA roller gate sections	1.0d	15-Apr-16	16-Apr-16
CE17450	B3 WBS Summary CVA	18.0d	15-Apr-16	03-May-16
CE17470	B3 Erection of CVA roller gate sections	3.0d	16-Apr-16	19-Apr-16
CE17480	B3 Bolting of CVA roller gate sections	3.0d	19-Apr-16	22-Apr-16
CE17490	B3 Welding of CVA roller gate sections	4.0d	24-Apr-16	28-Apr-16
CE17500	B3 Paint touch-ups of CVA roller gate	3.0d	28-Apr-16	01-May-16
CE17510	B3 Dogging devices installation of CVA roller gate	2.0d	01-May-16	03-May-16
CE17515	B3 Roller Gate free for Hemi (by Canmec)	0.0d		03-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.2 Installation of Tower - Bridge - Hoist assembly		99.0d	08-Feb-16	17-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.2.CTR Hoist & Bridge		95.0d	12-Feb-16	17-May-16
CE1761	B3 Receiving and unloading of Hoist Bridge CTR	0.5d	12-Feb-16	13-Feb-16
CE1760	B3 WBS Summary CTR	95.0d	12-Feb-16	17-May-16
CE1762	B3 Receiving and unloading of Hoist CTR	0.5d	13-Feb-16	13-Feb-16
CE1763	B3 Install Hoist on Hoist Bridge CTR	1.0d	13-Feb-16	14-Feb-16
CE1764	B3 Erection of Hoist Bridge/Hoist/Walls on towers CTR	2.0d	29-Apr-16	01-May-16
CE1765	B3 Bolting of Hoist Bridge CTR	1.0d	02-May-16	03-May-16

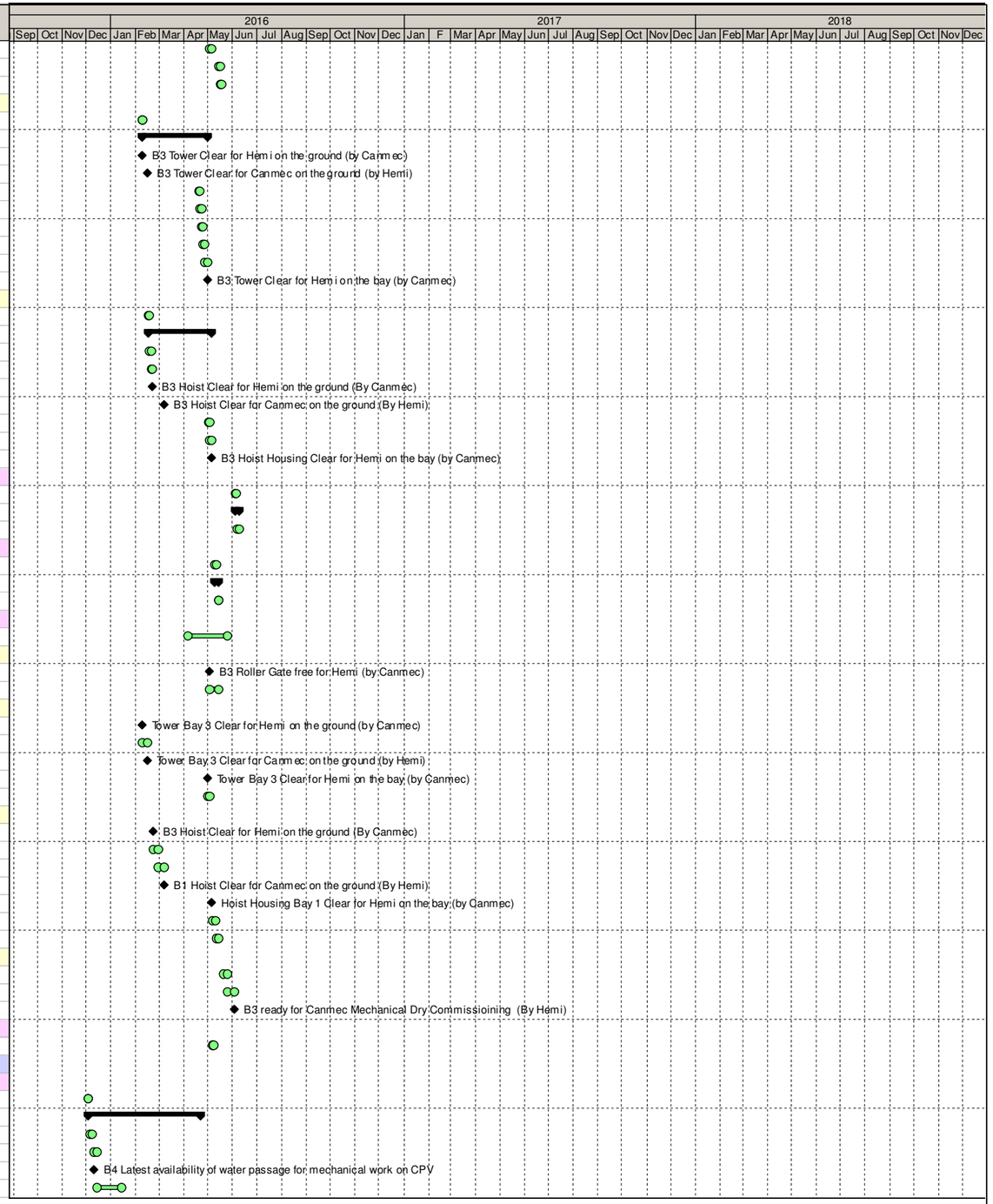


WBS Summary ◆ ◆ Milestone
Level of Effort
Actual Work
Remaining

Issued by: William Mavromatis

Date	Revision	Checked	Approved
28-Oct-15	PRELIMINARY-Rev-1		
26-Nov-15	PRELIMINARY-Rev-2		
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
CE1766	B3 Reeving step #1, cable through sheaves CTR	2.0d	03-May-16	05-May-16
CE1766	B3 Reeving step #2, winding cables on drums CTR	2.0d	14-May-16	16-May-16
CE1766	B3 Cleaning of Hoist House and Hoist CTR	1.0d	16-May-16	17-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.2.CST Towers		82.0d	08-Feb-16	30-Apr-16
CE1754	B3 Receiving and unloading of Intermediate Tower CST	1.0d	08-Feb-16	09-Feb-16
CE1755	B3 WBS Summary CST	82.0d	08-Feb-16	30-Apr-16
CE1754	B3 Tower Clear for Hemi on the ground (by Canmec)	0.0d		09-Feb-16
CE1755	B3 Tower Clear for Canmec on the ground (by Hemi)	0.0d	14-Feb-16	
CE1755	B3 Erection of Intermediate Tower CST	1.0d	19-Apr-16	20-Apr-16
CE1756	B3 Bolting of Intermediate Tower CST	2.0d	20-Apr-16	22-Apr-16
CE1757	B3 Alignment and survey of Intermediate Tower CST	2.0d	22-Apr-16	24-Apr-16
CE1758	B3 Grouting base plates of Intermediate Tower CST	2.0d	24-Apr-16	26-Apr-16
CE1759	B3 Alignment of Intermediate Tower Guide CST	4.0d	26-Apr-16	30-Apr-16
CE1756	B3 Tower Clear for Hemi on the bay (by Canmec)	0.0d	30-Apr-16	
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.2.CBA Hoist Housing		79.0d	16-Feb-16	05-May-16
CE1772	B3 Receiving and unloading of Hoist House CBA	1.0d	16-Feb-16	17-Feb-16
CE1771	B3 WBS Summary CBA	79.0d	16-Feb-16	05-May-16
CE1773	B3 Wall erection on Hoist Bridge CBA	2.0d	17-Feb-16	19-Feb-16
CE1774	B3 Bolting of House Walls CBA	2.0d	19-Feb-16	21-Feb-16
CE1774	B3 Hoist Clear for Hemi on the ground (By Canmec)	0.0d		21-Feb-16
CE1774	B3 Hoist Clear for Canmec on the ground (By Hemi)	0.0d	06-Mar-16	
CE1775	B3 Roof erection CBA	1.0d	01-May-16	02-May-16
CE1776	B3 Bolting of House Roof CBA	2.0d	03-May-16	05-May-16
CE1776	B3 Hoist Housing Clear for Hemi on the bay (by Canmec)	0.0d		05-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.CPOS1 Upstream Stoplogs S1/S2/S3		5.0d	03-Jun-16	08-Jun-16
CE17780	B3 Installation of CPOS1/S2/S3 Stoplogs	2.0d	03-Jun-16	05-Jun-16
CE17770	B3 WBS Summary CPOS1/S2/S3	5.0d	03-Jun-16	08-Jun-16
CE17800	B3 Storage of CPOS1/S2/S3 Stoplogs	2.0d	06-Jun-16	08-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.CPOS4 Downstream Stoplogs S4		5.0d	09-May-16	14-May-16
CE17820	B3 Installation of CPOS4 Stoplogs	2.0d	09-May-16	11-May-16
CE17810	B3 WBS Summary CPOS4	5.0d	09-May-16	14-May-16
CE17840	B3 Storage of CPOS4 Stoplogs	1.0d	13-May-16	14-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.1 Installation of Electrical Equipments		82.0d	09-Feb-16	02-Jun-16
A6250	B3 Spillway Electrical Equipment	50.0d	06-Apr-16	25-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.1.1 Gate		8.0d	03-May-16	13-May-16
A7980	B3 Roller Gate free for Hemi (by Canmec)	0.0d	03-May-16	
BL003	B3 Gates Electrical Installation	10.0d	03-May-16	13-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.1.2 Tower		84.0d	09-Feb-16	03-May-16
A8225	Tower Bay 3 Clear for Hemi on the ground (by Canmec)	0.0d	09-Feb-16	
A8230	Tower Bay 3 Electrical Installation on the ground	5.0d	09-Feb-16	14-Feb-16
A8235	Tower Bay 3 Clear for Canmec on the ground (by Hemi)	0.0d		14-Feb-16
A8240	Tower Bay 3 Clear for Hemi on the bay (by Canmec)	0.0d	30-Apr-16	
A8245	Tower Bay 3 Electrical Installation on the bay	3.0d	30-Apr-16	03-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.1.4 Hoist		60.0d	22-Feb-16	14-May-16
A7965	B3 Hoist Clear for Hemi on the ground (By Canmec)	0.0d	22-Feb-16	
A7970	Installation of Bay 3 MCC (Includes lowering into hoist house)	7.0d	22-Feb-16	28-Feb-16
A7975	Installation of Bay 3 Electrical Auxillaries (Includes lowering into hoist house)	7.0d	29-Feb-16	06-Mar-16
A8250	B1 Hoist Clear for Canmec on the ground (By Hemi)	0.0d		06-Mar-16
A8255	Hoist Housing Bay 1 Clear for Hemi on the bay (by Canmec)	0.0d	05-May-16	
A7985	Power and Control cabling Pulling in hoist House (Bay 3 Specific)	5.0d	06-May-16	10-May-16
A7990	Termination of Bay 3 Hoist house Electrical Equipment (Megger,Glanding,Marking etc))	4.0d	11-May-16	14-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.1.3 Testing		13.0d	20-May-16	02-Jun-16
A8000	B3 Electrical Testing	5.0d	20-May-16	25-May-16
A8215	B3 Electrical Commissioning	8.0d	25-May-16	02-Jun-16
A8220	B3 ready for Canmec Mechanical Dry Commissioining (By Hemi)	0.0d		02-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 3.3 Cable Pulling to Elec Building		3.0d	06-May-16	08-May-16
A7995	B3 Install Cable Tray & Cable Pulling to Spillway electrical building	3.0d	06-May-16	08-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4 Bay 4		195.0d	14-Sep-15	13-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.CPV Roller Gate Embedded Parts		126.0d	02-Dec-15	21-Apr-16
CE17860	B4 Receiving & unloading of CPV Embedded Parts at site	1.0d	02-Dec-15	03-Dec-15
CE17850	B4 WBS Summary CPV	126.0d	02-Dec-15	21-Apr-16
CE17870	B4 Threaded rod installation on CPV Embedded Parts	2.0d	05-Dec-15	07-Dec-15
CE17890	B4 Hydro-Mobile work platform installation for CPV Guides	4.0d	10-Dec-15	14-Dec-15
CE17880	B4 Latest availability of water passage for mechanical work on CPV	0.0d	10-Dec-15	
CO36010	B4 Inspection and repair of anchor guide bolt holes (CO#36)	16.0d	14-Dec-15	14-Jan-16



WBS Summary ◆ ◆ Milestone
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28-Oct-15	PRELIMINARY-Rev-1		
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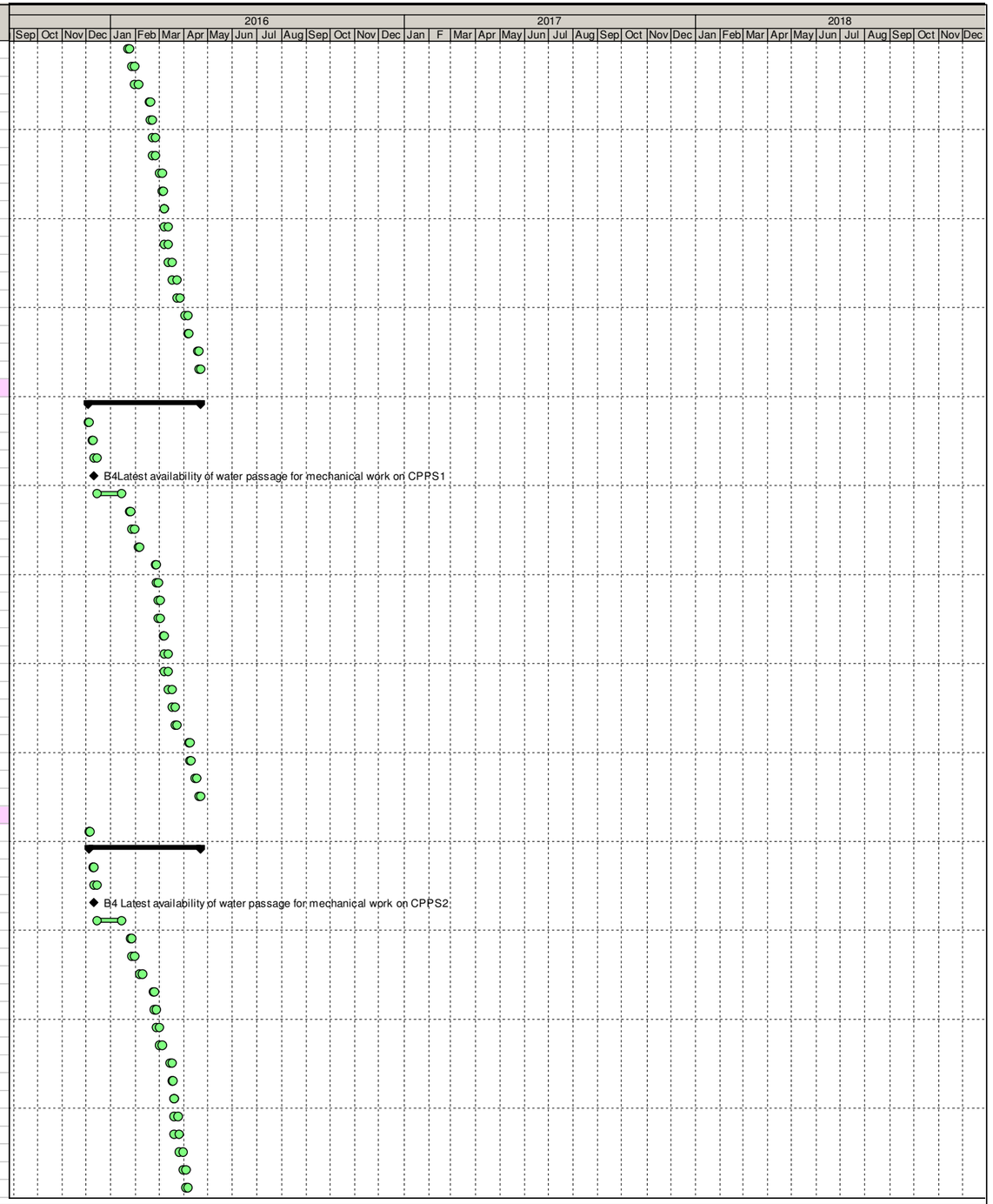
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
CE17900	B4 Erection of CPV Embedded Parts	2.0d	21-Jan-16	23-Jan-16
CE17910	B4 Shelter installation for CPV Embedded Parts	4.0d	26-Jan-16	30-Jan-16
CE17920	B4 Bolting CPV Embedded Parts	4.0d	30-Jan-16	03-Feb-16
CE17930	B4 Survey of CPV Embedded Parts	1.0d	17-Feb-16	18-Feb-16
CE17940	B4 Rough Alignment (+/- 1.5 mm) of CPV Guides	3.0d	18-Feb-16	21-Feb-16
CE17970	B4 Cutting of CPV Transition Plates	3.0d	21-Feb-16	24-Feb-16
CE17950	B4 Precision Alignment of CPV Guides	4.0d	21-Feb-16	25-Feb-16
CE17960	B4 Alignment of CPV Sill beam	3.0d	01-Mar-16	04-Mar-16
CE17980	B4 Pre-pour measurements of CPV Embedded Parts	1.0d	04-Mar-16	05-Mar-16
CE17990	B4 Pouring of CPV Sill beam	0.5d	06-Mar-16	07-Mar-16
CE18000	B4 Pouring of CPV Guides	5.5d	07-Mar-16	12-Mar-16
CE18001	B4 Transition plates installation of CPV Guides	5.5d	07-Mar-16	12-Mar-16
CE18010	B4 Formwork removal, concrete repairs and cleaning for CPV Embedded Parts	5.0d	12-Mar-16	17-Mar-16
CE18020	B4 Post-pour welding of CPV Guide Transition Plates	6.0d	17-Mar-16	23-Mar-16
CE18030	B4 Paint touch-ups of CPV Guides	3.0d	23-Mar-16	26-Mar-16
CE18040	B4 Rectification of CPV Embedded Parts	4.0d	01-Apr-16	05-Apr-16
CE18050	B4 Final measurements of CPV Embedded Parts	1.0d	05-Apr-16	06-Apr-16
CE18060	B4 Hydro-Mobile work platform dismantle for CPV Guides	2.0d	17-Apr-16	19-Apr-16
CE18070	B4 Shelter removal for CPV Embedded Parts	2.0d	19-Apr-16	21-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.CPPS1 Upstream Permanent Stoplogs Guides		125.0d	03-Dec-15	21-Apr-16
CE18080	B4 WBS Summary CPPS1	125.0d	03-Dec-15	21-Apr-16
CE18090	B4 Receiving & unloading of CPPS1 Embedded Parts at site	1.0d	03-Dec-15	04-Dec-15
CE18100	B4 Threaded rod installation on CPPS1 Embedded Parts	1.0d	07-Dec-15	08-Dec-15
CE18120	B4 Hydro-Mobile work platform installation for CPPS1 Guides	4.0d	10-Dec-15	14-Dec-15
CE18110	B4Latest availability of water passage for mechanical work on CPPS1	0.0d	10-Dec-15	
CO36011	B4 Inspection and repair of anchor guide bolt holes (CO#36)	16.0d	14-Dec-15	14-Jan-16
CE18130	B4 Erection of CPPS1 Embedded Parts	1.0d	23-Jan-16	24-Jan-16
CE18140	B4 Shelter installation for CPPS1 Embedded Parts	4.0d	26-Jan-16	30-Jan-16
CE18150	B4 Bolting CPPS1 Embedded Parts	2.0d	03-Feb-16	05-Feb-16
CE18160	B4 Survey of CPPS1 Embedded Parts	1.0d	25-Feb-16	26-Feb-16
CE18170	B4 Rough Alignment (+/- 1.5 mm) of CPPS1 Guides	2.0d	26-Feb-16	28-Feb-16
CE18180	B4 Precision Alignment of CPPS1 Guides	3.0d	28-Feb-16	02-Mar-16
CE18190	B4 Cutting of CPPS1 Transition Plates	3.0d	28-Feb-16	02-Mar-16
CE18200	B4 Pre-pour measurements of CPPS1 Embedded Parts	1.0d	05-Mar-16	06-Mar-16
CE18210	B4 Pouring of CPPS1 Guides	5.5d	07-Mar-16	12-Mar-16
CE18211	B4 Transition plates installation of CPPS1 Guides	5.0d	07-Mar-16	12-Mar-16
CE18220	B4 Formwork removal, concrete repairs and cleaning for CPPS1 Embedded Parts	5.0d	12-Mar-16	17-Mar-16
CE18230	B4 Post-pour welding of CPPS1 Guide Transition Plates	3.0d	17-Mar-16	20-Mar-16
CE18240	B4 Paint touch-ups of CPPS1 Guides	3.0d	20-Mar-16	23-Mar-16
CE18250	B4 Rectification of CPPS1 Embedded Parts	2.0d	06-Apr-16	08-Apr-16
CE18260	B4 Final measurements of CPPS1 Embedded Parts	1.0d	08-Apr-16	09-Apr-16
CE18270	B4 Hydro-Mobile work platform dismantle for CPPS1 Guides	2.0d	14-Apr-16	16-Apr-16
CE18280	B4 Shelter removal for CPPS1 Embedded Parts	2.0d	19-Apr-16	21-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.CPPS2 Upstream Temporary Stoplogs Embedded Parts		124.0d	04-Dec-15	21-Apr-16
CE18300	B4 Receiving & unloading of CPPS2 Embedded Parts at site	1.0d	04-Dec-15	05-Dec-15
CE18290	B4 WBS Summary CPPS2	124.0d	04-Dec-15	21-Apr-16
CE18310	B4 Threaded rod installation on CPPS2 Embedded Parts	2.0d	08-Dec-15	10-Dec-15
CE18330	B4 Hydro-Mobile work platform installation for CPPS2 Guides	4.0d	10-Dec-15	14-Dec-15
CE18320	B4 Latest availability of water passage for mechanical work on CPPS2	0.0d	10-Dec-15	
CO36012	B4 Inspection and repair of anchor guide bolt holes (CO#36)	16.0d	14-Dec-15	14-Jan-16
CE18340	B4 Erection of CPPS2 Embedded Parts	2.0d	24-Jan-16	26-Jan-16
CE18350	B4 Shelter installation for CPPS2 Embedded Parts	4.0d	26-Jan-16	30-Jan-16
CE18360	B4 Bolting CPPS2 Embedded Parts	3.0d	05-Feb-16	08-Feb-16
CE18370	B4 Survey of CPPS2 Embedded Parts	1.0d	22-Feb-16	23-Feb-16
CE18380	B4 Rough Alignment (+/- 1.5 mm) of CPPS2 Guides	3.0d	23-Feb-16	26-Feb-16
CE18390	B4 Precision Alignment of CPPS2 Guides	4.0d	26-Feb-16	01-Mar-16
CE18400	B4 Alignment of CPPS2 Sill beam	3.0d	01-Mar-16	04-Mar-16
CE18410	B4 Cutting of CPPS2 Transition Plates	3.0d	14-Mar-16	17-Mar-16
CE18420	B4 Pre-pour measurements of CPPS2 Embedded Parts	1.0d	17-Mar-16	18-Mar-16
CE18430	B4 Pouring of CPPS2 Sill beam	0.5d	19-Mar-16	19-Mar-16
CE18440	B4 Pouring of CPPS2 Guides	5.0d	19-Mar-16	24-Mar-16
CE18441	B4 Transition plates installation of CPPS2 Guides	5.5d	19-Mar-16	25-Mar-16
CE18450	B4 Formwork removal, concrete repairs and cleaning for CPPS2 Embedded Parts	5.0d	25-Mar-16	30-Mar-16
CE18460	B4 Post-pour welding of CPPS2 Guide Transition Plates	4.0d	30-Mar-16	03-Apr-16
CE18470	B4 Paint touch-ups of CPPS2 Guides	3.0d	03-Apr-16	06-Apr-16



WBS Summary ◆ ◆ Milestone
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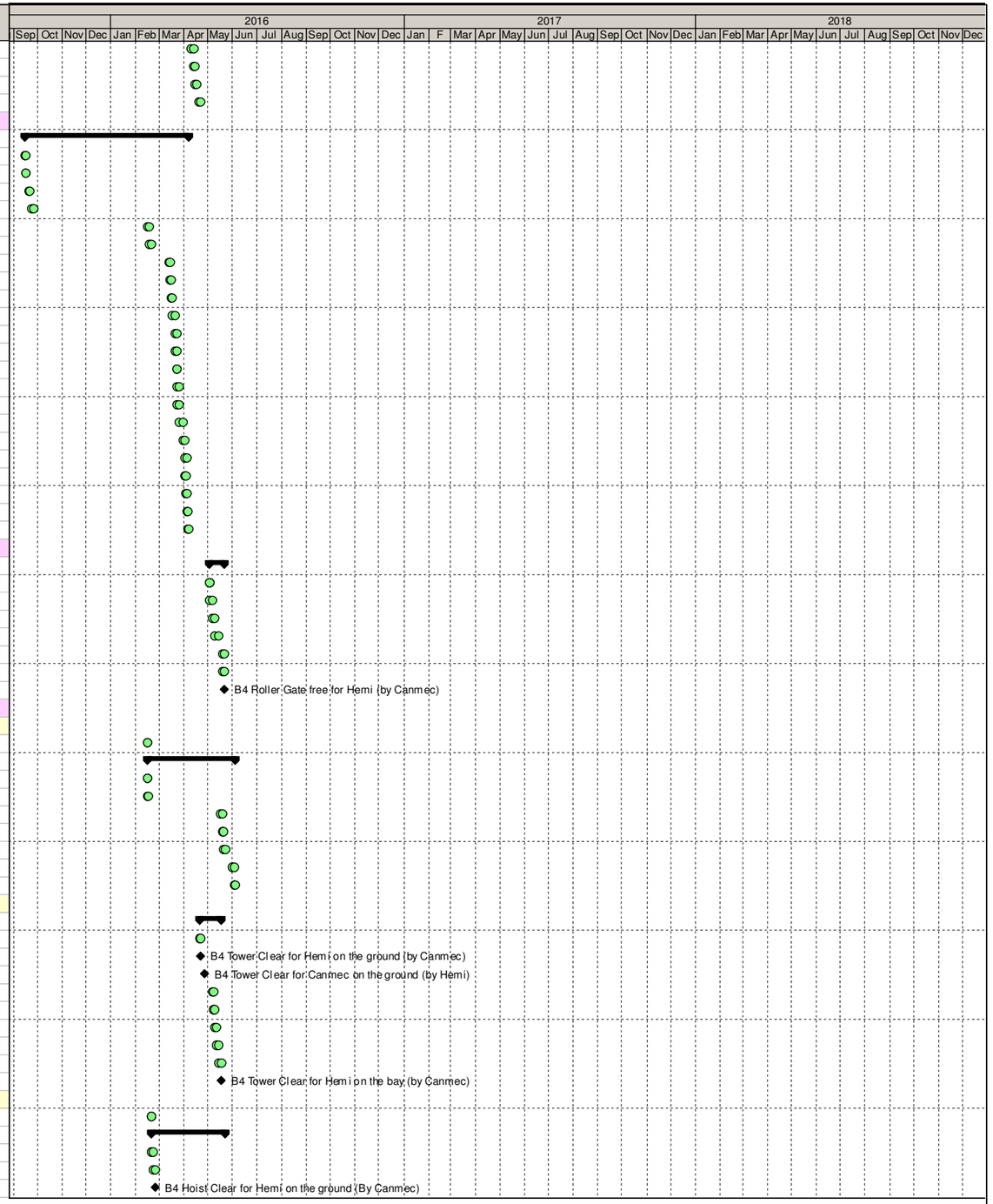
Activity ID	Activity Name	At Completion Duration	Start	Finish
CE18480	B4 Rectification of CPPS2 Embedded Parts	4.0d	09-Apr-16	13-Apr-16
CE18490	B4 Final measurements of CPPS2 Embedded Parts	1.0d	13-Apr-16	14-Apr-16
CE18500	B4 Hydro-Mobile work platform dismantle for CPPS2 Guides	2.0d	14-Apr-16	16-Apr-16
CE18510	B4 Shelter removal for CPPS2 Embedded Parts	2.0d	19-Apr-16	21-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.CPPS4 Downstream Stoplogs Embedded Parts		190.0d	14-Sep-15	06-Apr-16
CE18520	B4 WBS Summary CPPS4	190.0d	14-Sep-15	06-Apr-16
CE18530	B4 Receiving & unloading of CPPS4 Embedded Parts at site	1.0d	14-Sep-15	15-Sep-15
CE18540	B4 Threaded rod installation on CPPS4 Embedded Parts	1.0d	15-Sep-15	16-Sep-15
CE18570	B4 Erection of CPPS4 Embedded Parts	1.0d	19-Sep-15	20-Sep-15
CE18572	B4 Bolting CPPS4 Embedded Parts	2.0d	23-Sep-15	25-Sep-15
CE18575	B4 Hydro-Mobile work platform installation for CPPS4 Guides	2.0d	15-Feb-16	17-Feb-16
CE18580	B4 Shelter installation for CPPS4 Embedded Parts	2.0d	17-Feb-16	19-Feb-16
CE18600	B4 Survey of CPPS4 Embedded Parts	1.0d	13-Mar-16	14-Mar-16
CE18610	B4 Rough Alignment (+/- 1.5 mm) of CPPS4 Guides	1.0d	14-Mar-16	15-Mar-16
CE18620	B4 Precision Alignment of CPPS4 Guides	2.0d	15-Mar-16	17-Mar-16
CE18630	B4 Alignment of CPPS4 Sill beam	4.0d	17-Mar-16	21-Mar-16
CE18650	B4 Pre-pour measurements of CPPS4 Embedded Parts	2.0d	21-Mar-16	23-Mar-16
CE18640	B4 Cutting of CPPS4 Transition Plates	2.0d	21-Mar-16	23-Mar-16
CE18660	B4 Pouring of CPPS4 Sill beam	0.5d	23-Mar-16	23-Mar-16
CE18670	B4 Pouring of CPPS4 Guides	2.0d	23-Mar-16	25-Mar-16
CE18671	B4 Transition plates installation of CPPS4 Guides	2.0d	23-Mar-16	25-Mar-16
CE18680	B4 Formwork removal, concrete repairs and cleaning for CPPS4 Embedded Parts	5.0d	25-Mar-16	30-Mar-16
CE18690	B4 Post-pour welding of CPPS4 Guide Transition Plates	2.0d	30-Mar-16	01-Apr-16
CE18700	B4 Paint touch-ups of CPPS4 Guides	3.0d	01-Apr-16	04-Apr-16
CE18710	B4 Rectification of CPPS4 Embedded Parts	2.0d	01-Apr-16	03-Apr-16
CE18720	B4 Final measurements of CPPS4 Embedded Parts	1.0d	03-Apr-16	04-Apr-16
CE18730	B4 Hydro-Mobile work platform dismantle for CPPS4 Guides	1.0d	04-Apr-16	05-Apr-16
CE18740	B4 Shelter removal for CPPS4 Embedded Parts	1.0d	05-Apr-16	06-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.CVA Roller Gates		19.0d	02-May-16	21-May-16
CE18750	B4 WBS Summary CVA	19.0d	02-May-16	21-May-16
CE18760	B4 Receiving and unloading CVA roller gate sections	1.0d	02-May-16	03-May-16
CE18770	B4 Erection of CVA roller gate sections	3.0d	03-May-16	06-May-16
CE18780	B4 Bolting of CVA roller gate sections	3.0d	06-May-16	09-May-16
CE18790	B4 Welding of CVA roller gate sections	4.0d	09-May-16	13-May-16
CE18800	B4 Paint touch-ups of CVA roller gate	3.0d	18-May-16	21-May-16
CE18810	B4 Dogging devices installation of CVA roller gate	2.0d	19-May-16	21-May-16
CE18765	B4 Roller Gate free for Hemi (by Canmec)	0.0d		21-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.2 Installation of Tower - Bridge - Hoist assembly		110.0d	14-Feb-16	03-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.2.CTR Hoist & Bridge		110.0d	14-Feb-16	03-Jun-16
CE1891	B4 Receiving and unloading of Hoist Bridge CTR	0.5d	14-Feb-16	15-Feb-16
CE1890	B4 WBS Summary CTR	110.0d	14-Feb-16	03-Jun-16
CE1892	B4 Receiving and unloading of Hoist CTR	0.5d	15-Feb-16	15-Feb-16
CE1893	B4 Install Hoist on Hoist Bridge CTR	1.0d	15-Feb-16	16-Feb-16
CE1894	B4 Erection of Hoist Bridge/Hoist/Walls on towers CTR	2.0d	16-May-16	18-May-16
CE1895	B4 Bolting of Hoist Bridge CTR	1.0d	19-May-16	20-May-16
CE1896	B4 Reeving step #1, cable through sheaves CTR	2.0d	20-May-16	22-May-16
CE1897	B4 Reeving step #2, winding cables on drums CTR	2.0d	31-May-16	02-Jun-16
CE1898	B4 Cleaning of Hoist House and Hoist CTR	1.0d	02-Jun-16	03-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.2.CST Towers		27.0d	20-Apr-16	17-May-16
CE1883	B4 WBS Summary CST	27.0d	20-Apr-16	17-May-16
CE1884	B4 Receiving and unloading of Intermediate Tower CST	1.0d	20-Apr-16	21-Apr-16
CE1884	B4 Tower Clear for Hemi on the ground (by Canmec)	0.0d		21-Apr-16
CE1885	B4 Tower Clear for Canmec on the ground (by Hemi)	0.0d	26-Apr-16	
CE1885	B4 Erection of Intermediate Tower CST	1.0d	06-May-16	07-May-16
CE1886	B4 Bolting of Intermediate Tower CST	2.0d	07-May-16	09-May-16
CE1887	B4 Alignment and survey of Intermediate Tower CST	2.0d	09-May-16	11-May-16
CE1888	B4 Grouting base plates of Intermediate Tower CST	2.0d	11-May-16	13-May-16
CE1889	B4 Alignment of Intermediate Tower Guide CST	4.0d	13-May-16	17-May-16
CE1886	B4 Tower Clear for Hemi on the bay (by Canmec)	0.0d		17-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.2.CBA Hoist Housing		93.0d	19-Feb-16	22-May-16
CE1902	B4 Receiving and unloading of Hoist House CBA	1.0d	19-Feb-16	20-Feb-16
CE1901	B4 WBS Summary CBA	93.0d	19-Feb-16	22-May-16
CE1903	B4 Wall erection on Hoist Bridge CBA	2.0d	20-Feb-16	22-Feb-16
CE1904	B4 Bolting of House Walls CBA	2.0d	22-Feb-16	24-Feb-16
CE1904	B4 Hoist Clear for Hemi on the ground (By Canmec)	0.0d		24-Feb-16

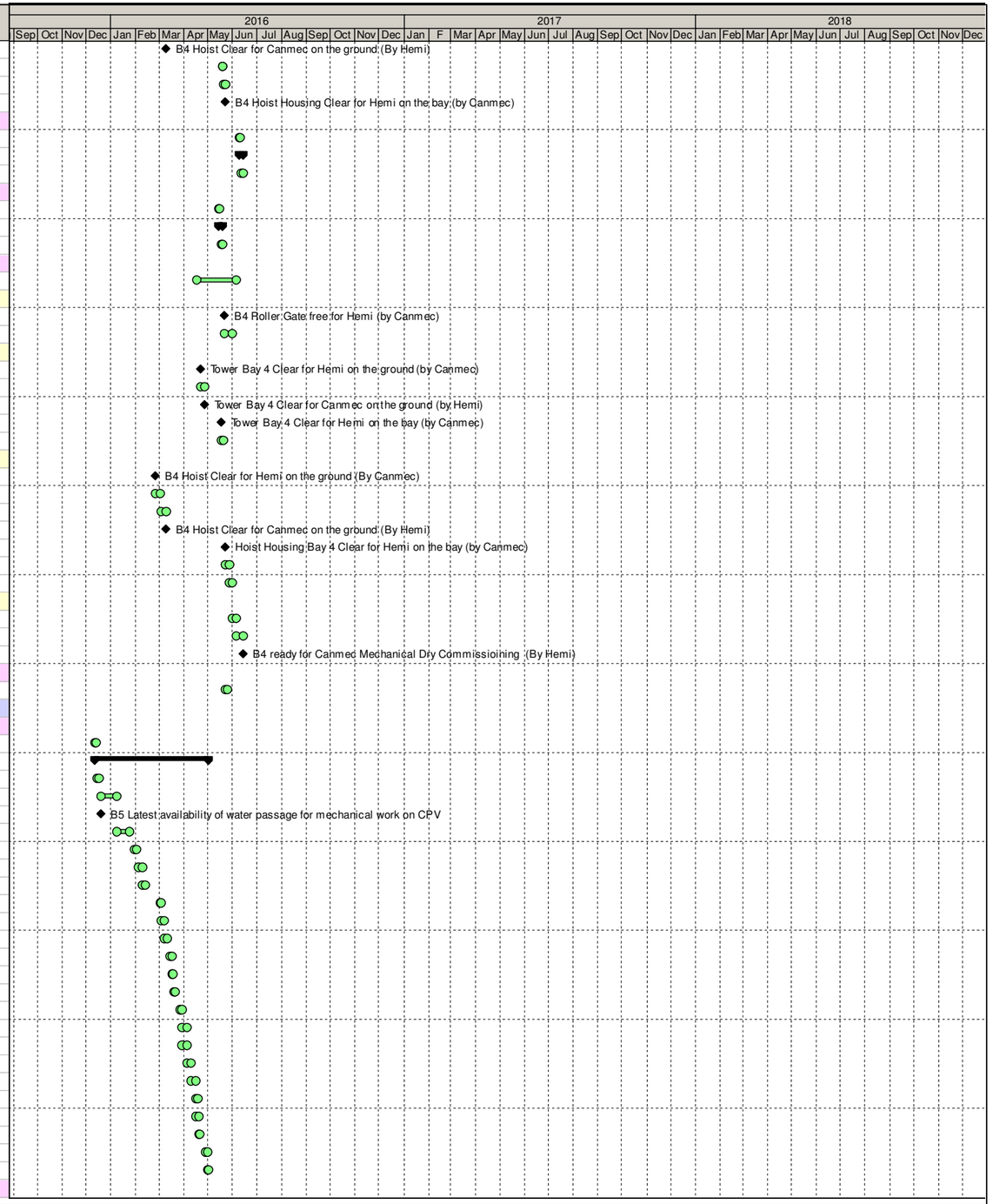


WBS Summary ◆ ◆ Milestone
Level of Effort
Actual Work
Remaining

Issued by: William Mavromatis

Date	Revision	Checked	Approved
28-Oct-15	PRELIMINARY-Rev-1		
26-Nov-15	PRELIMINARY-Rev-2		
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
CE1904	B4 Hoist Clear for Canmec on the ground (By Hemi)	0.0d	09-Mar-16	
CE1905	B4 Roof erection CBA	1.0d	18-May-16	19-May-16
CE1906	B4 Bolting of House Roof CBA	2.0d	20-May-16	22-May-16
CE1906	B4 Hoist Housing Clear for Hemi on the bay (by Canmec)	0.0d		22-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.CPOS1 Upstream Stoplogs S1/S2/S3		5.0d	08-Jun-16	13-Jun-16
CE19080	B4 Installation of CPOS1/S2/S3 Stoplogs	2.0d	08-Jun-16	10-Jun-16
CE19070	B4 WBS Summary CPOS1/S2/S3	5.0d	08-Jun-16	13-Jun-16
CE19100	B4 Storage of CPOS1/S2/S3 Stoplogs	2.0d	11-Jun-16	13-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.CPOS4 Downstream Stoplogs S4		5.0d	13-May-16	18-May-16
CE19120	B4 Installation of CPOS4 Stoplogs	2.0d	13-May-16	15-May-16
CE19110	B4 WBS Summary CPOS4	5.0d	13-May-16	18-May-16
CE19140	B4 Storage of CPOS4 Stoplogs	1.0d	17-May-16	18-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.1 Installation of Electrical Equipments		77.9d	25-Feb-16	13-Jun-16
A6255	B4 Spillway. Electrical Equipment	50.0d	17-Apr-16	05-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.1.1 Gate		6.9d	21-May-16	31-May-16
A8290	B4 Roller Gate free for Hemi (by Canmec)	0.0d	21-May-16	
BL004	B4 Gates Electrical Installation	10.0d	21-May-16	31-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.1.2 Tower		29.0d	21-Apr-16	20-May-16
A8265	Tower Bay 4 Clear for Hemi on the ground (by Canmec)	0.0d	21-Apr-16	
A8270	Tower Bay 4 Electrical Installation on the ground	5.0d	21-Apr-16	26-Apr-16
A8275	Tower Bay 4 Clear for Canmec on the ground (by Hemi)	0.0d	26-Apr-16	
A8280	Tower Bay 4 Clear for Hemi on the bay (by Canmec)	0.0d		17-May-16
A8285	Tower Bay 4 Electrical Installation on the bay	3.0d	17-May-16	20-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.1.3 Hoist		68.9d	25-Feb-16	31-May-16
A8035	B4 Hoist Clear for Hemi on the ground (By Canmec)	0.0d	25-Feb-16	
A8040	Installation of Bay 4 MCC (Includes lowering into hoist house)	7.0d	25-Feb-16	02-Mar-16
A8045	Installation of Bay 4 Electrical Auxillaries (Includes lowering into hoist house)	7.0d	03-Mar-16	09-Mar-16
A8300	B4 Hoist Clear for Canmec on the ground (By Hemi)	0.0d		09-Mar-16
A8295	Hoist Housing Bay 4 Clear for Hemi on the bay (by Canmec)	0.0d	22-May-16	
A8055	Power and Control cabling Pulling in hoist House (Bay 1 Specific)	5.0d	23-May-16	27-May-16
A8060	Termination of Bay 4 Hoist house Electrical Equipment (Megger,Glanding,Marking etc))	4.0d	28-May-16	31-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.1.4 Testing		13.0d	31-May-16	13-Jun-16
A8065	B4 Electrical Testing	5.0d	31-May-16	05-Jun-16
A8070	B4 Electrical Commissioning	8.0d	05-Jun-16	13-Jun-16
A8260	B4 ready for Canmec Mechanical Dry Commissioining (By Hemi)	0.0d		13-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 4.3 Cable Pulling to Elec Building		3.0d	23-May-16	25-May-16
A8050	B4 Install Cable Tray & Cable Pulling to Spillway electrical building-after Mechanical Inst (Hoist) of Bay 5 complete	3.0d	23-May-16	25-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5 Bay 5		201.6d	15-Sep-15	23-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.CPV Roller Gate Embedded Parts		127.5d	11-Dec-15	02-May-16
CE19160	B5 Receiving & unloading of CPV Embedded Parts at site	1.0d	11-Dec-15	12-Dec-15
CE19150	B5 WBS Summary CPV	127.5d	11-Dec-15	02-May-16
CE19170	B5 Threaded rod installation on CPV Embedded Parts	2.0d	14-Dec-15	16-Dec-15
CE19190	B5 Hydro-Mobile work platform installation for CPV Guides	4.0d	19-Dec-15	07-Jan-16
CE19180	B5 Latest availability of water passage for mechanical work on CPV	0.0d	19-Dec-15	
CO36013	B5 Inspection and repair of anchor guide bolt holes (CO#36)	16.0d	07-Jan-16	23-Jan-16
CE19200	B5 Erection of CPV Embedded Parts	2.0d	30-Jan-16	01-Feb-16
CE19210	B5 Shelter installation for CPV Embedded Parts	4.0d	04-Feb-16	08-Feb-16
CE19220	B5 Bolting CPV Embedded Parts	4.0d	08-Feb-16	12-Feb-16
CE19230	B5 Survey of CPV Embedded Parts	1.0d	02-Mar-16	03-Mar-16
CE19240	B5 Rough Alignment (+/- 1.5 mm) of CPV Guides	3.0d	03-Mar-16	06-Mar-16
CE19250	B5 Precision Alignment of CPV Guides	4.0d	06-Mar-16	10-Mar-16
CE19260	B5 Alignment of CPV Sill beam	3.0d	14-Mar-16	17-Mar-16
CE19280	B5 Pre-pour measurements of CPV Embedded Parts	1.0d	17-Mar-16	18-Mar-16
CE19290	B5 Pouring of CPV Sill beam	0.5d	19-Mar-16	20-Mar-16
CE19270	B5 Cutting of CPV Transition Plates	3.0d	26-Mar-16	29-Mar-16
CE19300	B5 Pouring of CPV Guides	5.5d	29-Mar-16	04-Apr-16
CE19301	B5 Transition plates installation of CPV Guides	5.5d	29-Mar-16	04-Apr-16
CE19310	B5 Formwork removal, concrete repairs and cleaning for CPV Embedded Parts	5.0d	04-Apr-16	09-Apr-16
CE19320	B5 Post-pour welding of CPV Guide Transition Plates	6.0d	09-Apr-16	15-Apr-16
CE19330	B5 Paint touch-ups of CPV Guides	3.0d	15-Apr-16	18-Apr-16
CE19340	B5 Rectification of CPV Embedded Parts	4.0d	15-Apr-16	19-Apr-16
CE19350	B5 Final measurements of CPV Embedded Parts	1.0d	19-Apr-16	20-Apr-16
CE19360	B5 Hydro-Mobile work platform dismantle for CPV Guides	2.0d	28-Apr-16	30-Apr-16
CE19370	B5 Shelter removal for CPV Embedded Parts	2.0d	30-Apr-16	02-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.CPPS1 Upstream Permanent Stoplogs Guides		126.5d	12-Dec-15	02-May-16



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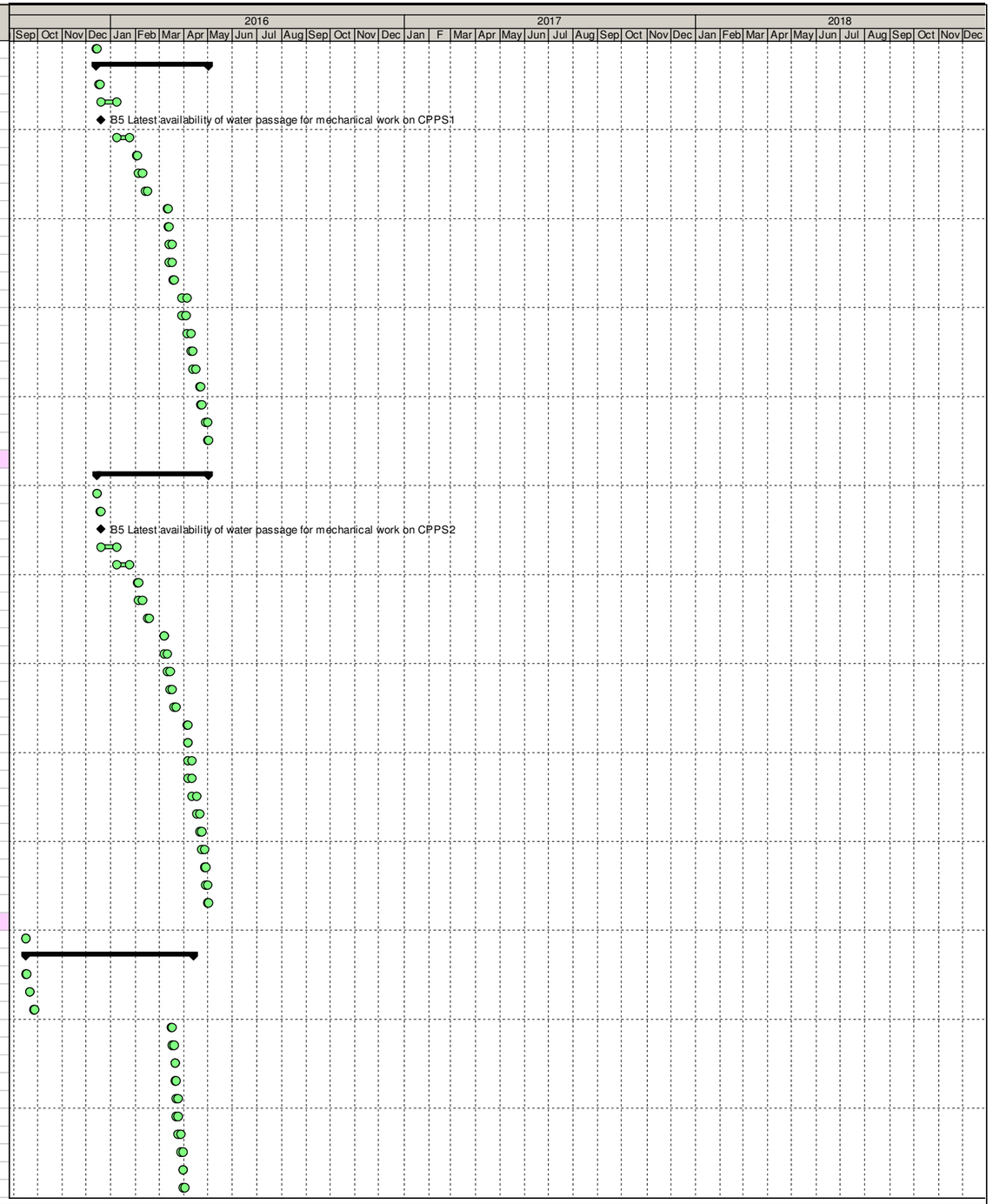
Activity ID	Activity Name	At Completion Duration	Start	Finish
CE19390	B5 Receiving & unloading of CPPS1 Embedded Parts at site	1.0d	12-Dec-15	13-Dec-15
CE19380	B5 WBS Summary CPPS1	126.5d	12-Dec-15	02-May-16
CE19400	B5 Threaded rod installation on CPPS1 Embedded Parts	1.0d	16-Dec-15	17-Dec-15
CE19420	B5 Hydro-Mobile work platform installation for CPPS1 Guides	4.0d	19-Dec-15	07-Jan-16
CE19410	B5 Latest availability of water passage for mechanical work on CPPS1	0.0d	19-Dec-15	
CO36014	B5 Inspection and repair of anchor guide bolt holes (CO#36)	16.0d	07-Jan-16	23-Jan-16
CE19430	B5 Erection of CPPS1 Embedded Parts	1.0d	01-Feb-16	02-Feb-16
CE19440	B5 Shelter installation for CPPS1 Embedded Parts	4.0d	04-Feb-16	08-Feb-16
CE19450	B5 Bolting CPPS1 Embedded Parts	2.0d	12-Feb-16	14-Feb-16
CE19460	B5 Survey of CPPS1 Embedded Parts	1.0d	10-Mar-16	11-Mar-16
CE19470	B5 Rough Alignment (+/- 1.5 mm) of CPPS1 Guides	2.0d	11-Mar-16	13-Mar-16
CE19490	B5 Cutting of CPPS1 Transition Plates	3.0d	13-Mar-16	16-Mar-16
CE19480	B5 Precision Alignment of CPPS1 Guides	3.0d	13-Mar-16	16-Mar-16
CE19500	B5 Pre-pour measurements of CPPS1 Embedded Parts	1.0d	18-Mar-16	19-Mar-16
CE19510	B5 Pouring of CPPS1 Guides	5.5d	29-Mar-16	04-Apr-16
CE19511	B5 Transition plates installation of CPPS1 Guides	5.0d	29-Mar-16	03-Apr-16
CE19520	B5 Formwork removal, concrete repairs and cleaning for CPPS1 Embedded Parts	5.0d	04-Apr-16	09-Apr-16
CE19530	B5 Post-pour welding of CPPS1 Guide Transition Plates	3.0d	09-Apr-16	12-Apr-16
CE19540	B5 Paint touch-ups of CPPS1 Guides	3.0d	12-Apr-16	15-Apr-16
CE19550	B5 Rectification of CPPS1 Embedded Parts	2.0d	20-Apr-16	22-Apr-16
CE19560	B5 Final measurements of CPPS1 Embedded Parts	1.0d	22-Apr-16	23-Apr-16
CE19570	B5 Hydro-Mobile work platform dismantle for CPPS1 Guides	2.0d	28-Apr-16	30-Apr-16
CE19580	B5 Shelter removal for CPPS1 Embedded Parts	2.0d	30-Apr-16	02-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.CPPS2 Upstream Temporary Stoplogs Embedded Parts		125.5d	13-Dec-15	02-May-16
CE19590	B5 WBS Summary CPPS2	125.5d	13-Dec-15	02-May-16
CE19600	B5 Receiving & unloading of CPPS2 Embedded Parts at site	1.0d	13-Dec-15	14-Dec-15
CE19610	B5 Threaded rod installation on CPPS2 Embedded Parts	2.0d	17-Dec-15	19-Dec-15
CE19620	B5 Latest availability of water passage for mechanical work on CPPS2	0.0d	19-Dec-15	
CE19630	B5 Hydro-Mobile work platform installation for CPPS2 Guides	4.0d	19-Dec-15	07-Jan-16
CO36015	B5 Inspection and repair of anchor guide bolt holes (CO#36)	16.0d	07-Jan-16	23-Jan-16
CE19640	B5 Erection of CPPS2 Embedded Parts	2.0d	02-Feb-16	04-Feb-16
CE19650	B5 Shelter installation for CPPS2 Embedded Parts	4.0d	04-Feb-16	08-Feb-16
CE19660	B5 Bolting CPPS2 Embedded Parts	3.0d	14-Feb-16	17-Feb-16
CE19670	B5 Survey of CPPS2 Embedded Parts	1.0d	06-Mar-16	07-Mar-16
CE19680	B5 Rough Alignment (+/- 1.5 mm) of CPPS2 Guides	3.0d	07-Mar-16	10-Mar-16
CE19690	B5 Precision Alignment of CPPS2 Guides	4.0d	10-Mar-16	14-Mar-16
CE19700	B5 Alignment of CPPS2 Sill beam	3.0d	14-Mar-16	17-Mar-16
CE19710	B5 Cutting of CPPS2 Transition Plates	3.0d	19-Mar-16	22-Mar-16
CE19720	B5 Pre-pour measurements of CPPS2 Embedded Parts	1.0d	04-Apr-16	05-Apr-16
CE19730	B5 Pouring of CPPS2 Sill beam	0.5d	05-Apr-16	05-Apr-16
CE19740	B5 Pouring of CPPS2 Guides	5.5d	05-Apr-16	11-Apr-16
CE19741	B5 Transition plates installation of CPPS2 Guides	5.5d	05-Apr-16	11-Apr-16
CE19750	B5 Formwork removal, concrete repairs and cleaning for CPPS2 Embedded Parts	5.0d	11-Apr-16	16-Apr-16
CE19760	B5 Post-pour welding of CPPS2 Guide Transition Plates	4.0d	16-Apr-16	20-Apr-16
CE19770	B5 Paint touch-ups of CPPS2 Guides	3.0d	20-Apr-16	23-Apr-16
CE19780	B5 Rectification of CPPS2 Embedded Parts	4.0d	23-Apr-16	27-Apr-16
CE19790	B5 Final measurements of CPPS2 Embedded Parts	1.0d	27-Apr-16	28-Apr-16
CE19800	B5 Hydro-Mobile work platform dismantle for CPPS2 Guides	2.0d	28-Apr-16	30-Apr-16
CE19810	B5 Shelter removal for CPPS2 Embedded Parts	2.0d	30-Apr-16	02-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.CPPS4 Downstream Stoplogs Embedded Parts		196.0d	15-Sep-15	13-Apr-16
CE19830	B5 Receiving & unloading of CPPS4 Embedded Parts at site	1.0d	15-Sep-15	16-Sep-15
CE19820	B5 WBS Summary CPPS4	196.0d	15-Sep-15	13-Apr-16
CE19840	B5 Threaded rod installation on CPPS4 Embedded Parts	1.0d	16-Sep-15	17-Sep-15
CE19870	B5 Erection of CPPS4 Embedded Parts	1.0d	20-Sep-15	21-Sep-15
CE19872	B5 Bolting CPPS4 Embedded Parts	2.0d	25-Sep-15	27-Sep-15
CE19875	B5 Hydro-Mobile work platform installation for CPPS4 Guides	2.0d	15-Mar-16	17-Mar-16
CE19880	B5 Shelter installation for CPPS4 Embedded Parts	2.0d	17-Mar-16	19-Mar-16
CE19900	B5 Survey of CPPS4 Embedded Parts	1.0d	20-Mar-16	21-Mar-16
CE19910	B5 Rough Alignment (+/- 1.5 mm) of CPPS4 Guides	1.0d	21-Mar-16	22-Mar-16
CE19940	B5 Cutting of CPPS4 Transition Plates	2.0d	22-Mar-16	24-Mar-16
CE19920	B5 Precision Alignment of CPPS4 Guides	2.0d	22-Mar-16	24-Mar-16
CE19930	B5 Alignment of CPPS4 Sill beam	4.0d	24-Mar-16	28-Mar-16
CE19950	B5 Pre-pour measurements of CPPS4 Embedded Parts	2.0d	28-Mar-16	30-Mar-16
CE19960	B5 Pouring of CPPS4 Sill beam	0.5d	30-Mar-16	30-Mar-16
CE19970	B5 Pouring of CPPS4 Guides	2.0d	30-Mar-16	01-Apr-16



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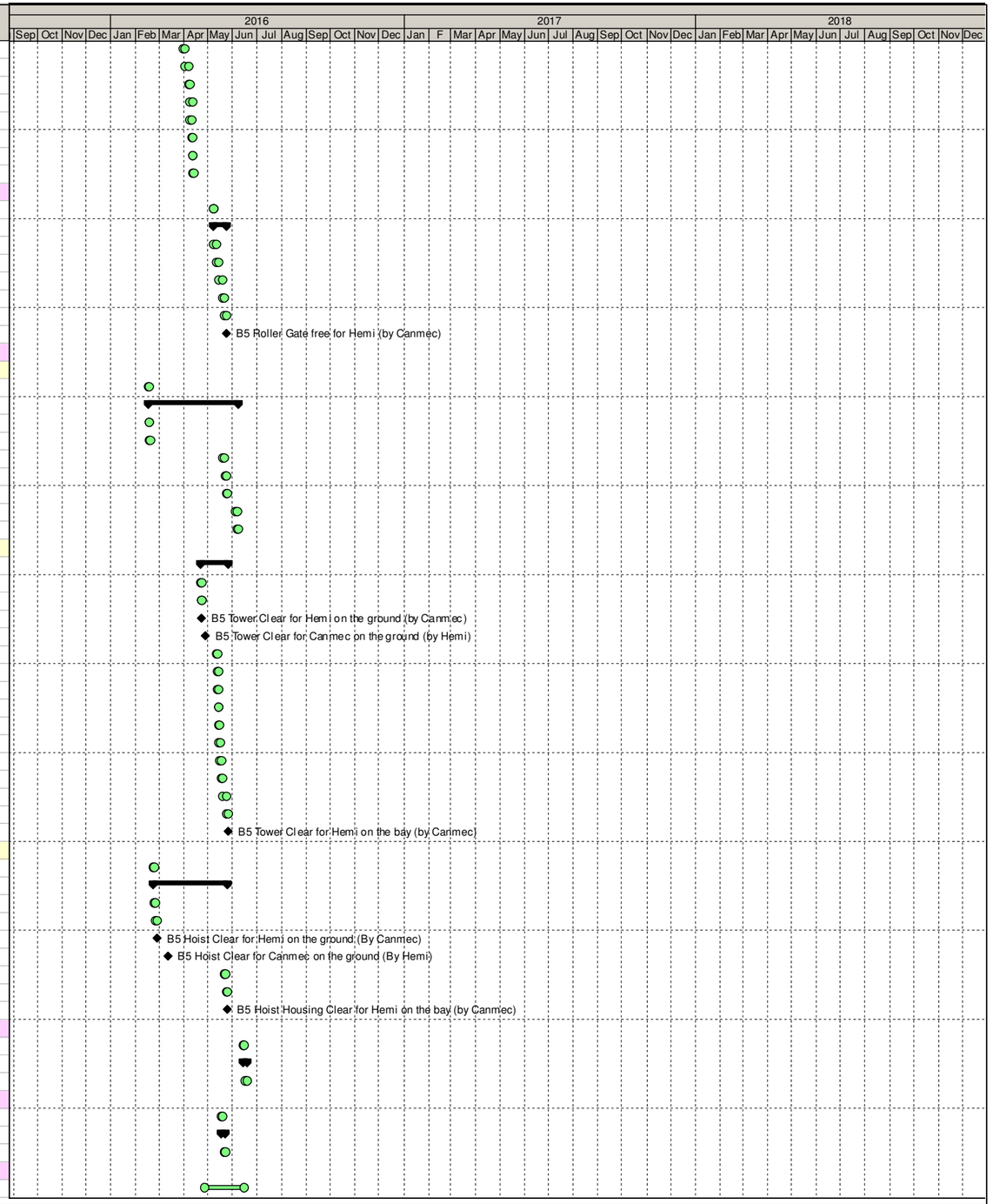
Activity ID	Activity Name	At Completion Duration	Start	Finish
CE19971	B5 Transition plates installation of CPPS4 Guides	2.0d	30-Mar-16	01-Apr-16
CE19980	B5 Formwork removal, concrete repairs and cleaning for CPPS4 Embedded Parts	5.0d	01-Apr-16	06-Apr-16
CE19990	B5 Post-pour welding of CPPS4 Guide Transition Plates	2.0d	06-Apr-16	08-Apr-16
CE20000	B5 Paint touch-ups of CPPS4 Guides	3.0d	08-Apr-16	11-Apr-16
CE20010	B5 Rectification of CPPS4 Embedded Parts	2.0d	08-Apr-16	10-Apr-16
CE20020	B5 Final measurements of CPPS4 Embedded Parts	1.0d	10-Apr-16	11-Apr-16
CE20030	B5 Hydro-Mobile work platform dismantle for CPPS4 Guides	1.0d	11-Apr-16	12-Apr-16
CE20040	B5 Shelter removal for CPPS4 Embedded Parts	1.0d	12-Apr-16	13-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.CVA Roller Gates		16.0d	07-May-16	23-May-16
CE20060	B5 Receiving and unloading CVA roller gate sections	1.0d	07-May-16	08-May-16
CE20050	B5 WBS Summary CVA	16.0d	07-May-16	23-May-16
CE20070	B5 Erection of CVA roller gate sections	3.0d	08-May-16	11-May-16
CE20080	B5 Bolting of CVA roller gate sections	3.0d	11-May-16	14-May-16
CE20090	B5 Welding of CVA roller gate sections	4.0d	14-May-16	18-May-16
CE20100	B5 Paint touch-ups of CVA roller gate	3.0d	18-May-16	21-May-16
CE20110	B5 Dogging devices installation of CVA roller gate	2.0d	21-May-16	23-May-16
CE20065	B5 Roller Gate free for Hemi (by Canmec)	0.0d		23-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.2 Installation of Tower - Bridge - Hoist assembly		112.0d	16-Feb-16	07-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.2.CTR Hoist & Bridge		112.0d	16-Feb-16	07-Jun-16
CE2027	B5 Receiving and unloading of Hoist Bridge CTR	0.5d	16-Feb-16	17-Feb-16
CE2026	B5 WBS Summary CTR	112.0d	16-Feb-16	07-Jun-16
CE2028	B5 Receiving and unloading of Hoist CTR	0.5d	17-Feb-16	17-Feb-16
CE2029	B5 Install Hoist on Hoist Bridge CTR	1.0d	17-Feb-16	18-Feb-16
CE2030	B5 Erection of Hoist Bridge/Hoist/Walls on towers CTR	2.0d	19-May-16	21-May-16
CE2031	B5 Bolting of Hoist Bridge CTR	1.0d	22-May-16	23-May-16
CE2032	B5 Reeving step #1, cable through sheaves CTR	2.0d	23-May-16	25-May-16
CE2034	B5 Reeving step #2, winding cables on drums CTR	2.0d	04-Jun-16	06-Jun-16
CE2035	B5 Cleaning of Hoist House and Hoist CTR	1.0d	06-Jun-16	07-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.2.CST Towers		35.0d	21-Apr-16	26-May-16
CE2013	B5 WBS Summary CST	35.0d	21-Apr-16	26-May-16
CE2014	B5 Receiving and unloading of Intermediate Tower CST	1.0d	21-Apr-16	22-Apr-16
CE2016	B5 Receiving and unloading of End Tower CST	1.0d	22-Apr-16	23-Apr-16
CE2014	B5 Tower Clear for Hemi on the ground (by Canmec)	0.0d		22-Apr-16
CE2015	B5 Tower Clear for Canmec on the ground (by Hemi)	0.0d	27-Apr-16	
CE2015	B5 Erection of Intermediate Tower CST	1.0d	11-May-16	12-May-16
CE2018	B5 Bolting of Intermediate Tower CST	1.0d	12-May-16	13-May-16
CE2017	B5 Erection of End Tower CST	1.0d	12-May-16	13-May-16
CE2019	B5 Alignment and survey of Intermediate Tower CST	1.0d	13-May-16	14-May-16
CE2021	B5 Bolting of End Tower CST	2.0d	13-May-16	15-May-16
CE2020	B5 Grouting base plates of Intermediate Tower CST	2.0d	14-May-16	16-May-16
CE2022	B5 Alignment and survey of End Tower CST	2.0d	15-May-16	17-May-16
CE2023	B5 Grouting base plates of End Tower CST	2.0d	17-May-16	19-May-16
CE2024	B5 Alignment of End and Intermediate Tower Guides CST	4.0d	19-May-16	23-May-16
CE2025	B5 Cladding of End Tower CST	3.0d	23-May-16	26-May-16
CE2016	B5 Tower Clear for Hemi on the bay (by Canmec)	0.0d		26-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.2.CBA Hoist Housing		93.0d	22-Feb-16	25-May-16
CE2038	B5 Receiving and unloading of Hoist House CBA	1.0d	22-Feb-16	23-Feb-16
CE2037	B5 WBS Summary CBA	93.0d	22-Feb-16	25-May-16
CE2039	B5 Wall erection on Hoist Bridge CBA	2.0d	23-Feb-16	25-Feb-16
CE2040	B5 Bolting of House Walls CBA	2.0d	25-Feb-16	27-Feb-16
CE2040	B5 Hoist Clear for Hemi on the ground (By Canmec)	0.0d		27-Feb-16
CE2040	B5 Hoist Clear for Canmec on the ground (By Hemi)	0.0d	12-Mar-16	
CE2041	B5 Roof erection CBA	1.0d	21-May-16	22-May-16
CE2042	B5 Bolting of House Roof CBA	2.0d	23-May-16	25-May-16
CE2042	B5 Hoist Housing Clear for Hemi on the bay (by Canmec)	0.0d		25-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.CPOS1 Upstream Stoplogs S1/S2/S3		5.0d	13-Jun-16	18-Jun-16
CE20440	B5 Installation of CPOS1/S2/S3 Stoplogs	2.0d	13-Jun-16	15-Jun-16
CE20430	B5 WBS Summary CPOS1/S2/S3	5.0d	13-Jun-16	18-Jun-16
CE20460	B5 Storage of CPOS1/S2/S3 Stoplogs	2.0d	16-Jun-16	18-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.CPOS4 Downstream Stoplogs S4		5.0d	17-May-16	22-May-16
CE20480	B5 Installation of CPOS4 Stoplogs	2.0d	17-May-16	19-May-16
CE20470	B5 WBS Summary CPOS4	5.0d	17-May-16	22-May-16
CE20500	B5 Storage of CPOS4 Stoplogs	1.0d	21-May-16	22-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.1 Installation of Electrical Equipments		83.5d	27-Feb-16	23-Jun-16
A6260	B5 Spillway - Electrical Equipment	50.0d	26-Apr-16	15-Jun-16



WBS Summary ◆ ◆ Milestone
Level of Effort
Actual Work
Remaining

Issued by: William Mavromatis			
Date	Revision	Checked	Approved
28-Oct-15	PRELIMINARY-Rev-1		
26-Nov-15	PRELIMINARY-Rev-2		
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.1.1 Gate		8.0d	23-May-16	02-Jun-16
A8120	B5 Roller Gate free for Hemi (by Canmec)	0.0d	23-May-16	
BL005	B5 Gates Electrical Installation	10.0d	23-May-16	02-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.1.4 Tower		37.0d	22-Apr-16	29-May-16
A8315	Tower Bay 5 Clear for Hemi on the ground (by Canmec)	0.0d	22-Apr-16	
A8320	Tower Bay 5 Electrical Installation on the ground	5.0d	22-Apr-16	27-Apr-16
A8325	Tower Bay 5 Clear for Canmec on the ground (by Hemi)	0.0d		27-Apr-16
A8330	Tower Bay 5 Clear for Hemi on the bay (by Canmec)	0.0d	26-May-16	
A8335	Tower Bay 5 Electrical Installation on the bay	3.0d	26-May-16	29-May-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.1.2 Hoist		70.0d	27-Feb-16	04-Jun-16
A8125	B5 Hoist Clear for Hemi on the ground (By Canmec)	0.0d	27-Feb-16	
A8110	Installation of Bay 5 MCC (Includes lowering into hoist house)	7.0d	28-Feb-16	05-Mar-16
A8115	Installation of Bay 5 Electrical Auxillaries (Includes lowering into hoist house)	7.0d	06-Mar-16	12-Mar-16
A8340	B5 Hoist Clear for Canmec on the ground (By Hemi)	0.0d		12-Mar-16
A8345	Hoist Housing Bay 5 Clear for Hemi on the bay (by Canmec)	0.0d	25-May-16	
A8350	Power and Control cabling Pulling in hoist House (Bay 1 Specific)	5.0d	25-May-16	30-May-16
A8130	Termination of Bay 5 Hoist house Electrical Equipment (Megger,Glanding,Marking etc))	5.0d	31-May-16	04-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.1.3 Testing		13.0d	10-Jun-16	23-Jun-16
A8140	B5 Electrical Testing	5.0d	10-Jun-16	15-Jun-16
A8305	B5 Electrical Commissioning	8.0d	15-Jun-16	23-Jun-16
A8310	B5 ready for Canmec Mechanical Dry Commissioining (By Hemi)	0.0d		23-Jun-16
CH0032---12.5.1.3.SW.Diversion Phase.Bay 5.3 Cable Pulling to Elec Building		3.0d	26-May-16	28-May-16
A8135	B5 Install Cable Tray & Cable Pulling to Spillway electrical building-after Mechanical Inst (Hoist) of Bay 5 complete	3.0d	26-May-16	28-May-16
CH0032---12.5.1.3.SW.Diversion Phase.7 Spillway electrical building		141.0d	04-Jan-16	23-May-16
CH0032---12.5.1.3.SW.Diversion Phase.7.1 Building & Auxillaries (Grimard)		121.0d	04-Jan-16	03-May-16
A6280	Building structural and architectual work	80.0d	04-Jan-16	23-Mar-16
A6290	Electrical auxiliaries 1 - (Cable Trays, 0.6 kV switch, 0.6 kV & 120 Vac power outlets)	40.0d	14-Feb-16	24-Mar-16
A6285	Mechanical auxiliaries 1- (Room heating units & workstations for CCTV display)	40.0d	26-Feb-16	05-Apr-16
A6295	Diesel generator	40.0d	03-Mar-16	11-Apr-16
A6300	Fuel storage system	40.0d	03-Mar-16	11-Apr-16
A6330	Building clear for Hemi for Heavy equipment Setting in (by Grimard)	0.0d		23-Mar-16
A6345	Cable trays ready for Hemi (by Grimard)	0.0d		24-Mar-16
A6425	Electrical auxiliaries (Exterior Lighting, Telecom Panel, CCTV Camera, Telephones and SACS)	40.0d	25-Mar-16	03-May-16
A6335	Building clear for Grimard after Heavy equipment Setting in (by Hemi)	0.0d		05-Apr-16
CH0032---12.5.1.3.SW.Diversion Phase.7.2 Process & Control (Hemi)		71.0d	14-Mar-16	23-May-16
A6225	Battery and DC System	17.0d	14-Mar-16	30-Mar-16
A6210	Cable Pulling, Cable Glands & termination and Grounding-Partial	60.0d	25-Mar-16	23-May-16
A6320	Building clear for Hemi for Heavy equipment Setting in (by Grimard)	0.0d	25-Mar-16	
A6350	Cable trays ready for Hemi (by Grimard)	0.0d	25-Mar-16	
A6220	Setting in Elec Building of (0.6kV Switchgear, 0.6kV MCC,0.6kV Busway, Pannelboards & Transformers)	7.0d	30-Mar-16	05-Apr-16
A6235	Load management system	10.0d	31-Mar-16	09-Apr-16
A6325	Building clear for Grimard after Heavy equipment Setting in (by Hemi)	0.0d		05-Apr-16
A6270	Installation of (0.6kV Switchgear, 0.6kV MCC,0.6kV Busway, Pannelboards & Transformers)	25.0d	06-Apr-16	30-Apr-16
A6340	25KV Feeder & Equipment (including trench and conduit)	10.0d	01-May-16	10-May-16
A6215	25 kV OHL supply and Fiber Optics	10.0d	11-May-16	20-May-16
CH0032---12.5.1.3.SW.1 Complete Diversion Phase Work		79.0d	30-Jun-16	17-Sep-16
CH0032---12.5.1.3.SW.1.1 Electrical Work		79.0d	30-Jun-16	17-Sep-16
CH0032---12.5.1.3.SW.1.1.6 Spillway Electrical Building		49.0d	30-Jun-16	18-Aug-16
A6435	Interior Lighting	5.0d	30-Jun-16	05-Jul-16
A6430	Mechanical auxiliaries 2 (Ventilation equipment, Exit Signs & Fire Detection)	34.0d	05-Jul-16	08-Aug-16
AC1000	Cable Pulling, Cable Glands & termination and Grounding-Full	10.0d	08-Aug-16	18-Aug-16
CH0032---12.5.1.3.SW.1.1.1 Bay 1 Elec		19.0d	30-Jun-16	19-Jul-16
A7795	Roller Gate Heating system (Heaters , Blowers , Safety Switch , JB's,Cabling, Conduit etc...).	3.0d	30-Jun-16	03-Jul-16
A7800	Roller Gate Heating system Power & Control Cable Pulling	3.0d	04-Jul-16	07-Jul-16
A7805	Roller Gate Heating system Power & Control Cable Termination	3.0d	07-Jul-16	10-Jul-16
A7810	Roller Gate Guide Heating system (Heaters , JB,s, Cabling, Conduit etc...)	3.0d	10-Jul-16	13-Jul-16
A7815	Roller Gate Guide Heating system Power & Control Cable Pulling	3.0d	13-Jul-16	16-Jul-16
A7820	Roller Gate Guide Heating system Power & Control Cable Termination	3.0d	16-Jul-16	19-Jul-16
CH0032---12.5.1.3.SW.1.1.2 Bay 2 Elec		18.0d	16-Jul-16	03-Aug-16
A7865	Roller Gate Heating system (Heaters , Blowers , Safety Switch , JB's,Cabling, Conduit etc...)	3.0d	16-Jul-16	19-Jul-16
A7870	Roller Gate Heating system Power & Control Cable Pulling	3.0d	19-Jul-16	22-Jul-16
A7875	Roller Gate Heating system Power & Control Cable Termination	3.0d	22-Jul-16	25-Jul-16
A7880	Roller Gate Guide Heating system (Heaters , JB,s, Cabling, Conduit etc...)	3.0d	25-Jul-16	28-Jul-16
A7885	Roller Gate Guide Heating system Power & Control Cable Pulling	3.0d	28-Jul-16	31-Jul-16
A7890	Roller Gate Guide Heating system Power & Control Cable Termination	3.0d	31-Jul-16	03-Aug-16

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26-Nov-15	PRELIMINARY-Rev-2		
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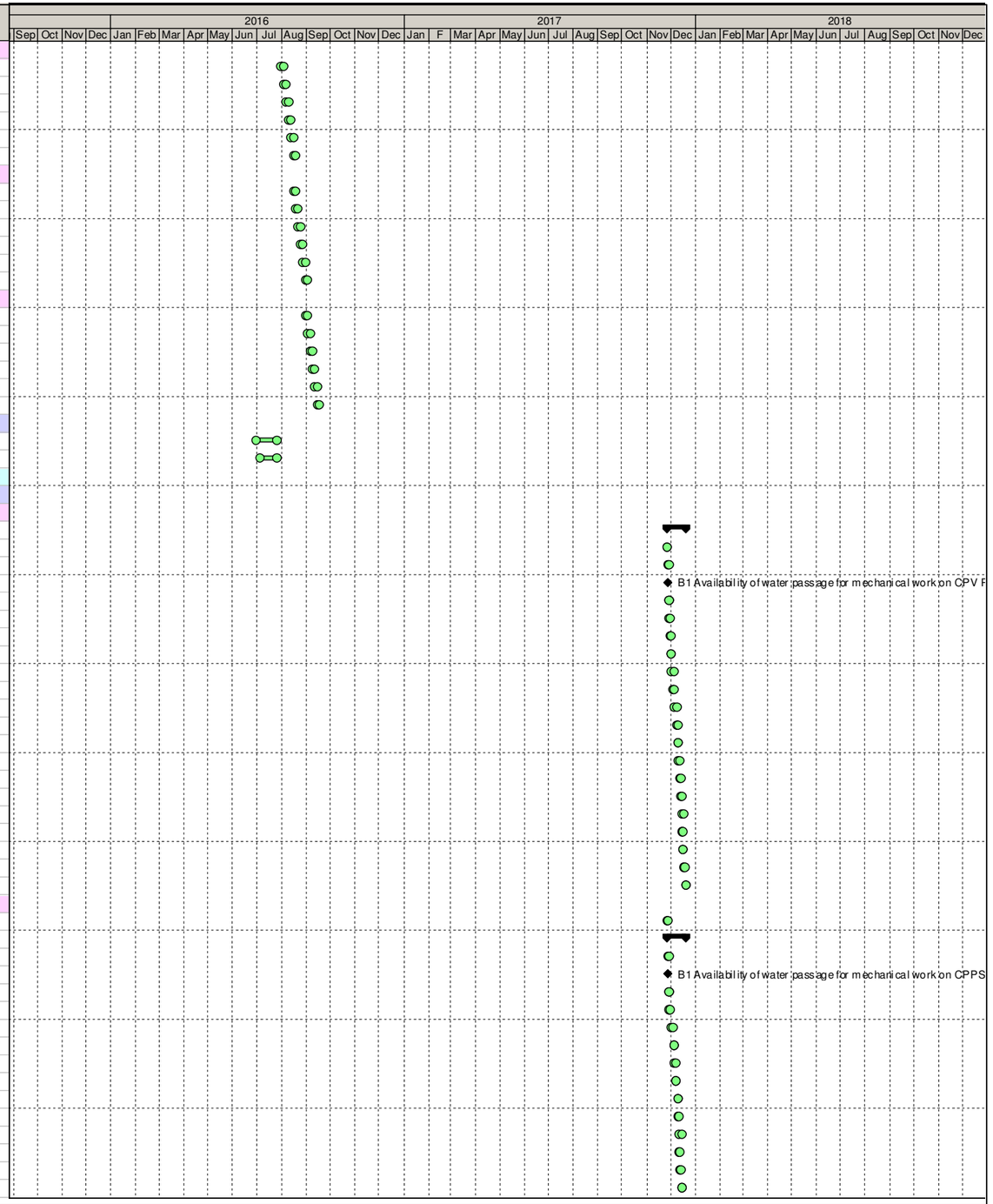
Activity ID	Activity Name	At Completion Duration	Start	Finish
CH0032---12.5.1.3.SW.1.1.3 Bay 3 Elec		18.0d	31-Jul-16	18-Aug-16
A7935	Roller Gate Heating system (Heaters , Blowers , Safety Switch , JB's,Cabling, Conduit etc...)	3.0d	31-Jul-16	03-Aug-16
A7940	Roller Gate Heating system Power & Control Cable Pulling	3.0d	03-Aug-16	06-Aug-16
A7945	Roller Gate Heating system Power & Control Cable Termination	3.0d	06-Aug-16	09-Aug-16
A7950	Roller Gate Guide Heating system (Heaters , JB,s, Cabling, Conduit etc...)	3.0d	09-Aug-16	12-Aug-16
A7955	Roller Gate Guide Heating system Power & Control Cable Pulling	3.0d	12-Aug-16	15-Aug-16
A7960	Roller Gate Guide Heating system Power & Control Cable Termination	3.0d	15-Aug-16	18-Aug-16
CH0032---12.5.1.3.SW.1.1.4 Bay 4 Elec		18.0d	15-Aug-16	02-Sep-16
A8005	Roller Gate Heating system (Heaters , Blowers , Safety Switch , JB's,Cabling, Conduit etc...)	3.0d	15-Aug-16	18-Aug-16
A8010	Roller Gate Heating system Power & Control Cable Pulling	3.0d	18-Aug-16	21-Aug-16
A8015	Roller Gate Heating system Power & Control Cable Termination	3.0d	21-Aug-16	24-Aug-16
A8020	Roller Gate Guide Heating system (Heaters , JB,s, Cabling, Conduit etc...)	3.0d	24-Aug-16	27-Aug-16
A8025	Roller Gate Guide Heating system Power & Control Cable Pulling	3.0d	27-Aug-16	30-Aug-16
A8030	Roller Gate Guide Heating system Power & Control Cable Termination	3.0d	30-Aug-16	02-Sep-16
CH0032---12.5.1.3.SW.1.1.5 Bay 5 Elec		18.0d	30-Aug-16	17-Sep-16
A8075	Roller Gate Heating system (Heaters , Blowers , Safety Switch , JB's,Cabling, Conduit etc...)	3.0d	30-Aug-16	02-Sep-16
A8080	Roller Gate Heating system Power & Control Cable Pulling	3.0d	02-Sep-16	05-Sep-16
A8085	Roller Gate Heating system Power & Control Cable Termination	3.0d	05-Sep-16	08-Sep-16
A8090	Roller Gate Guide Heating system (Heaters , JB,s, Cabling, Conduit etc...)	3.0d	08-Sep-16	11-Sep-16
A8095	Roller Gate Guide Heating system Power & Control Cable Pulling	3.0d	11-Sep-16	14-Sep-16
A8100	Roller Gate Guide Heating system Power & Control Cable Termination	3.0d	14-Sep-16	17-Sep-16
CH0032---12.5.1.3.SW.1.3 TRCM		25.0d	30-Jun-16	25-Jul-16
A6000	Installation TRCM	25.0d	30-Jun-16	25-Jul-16
A6265	Installation of Power Supply for Bridge Crane and TRCM	20.0d	05-Jul-16	25-Jul-16
CH0032---12.5.1.3.SW.Operation Phase Rollway Modifications		819.3d	16-Sep-16	30-Dec-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 1 Bay 1		445.6d	16-Sep-16	21-Dec-17
CH0032---12.5.1.3.SW.Operation Phase.Bay 1.CPV Roller Gate Permanent Sill Beam		23.5d	26-Nov-17	19-Dec-17
CE20510	B1 WBS Summary CPV Permanent Sill Beam	23.5d	26-Nov-17	19-Dec-17
CE20520	B1 Receiving & unloading of CPV Permanent Sill Beam	0.5d	26-Nov-17	26-Nov-17
CE20540	B1 Scaffold installation for CPV Permanent Sill Beam	1.0d	27-Nov-17	28-Nov-17
CE20530	B1 Availability of water passage for mechanical work on CPV Permanent Sill Beam	0.0d	27-Nov-17	
CE20550	B1 Erection of CPV Permanent Sill Beam	0.5d	28-Nov-17	28-Nov-17
CE20560	B1 Shelter installation for CPV Permanent Sill Beam	1.0d	29-Nov-17	30-Nov-17
CE20570	B1 Bolting CPV Permanent Sill Beam	1.0d	30-Nov-17	01-Dec-17
CE20580	B1 Survey of CPV Permanent Sill Beam	0.5d	01-Dec-17	01-Dec-17
CE20590	B1 Alignment of CPV Permanent Sill beam	2.5d	01-Dec-17	04-Dec-17
CE20600	B1 Cutting of CPV Transition Plates	2.0d	03-Dec-17	05-Dec-17
CE20610	B1 Installation of CPV Transition Plates	3.0d	05-Dec-17	08-Dec-17
CE20620	B1 Pre-pour measurements of CPV Permanent Sill beam	0.5d	08-Dec-17	09-Dec-17
CE20630	B1 Pouring of CPV Permanent Sill beam	0.5d	09-Dec-17	09-Dec-17
CE20640	B1 Post-pour welding of CPV Permanent Sill beam Transition Plates	3.0d	09-Dec-17	12-Dec-17
CE20650	B1 Injection of Transition Plates	1.0d	12-Dec-17	13-Dec-17
CE20660	B1 Post-injection welding of CPV Permanent Sill beam Transition Plates	1.0d	13-Dec-17	14-Dec-17
CE20670	B1 Paint touch-ups of CPV Permanent Sill beam	3.0d	14-Dec-17	17-Dec-17
CE20680	B1 Rectification of CPV Permanent Sill beam	1.0d	14-Dec-17	15-Dec-17
CE20690	B1 Final measurements of CPV Permanent Sill beams	1.0d	15-Dec-17	16-Dec-17
CE20700	B1 Shelter removal for CPV Permanent Sill beam	0.5d	17-Dec-17	18-Dec-17
CE20710	B1 Scaffold dismantle for CPV Permanent Sill beam	0.5d	19-Dec-17	19-Dec-17
CH0032---12.5.1.3.SW.Operation Phase.Bay 1.CPPS1 Upstream Permanent Stoplogs Sill Beam		23.0d	26-Nov-17	19-Dec-17
CE20730	B1 Receiving & unloading of CPPS1 Sill Beam	0.5d	26-Nov-17	27-Nov-17
CE20720	B1 WBS Summary CPPS1 Sill Beam	23.0d	26-Nov-17	19-Dec-17
CE20750	B1 Scaffold installation for CPPS1 Sill Beam	1.0d	27-Nov-17	28-Nov-17
CE20740	B1 Availability of water passage for mechanical work on CPPS1 Sill Beam	0.0d	27-Nov-17	
CE20760	B1 Erection of CPPS1 Sill Beam	0.5d	28-Nov-17	29-Nov-17
CE20770	B1 Shelter installation for CPPS1 Sill Beam	1.0d	29-Nov-17	30-Nov-17
CE20780	B1 Bolting CPPS1 Sill Beam	2.0d	01-Dec-17	03-Dec-17
CE20790	B1 Survey of CPPS1 Sill Beam	0.5d	04-Dec-17	04-Dec-17
CE20800	B1 Alignment of CPPS1 Sill beam	2.5d	04-Dec-17	07-Dec-17
CE20810	B1 Pre-pour measurements of CPPS1 Sill beam	0.5d	07-Dec-17	07-Dec-17
CE20820	B1 Pouring of CPPS1 Sill beam	0.5d	09-Dec-17	10-Dec-17
CE20830	B1 Post-pour welding of CPPS1 Sill beam	1.0d	10-Dec-17	11-Dec-17
CE20840	B1 Paint touch-ups of CPPS1 Sill beam	3.0d	11-Dec-17	14-Dec-17
CE20850	B1 Rectification of CPPS1 Sill beam	1.0d	11-Dec-17	12-Dec-17
CE20860	B1 Final measurements of CPPS1 Sill beams	1.0d	12-Dec-17	13-Dec-17
CE20870	B1 Shelter removal for CPPS1 Sill beam	0.5d	14-Dec-17	14-Dec-17



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Activity ID	Activity Name	At Completion Duration	Start	Finish
CE20880	B1 Scaffold dismantle for CPPS1 Sill beam	0.5d	19-Dec-17	19-Dec-17
CH0032---12.5.1.3.SW.Operation Phase.Bay 1.CPO Stoplogs S1, S2, S3 and S4		445.6d	16-Sep-16	21-Dec-17
CE20910	B1 Installation of CPOS1/S2/S3 Stoplogs	2.0d	16-Sep-16	17-Sep-16
CE20900	B1 WBS Summary CPO Stoplogs	445.6d	16-Sep-16	21-Dec-17
CE20920	B1 Installation of CPOS4 Stoplogs	1.1d	18-Sep-16	19-Sep-16
CE20940	B1 Storage of CPOS1/S2/S3 Stoplogs	1.0d	19-Dec-17	20-Dec-17
CE20950	B1 Storage of CPOS4 Stoplogs	1.0d	20-Dec-17	21-Dec-17
CH0032---12.5.1.3.SW.Operation Phase.Bay 2 Bay 2		177.2d	05-Jul-18	29-Dec-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 2.CPV Roller Gate Permanent Sill Beam		25.5d	02-Dec-18	27-Dec-18
CE20970	B2 Receiving & unloading of CPV Permanent Sill Beam	0.5d	02-Dec-18	02-Dec-18
CE20960	B2 WBS Summary CPV Permanent Sill Beam	25.5d	02-Dec-18	27-Dec-18
CE20990	B2 Scaffold installation for CPV Permanent Sill Beam	1.0d	04-Dec-18	05-Dec-18
CE20980	B2 Availability of water passage for mechanical work on CPV Permanent Sill Beam	0.0d	04-Dec-18	
CE21000	B2 Erection of CPV Permanent Sill Beam	0.5d	06-Dec-18	06-Dec-18
CE21010	B2 Shelter installation for CPV Permanent Sill Beam	1.0d	07-Dec-18	08-Dec-18
CE21020	B2 Bolting CPV Permanent Sill Beam	1.0d	08-Dec-18	09-Dec-18
CE21030	B2 Survey of CPV Permanent Sill Beam	0.5d	09-Dec-18	09-Dec-18
CE21040	B2 Alignment of CPV Permanent Sill beam	2.5d	09-Dec-18	12-Dec-18
CE21050	B2 Cutting of CPV Transition Plates	2.0d	11-Dec-18	13-Dec-18
CE21060	B2 Installation of CPV Transition Plates	3.0d	13-Dec-18	16-Dec-18
CE21070	B2 Pre-pour measurements of CPV Permanent Sill beam	0.5d	16-Dec-18	17-Dec-18
CE21080	B2 Pouring of CPV Permanent Sill beam	0.5d	17-Dec-18	17-Dec-18
CE21090	B2 Post-pour welding of CPV Permanent Sill beam Transition Plates	3.0d	17-Dec-18	20-Dec-18
CE21100	B2 Injection of Transition Plates	1.0d	20-Dec-18	21-Dec-18
CE21110	B2 Post-injection welding of CPV Permanent Sill beam Transition Plates	1.0d	21-Dec-18	22-Dec-18
CE21120	B2 Paint touch-ups of CPV Permanent Sill beam	3.0d	22-Dec-18	25-Dec-18
CE21130	B2 Rectification of CPV Permanent Sill beam	1.0d	22-Dec-18	23-Dec-18
CE21140	B2 Final measurements of CPV Permanent Sill beams	1.0d	23-Dec-18	24-Dec-18
CE21150	B2 Shelter removal for CPV Permanent Sill beam	0.5d	25-Dec-18	26-Dec-18
CE21160	B2 Scaffold dismantle for CPV Permanent Sill beam	0.5d	27-Dec-18	27-Dec-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 2.CPO Stoplogs S1, S2, S3 and S4		177.2d	05-Jul-18	29-Dec-18
CE21360	B2 Installation of CPOS1/S2/S3 Stoplogs	2.0d	05-Jul-18	07-Jul-18
CE21350	B2 WBS Summary CPO Stoplogs	177.2d	05-Jul-18	29-Dec-18
CE21370	B2 Installation of CPOS4 Stoplogs	0.5d	07-Jul-18	07-Jul-18
CE21390	B2 Storage of CPOS1/S2/S3 Stoplogs	1.0d	27-Dec-18	28-Dec-18
CE21400	B2 Storage of CPOS4 Stoplogs	0.5d	28-Dec-18	29-Dec-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 2.CPPS1 Upstream Permanent Stoplogs Sill Beam		25.0d	02-Dec-18	27-Dec-18
CE21180	B2 Receiving & unloading of CPPS1 Sill Beam	0.5d	02-Dec-18	03-Dec-18
CE21170	B2 WBS Summary CPPS1 Sill Beam	25.0d	02-Dec-18	27-Dec-18
CE21200	B2 Scaffold installation for CPPS1 Sill Beam	1.0d	04-Dec-18	05-Dec-18
CE21190	B2 Availability of water passage for mechanical work on CPPS1 Sill Beam	0.0d	04-Dec-18	
CE21210	B2 Erection of CPPS1 Sill Beam	0.5d	06-Dec-18	07-Dec-18
CE21220	B2 Shelter installation for CPPS1 Sill Beam	1.0d	09-Dec-18	10-Dec-18
CE21230	B2 Bolting CPPS1 Sill Beam	2.0d	10-Dec-18	12-Dec-18
CE21240	B2 Survey of CPPS1 Sill Beam	0.5d	12-Dec-18	12-Dec-18
CE21250	B2 Alignment of CPPS1 Sill beam	2.5d	12-Dec-18	15-Dec-18
CE21260	B2 Pre-pour measurements of CPPS1 Sill beam	0.5d	15-Dec-18	15-Dec-18
CE21270	B2 Pouring of CPPS1 Sill beam	0.5d	17-Dec-18	18-Dec-18
CE21280	B2 Post-pour welding of CPPS1 Sill beam	1.0d	18-Dec-18	19-Dec-18
CE21290	B2 Paint touch-ups of CPPS1 Sill beam	3.0d	19-Dec-18	22-Dec-18
CE21300	B2 Rectification of CPPS1 Sill beam	1.0d	19-Dec-18	20-Dec-18
CE21310	B2 Final measurements of CPPS1 Sill beams	1.0d	20-Dec-18	21-Dec-18
CE21320	B2 Shelter removal for CPPS1 Sill beam	0.5d	22-Dec-18	22-Dec-18
CE21330	B2 Scaffold dismantle for CPPS1 Sill beam	0.5d	27-Dec-18	27-Dec-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 3 Bay 3		170.0d	13-Jan-18	02-Jul-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 3.CPV Roller Gate Permanent Sill Beam		24.0d	07-Jun-18	01-Jul-18
CE21420	B3 Receiving & unloading of CPV Permanent Sill Beam	0.5d	07-Jun-18	07-Jun-18
CE21410	B3 WBS Summary CPV Permanent Sill Beam	24.0d	07-Jun-18	01-Jul-18
CE21440	B3 Scaffold installation for CPV Permanent Sill Beam	1.0d	09-Jun-18	10-Jun-18
CE21430	B3 Availability of water passage for mechanical work on CPV Permanent Sill Beam	0.0d	09-Jun-18	
CE21450	B3 Erection of CPV Permanent Sill Beam	0.5d	11-Jun-18	11-Jun-18
CE21460	B3 Shelter installation for CPV Permanent Sill Beam	1.0d	11-Jun-18	12-Jun-18
CE21470	B3 Bolting CPV Permanent Sill Beam	1.0d	12-Jun-18	13-Jun-18
CE21480	B3 Survey of CPV Permanent Sill Beam	0.5d	13-Jun-18	14-Jun-18
CE21490	B3 Alignment of CPV Permanent Sill beam	2.5d	14-Jun-18	16-Jun-18

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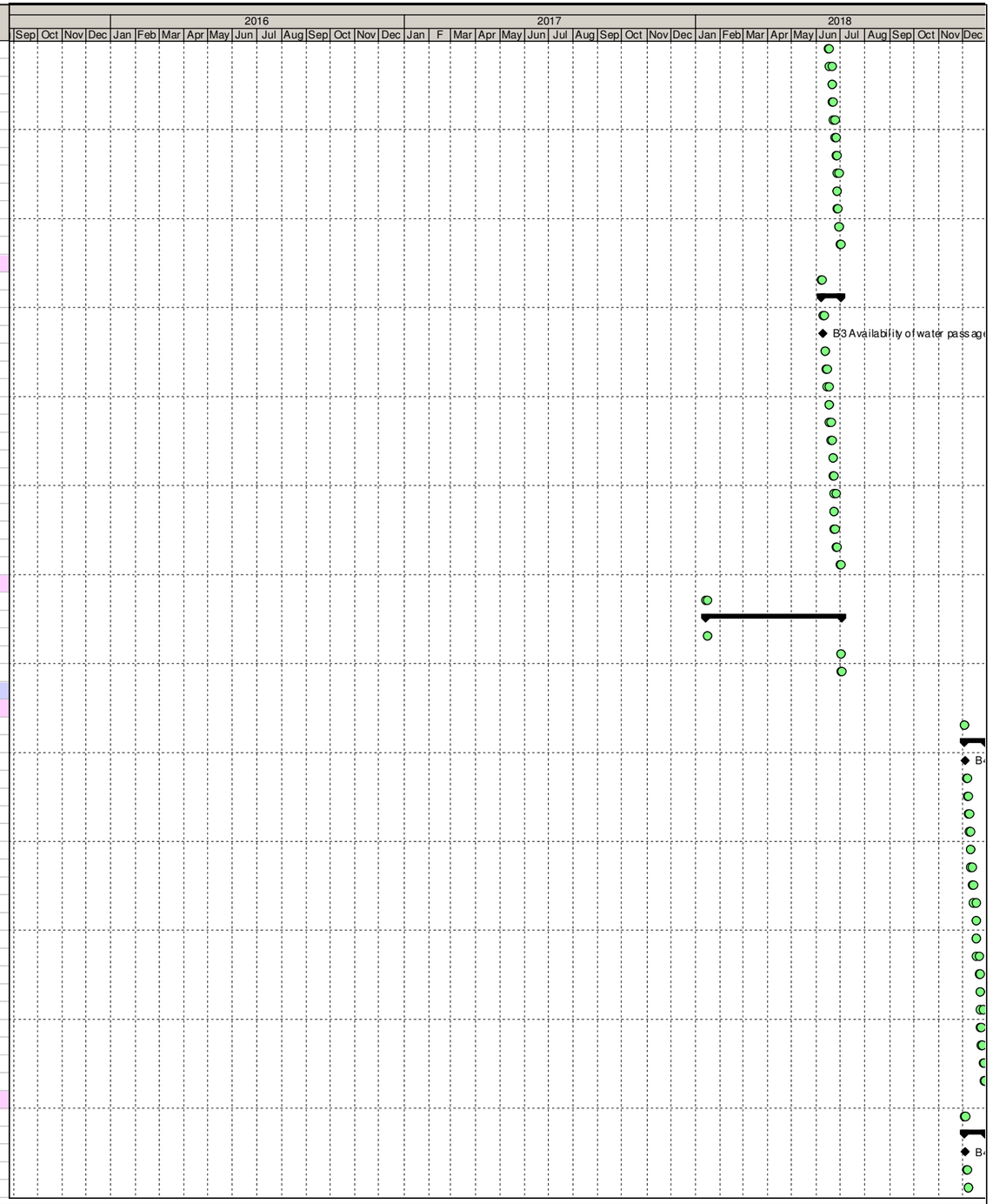
28-Oct-15	PRELIMINARY-Rev-1		
26-Nov-15	PRELIMINARY-Rev-2		
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
CE21500	B3 Cutting of CPV Transition Plates	2.0d	15-Jun-18	17-Jun-18
CE21510	B3 Installation of CPV Transition Plates	3.0d	17-Jun-18	20-Jun-18
CE21520	B3 Pre-pour measurements of CPV Permanent Sill beam	0.5d	20-Jun-18	20-Jun-18
CE21530	B3 Pouring of CPV Permanent Sill beam	0.5d	20-Jun-18	21-Jun-18
CE21540	B3 Post-pour welding of CPV Permanent Sill beam Transition Plates	3.0d	21-Jun-18	24-Jun-18
CE21550	B3 Injection of Transition Plates	1.0d	24-Jun-18	25-Jun-18
CE21560	B3 Post-injection welding of CPV Permanent Sill beam Transition Plates	1.0d	25-Jun-18	26-Jun-18
CE21570	B3 Paint touch-ups of CPV Permanent Sill beam	3.0d	26-Jun-18	29-Jun-18
CE21580	B3 Rectification of CPV Permanent Sill beam	1.0d	26-Jun-18	27-Jun-18
CE21590	B3 Final measurements of CPV Permanent Sill beams	1.0d	27-Jun-18	28-Jun-18
CE21600	B3 Shelter removal for CPV Permanent Sill beam	0.5d	29-Jun-18	29-Jun-18
CE21610	B3 Scaffold dismantle for CPV Permanent Sill beam	0.5d	30-Jun-18	01-Jul-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 3.CPPS1 Upstream Permanent Stoplogs Sill Beam		23.5d	07-Jun-18	01-Jul-18
CE21630	B3 Receiving & unloading of CPPS1 Sill Beam	0.5d	07-Jun-18	08-Jun-18
CE21620	B3 WBS Summary CPPS1 Sill Beam	23.5d	07-Jun-18	01-Jul-18
CE21650	B3 Scaffold installation for CPPS1 Sill Beam	1.0d	09-Jun-18	10-Jun-18
CE21640	B3 Availability of water passage for mechanical work on CPPS1 Sill Beam	0.0d	09-Jun-18	
CE21660	B3 Erection of CPPS1 Sill Beam	0.5d	11-Jun-18	12-Jun-18
CE21670	B3 Shelter installation for CPPS1 Sill Beam	1.0d	13-Jun-18	14-Jun-18
CE21680	B3 Bolting CPPS1 Sill Beam	2.0d	14-Jun-18	16-Jun-18
CE21690	B3 Survey of CPPS1 Sill Beam	0.5d	16-Jun-18	17-Jun-18
CE21700	B3 Alignment of CPPS1 Sill beam	2.5d	17-Jun-18	19-Jun-18
CE21710	B3 Pre-pour measurements of CPPS1 Sill beam	0.5d	19-Jun-18	20-Jun-18
CE21720	B3 Pouring of CPPS1 Sill beam	0.5d	21-Jun-18	21-Jun-18
CE21730	B3 Post-pour welding of CPPS1 Sill beam	1.0d	21-Jun-18	22-Jun-18
CE21740	B3 Paint touch-ups of CPPS1 Sill beam	3.0d	22-Jun-18	25-Jun-18
CE21750	B3 Rectification of CPPS1 Sill beam	1.0d	22-Jun-18	23-Jun-18
CE21760	B3 Final measurements of CPPS1 Sill beams	1.0d	23-Jun-18	24-Jun-18
CE21770	B3 Shelter removal for CPPS1 Sill beam	0.5d	25-Jun-18	26-Jun-18
CE21780	B3 Scaffold dismantle for CPPS1 Sill beam	0.5d	30-Jun-18	01-Jul-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 3.CPO Stoplogs S1, S2, S3 and S4		170.0d	13-Jan-18	02-Jul-18
CE21810	B3 Installation of CPOS1/S2/S3 Stoplogs	2.0d	13-Jan-18	15-Jan-18
CE21800	B3 WBS Summary CPO Stoplogs	170.0d	13-Jan-18	02-Jul-18
CE21820	B3 Installation of CPOS4 Stoplogs	0.5d	15-Jan-18	16-Jan-18
CE21840	B3 Storage of CPOS1/S2/S3 Stoplogs	1.0d	01-Jul-18	02-Jul-18
CE21850	B3 Storage of CPOS4 Stoplogs	0.5d	02-Jul-18	02-Jul-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 4 Bay 4		175.7d	07-Jul-18	30-Dec-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 4.CPV Roller Gate Permanent Sill Beam		25.5d	03-Dec-18	28-Dec-18
CE21870	B4 Receiving & unloading of CPV Permanent Sill Beam	0.5d	03-Dec-18	03-Dec-18
CE21860	B4 WBS Summary CPV Permanent Sill Beam	25.5d	03-Dec-18	28-Dec-18
CE21880	B4 Availability of water passage for mechanical work on CPV Permanent Sill Beam	0.0d	04-Dec-18	
CE21890	B4 Scaffold installation for CPV Permanent Sill Beam	1.0d	05-Dec-18	06-Dec-18
CE21900	B4 Erection of CPV Permanent Sill Beam	0.5d	07-Dec-18	07-Dec-18
CE21910	B4 Shelter installation for CPV Permanent Sill Beam	1.0d	08-Dec-18	09-Dec-18
CE21920	B4 Bolting CPV Permanent Sill Beam	1.0d	09-Dec-18	10-Dec-18
CE21930	B4 Survey of CPV Permanent Sill Beam	0.5d	10-Dec-18	10-Dec-18
CE21940	B4 Alignment of CPV Permanent Sill beam	2.5d	10-Dec-18	13-Dec-18
CE21950	B4 Cutting of CPV Transition Plates	2.0d	12-Dec-18	14-Dec-18
CE21960	B4 Installation of CPV Transition Plates	3.0d	14-Dec-18	17-Dec-18
CE21970	B4 Pre-pour measurements of CPV Permanent Sill beam	0.5d	17-Dec-18	18-Dec-18
CE21980	B4 Pouring of CPV Permanent Sill beam	0.5d	18-Dec-18	18-Dec-18
CE21990	B4 Post-pour welding of CPV Permanent Sill beam Transition Plates	3.0d	18-Dec-18	21-Dec-18
CE22000	B4 Injection of Transition Plates	1.0d	21-Dec-18	22-Dec-18
CE22010	B4 Post-injection welding of CPV Permanent Sill beam Transition Plates	1.0d	22-Dec-18	23-Dec-18
CE22020	B4 Paint touch-ups of CPV Permanent Sill beam	3.0d	23-Dec-18	26-Dec-18
CE22030	B4 Rectification of CPV Permanent Sill beam	1.0d	23-Dec-18	24-Dec-18
CE22040	B4 Final measurements of CPV Permanent Sill beams	1.0d	24-Dec-18	25-Dec-18
CE22050	B4 Shelter removal for CPV Permanent Sill beam	0.5d	26-Dec-18	27-Dec-18
CE22060	B4 Scaffold dismantle for CPV Permanent Sill beam	0.5d	28-Dec-18	28-Dec-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 4.CPPS1 Upstream Permanent Stoplogs Sill Beam		25.0d	03-Dec-18	28-Dec-18
CE22080	B4 Receiving & unloading of CPPS1 Sill Beam	0.5d	03-Dec-18	04-Dec-18
CE22070	B4 WBS Summary CPPS1 Sill Beam	25.0d	03-Dec-18	28-Dec-18
CE22090	B4 Availability of water passage for mechanical work on CPPS1 Sill Beam	0.0d	04-Dec-18	
CE22100	B4 Scaffold installation for CPPS1 Sill Beam	1.0d	05-Dec-18	06-Dec-18
CE22110	B4 Erection of CPPS1 Sill Beam	0.5d	07-Dec-18	08-Dec-18

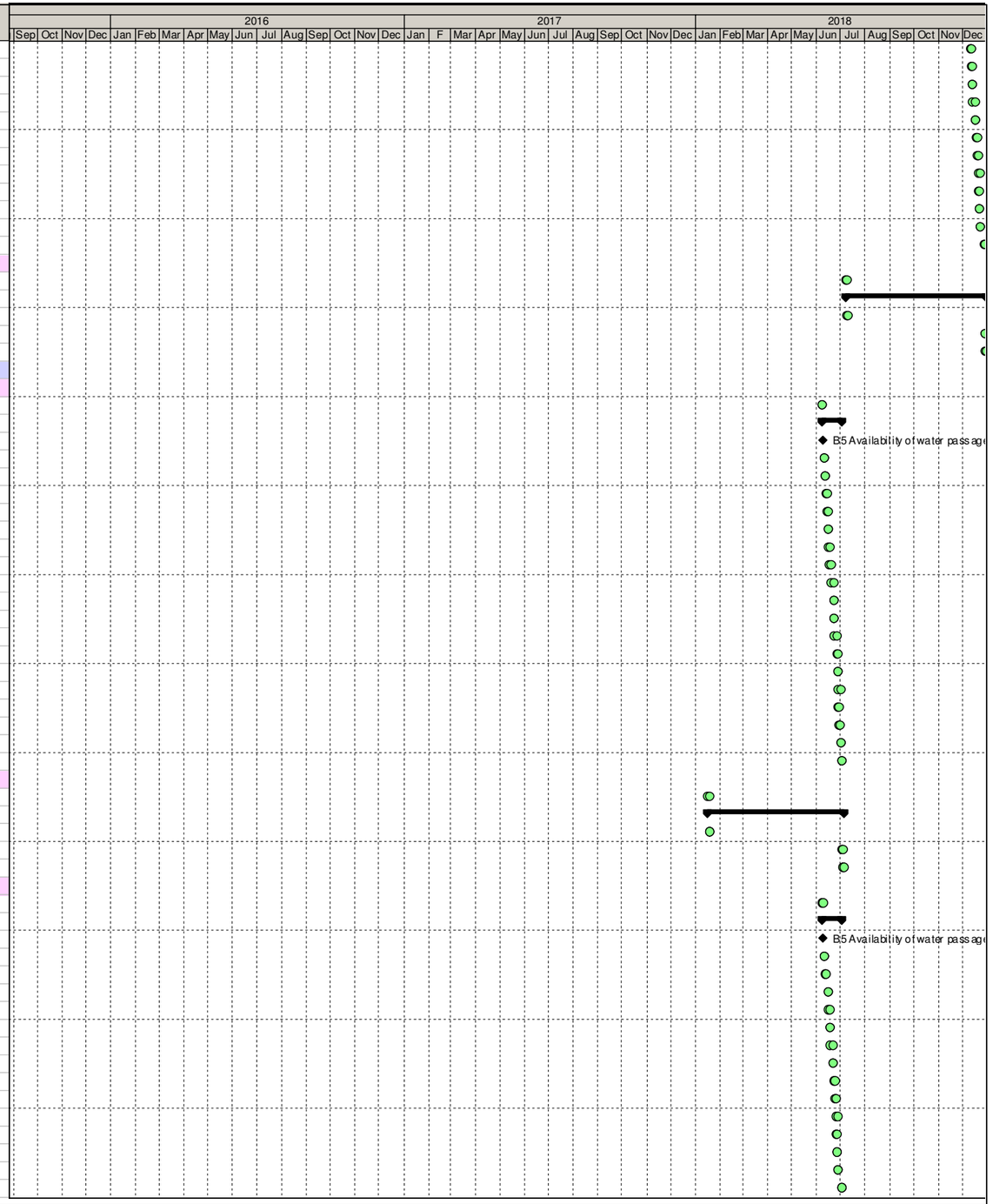


WBS Summary ◆ ◆ Milestone
Level of Effort
Actual Work
Remaining

Issued by: William Mavromatis

Date	Revision	Checked	Approved
28-Oct-15	PRELIMINARY-Rev-1		
26-Nov-15	PRELIMINARY-Rev-2		
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
CE22120	B4 Shelter installation for CPPS1 Sill Beam	1.0d	10-Dec-18	11-Dec-18
CE22130	B4 Bolting CPPS1 Sill Beam	2.0d	11-Dec-18	13-Dec-18
CE22140	B4 Survey of CPPS1 Sill Beam	0.5d	13-Dec-18	13-Dec-18
CE22150	B4 Alignment of CPPS1 Sill beam	2.5d	13-Dec-18	16-Dec-18
CE22160	B4 Pre-pour measurements of CPPS1 Sill beam	0.5d	16-Dec-18	16-Dec-18
CE22170	B4 Pouring of CPPS1 Sill beam	0.5d	18-Dec-18	19-Dec-18
CE22180	B4 Post-pour welding of CPPS1 Sill beam	1.0d	19-Dec-18	20-Dec-18
CE22190	B4 Paint touch-ups of CPPS1 Sill beam	3.0d	20-Dec-18	23-Dec-18
CE22200	B4 Rectification of CPPS1 Sill beam	1.0d	20-Dec-18	21-Dec-18
CE22210	B4 Final measurements of CPPS1 Sill beams	1.0d	21-Dec-18	22-Dec-18
CE22220	B4 Shelter removal for CPPS1 Sill beam	0.5d	23-Dec-18	23-Dec-18
CE22230	B4 Scaffold dismantle for CPPS1 Sill beam	0.5d	28-Dec-18	28-Dec-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 4.CPO Stoplogs S1, S2, S3 and S4		175.7d	07-Jul-18	30-Dec-18
CE22260	B4 Installation of CPOS1/S2/S3 Stoplogs	2.0d	07-Jul-18	09-Jul-18
CE22250	B4 WBS Summary CPO Stoplogs	175.7d	07-Jul-18	30-Dec-18
CE22270	B4 Installation of CPOS4 Stoplogs	0.5d	09-Jul-18	10-Jul-18
CE22290	B4 Storage of CPOS1/S2/S3 Stoplogs	1.0d	28-Dec-18	29-Dec-18
CE22300	B4 Storage of CPOS4 Stoplogs	0.5d	29-Dec-18	30-Dec-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 5 Bay 5		170.0d	16-Jan-18	05-Jul-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 5.CPV Roller Gate Permanent Sill Beam		25.5d	08-Jun-18	03-Jul-18
CE22320	B5 Receiving & unloading of CPV Permanent Sill Beam	0.5d	08-Jun-18	08-Jun-18
CE22310	B5 WBS Summary CPV Permanent Sill Beam	25.5d	08-Jun-18	03-Jul-18
CE22330	B5 Availability of water passage for mechanical work on CPV Permanent Sill Beam	0.0d	09-Jun-18	
CE22340	B5 Scaffold installation for CPV Permanent Sill Beam	1.0d	10-Jun-18	11-Jun-18
CE22350	B5 Erection of CPV Permanent Sill Beam	0.5d	12-Jun-18	12-Jun-18
CE22360	B5 Shelter installation for CPV Permanent Sill Beam	1.0d	13-Jun-18	14-Jun-18
CE22370	B5 Bolting CPV Permanent Sill Beam	1.0d	14-Jun-18	15-Jun-18
CE22380	B5 Survey of CPV Permanent Sill Beam	0.5d	15-Jun-18	15-Jun-18
CE22390	B5 Alignment of CPV Permanent Sill beam	2.5d	15-Jun-18	18-Jun-18
CE22400	B5 Cutting of CPV Transition Plates	2.0d	17-Jun-18	19-Jun-18
CE22410	B5 Installation of CPV Transition Plates	3.0d	19-Jun-18	22-Jun-18
CE22420	B5 Pre-pour measurements of CPV Permanent Sill beam	0.5d	22-Jun-18	23-Jun-18
CE22430	B5 Pouring of CPV Permanent Sill beam	0.5d	23-Jun-18	23-Jun-18
CE22440	B5 Post-pour welding of CPV Permanent Sill beam Transition Plates	3.0d	23-Jun-18	26-Jun-18
CE22450	B5 Injection of Transition Plates	1.0d	26-Jun-18	27-Jun-18
CE22460	B5 Post-injection welding of CPV Permanent Sill beam Transition Plates	1.0d	27-Jun-18	28-Jun-18
CE22470	B5 Paint touch-ups of CPV Permanent Sill beam	3.0d	28-Jun-18	01-Jul-18
CE22480	B5 Rectification of CPV Permanent Sill beam	1.0d	28-Jun-18	29-Jun-18
CE22490	B5 Final measurements of CPV Permanent Sill beams	1.0d	29-Jun-18	30-Jun-18
CE22500	B5 Shelter removal for CPV Permanent Sill beam	0.5d	01-Jul-18	02-Jul-18
CE22510	B5 Scaffold dismantle for CPV Permanent Sill beam	0.5d	03-Jul-18	03-Jul-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 5.CPO Stoplogs S1, S2, S3 and S4		170.0d	16-Jan-18	05-Jul-18
CE22710	B5 Installation of CPOS1/S2/S3 Stoplogs	2.0d	16-Jan-18	18-Jan-18
CE22700	B5 WBS Summary CPO Stoplogs	170.0d	16-Jan-18	05-Jul-18
CE22720	B5 Installation of CPOS4 Stoplogs	0.5d	18-Jan-18	18-Jan-18
CE22740	B5 Storage of CPOS1/S2/S3 Stoplogs	1.0d	03-Jul-18	04-Jul-18
CE22750	B5 Storage of CPOS4 Stoplogs	0.5d	04-Jul-18	05-Jul-18
CH0032---12.5.1.3.SW.Operation Phase.Bay 5.CPPS1 Upstream Permanent Stoplogs Sill Beam		25.0d	08-Jun-18	03-Jul-18
CE22530	B5 Receiving & unloading of CPPS1 Sill Beam	0.5d	08-Jun-18	09-Jun-18
CE22520	B5 WBS Summary CPPS1 Sill Beam	25.0d	08-Jun-18	03-Jul-18
CE22540	B5 Availability of water passage for mechanical work on CPPS1 Sill Beam	0.0d	09-Jun-18	
CE22550	B5 Scaffold installation for CPPS1 Sill Beam	1.0d	10-Jun-18	11-Jun-18
CE22560	B5 Erection of CPPS1 Sill Beam	0.5d	12-Jun-18	13-Jun-18
CE22570	B5 Shelter installation for CPPS1 Sill Beam	1.0d	15-Jun-18	16-Jun-18
CE22580	B5 Bolting CPPS1 Sill Beam	2.0d	16-Jun-18	18-Jun-18
CE22590	B5 Survey of CPPS1 Sill Beam	0.5d	18-Jun-18	18-Jun-18
CE22600	B5 Alignment of CPPS1 Sill beam	2.5d	18-Jun-18	21-Jun-18
CE22610	B5 Pre-pour measurements of CPPS1 Sill beam	0.5d	21-Jun-18	21-Jun-18
CE22620	B5 Pouring of CPPS1 Sill beam	0.5d	23-Jun-18	24-Jun-18
CE22630	B5 Post-pour welding of CPPS1 Sill beam	1.0d	24-Jun-18	25-Jun-18
CE22640	B5 Paint touch-ups of CPPS1 Sill beam	3.0d	25-Jun-18	28-Jun-18
CE22650	B5 Rectification of CPPS1 Sill beam	1.0d	25-Jun-18	26-Jun-18
CE22660	B5 Final measurements of CPPS1 Sill beams	1.0d	26-Jun-18	27-Jun-18
CE22670	B5 Shelter removal for CPPS1 Sill beam	0.5d	28-Jun-18	28-Jun-18
CE22680	B5 Scaffold dismantle for CPPS1 Sill beam	0.5d	03-Jul-18	03-Jul-18



WBS Summary ◆ ◆ Milestone
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Issued by: William Mavromatis

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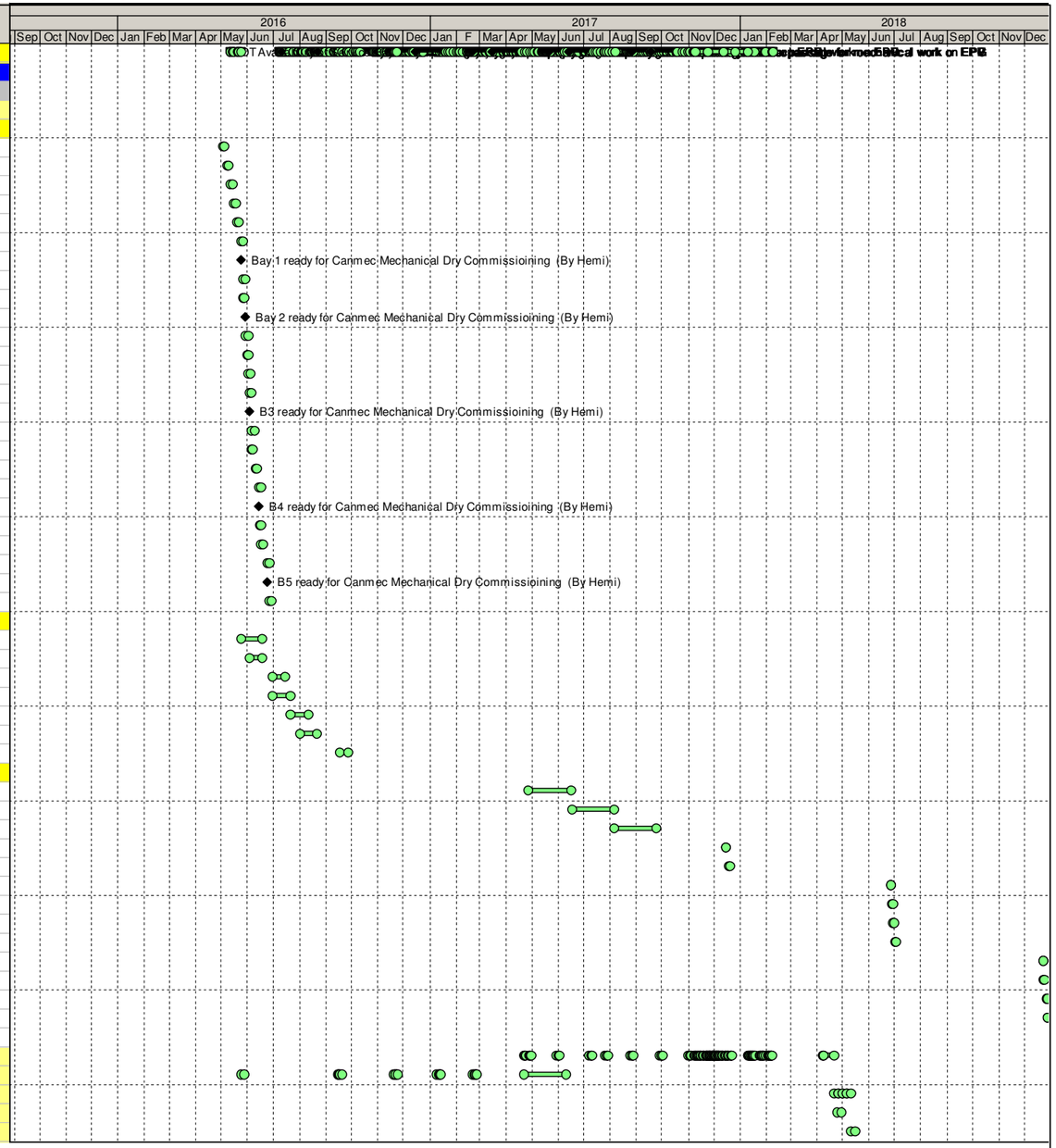
28-Oct-15	PRELIMINARY-Rev-1		
26-Nov-15	PRELIMINARY-Rev-2		
04-Dec-15	PRELIMINARY-Rev-3		

Activity ID	Activity Name	At Completion Duration	Start	Finish
CH0032---12.5.1.3.2	Intake and Powerhouse Installation	456.5d	11-May-16	08-Feb-18
CH0032---12.6	Commissioning	717.9d	02-May-16	31-Jan-19
CH0032---12.6.C	COMMISSIONING	717.9d	02-May-16	31-Jan-19
CH0032---12.6.C.SW	Spillway Commissioning	717.9d	02-May-16	31-Jan-19
CH0032---12.6.C.SW.Diversion Phase	Spillway Commissioning of Minimum Diversion Phase	41.6d	02-May-16	29-Jun-16
CE15230	B1 Dry Commissioning of CPOS4 Stoplogs	2.0d	02-May-16	04-May-16
CE16530	B2 Dry Commissioning of CPOS4 Stoplogs	2.0d	07-May-16	09-May-16
CE17830	B3 Dry Commissioning of CPOS4 Stoplogs	2.0d	11-May-16	13-May-16
CE19130	B4 Dry Commissioning of CPOS4 Stoplogs	2.0d	15-May-16	17-May-16
CE20490	B5 Dry Commissioning of CPOS4 Stoplogs	2.0d	19-May-16	21-May-16
CE15080	B1 Dry Commissioning of Hoist CTR	3.0d	23-May-16	26-May-16
A6310	Bay 1 ready for Canmec Mechanical Dry Commissioining (By Hemi)	0.0d	23-May-16	
CE14890	B1 Dry Commissioning of CVA roller Gate	3.0d	26-May-16	29-May-16
CE15180	B1 Dry Commissioning of CPOS1/S2/S3 Stoplogs	1.0d	26-May-16	27-May-16
CE16405	Bay 2 ready for Canmec Mechanical Dry Commissioining (By Hemi)	0.0d	28-May-16	
CE16400	B2 Dry Commissioning of Hoist CTR	3.0d	29-May-16	01-Jun-16
CE16490	B2 Dry Commissioning of CPOS1/S2/S3 Stoplogs	1.0d	31-May-16	01-Jun-16
CE16220	B2 Dry Commissioning of CVA roller Gate	3.0d	01-Jun-16	04-Jun-16
CE17700	B3 Dry Commissioning of Hoist CTR	3.0d	02-Jun-16	05-Jun-16
CE17705	B3 ready for Canmec Mechanical Dry Commissioining (By Hemi)	0.0d	02-Jun-16	
CE17520	B3 Dry Commissioning of CVA roller Gate	3.0d	05-Jun-16	08-Jun-16
CE17790	B3 Dry Commissioning of CPOS1/S2/S3 Stoplogs	1.0d	05-Jun-16	06-Jun-16
CE19090	B4 Dry Commissioning of CPOS1/S2/S3 Stoplogs	1.0d	10-Jun-16	11-Jun-16
CE19000	B4 Dry Commissioning of Hoist CTR	3.0d	13-Jun-16	16-Jun-16
CE19005	B4 ready for Canmec Mechanical Dry Commissioining (By Hemi)	0.0d	13-Jun-16	
CE20450	B5 Dry Commissioning of CPOS1/S2/S3 Stoplogs	1.0d	15-Jun-16	16-Jun-16
CE18820	B4 Dry Commissioning of CVA roller Gate	3.0d	16-Jun-16	19-Jun-16
CE20360	B5 Dry Commissioning of Hoist CTR	3.0d	23-Jun-16	26-Jun-16
CE20365	B5 ready for Canmec Mechanical Dry Commissioining (By Hemi)	0.0d	23-Jun-16	
CE20120	B5 Dry Commissioning of CVA roller Gate	3.0d	26-Jun-16	29-Jun-16
CH0032---12.6.C.SW.1	Spillway Commissioning of Complete Diversion Phase	90.8d	23-May-16	27-Sep-16
A6275	Commissioning of electrical building - AC/DC & Local Control - Andritz Hemi	25.0d	23-May-16	17-Jun-16
A6305	Commissioning of electrical building-Grimard	15.0d	02-Jun-16	17-Jun-16
AC001	Measurement of guide wheels gaps & bumper tests	10.0d	30-Jun-16	14-Jul-16
AC002	Control Testing Fully complete	15.0d	30-Jun-16	21-Jul-16
AC003	Electrical Load Management Fully operational	15.0d	21-Jul-16	11-Aug-16
A6640	Commissioning of trash cleaner hoist	20.0d	01-Aug-16	21-Aug-16
A6315	Commissioning of electrical building - AC/DC & Common Control- Andritz Hemi	10.0d	17-Sep-16	27-Sep-16
CH0032---12.6.C.SW.Operation Phase	Spillway Commissioning of Operation Phase	461.8d	26-Apr-17	31-Jan-19
A6790	Roller Gates 1 operational tests	52.0d	26-Apr-17	16-Jun-17
A33820	Roller Gates 3 & 5 operational tests	50.0d	17-Jun-17	05-Aug-17
A33825	Roller Gates 2 & 4 operational tests	50.0d	06-Aug-17	24-Sep-17
CE20930	B1 Dry Commissioning of CPOS1 Stoplogs	0.5d	14-Dec-17	15-Dec-17
CE20890	B1 Dry Commissioning of Hoist CTR and Roller Gate CVA	1.0d	18-Dec-17	19-Dec-17
CE21830	B3 Dry Commissioning of CPOS1 Stoplogs	0.5d	26-Jun-18	26-Jun-18
CE22730	B5 Dry Commissioning of CPOS1 Stoplogs	0.5d	28-Jun-18	29-Jun-18
CE21790	B3 Dry Commissioning of Hoist CTR and Roller Gate CVA	1.0d	29-Jun-18	30-Jun-18
CE22690	B5 Dry Commissioning of Hoist CTR and Roller Gate CVA	1.0d	02-Jul-18	03-Jul-18
CE21380	B2 Dry Commissioning of CPOS1 Stoplogs	0.5d	22-Dec-18	23-Dec-18
CE22280	B4 Dry Commissioning of CPOS1 Stoplogs	0.5d	23-Dec-18	24-Dec-18
CE21340	B2 Dry Commissioning of Hoist CTR and Roller Gate CVA	1.0d	26-Dec-18	27-Dec-18
CE22240	B4 Dry Commissioning of Hoist CTR and Roller Gate CVA	1.0d	27-Dec-18	28-Dec-18
A6755	Roller Gates 1 to 5 operationally tested for forebay Full Supply Level	15.0d	16-Jan-19	31-Jan-19
CH0032---12.6.C.IN	Intake Commissioning	260.9d	21-Apr-17	20-Apr-18
CH0032---12.6.C.DT	Draft Tube Commissioning	274.5d	23-May-16	10-Jun-17
CH0032---12.6.C.4	TRCM Commissioining	20.0d	21-Apr-18	10-May-18
CH0032---12.6.C.5	Static Commissioning tests	5.0d	25-Apr-18	29-Apr-18
CH0032---12.6.C.6	Final Commissioning tests	5.0d	11-May-18	15-May-18



WBS Summary ◆ ◆ Milestone
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SUPPLY AND INSTALL AGREEMENT
LOWER CHURCHILL PROJECT
MUSKRAT FALLS HYDROELECTRIC DEVELOPMENT
Agreement No.: CH0032-01

PROPOSAL FOR ACCELERATION OF SPILLWAY INSTALLATION SCHEDULE
(TO MEET RIVER DIVERSION REQUIREMENTS ON OR BEFORE 30 JUNE 2016)

Prepared by:

Bill Mavromatis
Project Manager
Large Hydro Division

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6100, aut. Transcanadienne
Pointe Claire, QC, Canada , H9R 1B9

December 4, 2015

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ANDRITZ HYDRO PROPOSAL FOR ACCELERATION OF SPILLWAY INSTALLATION SCHEDULE TO MEET RIVER DIVERSION REQUIREMENTS ON OR BEFORE 30 JUNE 2016

References:

1. Company Request Contractor Acceleration Proposal, evidenced by June 12, 2015 minutes.
2. AH Preliminary Acceleration Schedule Proposal letter, dated August 19, 2015
3. Company's Change Order No. 010, dated November 10, 2015
4. AH Letter Response, dated November 24, 2015
5. AH Spillway Acceleration Presentation, dated November 27, 2015
6. Muskrat Gates Contract inter alia Exhibit 9 Milestones I1A, M4

1) Background Overview

The Muskrat Gates Contract, Exhibit 9, Interface and Milestone Schedule I1A, Upstream of Spillway ready for start of hydro-mechanical works, indicates the ready for start for February 16, 2015. This is a responsibility of the Company. The delay in the upstream spillway civil works ready for start is at least 258 days to November 1, 2015 (additional days delay in November).

The Company requested in July, 2015 a proposal from the Contractor to accelerate the hydro-mechanical spillway installation work to allow the Company to be ready for river diversion in July 2016. The Contractor provided the Company a preliminary Acceleration Proposal on August 19, 2015 for 47,320 hours for $8,251,973, on a lump sum basis.

The Company responded with a Change Order 010, dated November 10, 2015, for a lump sum of $3,370,314.

The Contractor provided updated acceleration plan parameters including subcontracting parameters from CANMEC, GRIMARD, CRT, AH, and HEMI for a total of $11,435,917. Discussions were held in St. John's on November 27, 2015. The Company requested the Contractor to formally submit the Acceleration Proposal for December 4, 2015 for discussions December 8, 2015 at Contractor's office in Pointe-Claire, Montreal.

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At this stage, the Parties wish to resolve the pricing parameters and finalize a change order by mid-December 2015. In good faith, the Parties acknowledge that it is in the best interests of successfully completing the Project to resolve these pricing discussions without further dispute resolution pursuant to Article 26.6. Both parties acknowledge these discussions are without prejudice to any and all other contract rights and remedies.

2) Summary of Proposal

The Contractor has initiated acceleration on November 12th as directed by Company and proposes that acceleration be completed on a best efforts basis by June 30, 2016. The Scope of Work will be described in Section 3 herein below.

The amounts of the Acceleration Proposal will be detailed in the detailed cost estimate with assumptions and pre-requisites in Section 6.

Following discussions on November 27, 2015, the Contractor is proposing a three-part pricing for the acceleration period of 7 months as follows:

PART A	FIXED PORTION	$8,484,173
PART B	VARIABLE PORTION	$1,270,116
PART C	INCENTIVE	$3,000,000 BONUS/$1,240,000 LD

3) Method of Payment

The Company will pay the Contractor in seven (7) equal monthly payments invoiced at the end of each month and paid pursuant to the Agreement.

4) Description of Scope of Work

The scope of work for river diversion includes but is not limited to the following;

Requirements For River Diversion

1) Five spillway gates dry testing completed. Gates can be raised and lowered by manual controls and temporary power:

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a) Embedded guides (S1, S2, Spillway Roller Gate (SRG), S4) installed, embedded, and finished to tolerance;

b) Repair of all embedment anchors as required (Work performed under Company's CHR-3001);

c) SRG sections installed, assembled and dry tested;

d) SRG towers (tower cladding can be later), bridge, hoist house, hoists installed;

e) SRG hoists assembled and reeved; and,

f) Hoist 125% load testing for Bay 1 to 4. Bay 5 to be performed during operation phase with stoplogs installed;

g) SRG and Hoists mechanically complete;

h) Spillway stop logs dry testing completed.

2) Mechanical and electrical hoist protection systems are operational in local mode:

a) Gate MCC's and Gate local control panels installed with power and control cabling to SRG hoists (cable from Spillway Electrical Building can be installed later);

b) Connection of Gate MCC's with permanent power feeder cable to temporary power (portable generator) or partial permanent power (25kV Construction Power or Backup Diesel Generator);

c) Hoist power, control, and protection systems tested and operational in local mode.

3) Re-engineering and any additional engineering to support the temporary configuration to support the river diversion scope of work until the balance of the work to meet Milestone M4 is completed.

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4) Design, supply and installation of all temporary facilities.

Completion

For the activities listed above defined as being required for partial completion of the spillway for river diversion the following minimum scope is required:

1) Work scopes / sub-systems must be clearly defined in the Project Completions System with processes to support formal Company acceptance as being Complete.

2) All installation / testing activities are supported by installation / pre-commissioning checks and / or Dynamic Commissioning procedures as agreed with Company.

3) All above work scopes are considered Mechanically Complete, Commissioned and available for Handover as per the Project Completions System.

4) Re-commissioning will be required after the spillway electrical building has been completed to test and prove electrical and controls systems operation between the electrical building and the hoist house.

5) Load testing requirements as per the Contract remain in effect. Company may agree to load testing after river diversion if Contractor can provide Company suitable supporting documentation that load testing can be completed safely. If done during operation phase due to accelerated schedule (Bay 5), it needs to be done with stoplog in place and prior to rollway construction due to height limitation.

6) All construction equipment and temporary facilities shall be removed from the upstream and downstream spillway channels.

Remaining Scope (for achieving M4)

All requirements as defined in the Contract shall be completed as per the approved schedule to meet Milestone M4.

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1) Gate Heating System; all components are installed in gates prior to river diversion readiness but are not operational (guide heaters can be installed later).

2) Electrical Load Management System.

3) Spillway Electrical Building and all associated equipment internal and external to the building.

4) Hoist house building electrical and mechanical services completed.

5) PLC and HMI controls.

6) Trash Cleaning Machine hoist

7) Telecom (SAC S camera) equipment

4) Revised Schedule for Acceleration and Assumptions

Revised Schedule

a) Please refer to the following which is a high level schedule summary of the Proposed Spillway Acceleration Schedule to the June 30th 2016 partial spillway ready for river diversion milestone. A detailed complete P6 schedule in .pdf is included in Appendix A of this proposal, and the .XER file is submitted to Company via Aconex, together with this proposal.

SPILLWAY ACCELERATED SCHEDULE SUMMARY

Accelerated Schedule (30-Jun-16)	Nov-15	Dec-15	Jan-16	Feb -16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16
Installation of Upstream Embedded Parts													
Installation of SRG, Hoist, Bridge and Towers													
Installation of Downstream Embedded Parts													
Gates Dry Testing / Commissioning													
Ready for River Diversion Milestone Achieved													
Remaining Scope Up to M4 Milestone													

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b) Please note that the night shift calendar has not yet been incorporated in the .XER version of the P6 schedule, but durations shown in the schedule consider night work as detailed in the attached work shift table – please refer to Appendix 3. AH is in the process of adding the calendar to the P6 database, and expects to have this completed by December 11th, 2015.

Schedule Assumptions

a) AH is provided free and unfettered access to Work fronts as specified and/or implied in attached Proposed Spillway Accelerated Schedule.
b) Repair of damaged embedded anchor work, per LCP CHR 3001, is assumed to have a schedule duration as indicated in the attached Proposed Spillway Acceleration Schedule.
c) AH is provided free and unfettered access to Work fronts and equipment for AH to complete punchlist type or incomplete work that may be required after the minimum completion requirements for river diversion have been achieved.
d) LCP will coordinate and make provisions for commissioning activities to be completed after the minimum completion requirements have been achieved.
e) Crawler Crane assembly planned for November 30, 2015. Upstream of Bay #5 shall be clear of all obstructions.
f) Hydro Mobile installation in Bay #1 is planned to be completed by November 30, 2015. Bay #1 shall be clear of obstructions for mast installation.
g) Embedded anchor repairs in Bay #1 shall be completed by December 3, 2015.
h) Erection of Bay #1 Embedded Parts planned to start on December 4, 2015. Guide blockouts shall be clear of obstructions and accessible from the top of the pier. All anchors shall be repaired.
i) Erection of Bay #2 Embedded Parts planned to start on December 9, 2015. Guide blockouts shall be clear of obstructions and accessible from the top of the pier. All anchors shall be repaired.
j) Erection of Bay #3 Embedded Parts is planned to start on January 5, 2016. Guide blockouts shall be clear of obstructions and accessible from the top of the pier. All anchors shall be repaired.

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k) Erection of Bay #4 Embedded Parts is planned to start on January 14, 2016. Guide blockouts shall be clear of obstructions and accessible from the top of the pier. All anchors shall be repaired.

l) Erection of Bay #5 Embedded Parts is planned to start on January 27, 2016. Guide blockouts shall be clear of obstructions and accessible from the top of the pier. All anchors shall be repaired.

m) The spillway upstream laydown area shall be free for occupation by December 7th, 2015.

n) No overhead Works by Company's Other Contractors shall prevent AH from executing mechanical Works.

o) The Proposed Spillway Acceleration Schedule does not reflect schedule impacts of ongoing delays in achieving Interface Milestone I1A milestone.

5) Basic Principles forming basis of the Contractor Acceleration Proposal (all based on work experience from previous projects):

The basic principles discussed herein below are important to understand and be agreed upon by the parties. The acceleration of work changes the implementation conditions and significantly increases the costs.

Carrying out more severe work in winter conditions, introducing a night shift, learning curve problems, and crowding all lead to higher inefficiencies in labour productivity and result in higher costs. The start of the acceleration work is deemed to be November 12, 2015 and best effort completion by June 30th, 2016.

a) Hourly rate

The following rate is used in the proposal for labor: $103.93 X 1.15 = $119.51. Following discussions with the Company, Contractor has compromised by lowering its contracted rate of $141 to the Canmec subcontracted rate, including AH mark-up, totalling $119.51 as a blended rate.

b) Winter conditions – Cold weather reduces work efficiency

The ability of a worker to carry out a task is optimal when the ambient temperature is between 10o C and 21o C. Any deviation from this zone has an unfavourable impact

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on productivity.

Many studies have confirmed the negative impact of cold on productivity, including that of the N.R.C. which proposes different productivity loss coefficients depending on the effective temperature and type of work (involving fine or gross motor skills).

The changes to the execution conditions will result in a larger portion of the work being carried out under winter conditions, compared to that planned under the Agreement schedule. This will result in reduced productivity therefore increased labour costs.
Although it is noted that portable heaters may improve the work conditions, the extreme cold weather in 2014 and 2015 winters clearly reduced work efficiency in the region.

c) Overstaffing

Increasing additional staff and increasing the number of team may exceed the optimal team size and will reduce productivity according to NRC's studies. The quality of supervision will also be impacted negatively. Therefore, the Contractor's proposed Acceleration Plan will require significant increase in staff and the number of teams with the corresponding reduction in productivity.

d) Night shift-less productive

The evidence indicates that night shifts are less productive than regular shifts for reasons of interruption to work patterns, eating and sleeping. Night shift workers may be less alert, less accurate, slower, and more concerned about safety.

e) Learning curve

The first time a task is carried-out, personnel assigned to this task perform it slower in order to learn the various steps. After repetition, the time necessary to carry out the same task decreases with the number of repetitions (learning curve). To optimize productivity, it is thus preferable to assign tasks repeatedly to the same person rather than change worker.

The phenomenon of learning applies when activities are carried out in sequence, otherwise we observe a phenomenon of unlearning; a greater number of workers having to learn a task, results in a decreased efficiency compared to that which could

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have been achieved under optimal circumstances.

Several studies have shown the effect of the learning curve on productivity, including the N.R.C. which offers coefficients for productivity gain based on number of repetitions.

The implementation of acceleration measures in the spillway works will alter the execution sequences of the work and thus deprive the Contractor of a portion of productivity gain to be obtained through learning.

f) Crowding

The multiplication of work teams, which must complete their tasks within a limited space, creates congestion and a loss of productivity.

Several studies confirm the impact of crowding on crowding on productivity, notably that of the N.R.C which proposes different productivity loss coefficients depending upon the degree of crowding.

The implementation of the Acceleration Program require the mobilization of a greater number of workers within the same limited space, thus creating congestion with a negative impact on productivity. Contractor's subcontractor, CANMEC, has extensive experience in the North with crowding.

h) Additional Equipment and Tooling

Refer to Appendix A-1 for list of additional equipment and tooling required for the accelerated schedule.

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6) Detailed Cost Estimate

ACCELERATION PROPOSAL COSTS BREAKDOWN

			FIXED COSTS	VARIABLE COSTS (capped)
SUPERVISION (ANDRITZ HYDRO)	**AH Staff**	Technical Advisor	$ 185,340	
		Health and Safety	$ 145,742	
		Site Quality Assurance	$ 128,308	
		Site Administration	113,779	
		Sub-Total	**$ 573,169**	**$ -**
MECHANICAL INSTALLATION (CANMEC)	**Direct Labour**	Winter Conditions	$ 708,517	
		Loss of Learning	$ 471,986	
		Overstaffing	$ 763,481	
		Crowding	$ 1,272,469	$ 922,079
			$ 3,216,453	**$ 922,079**
	Indirect and Equipment	Indirect Labour Adjustment	$ 732,719	$ 73,566
		Equipment over $1500	$ 1,325,371	$ 134,276
		Liftting Equipment	$ 1,377,755	$ 140,194
			$ 3,435,845	**$ 348,037**
		Sub-Total	**$ 6,652,298**	**$ 1,270,116**
SECONDARY CONCRETING (CRT)			**$ 381,071.19**	**$ -**
ELECTRICAL BUILDING (GRIMARD)			**$ 660,134.50**	**$ -**
ELECTRICAL INSTALLATION (TBD)			**$ -**	**$ -**
EPS, TEMPORARY ELECTRICAL, COMMISSIONING (HEMI)			**$ 217,500.00**	**$ -**
ACCELERATION PROPOSAL COST		**TOTAL**	**$ 8,484,173**	**$ 1,270,116**

a) The assumptions for the cost estimate of the acceleration plan are based on the scope of work in section 3), schedule assumptions listed in section 4) above, site conditions as stipulated in the Agreement. Any deviations thereof may give rise to additional cost and schedule impacts.

b) Contractor proposes the following incentive plan.

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INCENTIVE	Bonus if delivery before July 15th 2016	**$ 3,000,000**
	Bonus reduction per calendar days, starting July 16th 2016	$ (150,000)
	Neutral on August 4th 2015	-
	LD increase par calendar day, starting Aug 5th 2016	$ (100,000)
	LD cap on August 16th 2016	**$(1,240,000)**

7) Explanation for Variable Costs

Contractor has decided to apply fifty (50) percent of the estimated crowding costs to a variable portion. In the Company's and Contractor's opinion , it is difficult to estimate the actual additional hours of labour resulting from overcrowding, so Contractor proposes that the additional crowding hours should be reimbursable to Contractor up to the cap of fifty (50) percent of the crowding additional hours/price estimate.

Contractor proposes that the following methodology be applied for measuring the Crowding efforts on a weekly basis:

- Actual effort will be measured and compared to the baseline estimated effort for reaching the completion level achieved during that week;
- The difference between the actual effort and the baseline effort will be deemed to be due to Crowding effect, and re-imbursable to Contractor;
- To the extent Company can demonstrate and Contractor agrees that specific work portions were due to effects other than Crowding, then such amounts will be deducted from the re-imbursable amount;
- The finer details of the benchmarking procedure will be agreed at a later date.

8) Conclusion

In adjusting Contractor's Acceleration Proposal to reflect progress in recent discussions, Contractor is demonstrating its good faith efforts to resolve amicably the pricing differences and to highlight the increased risks in the Acceleration Proposal resulting from the large increase in winter work to achieve the Company's target date, on a best efforts basis, on June 30, 2016 for ready for river diversion. The parties intend to finalize the acceleration proposal in the change order by mid-December.

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APPENDIX A

PROPOSED SPILLWAY ACCELERATED SCHEDULE (.PDF)

(Please refer to separate attachment)

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APPENDIX B

LIST OF ADDITIONAL EQUIPMENT AND TOOLING

	NUMBER OF UNITS		
DESCRIPTION	**CONTRACTURAL TIMETABLE**	**ACCELERATED TIMETABLE**	**ADDITIONAL**
Temporary Shelter for concrete slab (Elec Building)	0	1	1
Temporary Shelter for material storage (Elec Building)	0	1	1
Heating equipment for concrete slab shelter (Elec Building)	0	6	6
Heating equipment for material storaqge shelter (Elec Building)	0	1	1
130T Crawler (hours)	1830	2880	1050
Crawler 300 tonnes (hours)	660	840	180
Scaffolding (Hydro Mobile F-300 Platform)	8	12	4
Shelter Panel 10'x45' (Hoarding)	108	165	57
Electrical heater 600V/30 KVA	8	16	8
PureHeat system 8 diffusers	1	2	1
Frostfighter 500 000 Btu	4	6	2
Electrical distribution center	1	2	1
Welding machine 350A	8	14	6
Pick up F-250	3	6	3
12' x 60' Complex	2	3	1
Pickup F-150	4	5	1
Bus 15 passengers	1	2	1
Manlift 85'	1	2	1

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APPENDIX C

MANNING PLAN BY SHIFT
(Night Shifts Added)

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Line no	Activity	Men/team	Days/bay	Comments
4.3.2	**SPILLWAY EMBEDDED PARTS**			
4.3.2.01	**Temporary Upstream Stoplogs Embedded Parts**			
1	Unloading at site	4	1.3	4D
2	Survey	3	1	3D
3	Threaded rod installation on embedded parts	5	1.5	5D
4	Erection of Embedded Parts	5	2	5D
5	Scaffolding and shelter installation	12	2	6D + 6N
6	Bolting of embedded parts	8	2.9	4D + 4N
7	Guides Alignment	5	7.1	4D
8	Sill Beam Alignment	3	3.2	2D + 1N(W)
9	Pre-pour measurements	4	0.9	4D
10	Cutting of transition plates	4	2.9	2D + 2N
11	Handling of the lining plates for lower guides	4	2.4	2D + 2N
12	Sill Beam Concreting			
13	Pre-pour welding (Guides Concreting)	6	7	3D + 3N
14	Formwork removal, concrete repairs and cleaning (By others)			
15	Post-pour welding of Transition plates	4	4	2D + 2N
16	Paint touch-ups	4	1.9	2D + 2N
17	Rectifications	5	4.1	4D
18	Final Measurements	4	0.9	4D
19	Scaffolding and shelter removal	12	1	6D + 6N
20	Heating	2	2.4	1D + 1N
			48.5	
4.3.2.08	**Permanent Upstream Stoplogs Embedded Parts**			
1	Unloading at site	4	0.7	4D
2	Survey	3	1	3D
3	Threaded rod installation on embedded parts	5	1	5D
4	Erection of Embedded Parts	5	1.1	5D
5	Scaffolding and shelter installation	12	2	6D + 6N
6	Bolting of embedded parts	8	2	4D + 4N
7	Guides Alignment	5	5	4D
8	Pre-pour measurements	4	0.5	4D
9	Cutting of transition plates	4	2.1	2D + 2N
10	Handling of the lining plates for lower guides	4	1.9	2D + 2N
11	Pre-pour welding (Guides Concreting)	6	5	3D + 3N
12	Formwork removal, concrete repairs and cleaning (By others)			
13	Post-pour welding of Transition plates	4	2.9	2D + 2N
14	Paint touch-ups	4	1.5	2D + 2N
15	Rectifications	5	2.5	4D
16	Final Measurements	4	0.5	4D
17	Scaffolding and shelter removal	12	1	6D + 6N
18	Heating	2	2.4	1D + 1N
			33.1	
4.3.2.16	**Spillway Gate Embedded Parts**			
1	Unloading at site	4	0.9	4D
2	Survey	3	1	3D
3	Threaded rod installation on embedded parts	5	2.1	5D
4	Erection of Embedded Parts	5	1.4	5D
5	Scaffolding and shelter installation	12	2	6D + 6N
6	Bolting of embedded parts	8	4.1	4D + 4N
7	Guides Alignment	5	7.4	4D
8	Sill Beam Alignment	3	3.1	2D + 1N(W)
9	Pre-pour measurements	4	0.9	4D
10	Cutting of transition plates	4	3.1	2D + 2N
11	Handling of the lining plates for lower guides	4	4.9	2D + 2N
12	Sill Beam Concreting (By others)			
13	Pre-pour welding (Guides Concreting)	6	7.2	3D + 3N
14	Formwork removal, concrete repairs and cleaning (By others)			
15	Post-pour welding of Transition plates	4	5	2D + 2N
16	Paint touch-ups	4	3.7	2D + 2N
17	Rectifications	5	4.3	4D
18	Final Measurements	4	0.9	4D
19	Scaffolding and shelter removal	12	1	6D + 6N
20	Heating	2	2.4	1D + 1N
			55.4	
Total			**137**	

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Line no	Activity	Men/team	Days/bay	Comments
4.3.2.24	**Downstream Stoplog Embedded Parts**			
1	Unloading at site	4	0.6	4D
2	Survey	3	0.6	3D
3	Threaded rod installation on embedded parts	4	0.6	4D
4	Erection of Embedded Parts	4	1.2	4D
5	Scaffolding and shelter installation	6	3.6	6D
6	Bolting of gate embedded parts	4	1.5	4D
7	Guides Alignment	4	2.5	4D
8	Sill Beam Alignment	2	4	2D
9	Pre-pour measurements	4	0.3	
10	Cutting of transition plates	2	1.2	2D
11	Handling of the lining plates for lower guides	4	0.5	4D
12	Sill Beam Concreting (By others)			
13	Pre-pour welding (Guides Concreting)	4	2	4D
14	Formwork removal, concrete repairs and cleaning (By others)			
15	Post-pour welding of Transition plates	2	1.8	2D
16	Paint touch-ups	2	0.9	2D
17	Rectifications	4	1.4	4D
18	Final Measurements	4	0.4	4D
19	Scaffolding and shelter removal	6	1.8	6D
20	Heating	1	2.1	1D
Total			**27**	
4.3.3	**SPILLWAY STOPLOGS AND LIFTING BEAMS**			
1	Unloading at site	8	4	4D + 4N
2	**Follower Beam Storage Support**			
2.1	Survey	2	0.1	2D
2.2	Anchors	2	0.4	2D
2.3	Bolting	2	0.2	2D
2.4	Grout	2	1.4	2D
2.5	Storage	2	0.4	2D
Total			**6.5**	
4.3.4	**SPILLWAY GATES**			
1	Unloading at site	4	0.9	4D
2	Gate section handling with 220T Crane	8	2.1	4D + 4N
3	Bolting	8	2.5	4D + 4N
4	Welding	5	2.1	2D + 2N
5	Paint touch-ups	4	2.4	2D + 2N
6	J-seal installation	2	1.6	2D + 2N
7	**Dogging Device**			
7.1	Survey	2	0.4	2D
7.2	Anchors	2	0.1	2D
7.3	Erection	2	0.4	2D
7.4	Bolting	2	0.1	2D
7.5	Grout	2	0.4	2D
Total			**13**	
4.3.5	**SPILLWAY HOIST**			
1	Unloading at site	4	0.7	4D
2	Hoist handling with 220T Crane	7	1	6D
3	Bolting	4	0.1	4D
4	Reeving Step #1, passe cables through sheaves	12	1.9	6D + 6N
5	Electrical work (By others)			
6	Reeving Step #2, winding cables on drums	8	1.4	4D + 4N
7	Service Hoist Installation	4	0.7	4D
Total			**5.8**	
4.3.6	**SPILLWAY TOWERS, BRIDGE STRUCTURE & HOIST HOUSE**			
1	Unloading	8	1.8	4D + 4N
2	End Tower Erection with 220T Crane	8	1.3	4D + 4N
3	Intermediate Tower erection with 220T Crane	8	1.1	4D + 4N

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Line no	Activity	Men/team	Days/bay	Comments
4	End Tower Bolting	4	0.9	4D
5	Intermediate Tower Bolting	4	0.7	4D
6	Survey	4	0.4	4D
7	Grouting under tower base plates	4	0.9	4D
8	Hoist Bridge Erection	5	0.9	5D
9	Hoist House Erection	8	1.6	4D + 4N
10	Revêtement de la tour #1	4	0	4D + 4N
11	Revêtement de la tour #6	4	0	4D + 4N
12	Tower Guides Alignment	4	2.1	4D
13	Passerelles et gardes-corps	6	1.9	6D
Total			**13.6**	

4.4	**PHASE D: SPILLWAY HYDRO-MECHANICAL - COMMISSIONING**			
4.4.01	SPILLWAY STOPLOGS AND LIFT BEAMS	8	11	4D + 4N
4.4.02	SPILLWAY GATES	5	1.4	4D
4.4.03	SPILLWAY HOISTS	5	0.6	4D

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