

ID	%	Comple	Task Name	Start	Finish	Duration	Predecesso	Resource	May		
									B	M	
1	2%		<b>Tracker Hall Integration</b>	Thu 01/05/14	Fri 20/03/15	232 days					
2	5%		<b>Pre Installation work</b>	Mon 12/05/14	Mon 03/11/14	125 days					
3	0%		<b>General Maintenance</b>	Mon 12/05/14	Wed 14/05/14	3 days					
4	0%		Gather all Tracker equipment in lab space and do stock check	Mon 12/05/14	Wed 14/05/14	3 days					
5	0%		Get Electronics spares VME/NIM/Instruments?	Mon 12/05/14	Mon 12/05/14	1 day					
6	6%		<b>Cryostat related preparation</b>	Mon 12/05/14	Tue 08/07/14	42 days					
7	25%		Warwick QA of external waveguides	Mon 12/05/14	Fri 06/06/14	20 days					
8	0%		Gather spares for making new external waveguides	Mon 12/05/14	Fri 23/05/14	10 days					
9	0%		Quote/Book/Wait service with SHI cryogenics	Mon 12/05/14	Fri 06/06/14	20 days					
10	0%		Get new aeroquip Helium lines - 8 x 10M extra plus union and Spares?	Mon 12/05/14	Mon 12/05/14	1 day					
11	0%		Re-gas pressurise compressor with BIP Helium	Mon 12/05/14	Mon 12/05/14	1 day					
12	0%		Mend broken manual pressure valve	Mon 12/05/14	Mon 12/05/14	1 day					
13	0%		Service & clean CCG pressure sensors	Mon 12/05/14	Tue 13/05/14	2 days					
14	0%		Service compressor - New Adsorber?	Mon 09/06/14	Tue 10/06/14	2 days	9				
15	0%		Service cold heads	Mon 09/06/14	Tue 10/06/14	2 days	9				
16	0%		Connect up new SL80 turbo pump to cryostat x4	Mon 12/05/14	Mon 12/05/14	1 day					
17	0%		Mount & Connect TD400 turbo controller to Turbo x4	Tue 13/05/14	Tue 13/05/14	1 day	16				
18	0%		Lab test of cryostat vac, cooling & electronics. Need He gas & Comp	Wed 11/06/14	Tue 08/07/14	20 days	11,12,13,14				
19	0%		<b>Electronics preparation</b>	Mon 12/05/14	Tue 13/05/14	2 days					
20	0%		Buy and connect up rack smoke detector?	Mon 12/05/14	Mon 12/05/14	1 day					
21	0%		Buy another Vesda VLF250 or decide on single pipeline run?	Mon 12/05/14	Mon 12/05/14	1 day					
22	0%		Run in 4 DAQ ISIS 1RF trigger cables from MLCR to Tracker rack	Mon 12/05/14	Mon 12/05/14	1 day					
23	0%		Run in fibres between Tracker rack and Controls & DAQ computers	Mon 12/05/14	Mon 12/05/14	1 day					
24	0%		Test AFELIt boards, upgrade firmware, check locator pins	Mon 12/05/14	Tue 13/05/14	2 days		DA			
25	0%		<b>Services preparation</b>	Mon 12/05/14	Mon 03/11/14	125 days					
26	0%		Check Tracker rack & cryo positions and design for cryo stands	Mon 12/05/14	Mon 12/05/14	1 day		JT			
27	0%		Organise Mains distribution at Tracker rack positions	Tue 13/05/14	Wed 14/05/14	2 days	26	DL			
28	0%		Lay cable trays between rack and cryo position	Tue 13/05/14	Wed 14/05/14	2 days	26	Hall			
29	0%		Arrange BIP grade Helium gas line to Tracker rack	Tue 13/05/14	Tue 13/05/14	1 day	26	Hall			
30	0%		Global vac pipework in place end June 2014	Mon 30/06/14	Mon 30/06/14	0 days		MT			
31	0%		DL vac controls rack & software (NW corner) in place around Nov 2014	Mon 03/11/14	Mon 03/11/14	0 days		DL			
32	0%		<b>Make LED Calibration boxes</b>	Mon 12/05/14	Mon 19/05/14	6 days					
33	0%		Construct 2nd LED box (Drill box,pot fibres & PCB and Solder)	Mon 12/05/14	Tue 13/05/14	2 days					

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	Inactive Milestone		Manual Summary
	Inactive Summary		Start-only
	Manual Task		Finish-only
	Duration-only		Manual Summary Rollup

ID	%	Comple	Task Name	Start	Finish	Duration	Predecessors	Resource Names	May		
									B	M	
34	0%		Polish 2 sets (Qty20) of LED fibres in small connectors	Mon 12/05/14	Mon 12/05/14	1 day					LED connectors 12/05
35	0%		Pot & Polish 2x10 sets of LED fibres in PP connectors	Tue 13/05/14	Tue 13/05/14	1 day	34				PP connectors 13/05
36	0%		Cable up LED box in hall (VME, ethernet, fibres)	Wed 14/05/14	Wed 14/05/14	1 day	35				ethernet, fibres) 14/05
37	0%		LED box hardware & software debug (as not used before!)	Thu 15/05/14	Fri 16/05/14	2 days	36				not used before!) 16/05
38	0%		Run LED calibration with PMT?	Mon 19/05/14	Mon 19/05/14	1 day	37				calibration with PMT? 19/05
39	0%		<b>Upstream SpecSol offline activities in hall</b>	<b>Thu 01/05/14</b>	<b>Thu 15/05/14</b>	<b>11 days</b>					
40	0%		Plan Offline LED Calibration test with PMT?	Mon 12/05/14	Mon 12/05/14	1 day					test with PMT? 12/05
41	100%	✓	Upstream SpecSol placed in Offline position in hall	Mon 05/05/14	Mon 05/05/14	0 days		AN			hall 05/05
42	0%		Carry out Offline LED calibration test?	Tue 20/05/14	Mon 26/05/14	5 days	38,40,41				the LED calibration test? 26/05
43	0%		Trial connect and reform south side external waveguides?	Mon 05/05/14	Mon 05/05/14	0 days	41				as? 05/05
44	0%		<b>Compressors in hall</b>	<b>Mon 01/09/14</b>	<b>Mon 20/10/14</b>	<b>36 days</b>					
45	0%		3 phase mains connections at compressor positions in place?	Mon 01/09/14	Mon 01/09/14	0 days		AN			
46	0%		Chilled water piping & flowmeters at compressor positions in place?	Mon 01/09/14	Mon 01/09/14	0 days		AN			
47	0%		Framework in place for stack of two compressors	Mon 01/09/14	Mon 01/09/14	0 days	45,46	AN			
48	0%		Move compressors to hall and place in position	Mon 01/09/14	Mon 01/09/14	1 day	47				
49	0%		Connect chilled water & mains	Tue 02/09/14	Wed 03/09/14	2 days	48	AN			
50	0%		Run Helium lines (30M) from compressors to cryostat (S & N separately?)	Thu 04/09/14	Wed 15/10/14	30 days	49				
51	0%		Run electrical line (30M) from compressors to cryostat (S & N separately?)	Thu 04/09/14	Thu 04/09/14	1 day	49				
52	0%		Connect compressors to DL interface box	Tue 02/09/14	Tue 02/09/14	1 day	48,55				
53	0%		Leak test system (S & N separately)	Thu 16/10/14	Mon 20/10/14	3 days	50,51,52				
54	0%		<b>DL Tracker cryostat interface box (Interlocks)</b>	<b>Mon 12/05/14</b>	<b>Tue 04/11/14</b>	<b>127 days</b>					
55	0%		DL Tracker cryostat interface box in place in RR2?	Mon 12/05/14	Mon 12/05/14	0 days		DL			DL interface in RR2? 12/05
56	0%		Connect up smoke detector sensing pipework	Fri 24/10/14	Mon 27/10/14	2 days	77				
57	0%		Commission Vesda smoke detector in situ	Tue 28/10/14	Wed 29/10/14	2 days	56				
58	0%		Get Vesda system officially commissioned & accreditation test	Thu 30/10/14	Fri 31/10/14	2 days	57				
59	0%		Connect Vesda system alarm relay to DL interface box	Mon 03/11/14	Mon 03/11/14	1 day	55,57,58				
60	0%		Connect 115V transformer to Lid Heater box	Thu 23/10/14	Thu 23/10/14	0 days	77				
61	0%		Connect up Lid Heater outputs to DL interface box	Fri 24/10/14	Fri 24/10/14	1 day	55,60				
62	0%		Connect up Oxford ITC503 to RS232 via Ethernet to DL interface box	Tue 04/11/14	Tue 04/11/14	1 day	55,67				
63	0%		Connect Wiener (AFE) mains supply to DL interface box	Fri 24/10/14	Fri 24/10/14	1 day	55,77				
64	0%		Use Wiener mains interlock TTL signal?	Mon 12/05/14	Mon 12/05/14	0 days					TTL signal? 12/05
65	0%		Connect phone dialler?	Mon 12/05/14	Mon 12/05/14	0 days	55				phone dialler? 12/05
66	0%		<b>Tracker racks in hall (require both for N or S operation)</b>	<b>Mon 03/11/14</b>	<b>Wed 05/11/14</b>	<b>3 days</b>	<b>19,25</b>				

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	Inactive Milestone		Manual Summary
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ID	%	Comple	Task Name	Start	Finish	Duration	Predecesso	Resource	May		
									B	M	
67	0%		Place tracker rack in position in hall	Mon 03/11/14	Mon 03/11/14	1 day					
68	0%		Arrange Helium gas line from Tracker rack to cryo	Tue 04/11/14	Tue 04/11/14	1 day	67				
69	0%		Ship back David Adey kit from the US	Mon 03/11/14	Mon 03/11/14	0 days					
70	0%		Populate VME crates with modules	Tue 04/11/14	Tue 04/11/14	1 day	67,69				
71	0%		Connect fibre between Tracker rack and controls computer	Wed 05/11/14	Wed 05/11/14	1 day	70				
72	0%		Connect fibre between Tracker rack and MLCR based DAQ computer	Wed 05/11/14	Wed 05/11/14	1 day	70				
73	0%		Connect 1553 cables from VME module to AFE backplane	Wed 05/11/14	Wed 05/11/14	1 day	70,77				
74	0%		<b>South side cryostats install</b>	<b>Mon 30/06/14</b>	<b>Thu 06/11/14</b>	<b>94 days</b>					
75	0%		South side PRY in place by Mid Oct 2014	Mon 20/10/14	Mon 20/10/14	0 days		JT			
76	0%		Cryostat stands - South side in place	Mon 20/10/14	Tue 21/10/14	2 days	75	JT			
77	0%		Move South side cryostats to hall and place in position	Wed 22/10/14	Thu 23/10/14	2 days	76				
78	0%		Connect up CCG to MKS gauge in Tracker rack	Thu 06/11/14	Thu 06/11/14	1 day	66,77				
79	0%		Connect up Cold head Electrical & Helium lines with new washers	Fri 24/10/14	Fri 24/10/14	1 day	50,51,77				
80	0%		Connect temperature sensors to Oxford ITC503 in Tracker rack	Thu 06/11/14	Thu 06/11/14	1 day	66,77				
81	0%		Mount 4 x AFEIt PCB's	Fri 24/10/14	Fri 24/10/14	1 day	24,77				
82	0%		Connect mains power to Wiener AFE PSU	Fri 24/10/14	Fri 24/10/14	1 day	77				
83	0%		<b>Cryostat Vacuum system</b>	<b>Mon 30/06/14</b>	<b>Tue 04/11/14</b>	<b>92 days</b>					
84	0%		Connect TD400 Turbo controller to DL vac rack	Mon 03/11/14	Mon 03/11/14	1 day	17,31				
85	0%		Mount & Connect 24V for turbo controller at cryostat or DL vac rack	Tue 04/11/14	Tue 04/11/14	1 day	84				
86	0%		Connect up MKS937 pressure gauge controller trip relay to DL vac rack	Tue 04/11/14	Tue 04/11/14	1 day	31,67				
87	0%		Connect Pneumatic fail safe pressure valve behind turbo?	Mon 30/06/14	Mon 30/06/14	1 day	16,30	MT			
88	0%		Connect Pneumatic fail safe through to valve island and onto DL vac rack	Mon 03/11/14	Mon 03/11/14	1 day	31,87				
89	0%		Connect Roughing/Backing line to fail safe valve	Tue 04/11/14	Tue 04/11/14	1 day	30,88				
90	0%		<b>South side External Waveguides connect</b>	<b>Mon 12/05/14</b>	<b>Wed 29/10/14</b>	<b>123 days</b>					
91	0%		Upstream spectrometer solenoid in place on cooling channel?	Mon 12/05/14	Mon 12/05/14	0 days		AN			
92	0%		Make dark working environment	Mon 12/05/14	Tue 13/05/14	2 days	91				
93	0%		Reform and connect external waveguides to fit from PP to Cryostat	Fri 24/10/14	Tue 28/10/14	3 days	7,77,91,92				
94	0%		Errect trellis to support external waveguides	Wed 29/10/14	Wed 29/10/14	1 day	93				
95	0%		<b>North side cryostats install</b>	<b>Mon 30/06/14</b>	<b>Thu 05/03/15</b>	<b>179 days</b>					
96	0%		North side PRY in place by Feb 2015	Fri 27/02/15	Fri 27/02/15	0 days		JT			
97	0%		Cryostat stands - North side in place	Fri 27/02/15	Mon 02/03/15	2 days	96	JT			
98	0%		Move North side cryostats to hall and place in position	Tue 03/03/15	Wed 04/03/15	2 days	97				
99	0%		Connect up CCG to MKS gauge in Tracker rack	Thu 05/03/15	Thu 05/03/15	1 day	66,98				

des connect  
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environment

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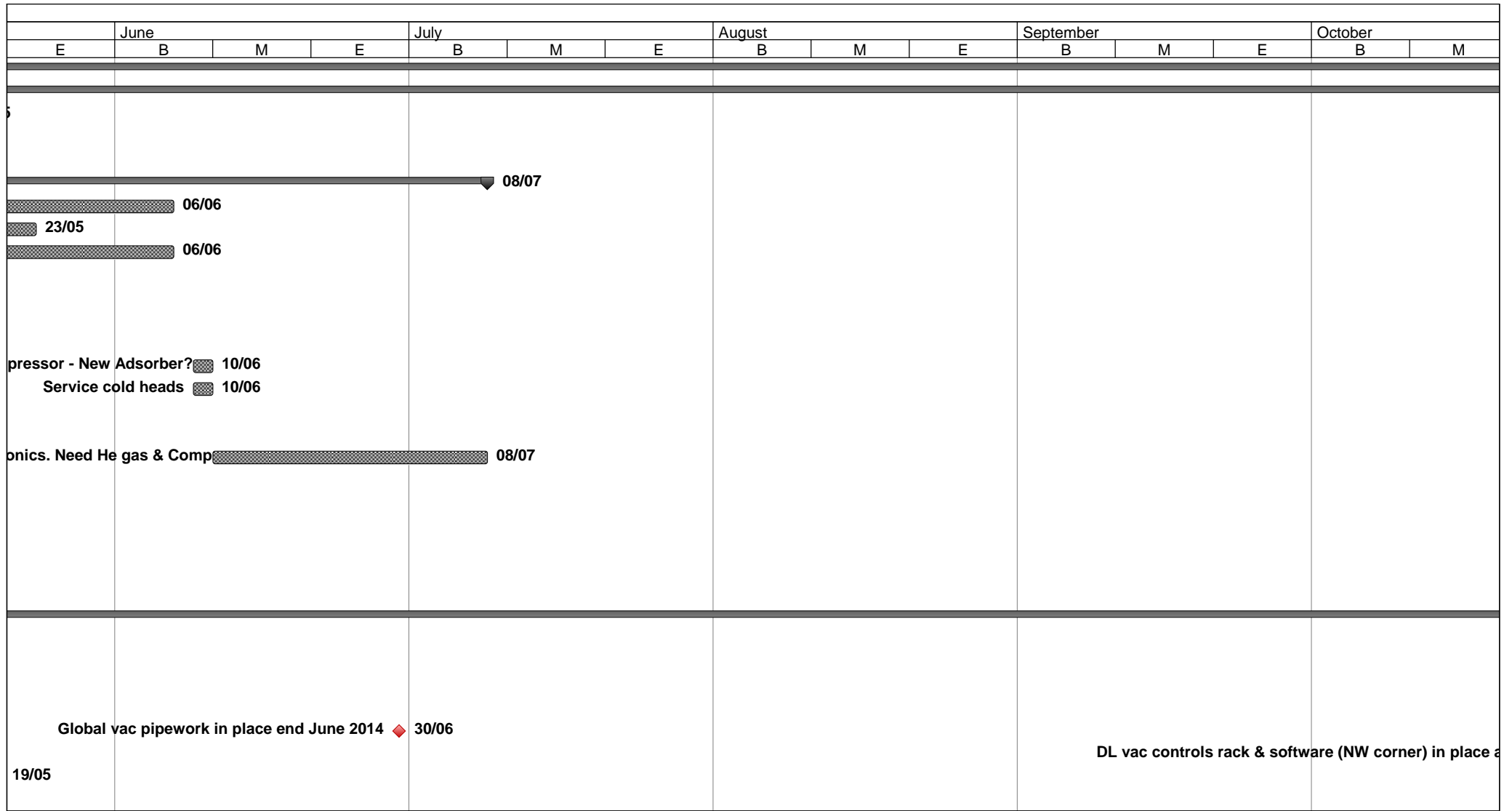
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	Inactive Summary		Start-only
	Manual Task		Finish-only
	Duration-only		Manual Summary Rollup

ID	%	Comple	Task Name	Start	Finish	Duration	Predecesso	Resource	May		
									B	M	
100	0%		Connect up Cold head Electrical & Helium lines with new washers	Thu 05/03/15	Thu 05/03/15	1 day	50,51,98				
101	0%		Connect temperature sensors to Oxford ITC503 in Tracker rack	Thu 05/03/15	Thu 05/03/15	1 day	66,98				
102	0%		Mount 4 x AFEIt PCB's	Thu 05/03/15	Thu 05/03/15	1 day	24,98				
103	0%		Connect mains power to Wiener AFE PSU	Thu 05/03/15	Thu 05/03/15	1 day	98				
104	0%		<b>Cryostat Vacuum system</b>	<b>Mon 30/06/14</b>	<b>Tue 04/11/14</b>	<b>92 days</b>					
105	0%		Connect TD400 Turbo controller to DL vac rack	Mon 03/11/14	Mon 03/11/14	1 day	31				
106	0%		Mount & Connect 24V for turbo controller at cryostat or DL vac rack	Tue 04/11/14	Tue 04/11/14	1 day	105				
107	0%		Connect up MKS937 pressure gauge controller trip relay to DL vac rack	Tue 04/11/14	Tue 04/11/14	1 day	31,67				
108	0%		Connect Pneumatic fail safe pressure valve behind turbo?	Mon 30/06/14	Mon 30/06/14	1 day	16,30	MT			
109	0%		Connect Pneumatic fail safe to valve island and DL vac rack	Mon 03/11/14	Mon 03/11/14	1 day	31,108				
110	0%		Connect Roughing/Backing line to fail safe valve	Tue 04/11/14	Tue 04/11/14	1 day	30,109				
111	0%		<b>North side External Waveguides connect</b>	<b>Mon 12/05/14</b>	<b>Tue 10/03/15</b>	<b>217 days</b>					
112	0%		Downstream spectrometer solenoid in place on cooling channel?	Mon 12/05/14	Mon 12/05/14	0 days		AN			
113	0%		Make dark working environment	Mon 12/05/14	Mon 12/05/14	1 day	112				
114	0%		Reform and connect external waveguides to fit from PP to Cryostat	Thu 05/03/15	Mon 09/03/15	3 days	7,98,112,11				
115	0%		Errect trellis to support external waveguides	Tue 10/03/15	Tue 10/03/15	1 day	114				
116	0%		<b>Pre-beam Comissioning</b>	<b>Thu 06/11/14</b>	<b>Fri 20/03/15</b>	<b>97 days</b>					
117	0%		<b>South side operations</b>	<b>Thu 06/11/14</b>	<b>Wed 26/11/14</b>	<b>15 days</b>					
118	0%		Test AFE slow controls (Adey)	Thu 06/11/14	Mon 10/11/14	3 days	66,81,82	DA			
119	0%		Test Tracker safety interlocks	Fri 07/11/14	Mon 10/11/14	2 days	44,54,66,74				
120	0%		Cool down procedure	Tue 11/11/14	Fri 14/11/14	4 days	119				
121	0%		LED Calibration & other	Mon 17/11/14	Mon 24/11/14	6 days	90,118,120	DA,EO			
122	0%		Initial ISIS RF timing with TOF mimic?	Tue 25/11/14	Wed 26/11/14	2 days	121	EO			
123	0%		<b>North side operations</b>	<b>Fri 06/03/15</b>	<b>Fri 20/03/15</b>	<b>11 days</b>					
124	0%		Test AFE slow controls (Adey)	Fri 06/03/15	Fri 06/03/15	1 day	66,102,103	DA			
125	0%		Test Tracker safety interlocks	Fri 06/03/15	Fri 06/03/15	1 day	44,54,66,95				
126	0%		Cool down procedure	Mon 09/03/15	Thu 12/03/15	4 days	125				
127	0%		(Full) LED Calibration & other	Fri 13/03/15	Fri 20/03/15	6 days	111,124,126	DA,EO			
128	0%		<b>Step IV beam commissioning starts : ISIS cycle starts 17th March</b>	Tue 17/03/15	Tue 17/03/15	0 days					

des connect  
ng channel?  
environment

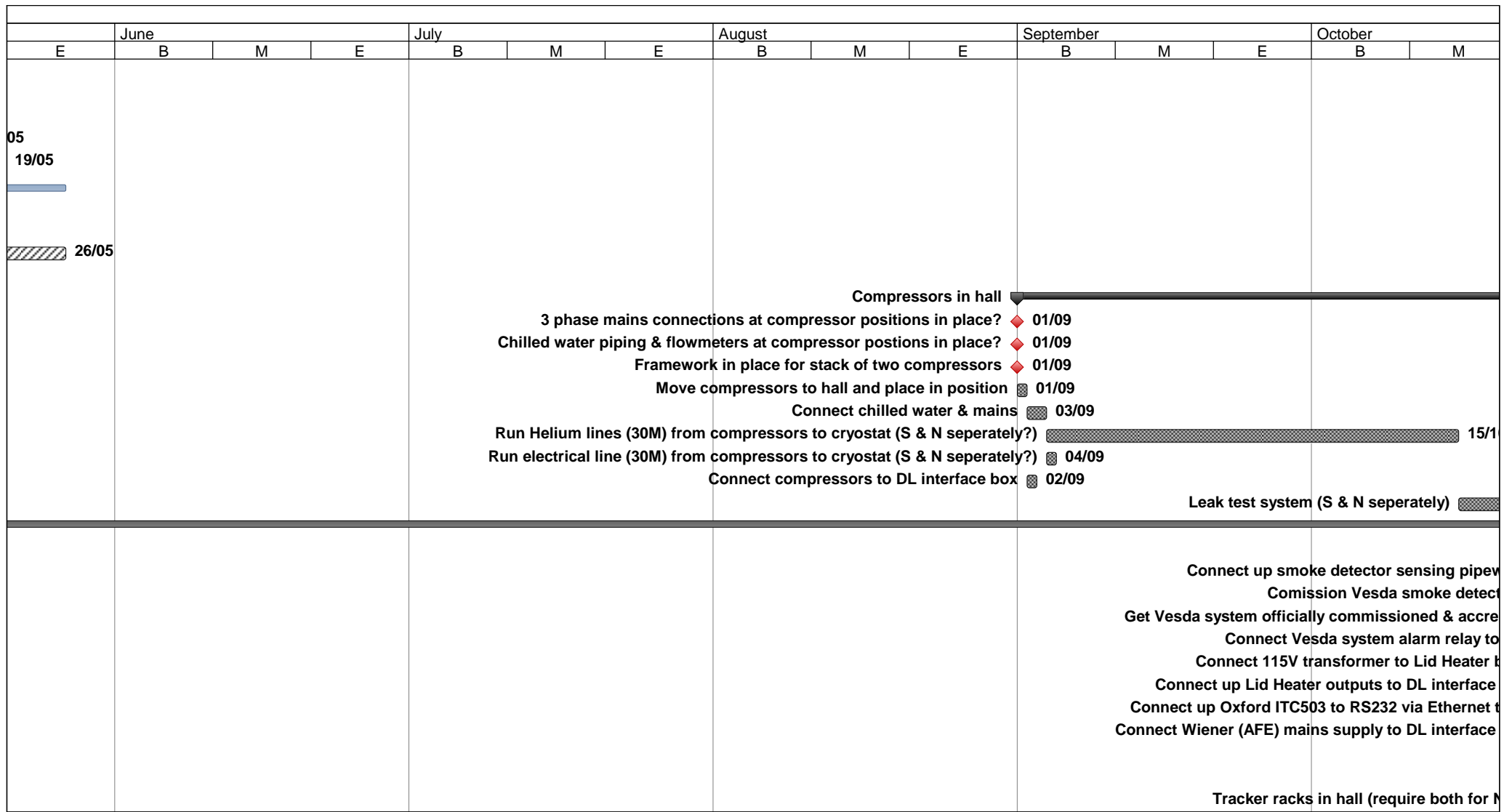
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	Inactive Summary		Start-only
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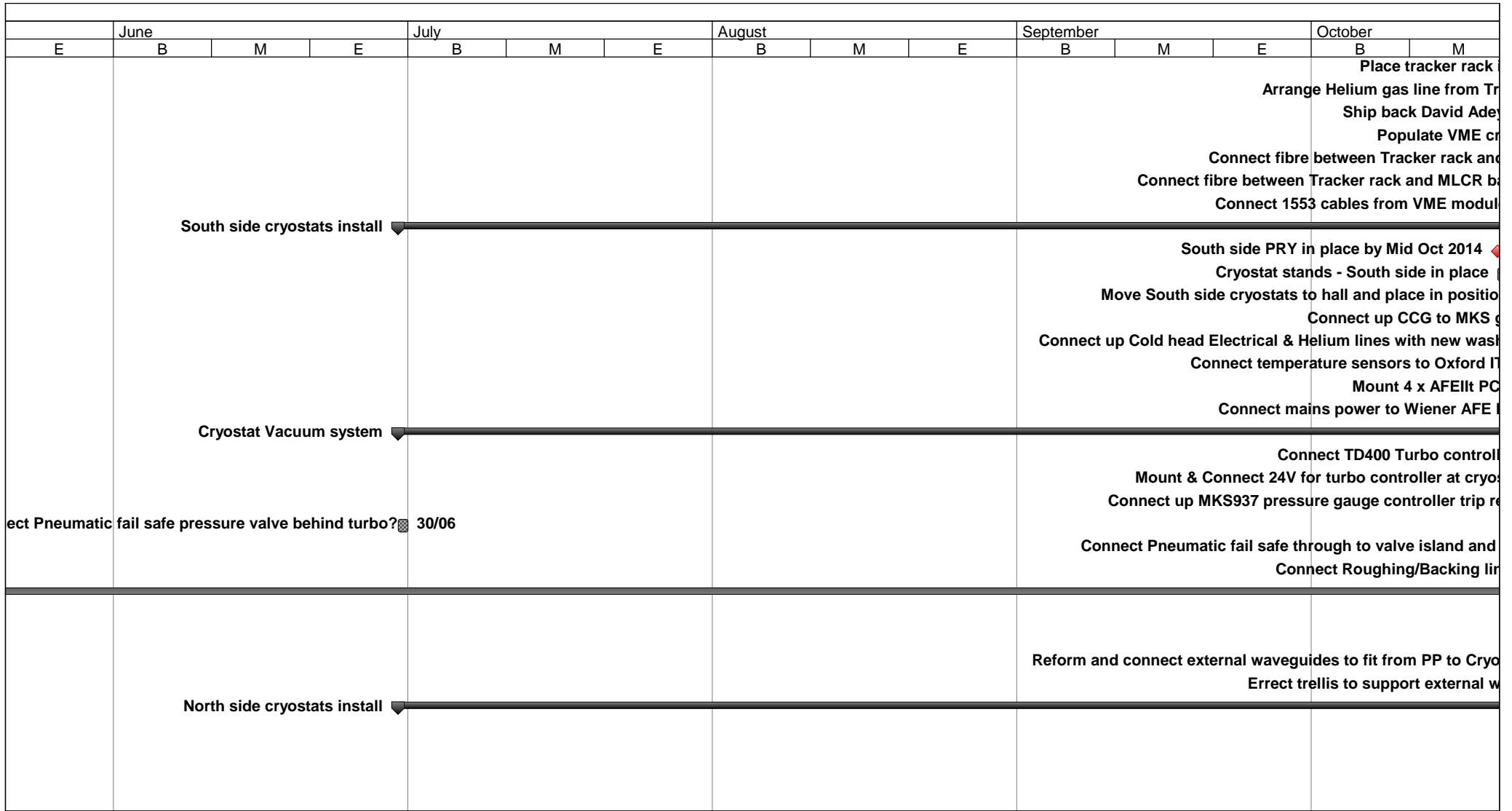
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	Inactive Task		

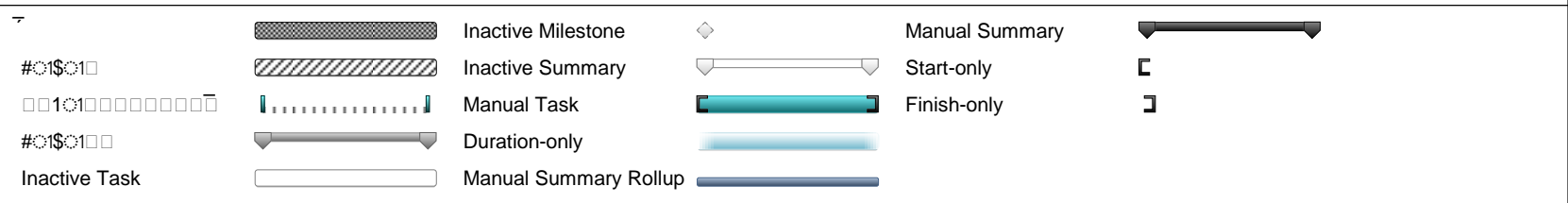


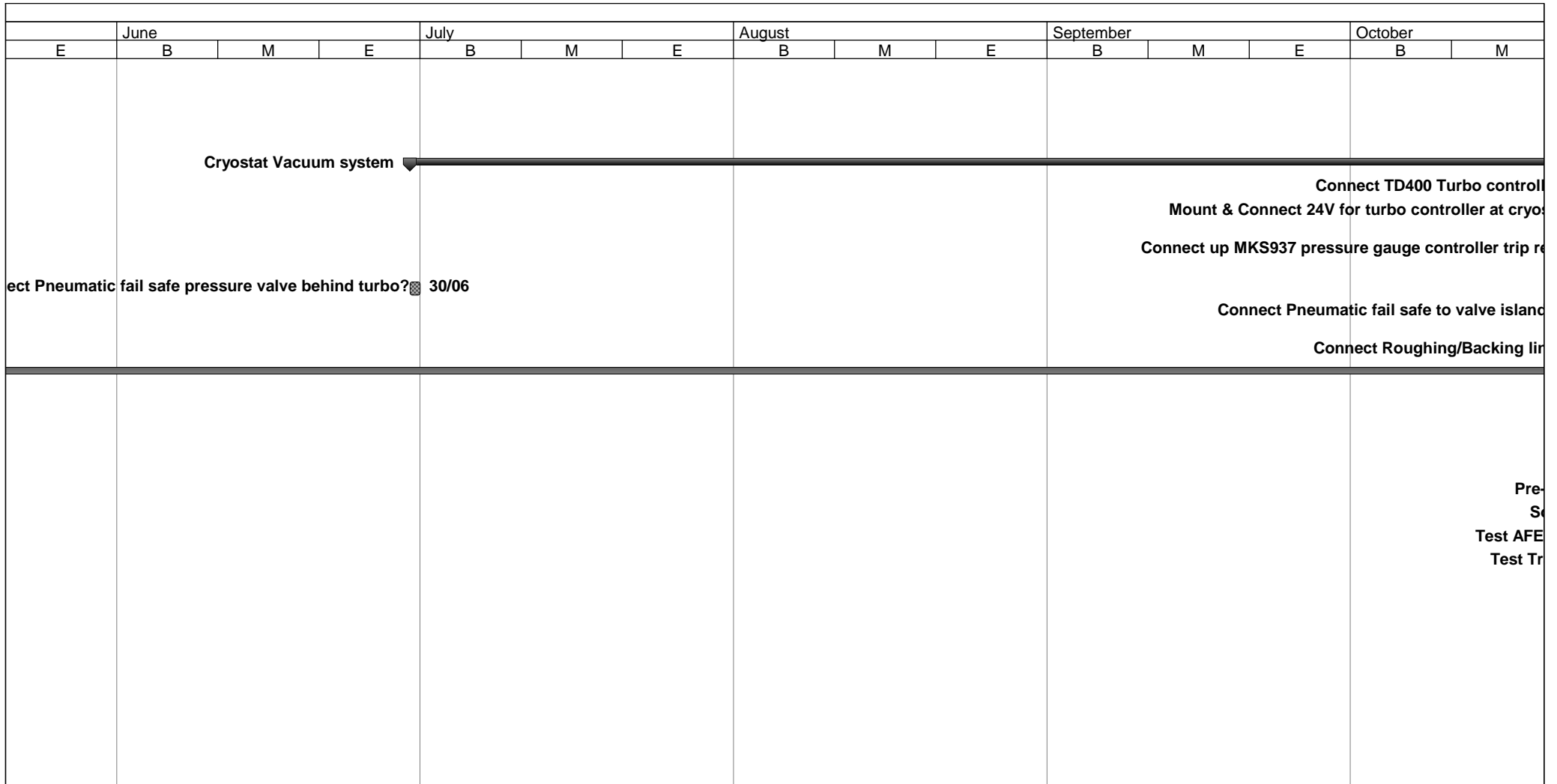
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	Inactive Summary		Start-only
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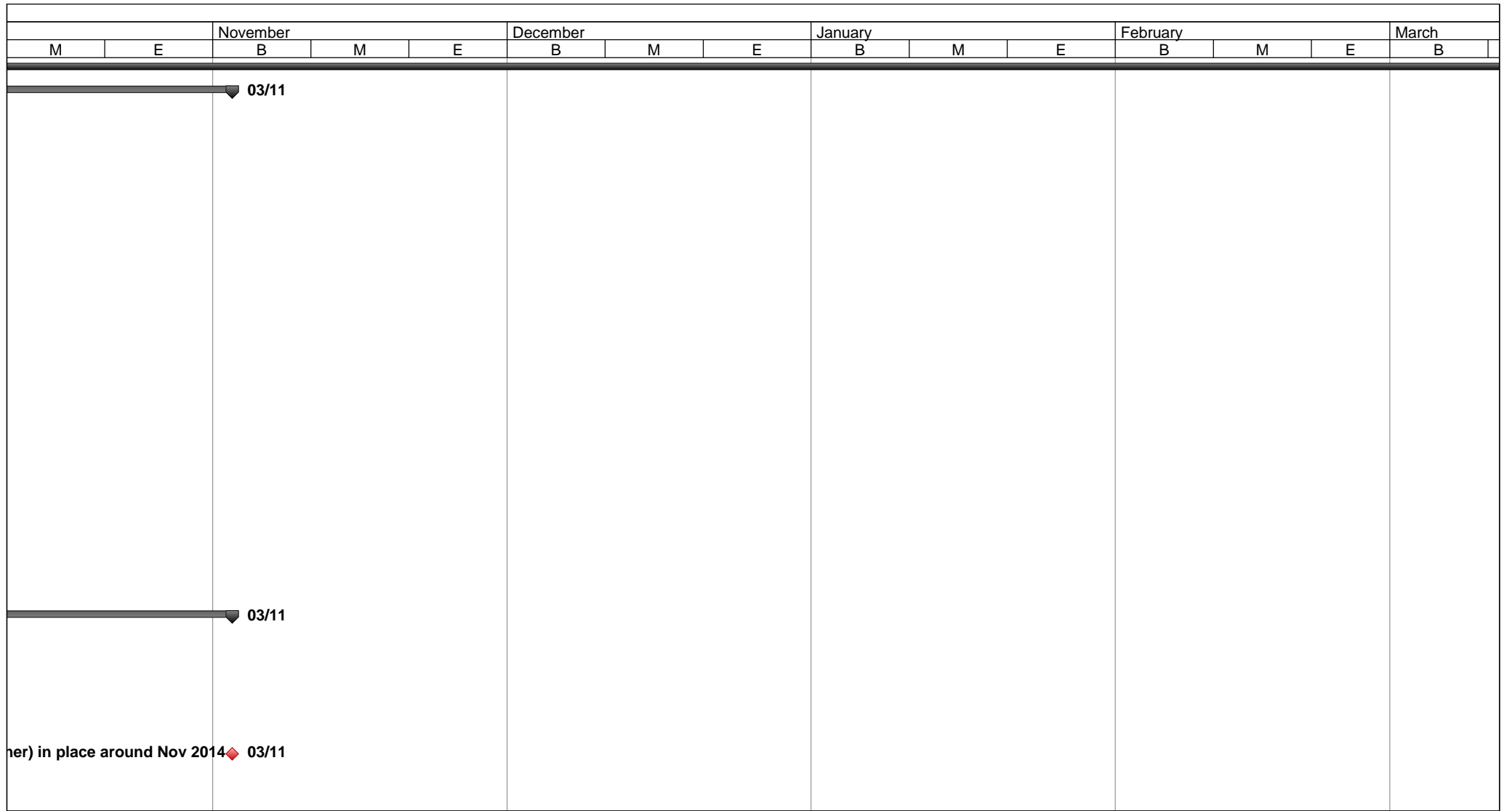


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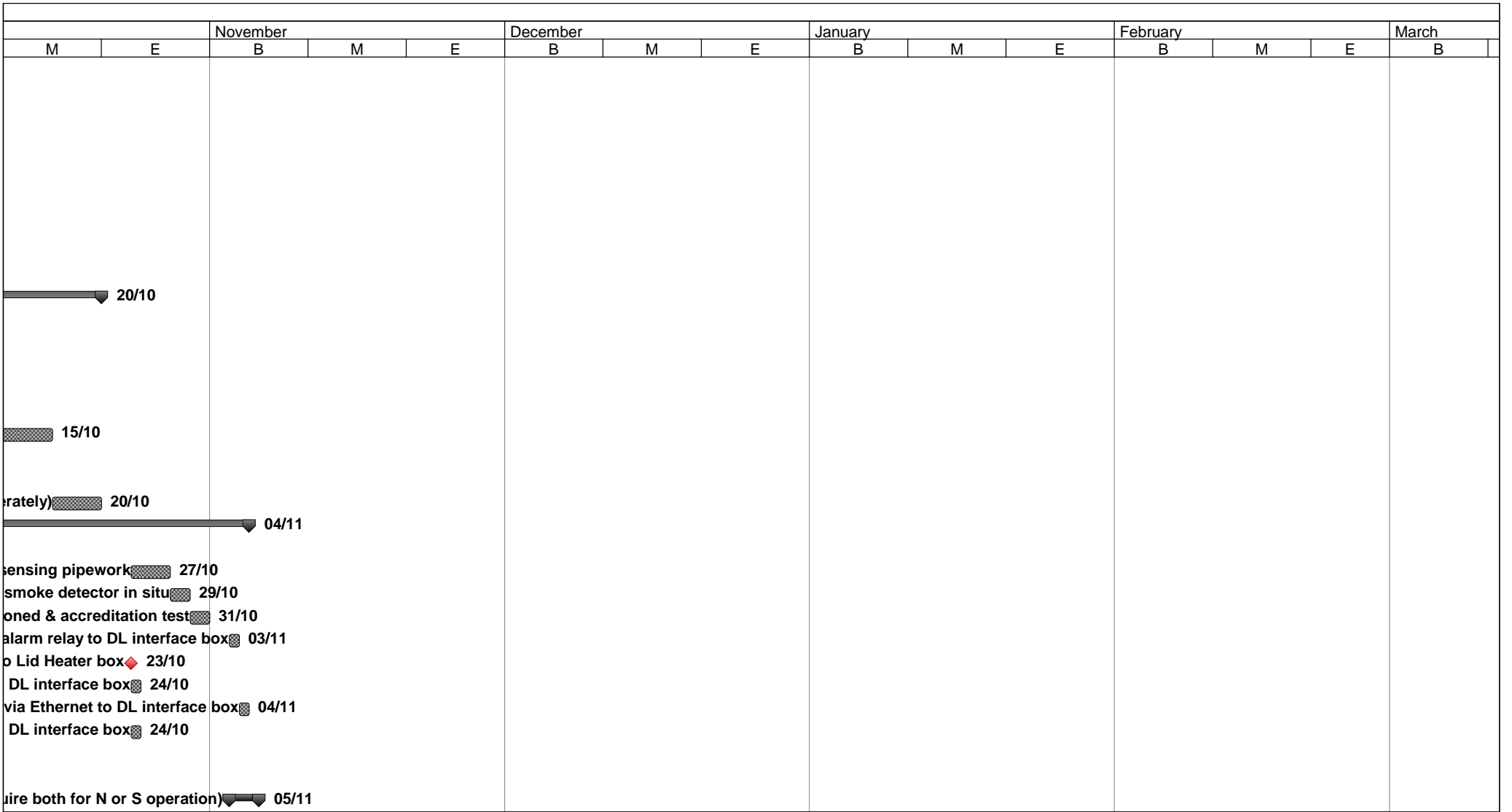
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- #0\$010  Inactive Summary
-  Manual Task
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-  Start-only
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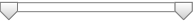










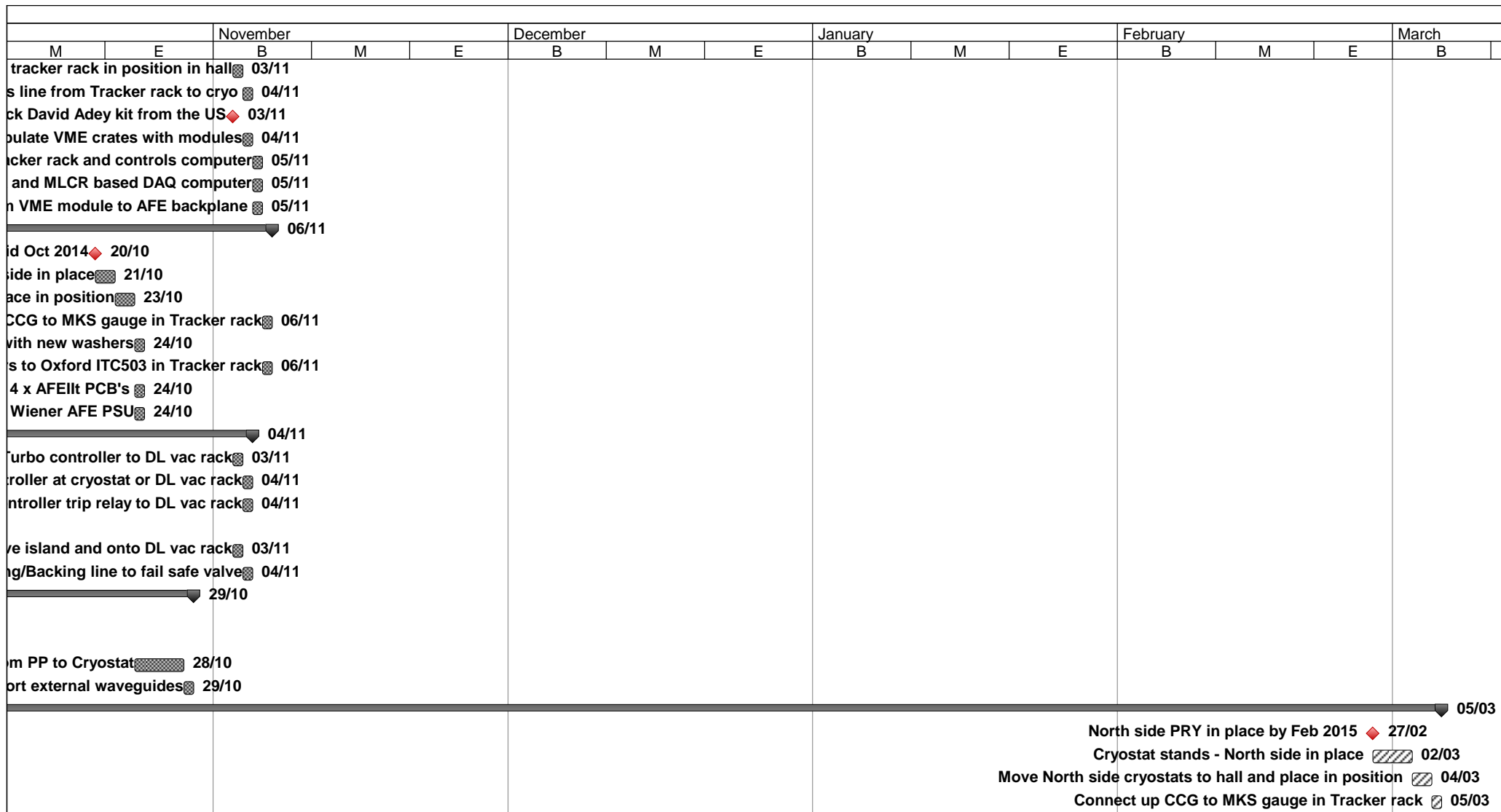
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	Inactive Summary		Finish-only	
	Manual Task		Duration-only	
	Inactive Task		Manual Summary Rollup	



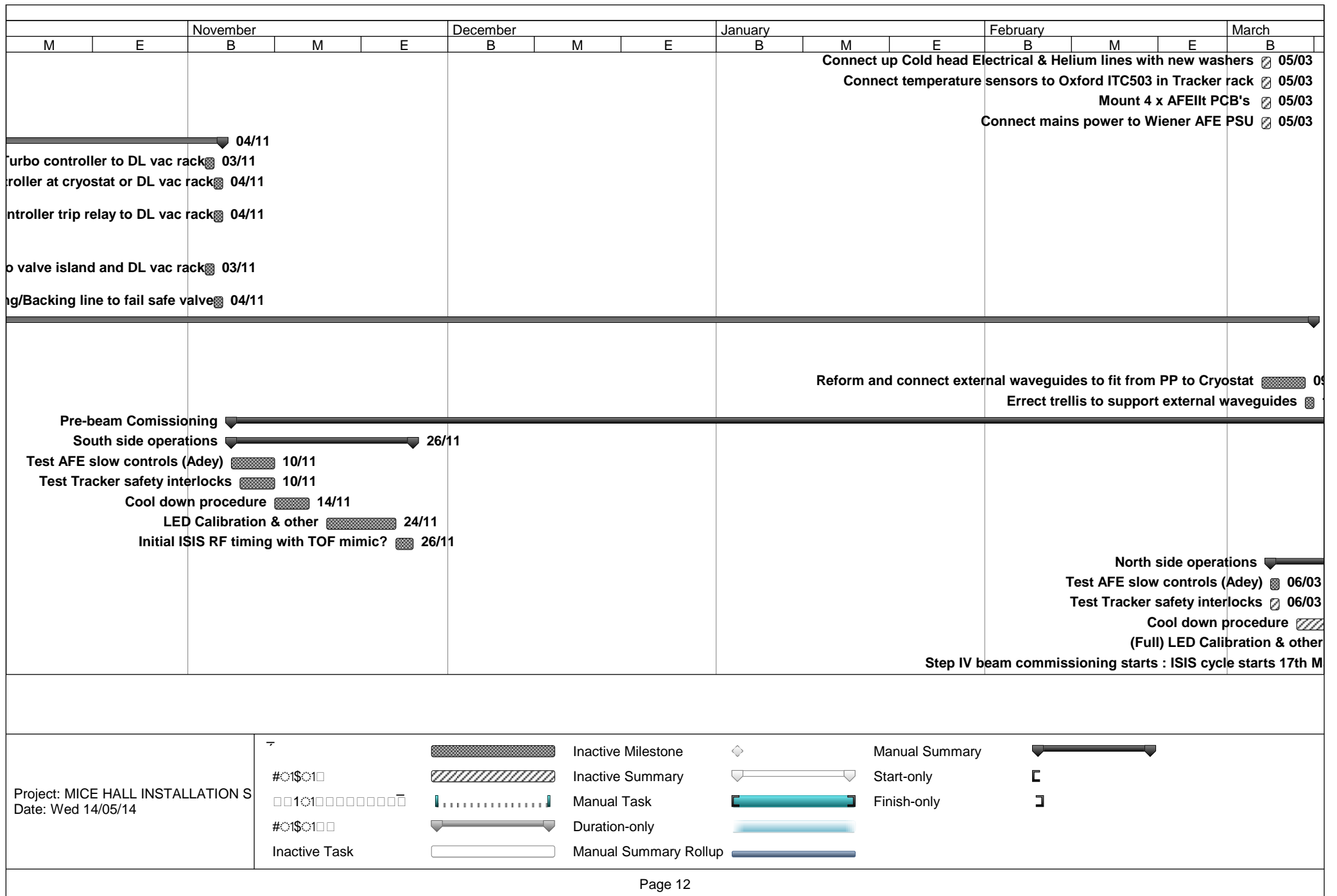
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	Inactive Task			



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	Inactive Task		



		April			May			June			July			August
M	E	B	M	E	B	M	E	B	M	E	B	M	E	B
	20/03													

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	Manual Task		Manual Summary Rollup	
	Inactive Task			

		April			May			June			July			August
M	E	B	M	E	B	M	E	B	M	E	B	M	E	B



















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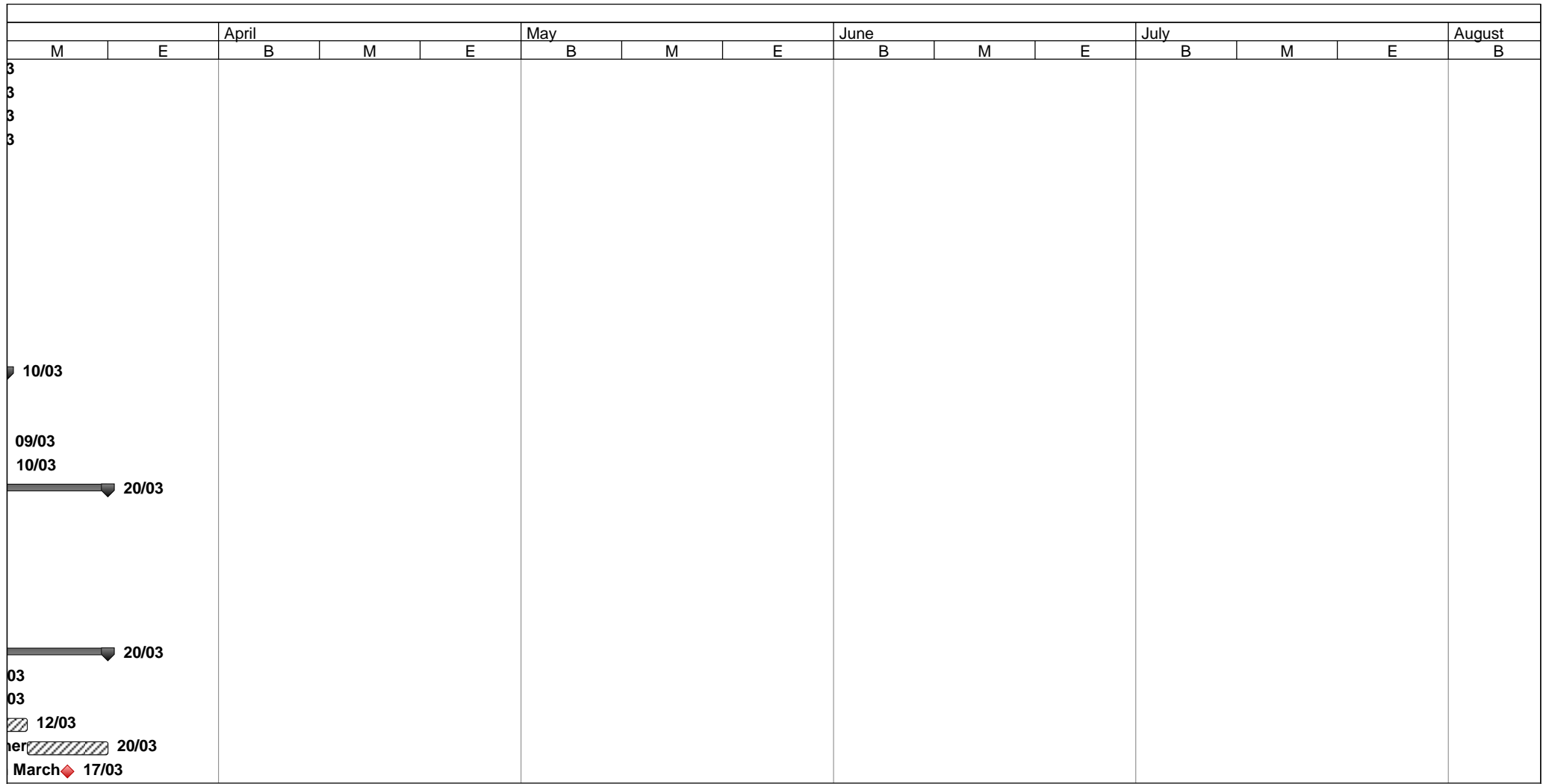
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	Duration-only		Manual Summary Rollup	
	Inactive Task			









		April			May			June			July			August
M	E	B	M	E	B	M	E	B	M	E	B	M	E	B

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			Duration-only		Manual Summary Rollup	
		Inactive Task				



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	#0\$0100		Manual Task		Finish-only	┐
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