

ID	Task Name	% Complete	Duration
1	Unit 4 Overhaul - August 13 - October 5, 2012	34%	74.66 days
2	Spin Unit/Fish flushing	100%	2.25 hrs
3	Start mechanical clearance	100%	1 hr
4	Install headgates	100%	8 hrs
5	Pull STS in ____ slot	0%	0 hrs
6	Open wicket gates & drain to tailwater	100%	1 hr
7	Install draft tube stoplogs	100%	3 hrs
8	Continue placing mechanical clearance	100%	4 hrs
9	Install scroll case tigger	100%	3 hrs
10	Drain unit & monitor scroll case water elevation (dip basket)	100%	4 hrs
11	Fish rescue	100%	2 hrs
12	Start placing electrical clearance	100%	1 day
13	Place grounds	100%	0.13 days
14	Pull 4 pie sections/deck plates & 8 air baffles/shrouds, establish FME perimeter	100%	1 day
15	Generator PM - electricians	70%	7.5 days
16	Remove and Clean Surface Air Coolers - mechanics	30%	12 days
17	Start cleaning rotor, stator and upper bearing bracket - combined crew	12%	10 days
18	Drain water in scroll case, draft tube to water cushion at el. 367	100%	5 hrs
19	Wash down scroll case	100%	4 hrs
20	Install/stage scroll case lights, safety lines, access ramps, power supplies, Jacob's ladders, inspection cover, etc.	100%	0.5 days
21	Perform wicket gate clearance readings & pinch test - mechanics	100%	7 hrs
22	Open & block wicket gates	100%	2 hrs
23	De-pressurize governor & continue placing mechanical & finish placing electrical clearances	100%	4 hrs
24	Install draft tube platform	100%	0.75 days
25	Pressurize hub (SSG must be off?)	100%	0.5 days
26	Start to raise platform & Drain hub cone oil	100%	1 day
27	Finish raising and welding platform to pad eyes	100%	2 days
28	Pole drop test - electricians	100%	4 days
29	Install water level monitor system, lights & remove 2 inspection hatches in inner headcover	100%	3 hrs
30	Drain oil in governor sump actuator tank & 3 bearing sumps (not thrust bearing)	100%	1 day
31	Governor PM - electricians	0%	18 hrs
32	XJ Breaker PM - electricians	0%	70 hrs
33	Clean/filter turbine oil	50%	1 day
34	Shaft and Oil Pipe PM - mechanics	5%	1 day
35	Farval Unit	0%	1 day
36	Install exhaust fans	100%	5 hrs
37	Install draft tube entry system	100%	3 hrs
38	Drain draft tube completely (overnight)	100%	6 hrs
39	Turbine PM - electricians	0%	11 hrs
40	Cooling Water Strainers PM - mechanics	0%	3 days
41	Clean out weep holes & record depth & flow	90%	0.5 days
42	Dam Safety inspection	0%	0 hrs
43	Draft Tube Drain Valves/Mud Valves	0%	1 day
44	Remove main shaft packing	100%	3 hrs
45	Remove bearing sump covers	100%	1 day
46	Install lighting on inside of unit	100%	2 hrs

ID	Task Name	% Complete	Duration
47	Thrust & Guide Bearings PM	0%	2 days
48	Oil Catcher Pumps on Blade Servo	0%	0.5 hrs
49	Begin/start headcover pumps (needs to be dry) - mechanics	60%	0.5 days
50	Stay Ring Followers	0%	1 day
51	Vacuum Breaker	0%	0.5 days
52	Begin/start Wicket Gates	0%	3 days
53	Take unit measurements - mechanics	100%	7 days
54	Replace 2 pie sections/deck plates & 7 air baffles/shrouds	100%	1 day
55	Megger test	0%	3 hrs
56	Blade cavitation inspection	100%	2 hrs
57	Cavitation Repair	0%	10 days
58	Replace blade packing (if needed)	0%	0 days
59	Replace bearing sump covers	100%	2 days
60	Fill governor sump actuator tank and 3 bearing sumps	0%	1 day
61	Brakes - mechanics	0%	2 hrs
62	Perform headcover bolt inspection	100%	1 day
63	Replace main shaft packing	30%	1 day
64	Begin/start governor work - mechanics	0%	7 days
65	Water, Air, Oil Distribution PM - mechanics	0%	1.5 days
66	Drain thrust bearing sump	100%	3 hrs
67	Fill hub cone oil through tap	0%	1 day
68	Bring water cushion up to man door	0%	0.25 days
69	Remove scroll case lights, safety lines, Jacob's ladders, etc.	0%	0.5 days
70	Remove draft tube entry system	0%	3 hrs
71	Remove draft tube platform	0%	2 days
72	Split thrust bearing tub	0%	7 days
73	Fill thrust bearing sump with oil	0%	2 hrs
74	High Pressure Thrust Bearing Oil Pump PM - mechanics	0%	0.5 days
75	Begin/start governor calibrations - mechanics & electricians	0%	1 day
76	Prepare to water up	0%	1 day
77	Start removing mechanical & electrical clearances	0%	0.5 days
78	Remove stoplogs and headgates	0%	1 day
79	Finish headcover pumps (timing tests & leak checks) - mechanics	0%	0.5 hrs
80	Finish wicket gates	0%	0 days
81	Cooling Water Flow meters PM - mechanics	0%	0.5 days
82	Finish governor calibrations - mechanics & electricians	0%	1 day
83	Annunciation system PM - electricians	0%	1 day
84	Relocate and replace headcover pumps	0%	0 days
85	Finish governor work - mechanics	0%	0.5 days
86	33 & 65 Switches PM - electricians & electronics technician	0%	0.5 days
87	3D CAM PM - electronics technician	0%	1 day
88	Remove scroll case tugger	0%	3 hrs
89	Remove exhaust fans in intake slot	0%	2 hrs
90	Finish removing mechanical clearance	0%	0.5 days
91	Finish removing electrical clearance & grounds	0%	0.5 days
92	4 day test run and thermography inspection	0%	4 days

ID	Task Name	% Complete	Duration
93	✓  Prep for Doble test	100%	2.5 hrs
94	✓  Doble test isophase bus from Main Unit to XJ breaker	100%	1 day