

ID	Task Name	Start	Finish	Risk code pre THA	Task Hazard Analysis	Risk code post THA	Atllis	HA list	Hot Work	TOSP, RWP, Lift plan	Duration
1	G2P installation	Mon 5/16/11	Mon 11/21/11	XXXXXX							132.5 days?
2		Mon 5/16/11	Mon 5/16/11								1 day?
3	RadCon Hold	Mon 5/16/11	Fri 5/27/11	SOT							10 days?
4	post beam checklist	Mon 5/16/11	Mon 5/16/11	SOT							1 day?
5											
6	beam line prep work	Mon 5/16/11	Mon 7/11/11	XXXXXX							39 days?
7	QA raster, calorimeter and magnet stands	Mon 5/16/11	Mon 5/16/11	SOT							0 days
8	install power for slow raster and calorimeter	Mon 5/16/11	Mon 5/16/11	SOT							0 days
9	install power in Hall for FZ magnets	Mon 5/16/11	Mon 5/16/11								1 day?
10	fab water manifolds for FZ magnets	Mon 5/16/11	Mon 5/16/11								1 day?
11	rework power connections for septum magnet	Mon 5/16/11	Mon 5/16/11								1 day?
12	rework water manifolds for septum magnet	Mon 5/16/11	Mon 5/16/11								1 day?
13	design and fab new electrical shields for septum magnet	Mon 5/16/11	Mon 5/16/11								1 day?
14	fab new beam pipe for septum magnet	Mon 5/16/11	Mon 5/16/11								1 day?
15	field map septum magnet	Mon 5/16/11	Mon 5/16/11								1 day?
16	pre survey beam dump	Mon 5/16/11	Mon 5/16/11								1 day?
17	pre survey target can	Mon 5/16/11	Mon 5/16/11								1 day?
18	pre survey target magnet	Mon 5/16/11	Mon 5/16/11								1 day?
19	close and unplug beam line vacuum valves	Mon 5/16/11	Mon 5/16/11	SOT			N				1 day?
20	turn off and valve off turbo pumps	Mon 5/16/11	Mon 5/16/11	SOT			N				1 day?
21	turn off diff pump station	Mon 5/16/11	Mon 5/16/11	SOT			N				1 day?
22	bleed up entrance beam line from diff pump to target	Mon 5/16/11	Mon 5/16/11	SOT			N				1 day?
23	reposition all metal beam line valve	Mon 5/16/11	Mon 5/16/11	SOT			N				1 day?
24	Platform - layout reference lines Mar 11	Mon 5/16/11	Mon 5/16/11								1 day?
25	Target fiduc. 1.Mag:Top March 11	Mon 5/16/11	Mon 5/16/11								1 day?
26	Target fiduc. 2.Top:Can Mar 11	Mon 5/16/11	Mon 5/16/11								1 day?
27	Septa fiduc.(new locations) March 11	Mon 5/16/11	Mon 5/16/11								1 day?
28	Platform - check target mount	Fri 6/10/11	Fri 6/10/11								1 day?
29	Target top flange tube align	Fri 6/10/11	Fri 6/10/11								1 day?
30	Target fiduc. 2.Top:Can	Mon 7/11/11	Mon 7/11/11								1 day?
31	Dump / Sieve fid.	Mon 7/11/11	Mon 7/11/11								1 day?
32											
33	LCW work	Mon 5/23/11	Mon 6/20/11	XXXXXX							20 days?
34	install new manifold to facilitate FZ power supplies	Mon 5/23/11	Mon 6/6/11	SOT			N				10 days?
35	install new manifolds to facilitate FZ magnets	Tue 6/7/11	Mon 6/20/11	SOT			N				10 days?
36											
37	***From here to line 116 is eng installation and electronics	Mon 5/16/...	Mon 5/16/...	XXXXXX							0 days?
38	***resources for this work needs to be assigned by***	Mon 5/16/...	Mon 5/16/...	XXXXXX							0 days?
39	***Neil Wilson, John Heckman, and electronics group***	Mon 5/16/...	Mon 5/16/...	XXXXXX							0 days?
40											
41	remove EP	Mon 5/23/11	Tue 6/7/11								11 days?
42	disconnect cables	Mon 5/23/11	Tue 5/24/11	SOT			N				2 days?

ID	Task Name	Start	Finish	Risk code pre THA	Task Hazard Analysis	Risk code post THA	Atlis	HA list	Hot Work	TOSP, RWP, Lift plan	Duration
43	remove external detectors	Wed 5/25/11	Wed 5/25/11	SOT			N				1 day?
44	disconnect vacuum system	Thu 5/26/11	Thu 5/26/11	SOT			N				1 day?
45	disconnect beam line	Fri 5/27/11	Fri 5/27/11	SOT			N				1 day?
46	remove upper detector section	Tue 5/31/11	Tue 5/31/11				N				1 day?
47	remove target section	Wed 6/1/11	Wed 6/1/11				N				1 day?
48	remove lower detector system	Thu 6/2/11	Thu 6/2/11				N				1 day?
49	remove EP stands	Fri 6/3/11	Fri 6/3/11								1 day?
50	remove stand foundations	Mon 6/6/11	Mon 6/6/11	SOT							1 day?
51	move EP system to ESB	Tue 6/7/11	Tue 6/7/11	SOT			N				1 day?
52											
53	Compton maintenance	Mon 5/16/11	Mon 11/21/11								132.5 days?
54	Radcon hold	Tue 7/5/11	Tue 7/5/11	SOT							1 day?
55	bleed up beam line	Tue 7/5/11	Tue 7/5/11	SOT							1 day?
56	remove blank flange for detector installation	Wed 7/6/11	Wed 7/6/11	SOT							1 day?
57	install electron detector package	Thu 7/7/11	Thu 7/7/11								1 day?
58	pump down vacuum system	Fri 7/8/11	Mon 7/11/11	SOT							2 days?
59	leak check	Tue 7/12/11	Tue 7/12/11	SOT							1 day?
60	bake affected areas bleed up for maintenance	Wed 7/13/11	Wed 7/13/11	SOT							1 day?
61	connect electronics	Thu 7/14/11	Mon 7/18/11	SOT			N				3 days?
62	operational checkout of electronics	Tue 7/19/11	Fri 7/29/11	SOT			N				9 days?
63	open laser enclosure for work	Fri 7/8/11	Fri 7/8/11				N				1 day?
64	replace laser mirrors	Mon 7/11/11	Fri 7/15/11				N				5 days?
65	align detector and laser as requested (to be defined later)	Mon 7/18/11	Tue 7/19/11								2 days?
66											
67											
68	install slow raster	Mon 6/6/11	Wed 8/3/11	XXXXXX							42 days?
69	survey holes for stand	Mon 6/6/11	Thu 6/9/11	SOT							4 days?
70	Drill holes	Fri 6/10/11	Mon 6/13/11	SOT							2 days?
71	mount stand	Tue 6/14/11	Wed 6/15/11								2 days?
72	survey stand	Thu 6/16/11	Tue 6/21/11	SOT							4 days?
73	grout stand	Wed 6/22/11	Thu 6/23/11	SOT							2 days?
74	grout set up time	Fri 6/24/11	Mon 6/27/11	SOT							2 days?
75	install slow raster	Tue 6/28/11	Tue 6/28/11								1 day?
76	connect beam line	Wed 6/29/11	Wed 6/29/11	SOT							1 day?
77	pump down beam line	Thu 6/30/11	Fri 7/1/11	SOT							2 days?
78	survey slow raster	Tue 7/5/11	Fri 7/8/11	SOT							4 days?
79	install coils	Mon 7/11/11	Mon 7/11/11	SOT			N				1 day?
80	install and connect raster controls and power	Tue 7/12/11	Tue 7/12/11	SOT			N				1 day?
81	ops check slow raster	Wed 7/13/11	Wed 7/13/11	SOT			N				1 day?
82	software checkout and ops check	Mon 8/1/11	Wed 8/3/11								3 days?
83											
84											

ID	Task Name	Start	Finish	Risk code pre THA	Task Hazard Analysis	Risk code post THA	Atllis	HA list	Hot Work	TOSP, RWP, Lift plan	Duration
85	install calorimeter	Mon 6/6/11	Fri 8/12/11	XXXXXX							49 days?
86	survey holes for stand	Mon 6/6/11	Tue 6/7/11	SOT							2 days?
87	Drill holes	Wed 6/8/11	Thu 6/9/11	SOT							2 days?
88	mount stand	Fri 6/10/11	Mon 6/13/11								2 days?
89	survey stand	Tue 6/14/11	Wed 6/15/11	SOT							2 days?
90	grout stand	Thu 6/16/11	Fri 6/17/11	SOT							2 days?
91	set up time	Mon 6/20/11	Tue 6/21/11	SOT							2 days?
92	install calorimeter	Wed 6/22/11	Wed 6/22/11								1 day?
93	connect beam line	Thu 6/23/11	Thu 6/23/11								1 day?
94	pump down beam line	Fri 6/24/11	Fri 6/24/11								1 day?
95	leak check beam line	Mon 6/27/11	Mon 6/27/11	SOT							1 day?
96	connect motion and cooling lines	Tue 6/28/11	Tue 6/28/11								1 day?
97	survey calorimeter	Wed 6/29/11	Wed 6/29/11	SOT							1 day?
98	install controls	Tue 7/5/11	Wed 7/6/11								2 days?
99	ops check	Thu 7/7/11	Thu 7/7/11	SOT							1 day?
100	software checkout and ops check	Mon 8/8/11	Fri 8/12/11								5 days?
101											
102											
103	remove dual quads & short girder	Thu 7/7/11	Wed 8/10/11	XXXXXX							25 days?
104	disconnect water and power on dual quad assembly	Thu 7/7/11	Thu 7/7/11	SOT							1 day?
105	bleed up vacuum	Fri 7/8/11	Fri 7/8/11	SOT							1 day?
106	disconnect vacuum lines	Mon 7/11/11	Tue 7/12/11	SOT							2 days?
107	remove quad girder	Wed 7/13/11	Wed 7/13/11								1 day?
108	remove lead from 3 inch beam line	Thu 7/14/11	Thu 7/14/11								1 day?
109	install new 3 inch beam line	Fri 7/15/11	Fri 7/15/11								1 day?
110	install beam line and corrector support girder	Mon 7/18/11	Mon 7/18/11	SOT							1 day?
111	install controls and power cabling	Tue 7/19/11	Fri 7/22/11								4 days?
112	install BLM	Mon 7/25/11	Mon 7/25/11	SOT							1 day?
113	install controls	Tue 7/26/11	Wed 7/27/11								2 days?
114	connect beam line	Thu 7/28/11	Thu 7/28/11								1 day?
115	install vacuum pump and controls	Fri 7/29/11	Tue 8/2/11								3 days?
116	pump down and leak check girder	Wed 8/3/11	Thu 8/4/11								2 days
117	survey beam line	Fri 8/5/11	Fri 8/5/11								1 day?
118	reinstall lead removed for 3 inch beam pipe	Wed 8/10/11	Wed 8/10/11								1 day?
119	ops check	Mon 8/8/11	Tue 8/9/11	SOT							1.5 days?
120											
121	remove girder	Tue 5/31/11	Mon 6/13/11	XXXXXX							10 days?
122	remove lead shielding	Tue 5/31/11	Mon 6/6/11								5 days?
123	disconnect beam line diagnostics	Tue 5/31/11	Tue 5/31/11								1 day?
124	disconnect vacuum equipment	Wed 6/1/11	Thu 6/2/11	SOT							2 days?
125	remove water and control lines	Fri 6/3/11	Mon 6/6/11	SOT							2 days?
126	remove girder	Tue 6/7/11	Tue 6/7/11								1 day?

ID	Task Name	Start	Finish	Risk code pre THA	Task Hazard Analysis	Risk code post THA	Atlis	HA list	Hot Work	TOSP, RWP, Lift plan	Duration
127	remove girder stands	Wed 6/8/11	Thu 6/9/11								2 days?
128	remove stand grout	Fri 6/10/11	Mon 6/13/11								2 days?
129											
130	install FZ magnets	Mon 5/16/11	Fri 11/4/11	XXXXXX							122 days?
131	survey holes for stands	Mon 6/6/11	Tue 6/7/11	SOT							2 days?
132	Drill holes	Wed 6/8/11	Thu 6/9/11	SOT							2 days?
133	mount stands	Fri 6/10/11	Mon 6/13/11								2 days?
134	survey stands	Tue 6/14/11	Wed 6/15/11	SOT							2 days?
135	grout stands	Thu 6/16/11	Fri 6/17/11	SOT							2 days?
136	grout set up time	Mon 6/20/11	Tue 6/21/11	SOT							2 days?
137	install cable tray	Wed 8/3/11	Fri 8/5/11				N				3 days?
138	run magnet power cables	Mon 8/8/11	Tue 8/9/11				N				2 days?
139	run instrumentation cables	Wed 8/10/11	Thu 8/11/11								2 days?
140	connect AC power to power supplies	Fri 8/12/11	Mon 8/15/11	SOT							2 days?
141											
142	install FZ magnets	Tue 8/16/11	Mon 8/29/11								10 days?
143	survey FZ magnets	Tue 8/30/11	Fri 9/2/11								4 days?
144	install and connect DC power to magnets	Tue 9/6/11	Tue 9/6/11								1 day?
145	ops check magnets	Wed 9/7/11	Tue 9/13/11								5 days?
146	install FZ beam line supports	Wed 9/14/11	Fri 9/16/11								3 days?
147	install beam lines and beam diagnostics	Mon 9/19/11	Fri 9/23/11	SOT							5 days?
148	install vacuum system	Mon 9/26/11	Fri 9/30/11	SOT							5 days?
149	reposition all metal valve	Mon 10/3/11	Mon 10/3/11	SOT							1 day?
150	install instrumentation	Tue 10/4/11	Fri 10/7/11	SOT							4 days?
151	pump down beam line	Mon 10/10/11	Tue 10/11/11	SOT							2 days?
152	leak check beam lines	Wed 10/12/11	Thu 10/13/11	SOT							2 days?
153	survey beam lines	Fri 10/14/11	Tue 10/18/11	SOT							3 days?
154	ops check	Wed 10/19/11	Fri 10/21/11	SOT							3 days?
155	software checkout and ops check	Mon 10/31/11	Fri 11/4/11								5 days?
156											
157											
158											
159											
160	***Hall A and target group staff work starts here***	Mon 5/16/...	Mon 5/16/...	XXXXXX							1 day
161											
162											
163	target / septa prep work	Mon 5/16/11	Mon 5/16/11	XXXXXX							0 days
164	modify septa platform	Mon 5/16/11	Mon 5/16/11	SOT			N				0 days
165	install 3rd coil set in septum magnet	Mon 5/16/11	Mon 5/16/11	SOT			N				0 days
166	pre assemble align target support on septa platform	Mon 5/16/11	Mon 5/16/11	SOT			N				0 days
167											
168	cryo work	Mon 5/16/11	Mon 8/8/11	XXXXXX							58.5 days?

ID		Task Name	Start	Finish	Risk code pre THA	Task Hazard Analysis	Risk code post THA	Atlis	HA list	Hot Work	TOSP, RWP, Lift plan	Duration
169		warm up both spectrometers	Mon 5/16/11	Fri 5/20/11	SOT			N				5 days?
170		pump all magnets	Tue 5/31/11	Mon 6/6/11	SOT			N				5 days?
171		pump all cryo lines	Mon 6/13/11	Fri 6/17/11				N				5 days?
172		replace Q1 JT valve heads with JLab valves	Mon 6/27/11	Fri 7/1/11	SOT			N				5 days?
173		replace dipole LN2 probes	Tue 7/5/11	Tue 7/5/11	SOT			N				1 day?
174		replace magnet pressure gauges	Thu 7/7/11	Mon 7/11/11	SOT			N				2.5 days?
175		repair left Q1 leads	Thu 7/14/11	Wed 7/20/11	SOT			N				5 days?
176		replace left Q1 vacuum seals	Thu 7/28/11	Tue 8/2/11	SOT			N				3.75 days?
177		replace all Q1 110 vac plugs due to radiation damage	Thu 8/4/11	Mon 8/8/11	SOT			N				2.5 days?
178												
179												
180		Detector work	Mon 6/6/11	Fri 7/29/11	XXXXXX							39 days?
181		roll out left detector	Mon 6/6/11	Mon 6/6/11	SOT			N				1 day?
182		pull out SRC detectors	Mon 6/13/11	Tue 6/14/11				N				2 days?
183		install G2P detectors	Mon 6/20/11	Fri 6/24/11				N				5 days?
184		roll in left detector	Mon 6/27/11	Mon 6/27/11	SOT			N				1 day?
185		clear balcony and close doors	Wed 6/29/11	Wed 6/29/11				N				1 day?
186												
187		roll out right detector	Tue 7/5/11	Tue 7/5/11	SOT			N				1 day?
188		pull out SRC detectors	Mon 7/11/11	Tue 7/12/11				N				2 days?
189		install G2P detectors	Mon 7/18/11	Thu 7/21/11				N				4 days?
190		roll in left detector	Mon 7/25/11	Mon 7/25/11	SOT			N				1 day?
191		clear balcony and close doors	Fri 7/29/11	Fri 7/29/11				N				1 day?
192												
193		remove target	Mon 5/16/11	Thu 7/7/11	XXXXXX							37 days?
194		warm up target	Mon 5/16/11	Thu 5/19/11	SOT			N				4 days?
195		bleed up chamber	Fri 5/20/11	Fri 5/20/11	SOT			N				1 day?
196		de-sting cryo	Mon 5/23/11	Mon 5/23/11				N				1 day?
197		disconnect target	Tue 5/24/11	Fri 6/3/11	SOT			N				8 days?
198		remove target from chamber	Mon 6/6/11	Mon 6/6/11				N				1 day?
199		remove vacuum system	Tue 6/7/11	Tue 6/7/11	SOT			N				1 day?
200		remove beam pipes	Wed 6/8/11	Wed 6/8/11	SOT			N				1 day?
201		remove upper chamber	Thu 6/9/11	Thu 6/9/11				N				1 day?
202		remove lower chamber	Fri 6/10/11	Fri 6/10/11				N				1 day?
203		remove chamber support spool	Mon 6/13/11	Mon 6/13/11				N				1 day?
204		reconfigure target lines and cables for new target	Mon 6/13/11	Wed 6/22/11	SOT			N				7.5 days?
205												
206		remove Big Bite	Mon 5/16/11	Thu 7/7/11	XXXXXX							37 days?
207		disconnect BB detector	Mon 5/16/11	Fri 5/20/11	SOT			N				5 days?
208		disconnect water	Mon 5/23/11	Mon 5/23/11	SOT			N				1 day?
209		disconnect and move inst. Interlocks etc	Tue 5/24/11	Wed 5/25/11	SOT			N				2 days?
210		disconnect BB power	Thu 5/26/11	Fri 5/27/11	SOT			N				2 days?

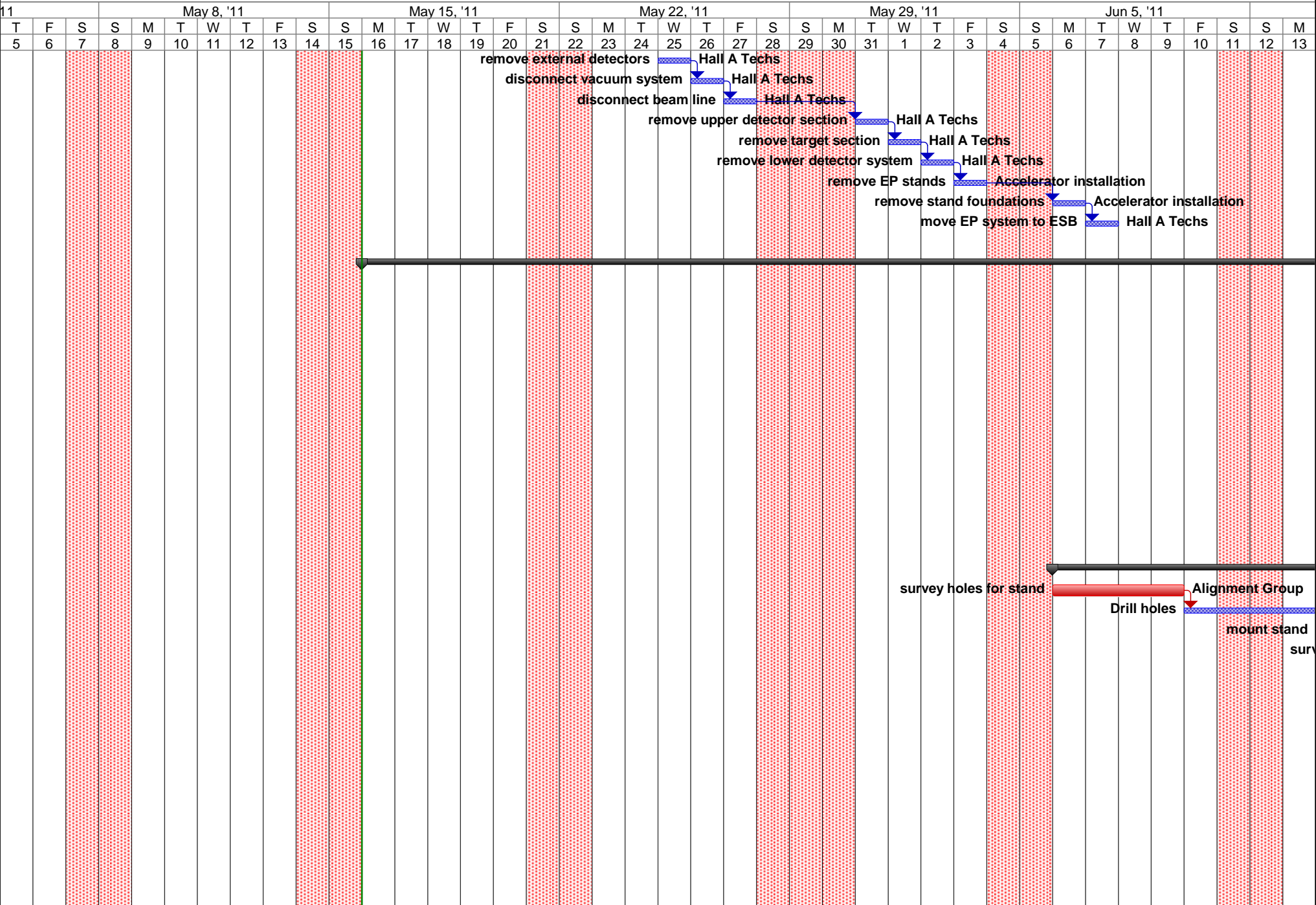
ID	Task Name	Start	Finish	Risk code pre THA	Task Hazard Analysis	Risk code post THA	Atlis	HA list	Hot Work	TOSP, RWP, Lift plan	Duration
211	install extension rails on BB stand	Tue 5/31/11	Tue 5/31/11				N				1 day?
212	reroute BB power lines for septum	Thu 6/2/11	Fri 6/3/11				N				2 days?
213	role back detector platform	Mon 6/6/11	Mon 6/6/11	SOT			N				1 day?
214	rig and move detector	Tue 6/7/11	Tue 6/7/11				N				1 day?
215	remove detector platform	Wed 6/8/11	Wed 6/8/11				N				1 day?
216	partial rollback of BB for field clamp removal	Thu 6/9/11	Thu 6/9/11	SOT							1 day?
217	rig and move field clamp including collimator to storage position	Fri 6/10/11	Fri 6/10/11				N				1 day?
218	rollback BB for door removal	Mon 6/13/11	Mon 6/13/11	SOT			N				1 day?
219	remove shielding doors to storage position	Tue 6/14/11	Wed 6/15/11				N				2 days?
220	remove shielding on top and around BB	Thu 6/16/11	Fri 6/17/11				N				2 days?
221	install pink stand	Mon 6/20/11	Mon 6/20/11				N				1 day?
222	Add supports to BB feet	Tue 6/21/11	Tue 6/21/11	SOT			N				1 day?
223	remove feet from BB	Wed 6/22/11	Wed 6/22/11				N				1 day?
224	rig and move BB magnet to storage position	Thu 6/23/11	Fri 6/24/11				N				2 days?
225	rig feet and move to storage position	Mon 6/27/11	Mon 6/27/11				N				1 day?
226	reposition rollers and other support equipment to storage position	Tue 6/28/11	Tue 6/28/11				N				1 day?
227	remove rail extensions	Wed 6/29/11	Wed 6/29/11				N				1 day?
228	remove pink stand	Thu 6/30/11	Thu 6/30/11				N				1 day?
229	rig and move BB stand	Fri 7/1/11	Fri 7/1/11				N				1 day?
230	Rotate right spect. To 12.5 degrees	Tue 7/5/11	Tue 7/5/11	SOT			N				1 day?
231	move electronics to storage	Wed 7/6/11	Wed 7/6/11				N				1 day?
232	move Hadron detector frame to PSB	Thu 7/7/11	Thu 7/7/11				N				1 day?
233											
234	install septum and target	Fri 7/8/11	Mon 11/21/11	XXXXXX							95.5 days?
235	both spectrometers to 12.5 deg	Fri 7/8/11	Fri 7/8/11	SOT			N				1 day?
236	survey both spectrometers	Mon 7/11/11	Mon 7/11/11	SOT							1 day?
237	install septum support stand	Tue 7/12/11	Wed 7/13/11				N				2 days?
238	align stand	Thu 7/14/11	Thu 7/14/11	SOT			N				1 day?
239	install beam right access platform and stairs	Fri 7/15/11	Fri 7/15/11				N				1 day?
240	install septum platform on support stand	Mon 7/18/11	Mon 7/18/11				N				1 day?
241	RadCon Hold	Mon 7/11/11	Fri 7/15/11	SOT			N				5 days?
242	install septum magnet on platform	Tue 7/19/11	Tue 7/19/11				N				1 day?
243	install tread plated and dump support on platform	Wed 7/20/11	Wed 7/20/11				N				1 day?
244	pre alignment of septum magnet	Thu 7/21/11	Thu 7/21/11	SOT							1 day?
245	install beam dump between magnet and target	Fri 7/22/11	Mon 7/25/11				N				2 days?
246	install target chamber support on platform	Tue 7/26/11	Tue 7/26/11				N				1 day?
247	install exit beam pipe in magnet	Wed 7/27/11	Wed 7/27/11	SOT			N				1 day?
248	RadCon Hold	Tue 7/26/11	Thu 7/28/11	SOT			N				3 days?
249	align beam dump	Thu 7/28/11	Fri 7/29/11								2 days?
250	install shielding between target and magnet	Mon 8/1/11	Mon 8/1/11				N				1 day?
251	install target chamber into chamber support	Tue 8/2/11	Tue 8/2/11				N				1 day?
252	install magnet into chamber	Wed 8/3/11	Wed 8/3/11				N				1 day?

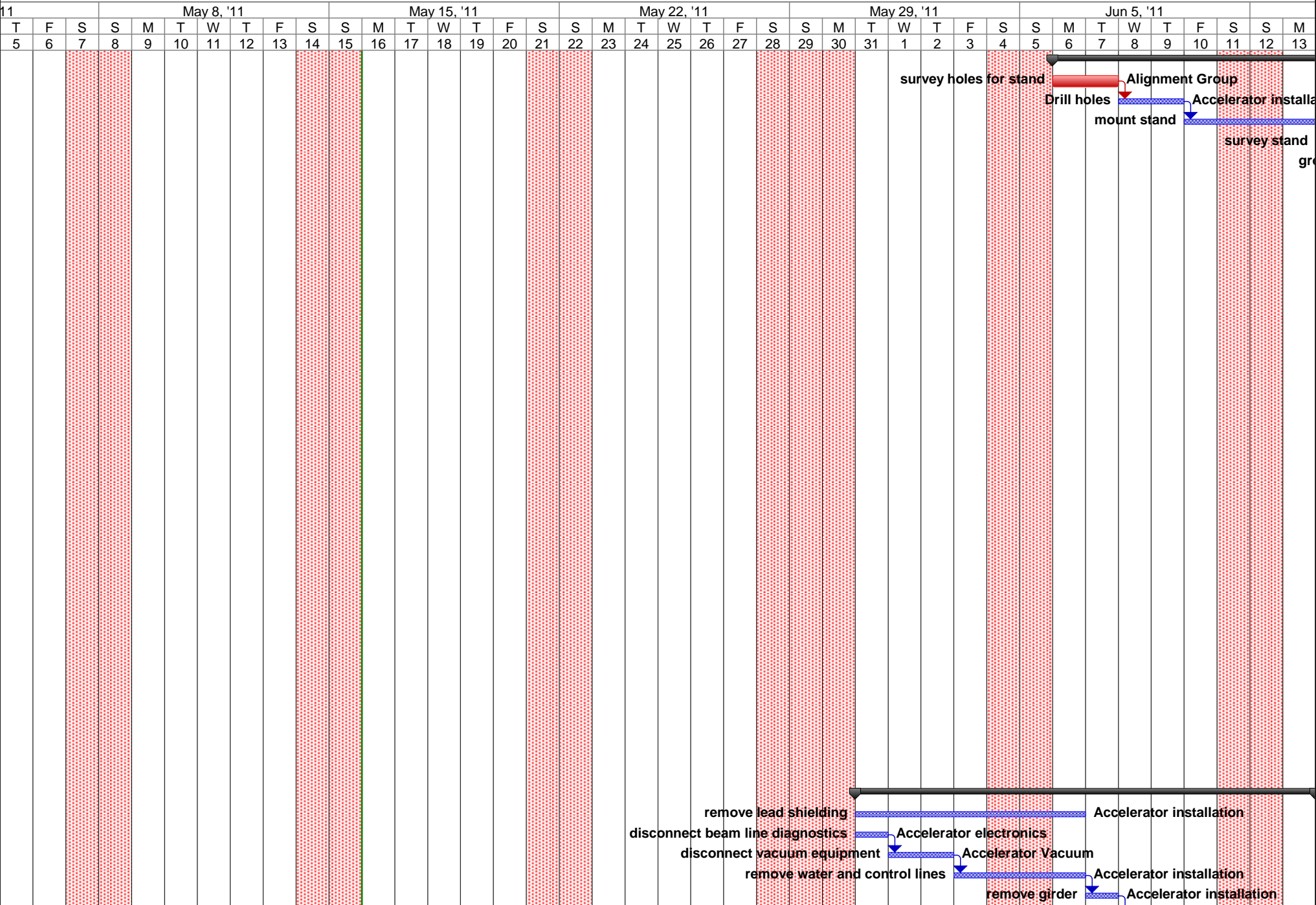
ID	Task Name	Start	Finish	Risk code pre THA	Task Hazard Analysis	Risk code post THA	Atlis	HA list	Hot Work	TOSP, RWP, Lift plan	Duration
253	test magnet rotation system	Thu 8/4/11	Thu 8/4/11	SOT			N				1 day?
254											
255	install refrigerator pump on upper target balcony	Fri 8/5/11	Fri 8/5/11				N				1 day?
256	roll septum/target platform into position	Mon 8/8/11	Mon 8/8/11				N				1 day?
257	lower and position septum platform	Tue 8/9/11	Tue 8/9/11				N				1 day?
258	align septum magnet	Wed 8/10/11	Thu 8/11/11	SOT							2 days?
259	align target chamber	Fri 8/12/11	Mon 8/15/11	SOT							2 days?
260	align magnet in chamber	Tue 8/16/11	Tue 8/16/11	SOT							1 day?
261	install catwalk on right access platform	Wed 8/17/11	Wed 8/17/11				N				1 day?
262	install upper platform stairs	Thu 8/18/11	Thu 8/18/11				N				1 day?
263											
264	install target dewar and stand	Fri 8/19/11	Fri 8/19/11				N				1 day?
265	connect dewar controls	Mon 8/22/11	Tue 8/23/11				N				2 days?
266	install dewar U tubes and return lines	Wed 8/24/11	Thu 8/25/11				N				2 days?
267	install beam lines	Fri 8/26/11	Fri 8/26/11	SOT			N				1 day?
268	align beam lines	Mon 8/29/11	Mon 8/29/11	SOT							1 day?
269	install Helium bags	Tue 8/30/11	Tue 8/30/11	SOT			N				1 day?
270	install target vacuum pump power	Wed 8/31/11	Fri 9/2/11				N				3 days?
271	install target vacuum pump plumbing	Tue 9/6/11	Fri 9/9/11				N				4 days?
272	install target vacuum system instr. and controls	Mon 9/12/11	Fri 9/16/11	SOT			N				5 days?
273	connect chamber vacuum system	Mon 9/19/11	Tue 9/20/11				N				2 days?
274	leak check and ops check target vacuum system	Wed 9/21/11	Wed 9/21/11	SOT			N				1 day?
275	install target	Thu 9/22/11	Fri 9/23/11				N				2 days?
276	align target	Mon 9/26/11	Wed 9/28/11	SOT							3 days?
277	install target and refrig. Inst, and controls	Thu 9/29/11	Wed 10/5/11	SOT			N				5 days?
278	connect target vacuum system	Thu 10/6/11	Wed 10/12/11				N				5 days?
279	leak check target vacuum system	Thu 10/13/11	Fri 10/14/11	SOT			N				2 days?
280	install target chamber windows	Mon 10/17/11	Mon 10/17/11				N				1 day?
281	pump down chamber	Tue 10/18/11	Wed 10/19/11	SOT			N				2 days?
282	leak check chamber	Thu 10/20/11	Thu 10/20/11	SOT			N				0.5 days?
283	insert target refrigerator	Thu 10/20/11	Thu 10/27/11				N				5 days?
284	sting dewar to refrig and refrig to target	Thu 10/27/11	Fri 10/28/11				N				1 day?
285	pump and purge target cryo system	Fri 10/28/11	Tue 11/1/11	SOT			N				2 days?
286	fill dewar	Tue 11/1/11	Fri 11/4/11	SOT			N				3 days?
287	cool down target cryo system	Fri 11/4/11	Tue 11/8/11	SOT			N				2 days?
288	test target refrigerator	Tue 11/8/11	Tue 11/15/11	SOT			N				5 days?
289	ops check target system	Tue 11/15/11	Mon 11/21/11	SOT			N				4 days?
290	software checkout and ops check	Mon 8/1/11	Mon 8/1/11								1 day?
291											
292											
293											
294	end stuff	Mon 10/31/11	Fri 11/18/11	XXXXXX							15 days?

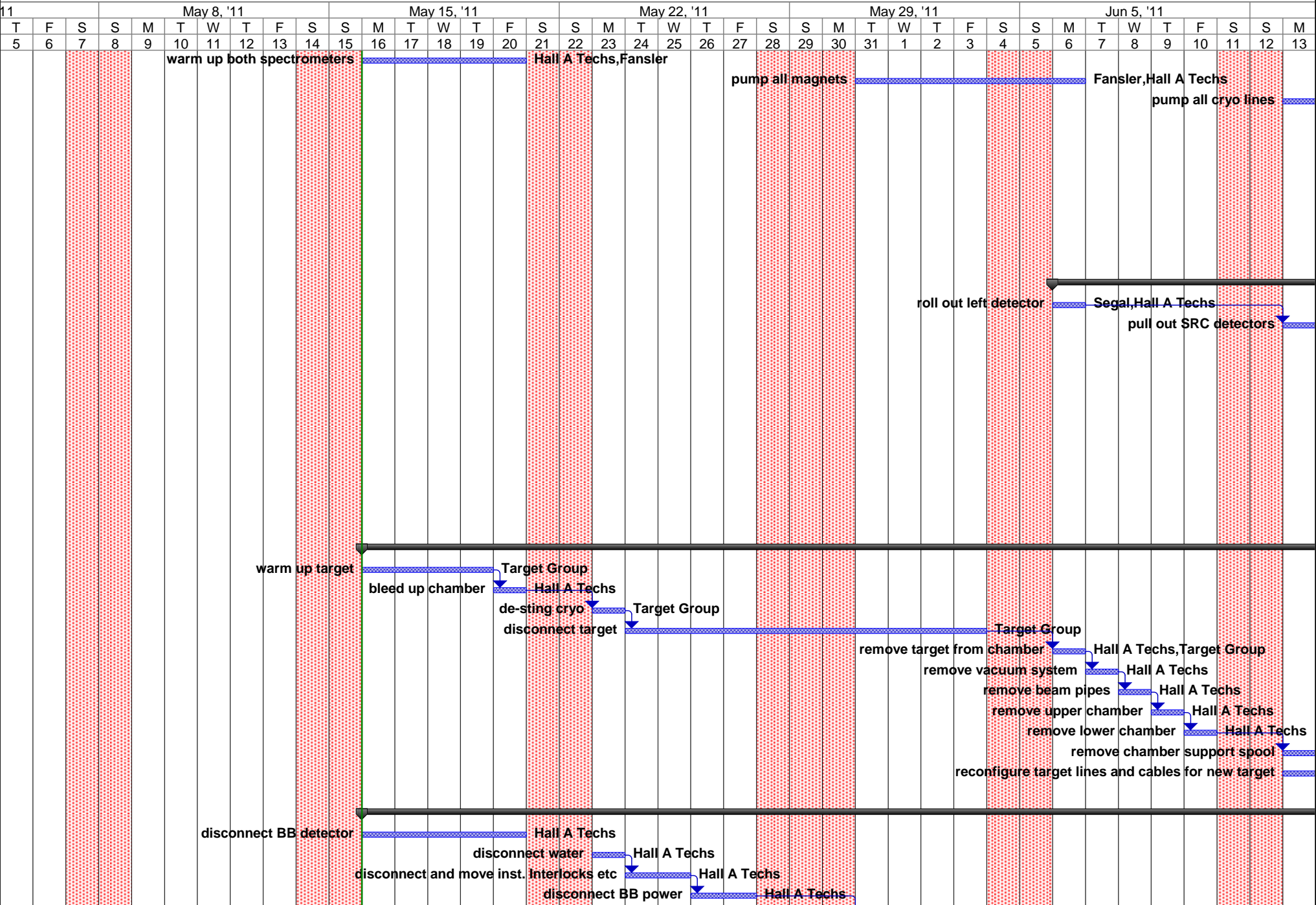
ID	Task Name	Start	Finish	Risk code pre THA	Task Hazard Analysis	Risk code post THA	Atlis	HA list	Hot Work	TOSP, RWP, Lift plan	Duration
295	inspect beam dump as requested by RADCON	Mon 10/31/11	Mon 10/31/11								1 day?
296	final removal	Mon 10/31/11	Fri 11/11/11	SOT			N				10 days?
297	start power supplies	Mon 11/7/11	Tue 11/8/11	SOT			N				2 days?
298	cleanup	Mon 11/7/11	Fri 11/18/11	SOT			N				10 days?
299	hot check out checklist	Thu 11/10/11	Thu 11/10/11	SOT			N				1 day?
300	restore beam	Fri 11/11/11	Fri 11/11/11	SOT			N				1 day?
301	final checklist	Wed 11/16/11	Wed 11/16/11	SOT			N				1 day?
302	run beam	Fri 11/18/11	Fri 11/18/11	OPS			N				1 day?
303											
304	stuff to do	Mon 5/16/11	Wed 6/29/11	XXXXXX							32 days?
305	grease bogies	Mon 6/27/11	Tue 6/28/11	SOT			N				2 days?
306	grease central bearing	Wed 6/29/11	Wed 6/29/11	SOT			N				1 day?
307	install water manifold on upper LCW	Mon 5/16/11	Mon 5/16/11				N				1 day?
308	install water manifold on PS balconies	Mon 5/16/11	Mon 5/16/11				N				1 day?
309	install new guards and heaters	Mon 5/16/11	Mon 5/16/11				N				1 day?
310	complete BB rigid water lines	Mon 5/16/11	Mon 5/16/11				N				1 day?
311	calibrate LL meters	Mon 5/16/11	Mon 5/16/11				N				1 day?
312	warm up Q-1 magnets	Mon 5/16/11	Mon 5/16/11	SOT			N				1 day?
313	de-sting Q-1 magnets	Mon 5/16/11	Mon 5/16/11				N				1 day?
314	rework leads on left Q1	Mon 5/16/11	Mon 5/16/11				N				1 day?
315	clean out cable trays	Mon 5/16/11	Mon 5/16/11	SOT			N				1 day?
316	install manual flow meters on Q2/Q3	Mon 5/16/11	Mon 5/16/11	SOT			N				1 day?
317	grease shield house doors	Mon 5/16/11	Mon 5/16/11				N				1 day?
318	re-insulate warm return lines	Mon 5/16/11	Mon 5/16/11				N				1 day?
319	repair leaks in exit beam pipe	Mon 5/16/11	Mon 5/16/11				N				1 day?
320	install DP gauges on LCW system	Mon 5/16/11	Mon 5/16/11				N				1 day?
321	install DP gauge on BB water system	Mon 5/16/11	Mon 5/16/11				N				1 day?
322	new lead guards on Q2/Q3	Mon 5/16/11	Mon 5/16/11	SOT			N				1 day?
323	new lead guards on Dipoles	Mon 5/16/11	Mon 5/16/11	SOT			N				1 day?
324	new lead guards on Q1s	Mon 5/16/11	Mon 5/16/11	SOT			N				1 day?
325	Lt Q1 power supply maintenance	Mon 5/16/11	Mon 5/16/11				N				1 day?
326	Lt Q2 power supply maintenance	Mon 5/16/11	Mon 5/16/11				N				1 day?
327	Lt Dipole power supply maintenance	Mon 5/16/11	Mon 5/16/11				N				1 day?
328	Rt Q1 power supply maintenance	Mon 5/16/11	Mon 5/16/11				N				1 day?
329	Rt Q2 power supply maintenance	Mon 5/16/11	Mon 5/16/11				N				1 day?
330	Rt Dipole power supply maintenance	Mon 5/16/11	Mon 5/16/11				N				1 day?
331	Rt Q3 power supply maintenance	Mon 5/16/11	Mon 5/16/11				N				1 day?
332	repair right transfer line	Mon 5/16/11	Mon 5/16/11				N				1 day?
333	replace left Q2 016 weka valve	Mon 5/16/11	Mon 5/16/11				N				1 day?
334	remove maintenance jacks from both spectrometers	Mon 5/16/11	Mon 5/16/11				N				1 day?
335	finish vacuum line extension on Rt Q3	Mon 5/16/11	Mon 5/16/11				N				1 day?
336	visual inspection of exit BP diffuser	Mon 5/16/11	Mon 5/16/11				N				1 day?

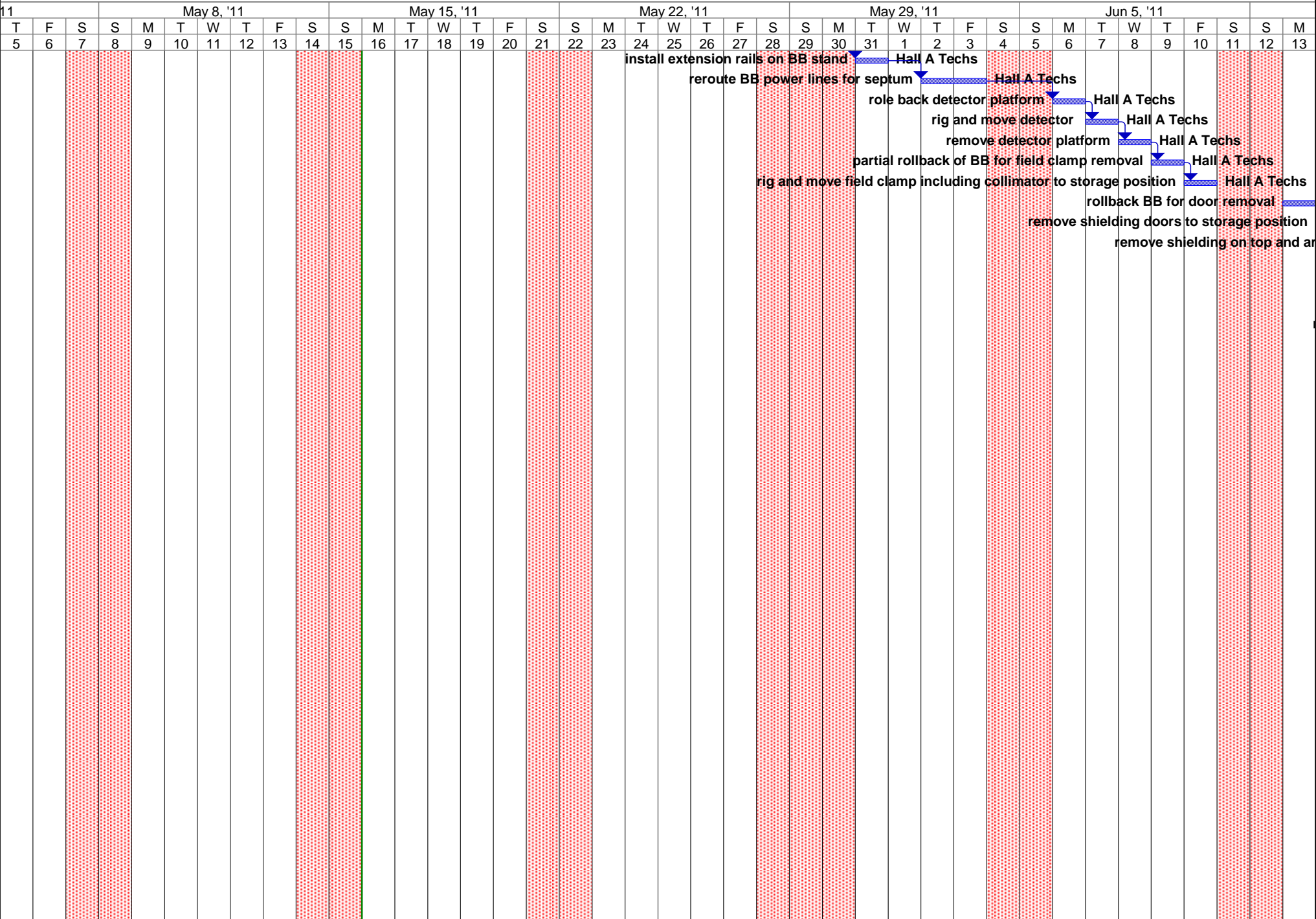
ID	Task Name	Start	Finish	Risk code pre THA	Task Hazard Analysis	Risk code post THA	Atlis	HA list	Hot Work	TOSP, RWP, Lift plan	Duration
337	Upgrade/ reinforce BB support arm and extensions	Mon 5/16/11	Mon 5/16/11				N				1 day?
338	Rework PHPK cryo cans for pivot distribution	Mon 5/16/11	Mon 5/16/11				N				1 day?
339	modify and install stairs	Mon 5/16/11	Mon 5/16/11				N				1 day?





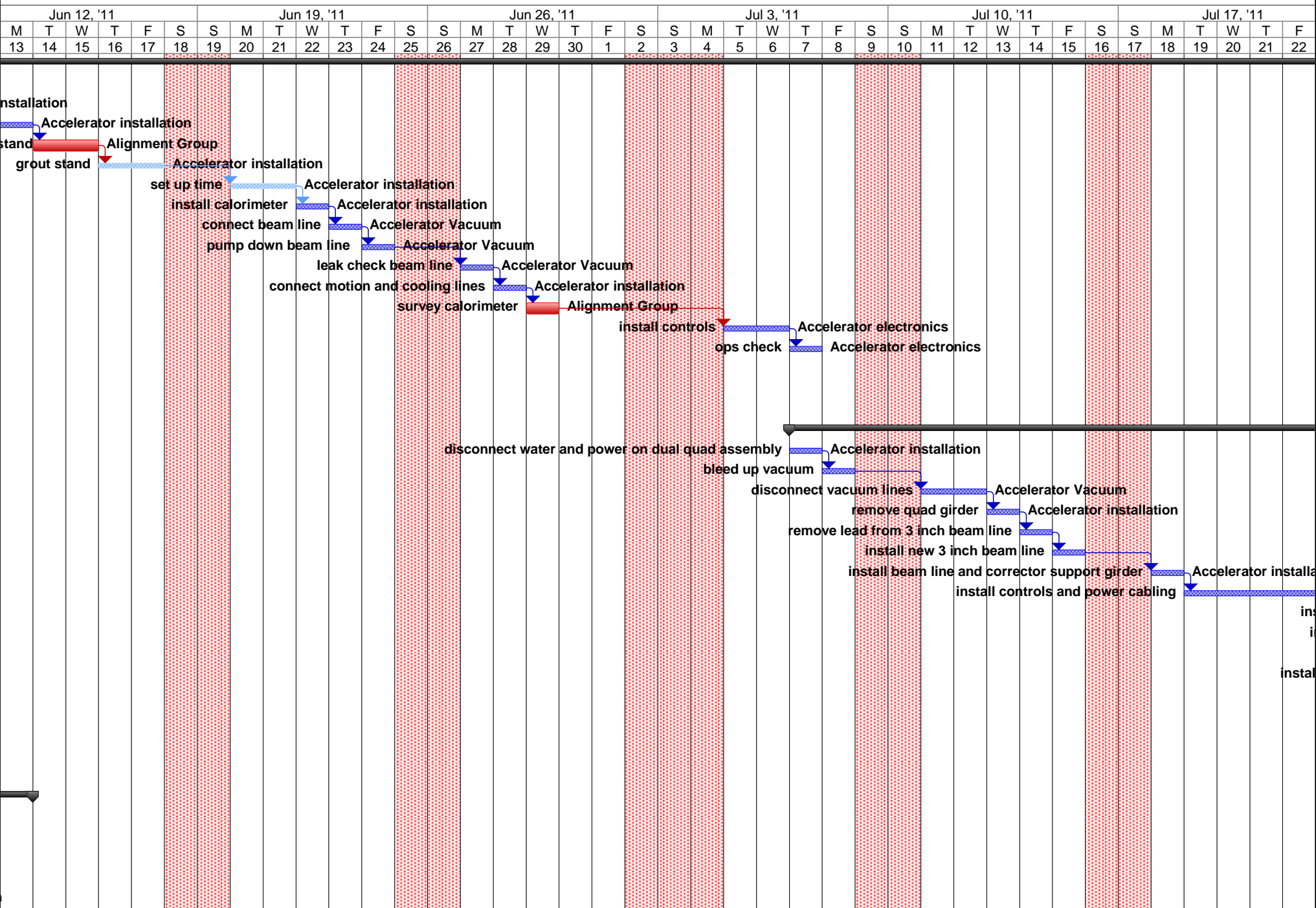


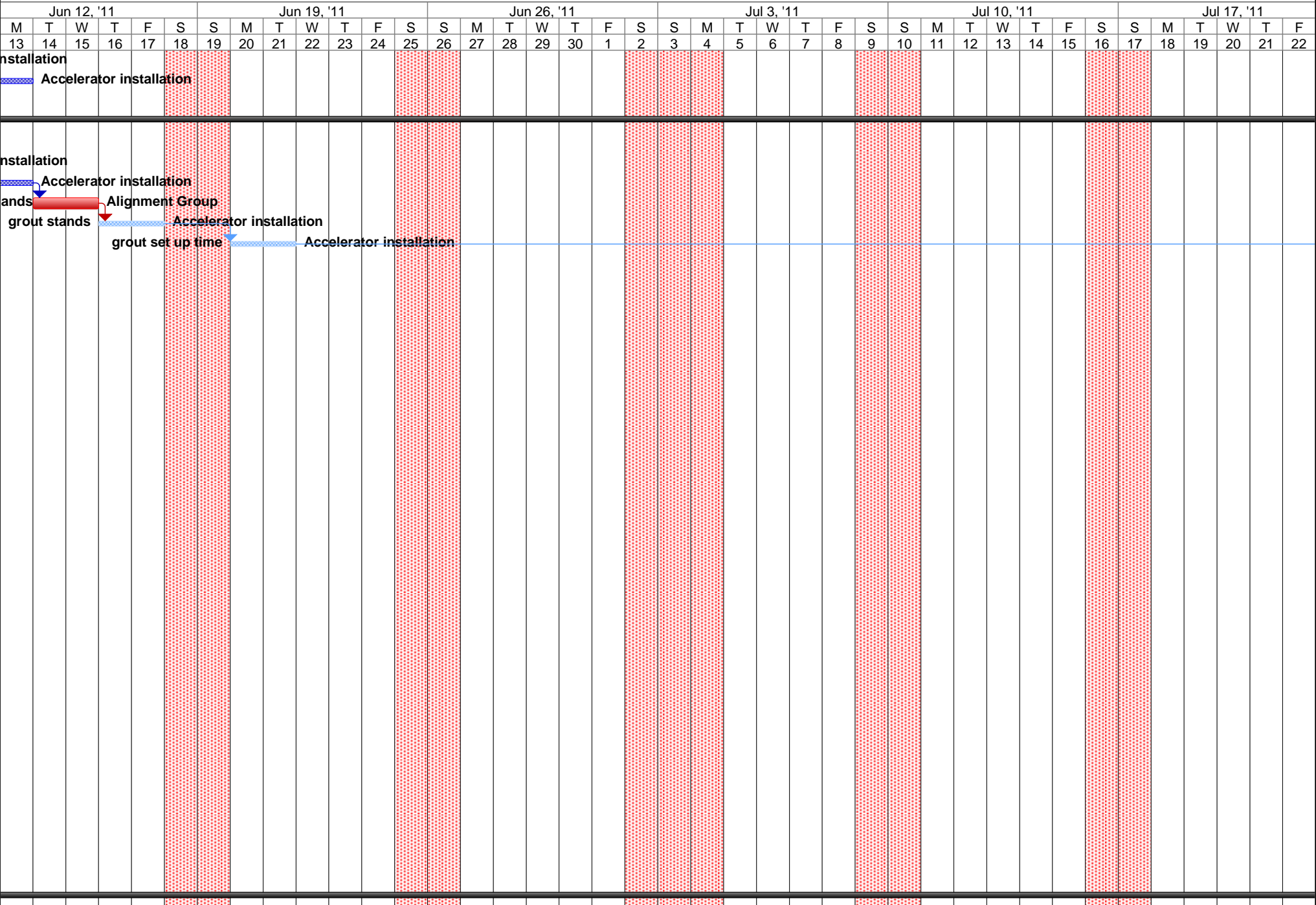


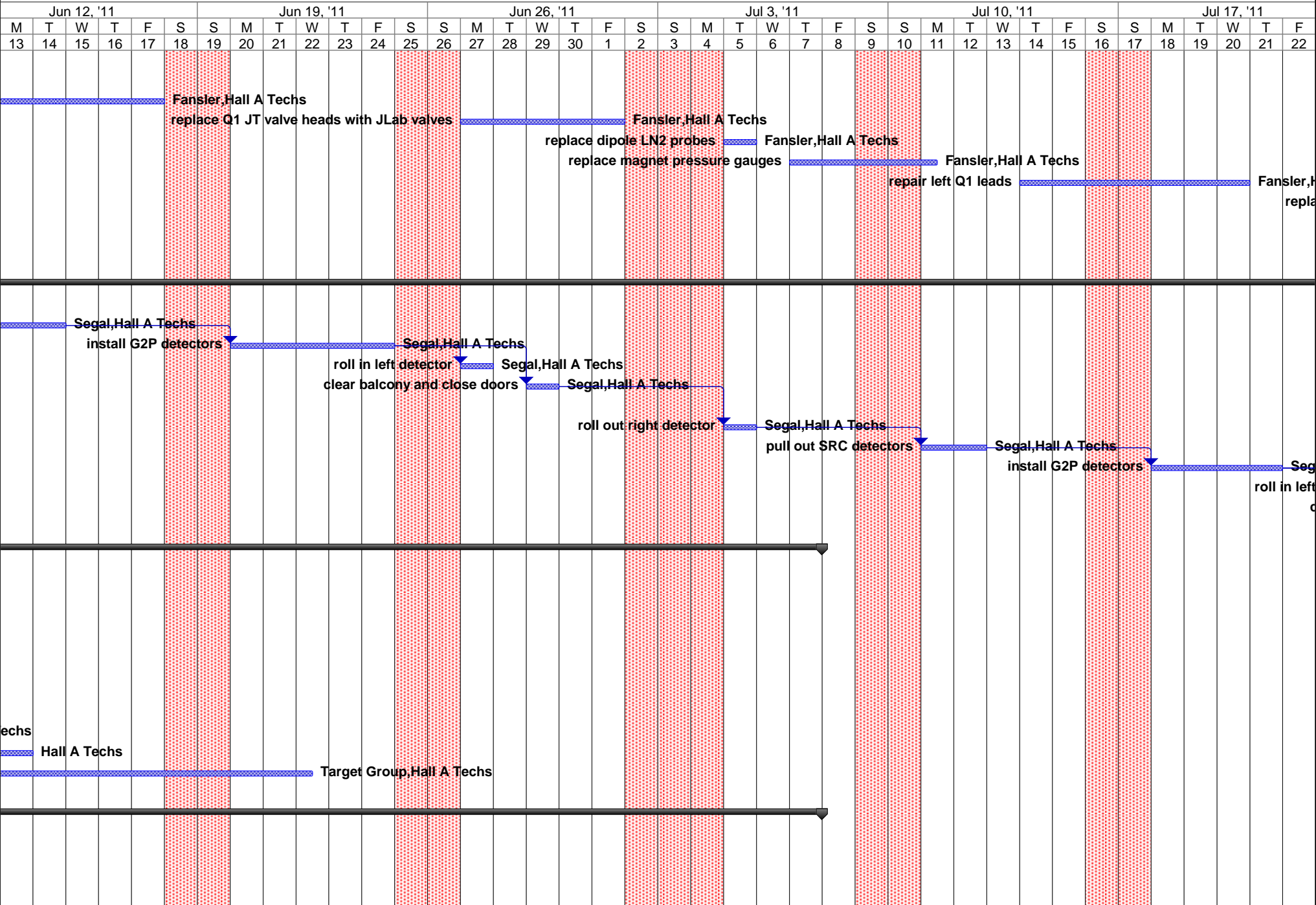


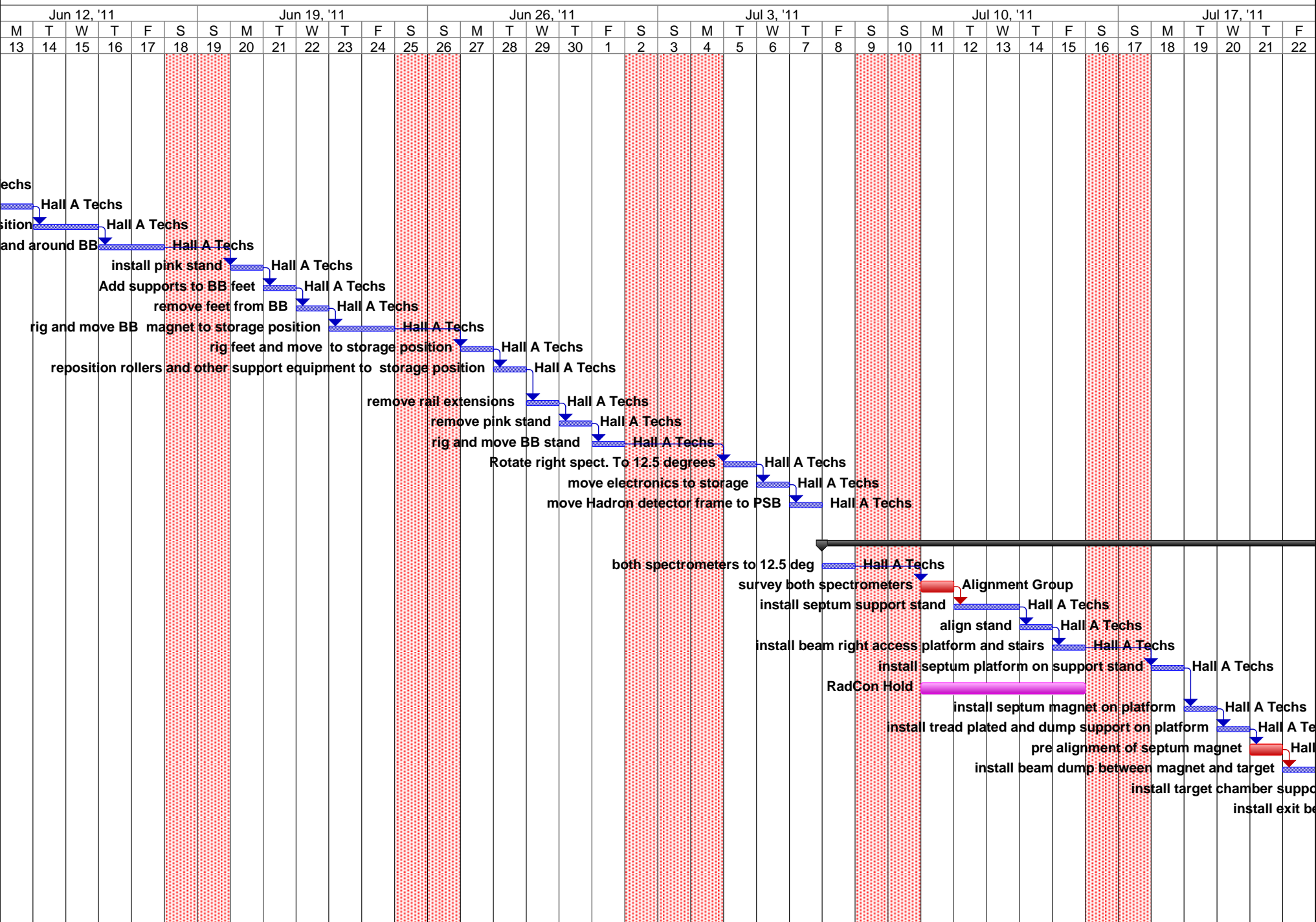
11					May 8, '11					May 15, '11					May 22, '11					May 29, '11					Jun 5, '11																									
T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M											
5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13											
					</																																													

11		May 8, '11							May 15, '11							May 22, '11							May 29, '11							Jun 5, '11																			
T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M										
5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13										
Upgrade/ reinforce BB support arm and extensions												[Blue hatched]																																					
Rework PHPK cryo cans for pivot distribution												[Blue hatched]																																					
modify and install stairs												[Blue hatched]																																					









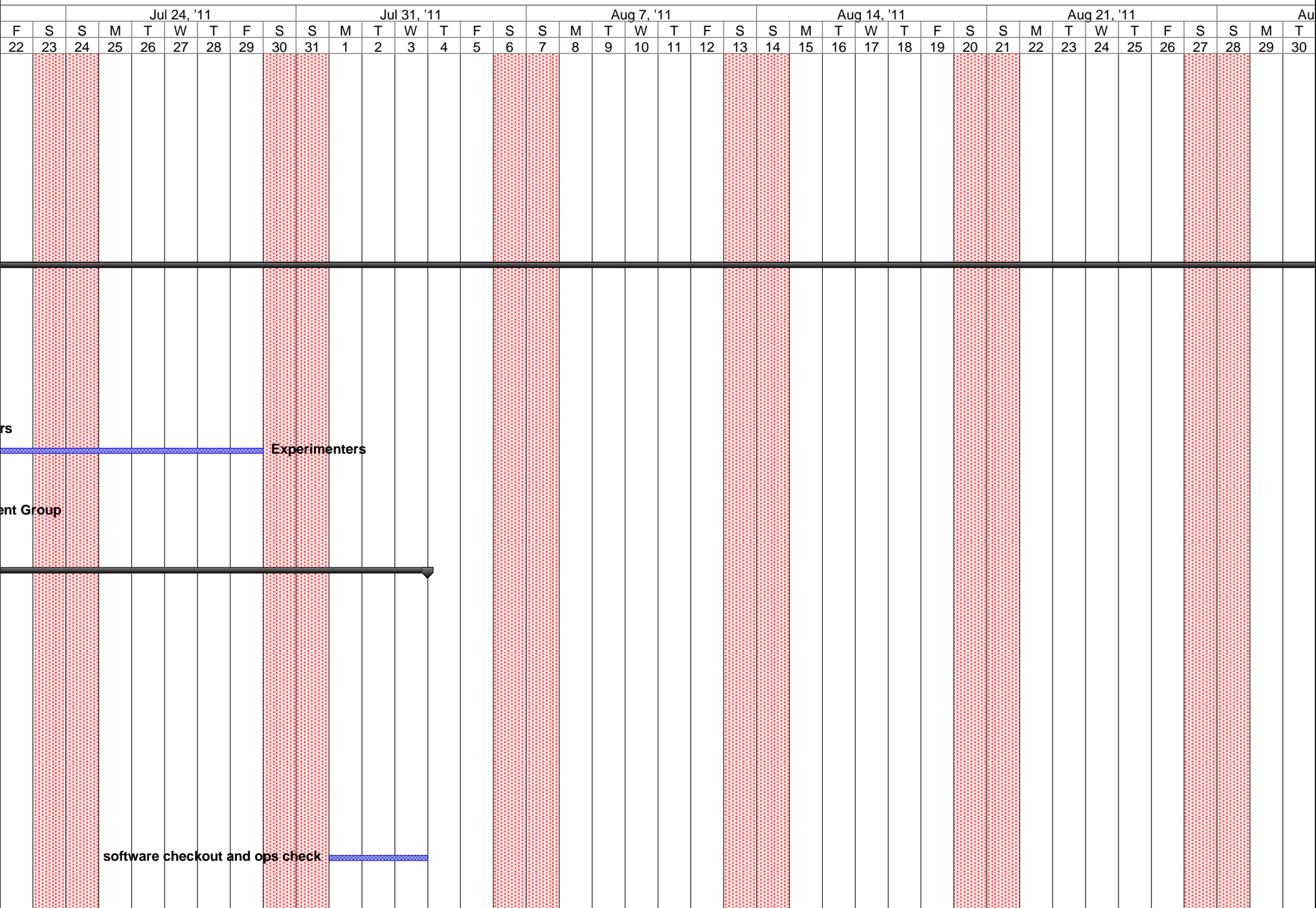
Jun 12, '11						Jun 19, '11						Jun 26, '11						Jul 3, '11						Jul 10, '11						Jul 17, '11																	
M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S							
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22								

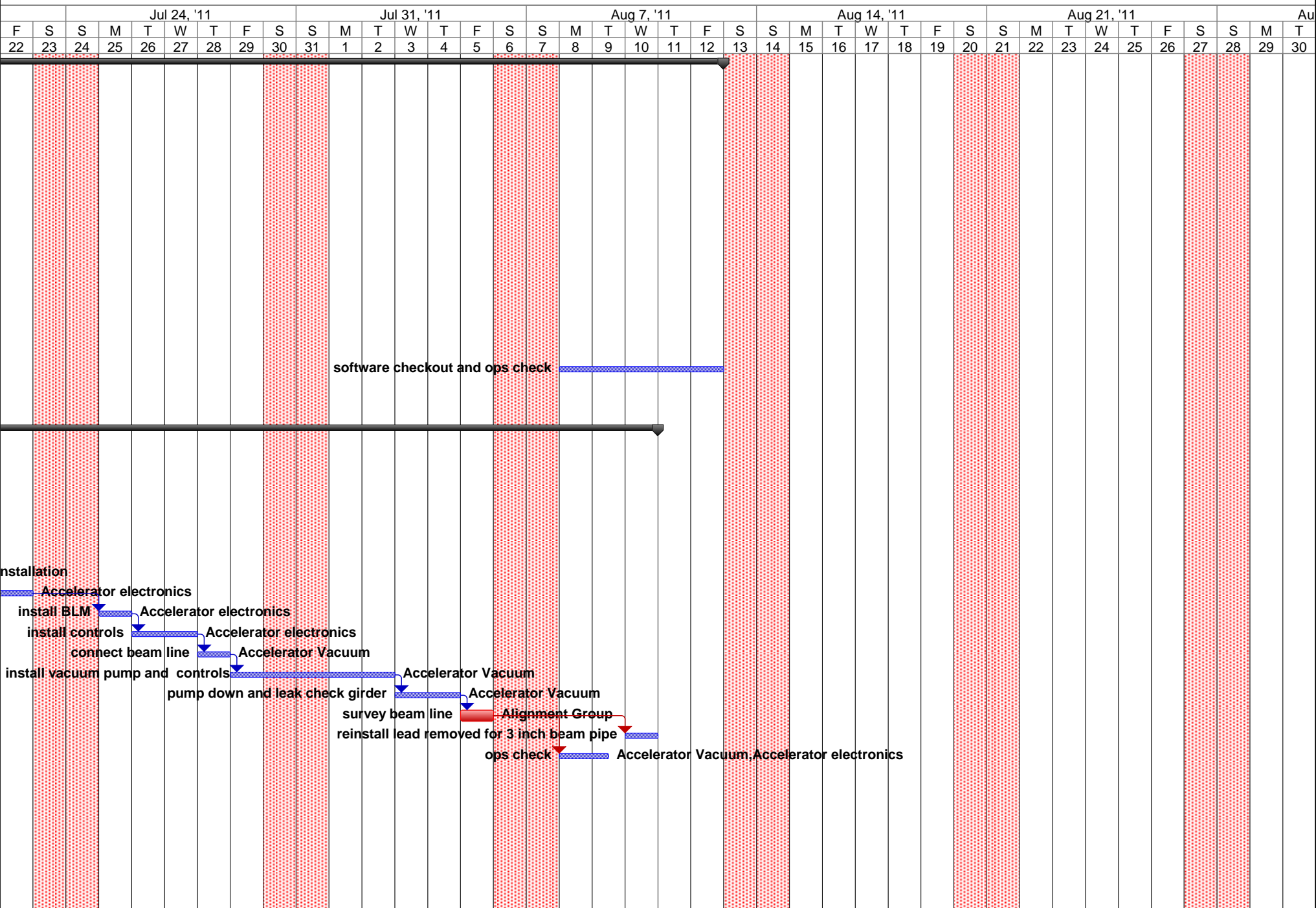
Jun 12, '11						Jun 19, '11						Jun 26, '11						Jul 3, '11						Jul 10, '11						Jul 17, '11																	
M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S							
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22								

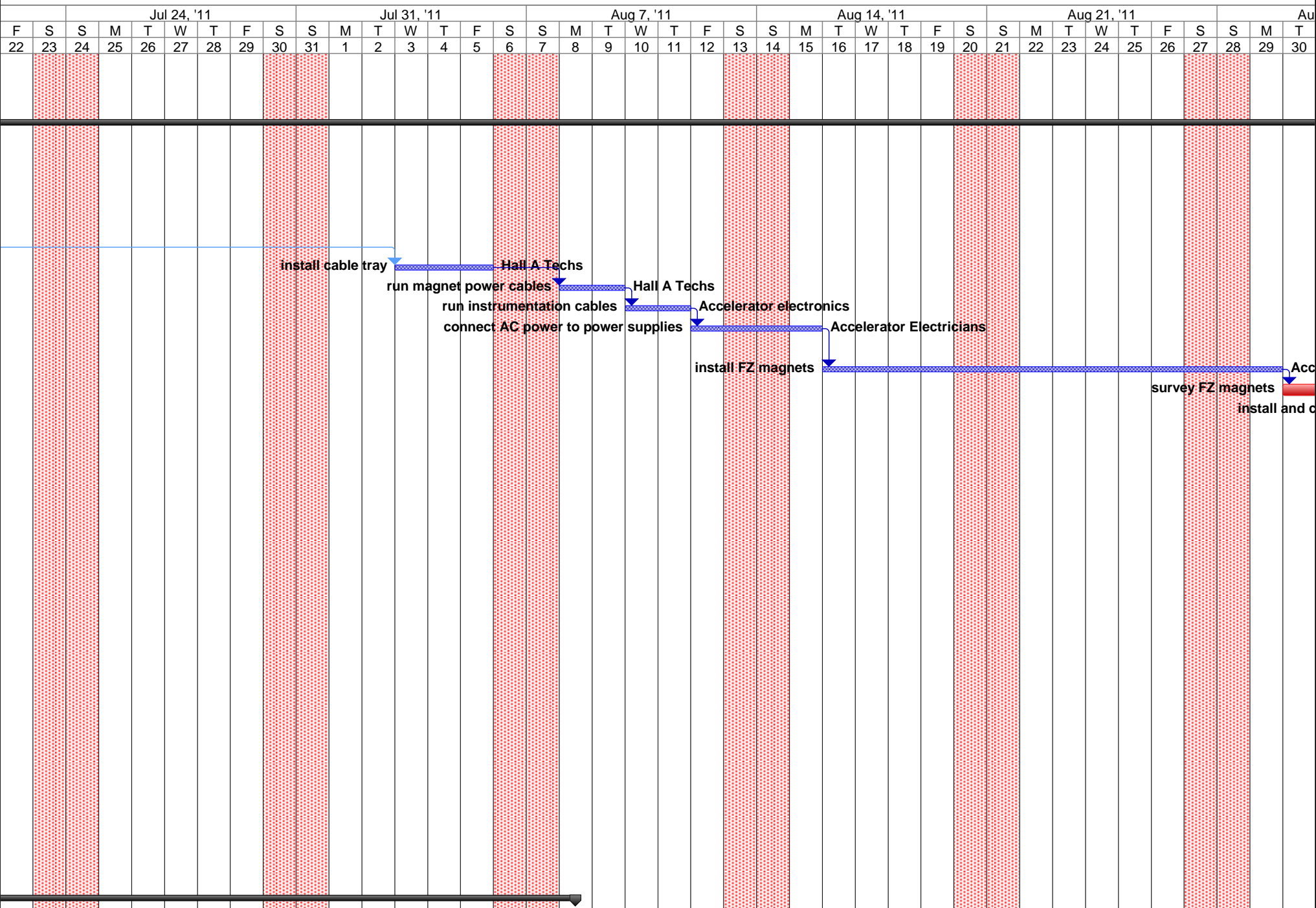
grease bogies →
grease central bearing →

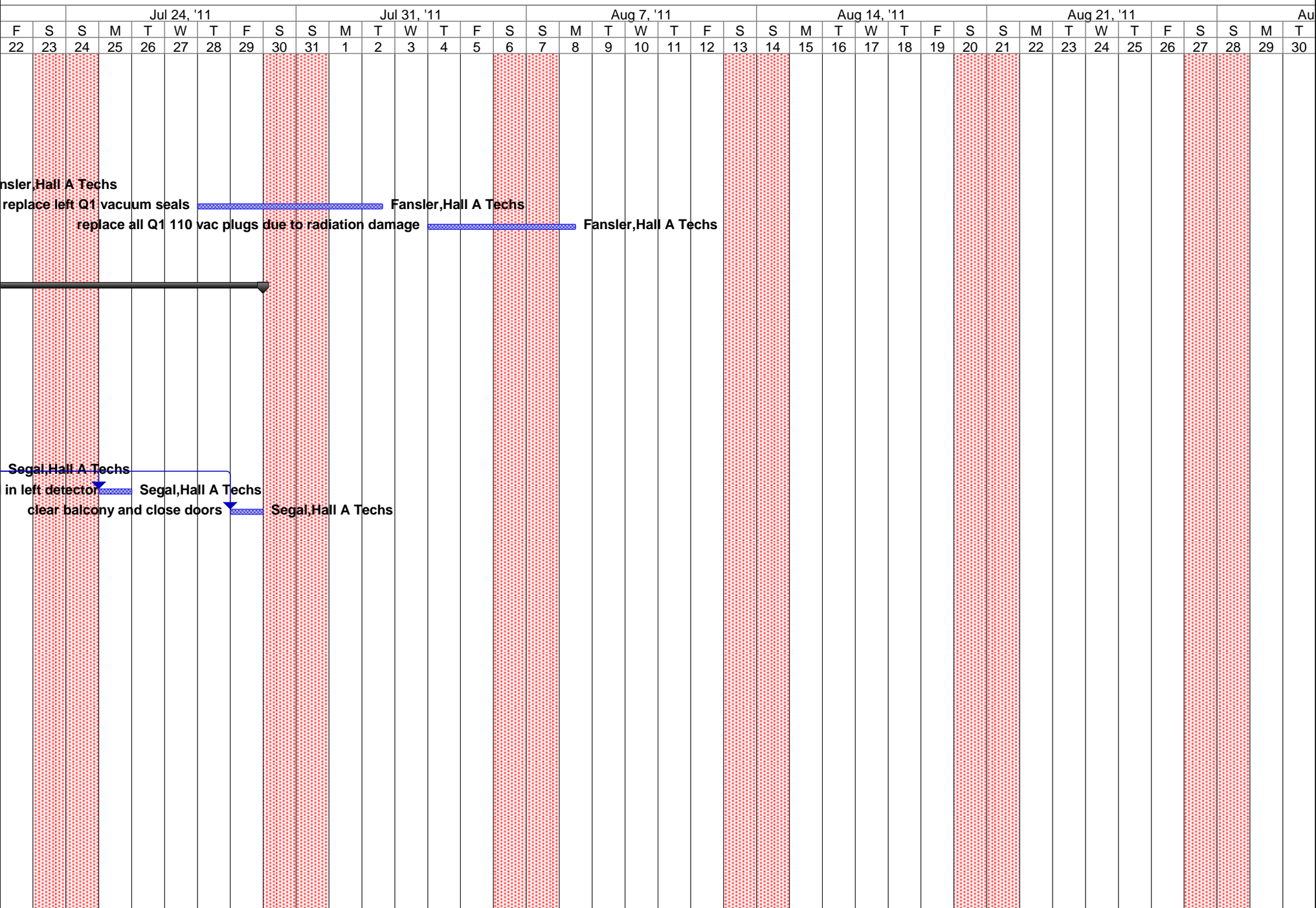
Jun 12, '11						Jun 19, '11						Jun 26, '11						Jul 3, '11						Jul 10, '11						Jul 17, '11																	
M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S							
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22								

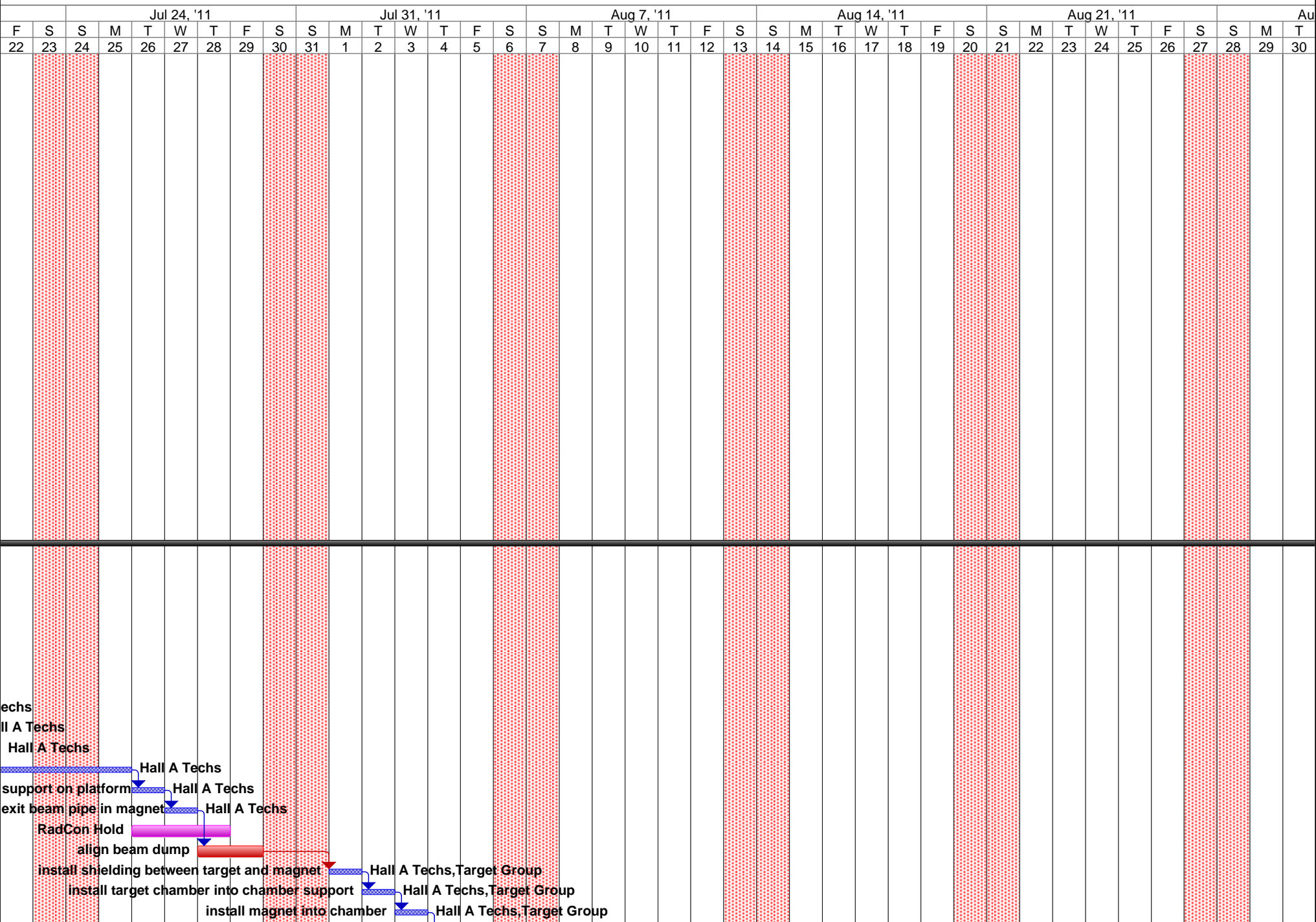
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

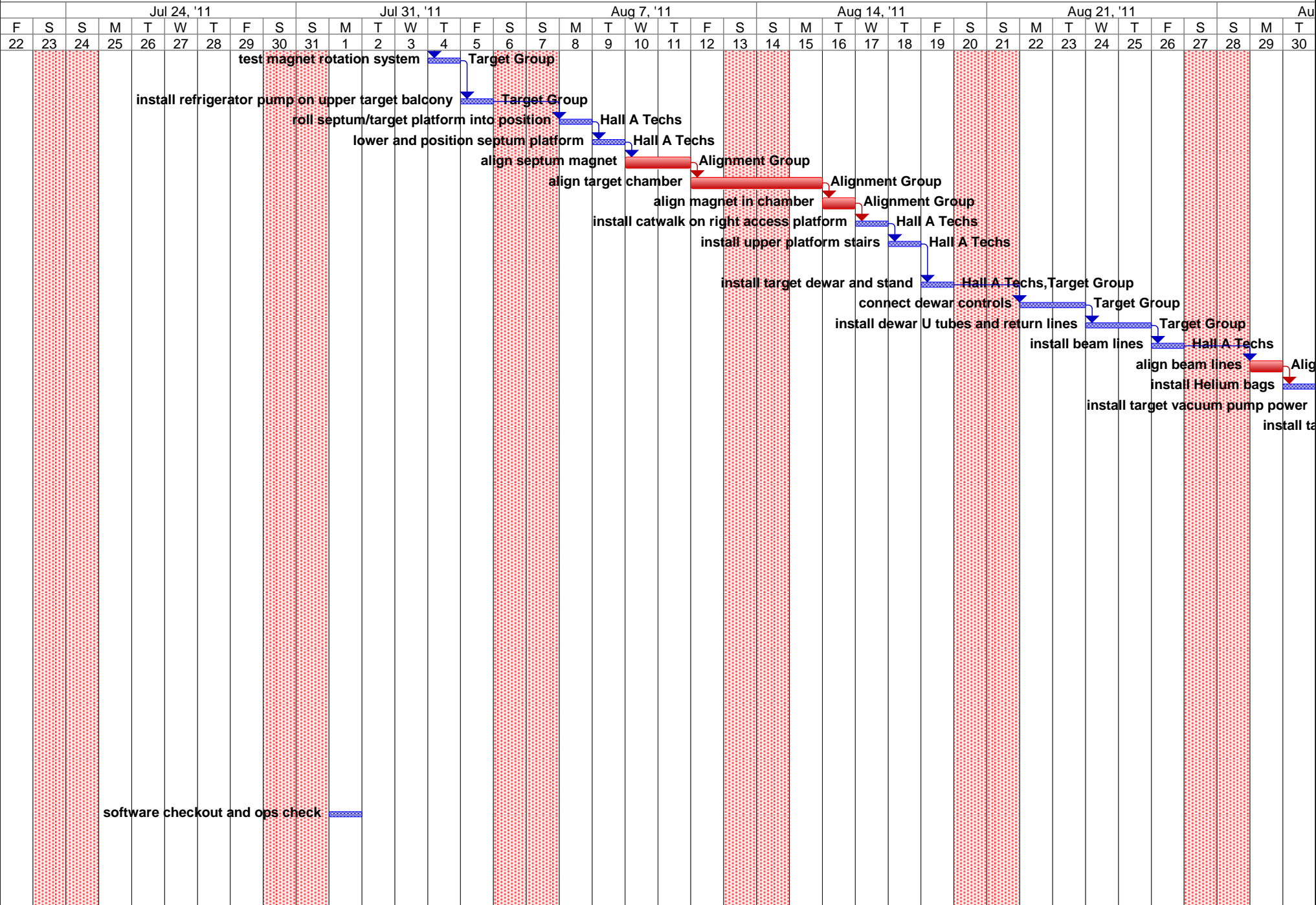








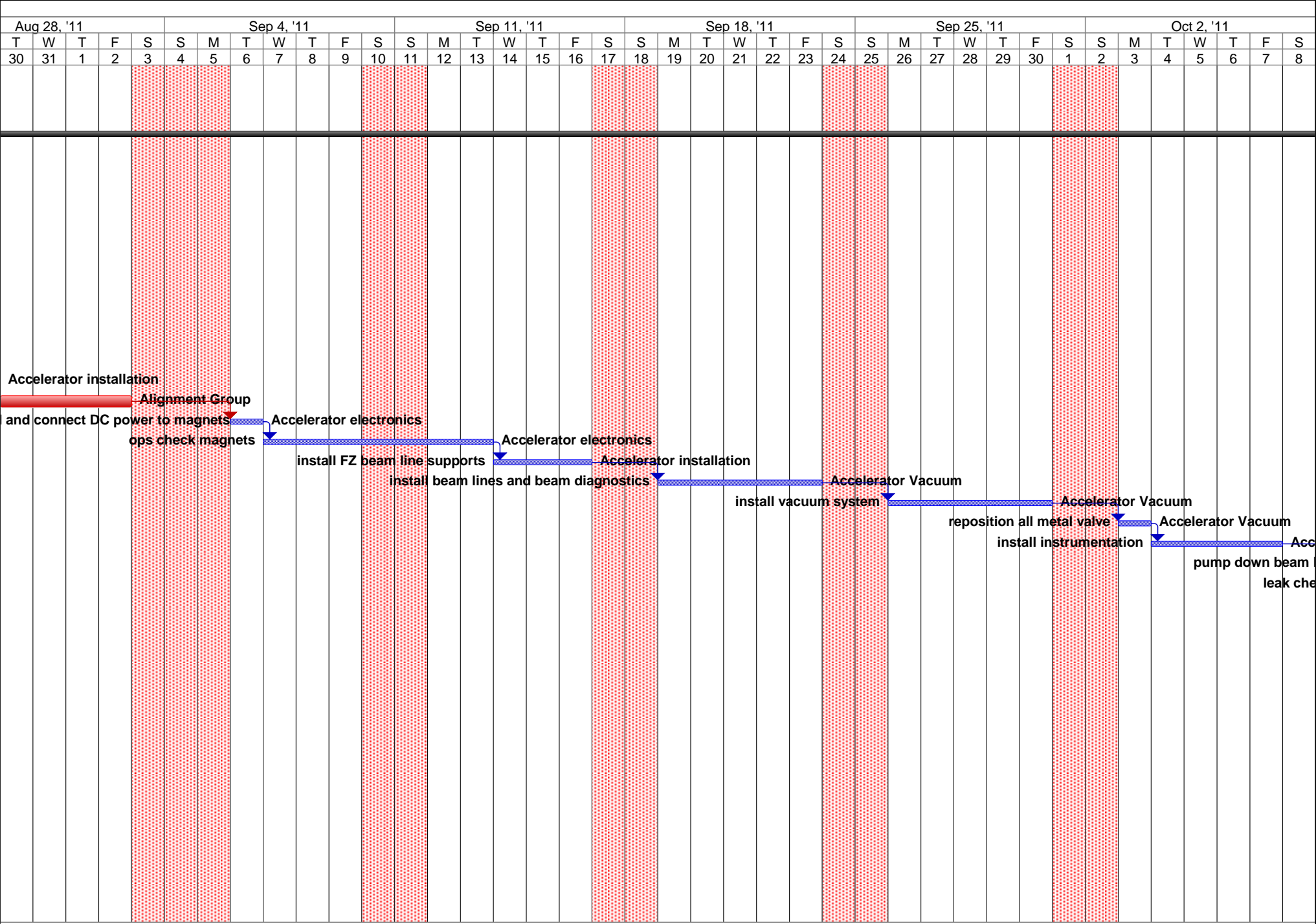


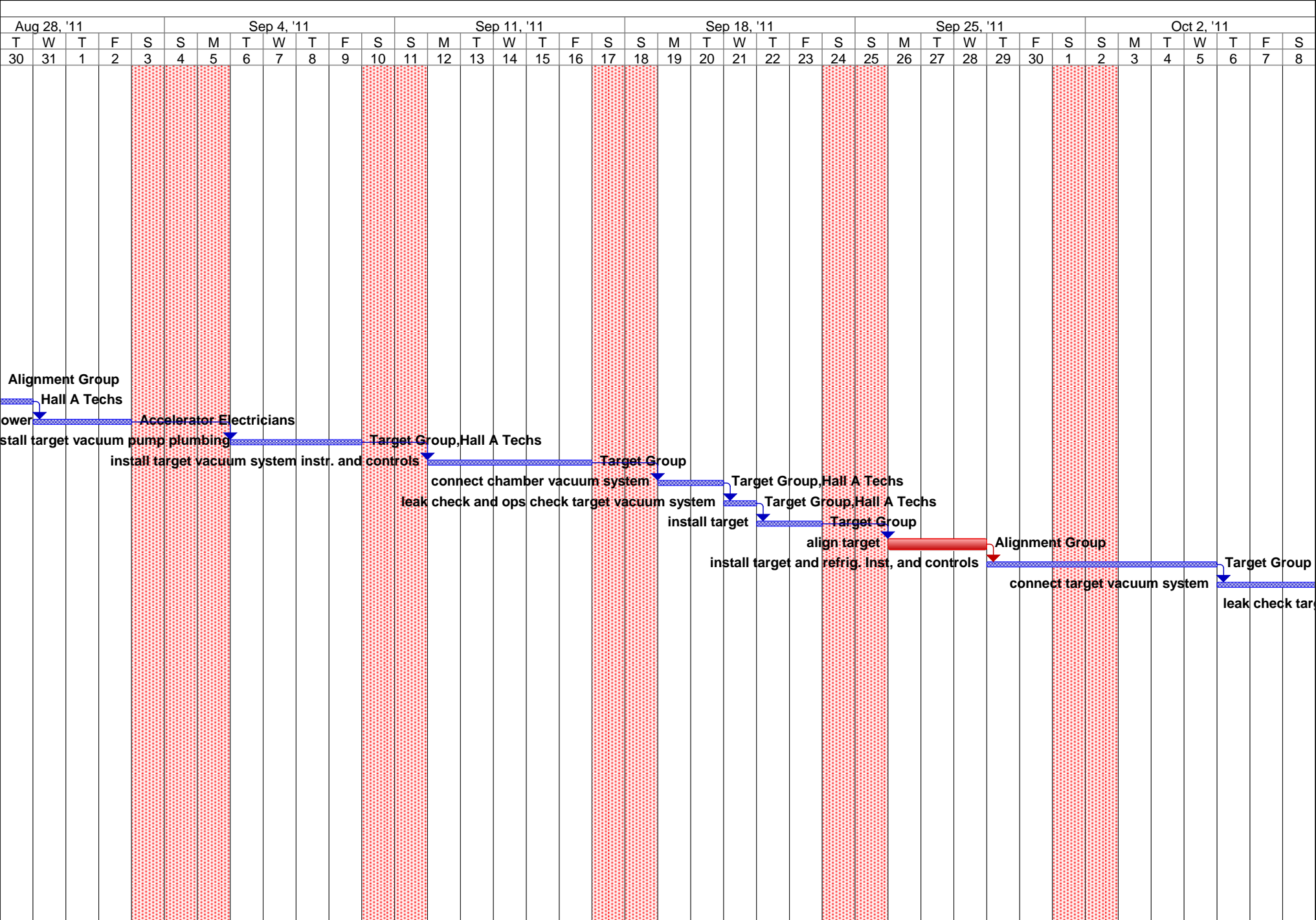


	Jul 24, '11									Jul 31, '11							Aug 7, '11							Aug 14, '11							Aug 21, '11							Au											
F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T										
22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30										

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Aug 28, '11					Sep 4, '11					Sep 11, '11					Sep 18, '11					Sep 25, '11					Oct 2, '11												
T	W	T	F	S	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
30	31	1	2	3	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8

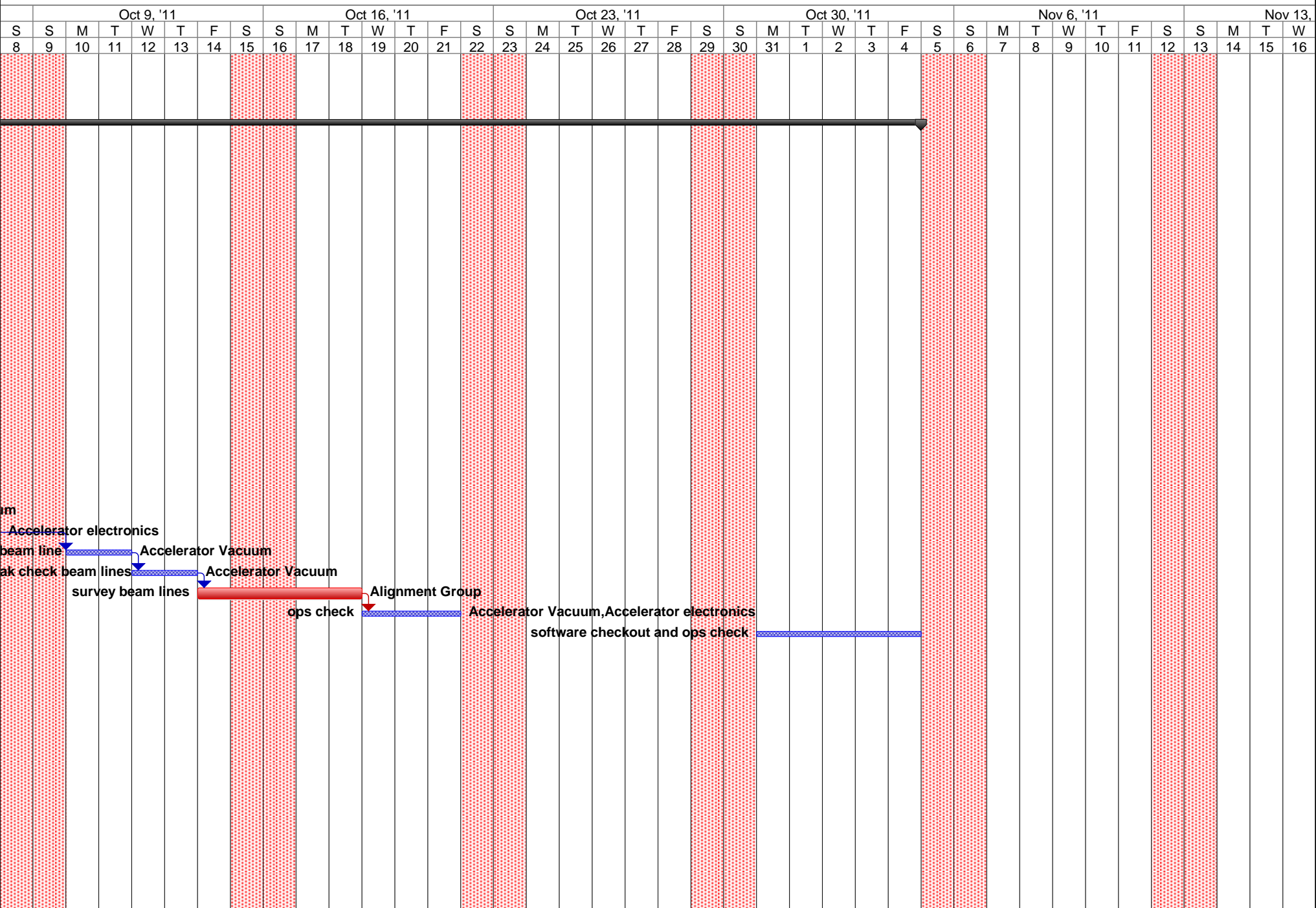




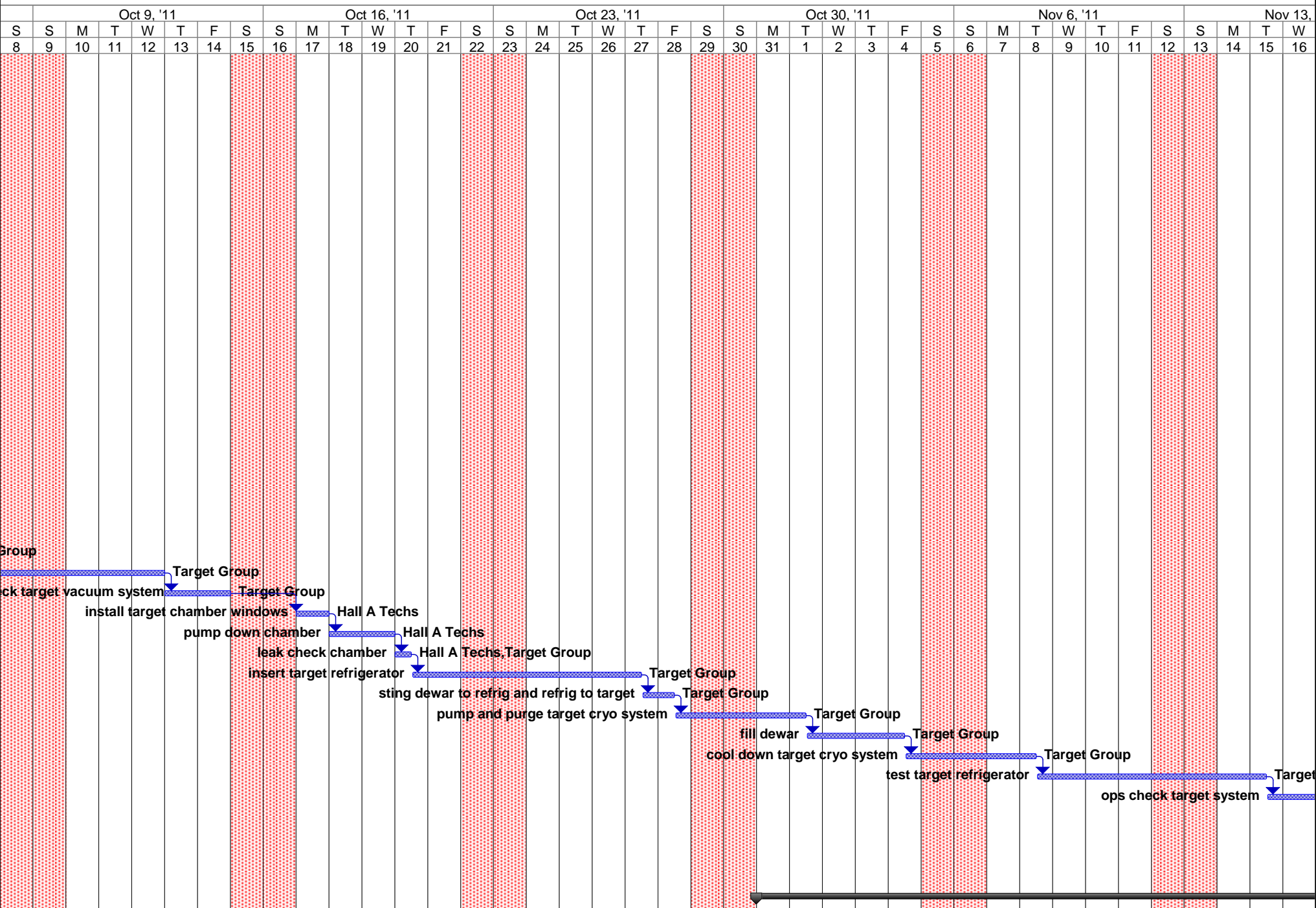
Oct 9, '11							Oct 16, '11							Oct 23, '11							Oct 30, '11							Nov 6, '11							Nov 13, '11																			
S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W															
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16															

Oct 9, '11							Oct 16, '11							Oct 23, '11							Oct 30, '11							Nov 6, '11							Nov 13, '11																	
S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	M	T	W	T	F	S	S	M	T	W							
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16													

Oct 9, '11							Oct 16, '11							Oct 23, '11							Oct 30, '11							Nov 6, '11							Nov 13, '11				
S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16



Oct 9, '11							Oct 16, '11							Oct 23, '11							Oct 30, '11							Nov 6, '11							Nov 13, '11											
S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W							
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16							



Oct 9, '11							Oct 16, '11							Oct 23, '11							Oct 30, '11							Nov 6, '11							Nov 13, '11										
S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W						
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16						

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

v 13, '11				Nov 20, '11				Nov 27, '11					Dec 4, '11					Dec 11, '11					Dec 18, '11																					
W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S						
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25					

v 13, '11				Nov 20, '11					Nov 27, '11					Dec 4, '11					Dec 11, '11					Dec 18, '11																					
W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S							
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25						



v 13, '11				Nov 20, '11					Nov 27, '11					Dec 4, '11					Dec 11, '11					Dec 18, '11																				
W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S						
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25					

v 13, '11				Nov 20, '11					Nov 27, '11					Dec 4, '11					Dec 11, '11					Dec 18, '11																					
W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S							
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25						

v 13, '11				Nov 20, '11					Nov 27, '11					Dec 4, '11					Dec 11, '11					Dec 18, '11																				
W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S						
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25					



v 13, '11				Nov 20, '11							Nov 27, '11							Dec 4, '11							Dec 11, '11							Dec 18, '11							
W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S							
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25