

Fig 2.2 'Elite' Walk Thru - ACD 20mg - Case 72 x 30 tablet bottles										© Jim McCallum Publishing Ltd 2012	
Step No	Description	Process Time per		Delay Time				Distance m			
		case	batch	wks	days	hrs	min				
1	Unload from truck							20			
2	Wait - checking and labelling				1						
3	Move to staging area for sampling							54			
4	Wait					12					
5	Move to sampling booth conveyor							18			
6	Wait					2					
7	Move into sampling booth							10			
8	Take sample (sample goes to QC)					1					
9	Move back down conveyor							10			
10	Wait					12					
11	Move to warehouse staging area							86			
12	Wait (incl pallet change)				1						
13	Move to rack							30			
14	Wait in rack				17						
15	Move back to warehouse staging area							30			
16	Wait				1						
17	Move to dispensing staging area via air lock							74			
18	Wait					12					
19	Move to dispensing room							16			
20	Wait						30				
21	Dispense one batch active						30				
22	Wait (for other materials)					1	30				
23	Move to wait area							24			
24	Wait				1						
25	Move to granulation staging area							56			
26	Wait				2						
27	Move to granulation room							16			
28	Wait (incl check)						30				
29	Move to machine							4			
*30	Mixing (14.4kg active)	1.8s	10m					14400g			
31	Move to mill							2			
*32	Milling	5.4s	30m								
33	Move to mixer							2			
*34	Mixing	2.7s	15m								
35	Wait (add materials)						5				
*36	Mixing	0.9s	5m								
37	Move to tableting staging area							64			
38	Wait				2						
39	Move to tableting machine							18			
40	Wait (incl check)						10				
*41	Tableting (80,000 tablets/hr)	3.6m	20h					720000			
42	Move to warehouse staging area via air lock							74			
43	Wait				1						
44	Move to rack							30			
45	Wait in rack			3							
46	Move back to warehouse staging area							30			
47	Wait				1						
48	Move to packaging staging area area via air lock							84			
49	Wait				1						
50	Move to packaging line							16			
*51	Packaging (100 bottles/min)	2.9m	16h					24000			
52	Wait					2		4			
53	Move to warehouse staging area via air lock							76			
54	Wait (incl pallet change)				1						
55	Move to rack							30			
56	Wait QA release				4						
57	Wait shipping instructions				10						
58	Move to despatch area							82			
59	Wait (incl wrap and paperwork)				1						
60	Move to loading bay							28			
	Ready for shipment										
	Totals										
	Throughput Time (steps 17 to 56)	6m 41s	37h	3	13	15	135	616			
	Pipeline Lead Time (steps 1 to 60)	6m 41s	37h	3	44	42	135	984			
	Total current throughput time (from dispensing to QA release) is process time + delay time = 2.3d + 15d + 13d + 2d = 32.3d										
	Total current pipeline lead time (from entry to exit) is entry + process + delay + exit time = 2.3d + 15d + 44d + 2.8d = 64.1 days										
	No of steps	60									
	No of value adds	6									
	No of non value adds	54									
	VA time (case)	6m 41s									
	VA time (batch)	37h									
	TPT	32.3d									
	PLT	64.1d									
	Distance travelled	984m									