

2020-05-19 H2020BC1 Execution Schedule EDIT BY LEHANN

Name: Eric B

Status Date: 04 August 2020

ID	Name	Duration	Start	Finish	% compl	Notes
PLC/SCADA programming - C14						
198	PLC/SCADA programming - C14	4.0d	18 June 2020	23 June 2020	0 %	
Commissioning - C14 Temperature indication						
210	Test I/O - C14 Temperature indication	1.0h	22 June 2020	22 June 2020	0 %	
212	Commission integrated system - C14 Temperature indication	1.0h	23 June 2020	23 June 2020	0 %	
211	PSSR authorisation - C14 Temperature indication	1.0h	22 June 2020	22 June 2020	0 %	
Commissioning - C35/SR1 Density indication F702						

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ID	Name	Duration	Start	Finish	% compl	Notes
573	Check valve stroking - C35/SR1 Density indication F702	1.0h	15 June 2020	15 June 2020	0 %	
575	Commission integrated system - C35 /SR1 Density indication F702	2.0h	15 June 2020	15 June 2020	0 %	
572	Test control loops - C35/SR1 Density indication F702	2.0h	15 June 2020	15 June 2020	0 %	
574	PSSR authorisation - O5 Acid Scrubber pump/fill	1.0h	15 June 2020	15 June 2020	0 %	

Installation of sight glasses on train 3

59	Install spools and sight glasses (3x3", 4x2") - sight glasses on train 3	3.0h	18 July 2020	18 July 2020	0 %	
60	PSSR authorisation - sight glasses on train 3	1.0h	18 July 2020	18 July 2020	0 %	

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ID	Name	Duration	Start	Finish	% compl	Notes
61	Commission system - sight glasses on train 3	1.0h	18 July 2020	18 July 2020	0 %	
Electrical pre-work - C38 Water to snake and sump scrubbers						
600	Installation of Cabling - C38 Water to snake and sump scrubbers	10.0d	15 June 2020	26 June 2020	0 %	
599	Installation of Coated conduit - C38 Water to snake and sump scrubbers	4.0d	09 June 2020	12 June 2020	0 %	
Mechanical pre-work - O3 Garo pump/fill						
737	Install air supply piping - O3 Garo pump/fill	7.0d	03 June 2020	11 June 2020	0 %	
Electrical installation - C14 Temperature indication						
208	Route cable ends and terminate - Thermo couple - C14 Temperature indication	2.0h	22 June 2020	22 June 2020	0 %	

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ID	Name	Duration	Start	Finish	% compl	Notes
207	Install Thermo couple - C14 Temperature indication	1.0h	22 June 2020	22 June 2020	0 %	
PLC/SCADA programming - U7						
1214	PLC/SCADA programming - U7	8.0d	21 July 2020	30 July 2020	0 %	
Civil pre-work - U7 Water treatment automation						
1197	Delivery of materials: Civils contractor - U7 Water treatment automation	5.0d	02 June 2020	08 June 2020	0 %	
1203	Concrete curing - U7 water treatment automation	15.0d	29 June 2020	20 July 2020	0 %	
1200	Concrete curing - U7 water treatment automation	4.0d	16 June 2020	19 June 2020	0 %	

Cast concrete pad - U7 water

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2020-05-19 H2020BC1 Execution Schedule EDIT BY LEHANN

ID	Name	Duration	Start	Finish	% compl	Notes
1199	treatment automation	1.0d	15 June 2020	June 2020	0 %	
1202	Cast tank concrete plinths - U7 water treatment automation	1.0d	26 June 2020	26 June 2020	0 %	
1196	Concrete Contractor site establishment - U7 Water treatment automation	5.0d	26 May 2020	01 June 2020	0 %	
1201	Place formwork and fix rebar for tank - U7 water treatment automation	4.0d	22 June 2020	25 June 2020	0 %	
1198	Place formwork and fix rebar for pad - U7 water treatment automation	4.0d	09 June 2020	12 June 2020	0 %	
Installation of solenoids sumps on train 1						
157	PSSR authorisation - sumps on train 1	1.0h	23 June 2020	24 June 2020	0 %	

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ID	Name	Duration	Start	Finish	% compl	Notes
155	Install nozzle and fit pH probe - sumps on train 1	3.0h	23 June 2020	23 June 2020	0 %	
158	Commission pH probe - sumps on train 1	1.0h	24 June 2020	24 June 2020	0 %	
156	Connect wiring - sumps on train 1	1.0h	23 June 2020	23 June 2020	0 %	

Installation of solenoids sumps on train 3

168	Connect wiring - sumps on train 3	1.0h	08 July 2020	08 July 2020	0 %	
170	Commission pH probe - sumps on train 3	1.0h	08 July 2020	08 July 2020	0 %	
167	Install nozzle and fit pH probe - sumps on train 3	3.0h	08 July 2020	08 July 2020	0 %	

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ID	Name	Duration	Start	Finish	% compl	Notes
169	PSSR authorisation - sumps on train 3	1.0h	08 July 2020	08 July 2020	0 %	
Mechanical pre-work - C35/SR1 Density indication F702						
553	Install air supply piping - C35 Density indication F702	7.0d	19 May 2020	28 May 2020	0 %	
Installation of auto valves - O3 Garo pump/fill						
750	Install Auto Valves on GARO compressor 3	6.0h	13 July 2020	13 July 2020	0 %	
756	Install Auto Valves on GARO compressor 6	6.0h	06 August 2020	06 August 2020	0 %	
752	Install Auto Valves on GARO compressor 4	6.0h	21 July 2020	21 July 2020	0 %	
				29 July		

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ID	Name	Duration	Start	Finish	% compl	Notes
754	Install Auto Valves on GARO compressor 5	6.0h	29 July 2020	2020	0 %	
758	Install Auto Valves on GARO compressor 7	6.0h	14 August 2020	14 August 2020	0 %	
748	Install Auto Valves on GARO compressor 2	6.0h	02 July 2020	02 July 2020	0 %	
746	Install Auto Valves on GARO compressor 1	6.0h	24 June 2020	24 June 2020	0 %	
Structural pre-work (building extension) - U7 Water treatment automation						
1206	Building erection by contractor - U7 Water treatment automation	6.0d	21 July 2020	28 July 2020	0 %	
1205	Contractor site establishment - U7 Water treatment automation	5.0d	30 June 2020	07 July 2020	0 %	

Building inspection and sign-off -

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ID	Name	Duration	Start	Finish	% compl	Notes
1207	U7 Water treatment automation	1.0d	29 July 2020	July 2020	0 %	
Structural pre-work - U8 Plant steam balance						
1290	Fabricate pipe supports - U8 Plant steam balance	4.0d	27 July 2020	30 July 2020	0 %	
Installation of sight glasses on train 2						
55	PSSR authorisation - sight glasses on train 2	1.0h	11 July 2020	11 July 2020	0 %	
56	Commission system - sight glasses on train 2	1.0h	11 July 2020	11 July 2020	0 %	
54	Install spools and sight glasses (3x3", 5x2") - sight glasses on train 2	3.0h	11 July 2020	11 July 2020	0 %	
Electrical installation - C38 Water to snake and sump scrubbers						

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ID	Name	Duration	Start	Finish	% compl	Notes
613	Route cable ends and terminate - Magmeter - C38 Water to snake and sump scrubbers	1.0h	01 July 2020	01 July 2020	0 %	
Installation of repeater pole						
1570	Dig hole and plant pole for radio repeater	1.0d	08 July 2020	08 July 2020	0 %	
1571	Install radio repeater	1.0d	09 July 2020	09 July 2020	0 %	
Installation of Cabling - O5 Acid Scrubber pump/fill						
834	Installation of cabling scrubber D308 (B line) O5	6.0d	22 June 2020	29 June 2020	0 %	
839	Installation of cabling scrubber D307 (A line) O5	6.0d	04 August 2020	11 August 2020	0 %	
				24 July		

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ID	Name	Duration	Start	Finish	% compl	Notes
837	Installation of cabling scrubber D2307 (D line) O5	6.0d	17 July 2020	2020	0 %	
835	Installation of cabling scrubber D2308 (E line) O5	6.0d	30 June 2020	08 July 2020	0 %	
838	Installation of cabling scrubber D2309 (C line) O5	6.0d	27 July 2020	03 August 2020	0 %	
836	Installation of cabling scrubber D5307 (F line) O5	6.0d	09 July 2020	16 July 2020	0 %	
Installation in MCC5GH						
1566	Install wireless system in MCC5GH	2.0d	13 July 2020	14 July 2020	0 %	
1567	Install wiring from wireless system to PLC cabinet	1.0d	15 July 2020	15 July 2020	0 %	

Install 4-20mA wiring to DCS

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ID	Name	Duration	Start	Finish	% compl	Notes
1568	cabinet	1.0d	16 July 2020	July 2020	0 %	
Installation solenoid valves on scrubber D308 (B Line outage)						
858	Install solenoid valves (2) scrubber D308 - O5	4.0h	09 August 2020	09 August 2020	0 %	
859	Terminate electrical wiring scrubber D308 - O5	1.0h	09 August 2020	09 August 2020	0 %	
861	Commission integrated system scrubber D308 - O5	2.0h	09 August 2020	09 August 2020	0 %	
860	PSSR authorisation scrubber D308 - O5	1.0h	09 August 2020	09 August 2020	0 %	
Installation of solenoids sumps on train 2						
164	Commission pH probe - sumps on train 2	1.0h	01 July 2020	01 July 2020	0 %	

Install nozzle and fit pH probe -

01

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ID	Name	Duration	Start	Finish	% compl	Notes
161	sumps on train 2	3.0h	01 July 2020	July 2020	0 %	
162	Connect wiring - sumps on train 2	1.0h	01 July 2020	01 July 2020	0 %	
163	PSSR authorisation - sumps on train 2	1.0h	01 July 2020	01 July 2020	0 %	
Electrical pre-work - C24 Dual pH meters SO2 scrubbers						
419	Installation of Coated conduit - C24 Dual pH meters SO2 scrubbers	3.0d	28 July 2020	30 July 2020	0 %	
420	Installation of Cabling - C24 Dual pH meters SO2 scrubbers	4.0d	31 July 2020	05 August 2020	0 %	
Moving of 2 Tanks F5522 and F5521						
1229	Install additional piping for water and floc addition - U7 Water treatment automation	7.0d	04 August 2020	12 August 2020	0 %	

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ID	Name	Duration	Start	Finish	% compl	Notes
1230	Install treated water line - U7 Water treatment automation	7.0d	13 August 2020	21 August 2020	0 %	
1227	Move tanks F5522 and F5521 to new building	2.0d	31 July 2020	03 August 2020	0 %	
1228	Install air supply piping - U7 Water treatment automation	3.0d	30 July 2020	03 August 2020	0 %	
Mechanical pre-work - C38 Water to snake and sump scrubbers						
602	Fabricate spools for Magmeter - C38 Water to snake and sump scrubbers	7.0d	03 June 2020	11 June 2020	0 %	
PLC/SCADA programming - C35/SR1						
555	PLC/SCADA programming - C35 /SR1	7.0d	05 June 2020	15 June 2020	0 %	
Structural pre-work - O3 Garo pump/fill						

Install supports for auto valves - O3

04

2020-05-19 H2020BC1 Execution Schedule EDIT BY LEHANN

ID	Name	Duration	Start	Finish	% compl	Notes
735	Garo pump/fill	7.0d	27 May 2020	June 2020	0 %	
734	Fabricate supports for auto valves - O3 Garo pump/fill	6.0d	18 May 2020	26 May 2020	0 %	

Electrical work - U7 Water treatment automation

1237	Installation of Cabling - U7 Water treatment automation	10.0d	05 August 2020	18 August 2020	0 %	
1236	Installation of Coated conduit - U7 Water treatment automation	4.0d	30 July 2020	04 August 2020	0 %	

Mechanical installation - C38 Water to snake and sump scrubbers

615	Install Magmeter - C38 Water to snake and sump scrubbers	2.0h	01 July 2020	01 July 2020	0 %	
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Commissioning - C38 Water to snake and sump scrubbers

PSSR authorisation - C38 Water to

01

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ID	Name	Duration	Start	Finish	% compl	Notes
618	snake and sump scrubbers	1.0h	01 July 2020	July 2020	0 %	
619	Commission integrated system - C38 Water to snake and sump scrubbers	1.0h	01 July 2020	01 July 2020	0 %	
617	Test circuits for Magmeter - C38 Water to snake and sump scrubbers	2.0h	01 July 2020	01 July 2020	0 %	
Installation solenoid valves on scrubber D2309 (C Line outage)						
865	Terminate electrical wiring scrubber D2309 - O5	1.0h	14 August 2020	14 August 2020	0 %	
866	PSSR authorisation scrubber D2309 - O5	1.0h	14 August 2020	14 August 2020	0 %	
864	Install solenoid valves (2) scrubber D2309 - O5	4.0h	14 August 2020	14 August 2020	0 %	
867	Commission integrated system scrubber D2309 - O5	2.0h	14 August 2020	14 August 2020	0 %	

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ID	Name	Duration	Start	Finish	% compl	Notes
Electrical pre-work - C14 Temperature indication						
196	Installation of Cabling - C14 Temperature indication	5.0d	11 June 2020	17 June 2020	0 %	
195	Installation of Coated conduit - C14 Temperature indication	2.0d	09 June 2020	10 June 2020	0 %	
Density meter steelwork						
1212	Install support for density meter - U7 Water treatment automation	3.0d	22 July 2020	24 July 2020	0 %	
1211	Fabricate support for density meter - U7 Water treatment automation	4.0d	16 July 2020	21 July 2020	0 %	
PLC/SCADA programming - C21						
371	PLC/SCADA programming - C21	4.0d	28 July 2020	31 July 2020	0 %	

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ID	Name	Duration	Start	Finish	% compl	Notes
Electrical pre-work - U8 Plant steam balance						
1287	Installation of Coated conduit - U8 Plant steam balance	10.0d	29 July 2020	11 August 2020	0 %	
1288	Installation of Cabling - U8 Plant steam balance	12.0d	12 August 2020	27 August 2020	0 %	
Electrical pre-work - C35/SR1 Density indication F702						
548	Installation of Cabling - C35 Density indication F702	10.0d	26 May 2020	08 June 2020	0 %	
547	Installation of Coated conduit - C35 Density indication F702	4.0d	19 May 2020	22 May 2020	0 %	
Mechanical and Piping pre-work - U7 Water treatment automation						
1209	Install suction and delivery lines for pumps G5526 and G5527	2.0d	23 July 2020	24 July 2020	0 %	

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ID	Name	Duration	Start	Finish	% compl	Notes
Shutdown duration						
1224	Commission pumps - U7 Water treatment automation	1.0h	30 July 2020	30 July 2020	0 %	
1223	Terminate electrical cables - U7 Water treatment automation	1.0h	29 July 2020	29 July 2020	0 %	
1220	FIRST Shutdown starts - U7 Water treatment automation	0.0d	29 July 2020	29 July 2020	0 %	
1222	Reconnect piping & tie in - U7 Water treatment automation	2.0h	29 July 2020	29 July 2020	0 %	
1221	Remove two pumps at G5526 and G5527 and re-install at F3521 and F3522 : U7 Water treatment automation	4.0h	29 July 2020	29 July 2020	0 %	
Electrical pre-work - O3 Garo pump/fill						

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ID	Name	Duration	Start	Finish	% compl	Notes
732	Installation of Cabling - O3 Garo pump/fill	10.0d	02 June 2020	15 June 2020	0 %	
731	Installation of conduit racks and Coated conduit - O3 Garo pump/fill	4.0d	27 May 2020	01 June 2020	0 %	
Structural pre-work - F920 Continuous blending from F-409						
1888	Fabricate support for new header - F920 Continuous blending from F-409	2.0d	17 August 2020	18 August 2020	0 %	
Electrical installation - C35/SR1 Density indication F702						
567	Route cable ends and terminate - Micromotion - C35/SR1 Density indication F702	1.0h	11 June 2020	11 June 2020	0 %	
566	Route cable ends and terminate - 2" butterfly valve with positioner - C35 /SR1 Density indication F702	1.0h	11 June 2020	11 June 2020	0 %	
PLC/SCADA programming - C11						

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ID	Name	Duration	Start	Finish	% compl	Notes
146	PLC/SCADA programming - C11	4.0d	09 June 2020	12 June 2020	0 %	

Mechanical pre-work - F241 Water purge for Multiverter radar

1735	Install air supply and water supply piping - F241 Water purge for Multiverter radar	7.0d	18 August 2020	27 August 2020	0 %	
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Installation solenoid valves on scrubber D307 (A Line outage)

854	PSSR authorisation scrubber D307 - O5	1.0h	16 August 2020	16 August 2020	0 %	
855	Commission integrated system scrubber D307 - O5	2.0h	16 August 2020	16 August 2020	0 %	
852	Install solenoid valves (2) scrubber D307 - O5	4.0h	16 August 2020	16 August 2020	0 %	

PLC/SCADA programming - C24

07

2020-05-19 H2020BC1 Execution Schedule EDIT BY LEHANN

ID	Name	Duration	Start	Finish	% compl	Notes
422	PLC/SCADA programming - C24	4.0d	04 August 2020	August 202	0 %	
Mechanical pre-work - U8 Plant steam balance						
1292	Fabricate spools - U8 Plant steam balance	10.0d	29 July 2020	11 August 2020	0 %	
Structural pre-work - C35/SR1 Density indication F702						
550	Fabricate support for density meter - C35 Density indication F702	4.0d	18 May 2020	21 May 2020	0 %	
551	Install support for density meter - C35 Density indication F702	3.0d	22 May 2020	27 May 2020	0 %	
Installation of sight glasses on train 1						
50	PSSR authorisation - sight glasses on train 1	1.0h	03 July 2020	03 July 2020	0 %	
	Commission system - sight glasses			04		

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ID	Name	Duration	Start	Finish	% compl	Notes
51	on train 1	1.0h	03 July 2020	July 2020	0 %	
49	Install spools and sight glasses (3x3", 4x2") - sight glasses on train 1	3.0h	03 July 2020	03 July 2020	0 %	
PLC/SCADA programming - O3						
739	PLC/SCADA programming - O3	51.0d	02 June 2020	11 August 2020	0 %	
PLC/SCADA programming - O5						
843	PLC/SCADA programming - O5	27.0d	30 June 2020	05 August 2020	0 %	
PLC/SCADA programming - U20						
1562	PLC/SCADA programming - U20	47.0d	22 June 2020	25 August 2020	0 %	
Electrical pre-work - O5 Acid Scrubber pump/fill						

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ID	Name	Duration	Start	Finish	% compl	Notes
832	Installation of Coated conduit - O5 Acid Scrubber pump/fill	16.0d	16 June 2020	08 July 2020	0 %	
Electrical pre-work - Chlorinator sump level blow downs						
143	Installation of Coated conduit - Chlorinator sump level blow downs	4.0d	19 May 2020	22 May 2020	0 %	
144	Installation of Cabling - Chlorinator sump level blow downs	10.0d	26 May 2020	08 June 2020	0 %	
Electrical pre-work - C21 Dual pH meters SR scrubber						
369	Installation of Cabling - C21 Dual pH meters SR scrubber	4.0d	24 July 2020	29 July 2020	0 %	
368	Installation of Coated conduit - C21 Dual pH meters SR scrubber	3.0d	21 July 2020	23 July 2020	0 %	
PLC/SCADA programming - U9						

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ID	Name	Duration	Start	Finish	% compl	Notes
1449	PLC/SCADA programming - U9	12.0d	10 August 2020	25 August 2020	0 %	
Mechanical pre-work						
841	Installation of 3x junction boxes - O5 Acid Scrubber pump/fill	3.0d	09 June 2020	11 June 2020	0 %	
Installation of Nalco skid						
1232	Install Nalco skid	3.0d	04 August 2020	06 August 2020	0 %	
1233	Connect piping Nalco skid	2.0d	07 August 2020	10 August 2020	0 %	
Mechanical installation - C35/SR1 Density indication F702						
569	Install 2" butterfly valve with positioner & connect air piping - C35/SR1 Density indication F702	3.0h	11 June 2020	11 June 2020	0 %	

Install Micromotion - C35/SR1

11

2020-05-19 H2020BC1 Execution Schedule EDIT BY LEHANN

ID	Name	Duration	Start	Finish	% compl	Notes
570	Density indication F702	4.0h	11 June 2020	June 2020	0 %	
Mechanical pre-work - C9 Vent for AlCl3 System						
104	Install junction boxes (3)	2.0d	17 August 2020	18 August 2020	0 %	
Mechanical pre-work - C8 Sight flow indicators on condensate drains						
40	Fabricate spools - C8 Sight flow indicators on condensate drains	7.0d	16 June 2020	24 June 2020	0 %	