ภาคผนวก ง

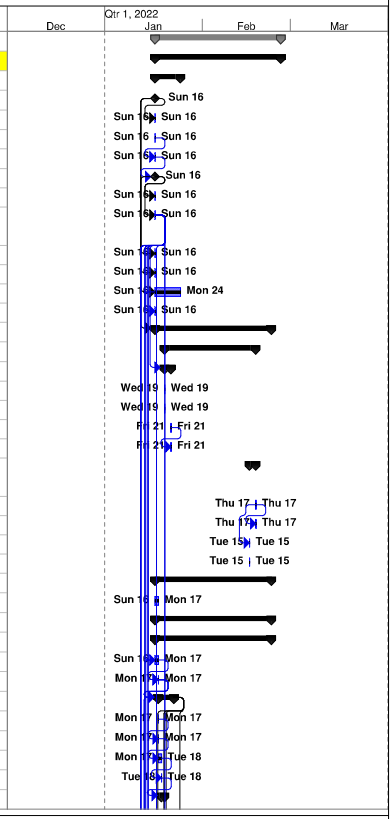
สำเนาเอกสารเกี่ยวกับการจัดการด้านเสียง

ภาคผนวก ง-1

แผนการซ่อมบำรุงเครื่องจักรประจำปี พ.ศ. 2565-2566

2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
0	**Major Outage**	100%	40.42 days	16 Jan 2:00	25 Feb 12:00	BLCP
1	**Outage Unit 1 Execution Plan**	100%	40.42 days	16 Jan 2:00	25 Feb 12:00	BLCP
2	Unit Shut down	100%	8.25 days	16 Jan 2:00	24 Jan 8:00	OPS
3	Shutdown @ 2:00	100%	0 hrs	16 Jan 2:00	16 Jan 2:00	OPS
4	Turbine MOST remote test	100%	15 mins	16 Jan 2:00	16 Jan 2:15	OPS
5	Gen breaker open	100%	1 hr	16 Jan 2:00	16 Jan 3:00	OPS
6	Turbine MOST Physical test	100%	1 hr	16 Jan 3:00	16 Jan 4:00	OPS
7	MFT finish	100%	0 hrs	16 Jan 4:00	16 Jan 4:00	OPS
8	Turning gear on.	100%	1 hr	16 Jan 4:00	16 Jan 5:00	OPS
9	Air Force cool down Boiler Isolate Draft system by by pass HP#8	100%	15 hrs	16 Jan 4:00	16 Jan 19:00	OPS
10	Boiler Team Install Spool HP#8	100%	2 hrs	16 Jan 5:30	16 Jan 7:30	BL
11	Remove insullation and open all man-hole for boiler	100%	12 hrs	16 Jan 2:00	16 Jan 14:00	ES/BL
12	Penthouse vacuum cleaning ash	100%	8 days	16 Jan 8:00	24 Jan 8:00	BL
13	Fire fighting transfermer system test	100%	1 hr	16 Jan 6:00	16 Jan 7:00	OPS/Safety/HV
14	Maintenance window	100%	37.5 days	16 Jan 8:00	22 Feb 20:00	ENG
15	Water and steam system inspection	100%	29.17 days	19 Jan 13:00	17 Feb 17:00	LAB
16	As found internal inspection by Chemist	100%	2.17 days	19 Jan 13:00	21 Jan 17:00	LAB
17	Storage Tank / Deaerator	100%	4 hrs	19 Jan 13:00	19 Jan 17:00	LAB
18	Hot well condenser A/B	100%	4 hrs	19 Jan 13:00	19 Jan 17:00	LAB
19	Steam drum	100%	4 hrs	21 Jan 9:00	21 Jan 13:00	LAB
20	Blow down Tank	100%	4 hrs	21 Jan 13:00	21 Jan 17:00	LAB
21	Final internal inspection condition before closed manhole by Chemist	100%	2.25 days	15 Feb 11:00	17 Feb 17:00	LAB
22	Steam drum	100%	2 hrs	17 Feb 13:00	17 Feb 15:00	LAB
23	Blow down Tank	100%	2 hrs	17 Feb 15:00	17 Feb 17:00	LAB
24	Storage Tank / Deaerator	100%	3 hrs	15 Feb 13:00	15 Feb 16:00	LAB
25	Hot well condenser A/B	100%	3 hrs	15 Feb 11:00	15 Feb 14:00	LAB
26	Boiler Maintenance	100%	37.5 days	16 Jan 8:00	22 Feb 20:00	BL
27	As Found IGV of Main Fan and Burner Tilting	100%	1 day	16 Jan 8:00	17 Jan 8:00	BL
28	Boiler pressure part	100%	37.5 days	16 Jan 8:00	22 Feb 20:00	BL
29	Furnace	100%	37.5 days	16 Jan 8:00	22 Feb 20:00	BL
30	Clean Boiler Nose and Slope Tube by water	100%	7 hrs	16 Jan 19:00	17 Jan 2:00	BL
31	Drone inspection internal Furnace	100%	3 hrs	17 Jan 2:00	17 Jan 5:00	BL
32	Internal install IU scaffolding	100%	4.79 days	17 Jan 7:00	22 Jan 2:00	ES
33	Erection floor	100%	3 hrs	17 Jan 7:00	17 Jan 10:00	ES
34	Base truss	100%	5 hrs	17 Jan 10:00	17 Jan 15:00	ES
35	Installation Winch and Base Tower	100%	10 hrs	17 Jan 15:00	18 Jan 1:00	ES
36	Wing Truss	100%	6 hrs	18 Jan 1:00	18 Jan 7:00	ES
37	Water wall	100%	1.52 days	18 Jan 7:00	19 Jan 19:30	ES



Project: Major Outage
Date: 27 Apr 14:51

Task | Rolled Up Progress | Inactive Milestone | Finish-only | Baseline Summary
Critical Task | Split | Inactive Summary | External Tasks | Progress
Milestone | External Tasks | Manual Task | External Milestone | Deadline
Summary | Project Summary | Duration-only | Critical
Rolled Up Task | Group By Summary | Manual Summary Rollup | Critical Split
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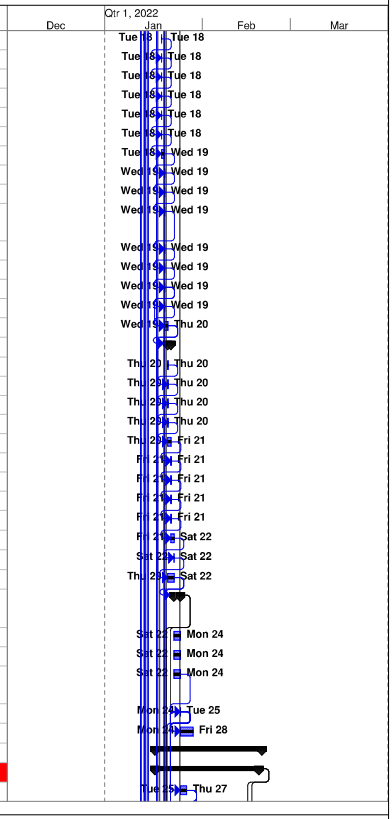
Rolled Up Milestone | Inactive Milestone | Start-only | Baseline Milestone

2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
38	Erect scaffolding at Level 1 (with spandeck)	100%	3 hrs	18 Jan 7:00	18 Jan 10:00	ES
39	Erect scaffolding at Level 2 (with spandeck)	100%	3 hrs	18 Jan 10:00	18 Jan 13:00	ES
40	Erect scaffolding at Level 3 (with spandeck)	100%	3 hrs	18 Jan 13:00	18 Jan 16:00	ES
41	Erect scaffolding at Level 4 (with spandeck)	100%	3 hrs	18 Jan 16:00	18 Jan 19:00	ES
42	Erect scaffolding at Level 5 (with spandeck)	100%	2 hrs	18 Jan 19:00	18 Jan 21:00	ES
43	Erect scaffolding at Level 6 (with spandeck)	100%	2 hrs	18 Jan 21:00	18 Jan 23:00	ES
44	Erect scaffolding at Level 7 (with spandeck)	100%	3.5 hrs	18 Jan 23:00	19 Jan 2:30	ES
45	Erect scaffolding at Level 8 (with spandeck)	100%	2.5 hrs	19 Jan 2:30	19 Jan 5:00	ES
46	Erect scaffolding at Level 9 (with spandeck at level 9.5)	100%	2.5 hrs	19 Jan 5:00	19 Jan 7:30	ES
47	Erect scaffolding at Level 10 (with spandeck at level 10.5)	100%	3 hrs	19 Jan 7:30	19 Jan 10:30	ES
48	Erect scaffolding at Level 11 (with spandeck)	100%	3 hrs	19 Jan 10:30	19 Jan 13:30	ES
49	Erect scaffolding at Level 12	100%	2.5 hrs	19 Jan 13:30	19 Jan 16:00	ES
50	Erect scaffolding at Level 13	100%	2.5 hrs	19 Jan 16:00	19 Jan 18:30	ES
51	Erect scaffolding at Level 14	100%	1 hr	19 Jan 18:30	19 Jan 19:30	
52	Erect scaffolding at dance floor	100%	9.5 hrs	19 Jan 19:30	20 Jan 5:00	ES
53	SH	100%	1.67 days	20 Jan 5:00	21 Jan 21:00	ES
54	Erect scaffolding at Level 1	100%	4 hrs	20 Jan 5:00	20 Jan 9:00	ES
55	Erect scaffolding at Level 2 (with spandeck)	100%	4 hrs	20 Jan 9:00	20 Jan 13:00	ES
56	Erect scaffolding at Level 3	100%	4 hrs	20 Jan 13:00	20 Jan 17:00	ES
57	Erect scaffolding at Level 4 (with spandeck)	100%	4 hrs	20 Jan 17:00	20 Jan 21:00	ES
58	Erect scaffolding at Level 5	100%	4 hrs	20 Jan 21:00	21 Jan 1:00	ES
59	Erect scaffolding at Level 6 (with spandeck)	100%	7 hrs	21 Jan 1:00	21 Jan 8:00	ES
60	Erect scaffolding at Level 7	100%	7 hrs	21 Jan 8:00	21 Jan 15:00	ES
61	Erect scaffolding at Level 8 (with spandeck)	100%	6 hrs	21 Jan 15:00	21 Jan 21:00	ES
62	Hopper level - 2.5	100%	2 hrs	21 Jan 21:00	21 Jan 23:00	ES
63	Hopper level - 1.5	100%	2 hrs	21 Jan 23:00	22 Jan 1:00	ES
64	Ordinary civil engineer inspection for structure	100%	1 hr	22 Jan 1:00	22 Jan 2:00	ES
65	Install BS scaffolding at 2ry, 3ry RH	100%	2.25 days	20 Jan 5:00	22 Jan 11:00	BL
66	Tube sand blasting (Water Wall + 1ry RH + 2ry SH) 450 m2	100%	2.92 days	22 Jan 2:00	25 Jan 0:00	BL
67	Tube sand blasting (1ry RH) Set-up testing until complete	100%	2.25 days	22 Jan 2:00	24 Jan 8:00	BL
68	Tube sand blasting (2ry SH) Set-up testing until complete	100%	2.25 days	22 Jan 2:00	24 Jan 8:00	BL
69	Tube sand blasting (Water Wall) Set-up testing until complete	100%	2.25 days	22 Jan 2:00	24 Jan 8:00	BL
70	Cleaning sandblast from IU spandect	100%	16 hrs	24 Jan 8:00	25 Jan 0:00	BL
71	Boiler Inspection	100%	4 days	24 Jan 8:00	28 Jan 8:00	ESCO
72	Boiler Furnace Inspection and Replacement	100%	33.75 days	16 Jan 8:00	19 Feb 2:00	BL
73	Water Wall	100%	33.67 days	16 Jan 8:00	19 Feb 0:00	BL
74	Visual Inspection by TA	100%	2 days	25 Jan 0:00	27 Jan 0:00	MPW



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2022 unit 1 Draft Outage Schedule

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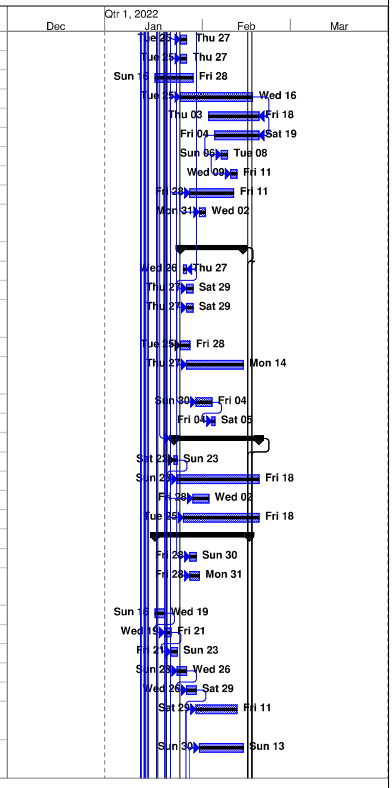
75	TA Pencil UT inspection	100%	2 days	25 Jan 0:00	27 Jan 0:00	MPW
76	DACON Pencil UT (Support TA tool)	100%	2 days	25 Jan 0:00	27 Jan 0:00	DACON
77	Site Work prepare field trasnportation tube prepariing (F	100%	12 days	16 Jan 8:00	28 Jan 8:00	EGCO
78	WW tube replacement (93 m2) with Additional	100%	548 hrs	25 Jan 0:00	16 Feb 20:00	EGCO
79	Welding water wall Tube membrane (Fin)	100%	15.5 days	03 Feb 0:00	18 Feb 12:00	EGCO
80	PT Fin	100%	14 days	04 Feb 10:00	19 Feb 0:00	EGCO
81	Tube at Burner Panel (Conner B & C)	100%	2 days	06 Feb 1:00	08 Feb 1:00	EGCO
82	Wall Deslager Port (1 Set)	100%	2 days	09 Feb 1:00	11 Feb 1:00	EGCO
83	Boiler slope tube replacement (4 conner) - Upto conditic	100%	14 days	28 Jan 0:00	11 Feb 0:00	EGCO
84	Estimate repair tube thickness reduction from TA Inspection (Max.)	100%	2 days	31 Jan 0:00	02 Feb 0:00	EGCO
85	**2rySH**	**100%**	**20 days**	**25 Jan 0:00**	**14 Feb 0:00**	**BL**
86	Scale Detector Inspection at U-Bend (10%) by DACON	100%	1 day	26 Jan 0:00	27 Jan 0:00	DACON
87	Visual Inspection by TA	100%	2 days	27 Jan 0:00	29 Jan 0:00	MPW
88	NDT inspection by R&D TA (Hardness Test, inner Oxide scale, Replica)	100%	2 days	27 Jan 0:00	29 Jan 0:00	MPW
89	Thermo copple at Header 2ry SH (Panel 3)	100%	3 days	25 Jan 0:00	28 Jan 0:00	ESCO
90	Replace Inlet Tube portion all panel= 12 row x 15 tube per row, 102 joints	100%	18 days	27 Jan 0:00	14 Feb 0:00	BL
91	Estimate tube defect at horizontal tube (Rapper Tube U	100%	5 days	30 Jan 0:00	04 Feb 0:00	BL
92	Sampling Tube U-Bend 2ry SH Sampling	100%	1 day	04 Feb 0:00	05 Feb 0:00	BL
93	**3rySH**	**100%**	**27 days**	**22 Jan 11:00**	**18 Feb 11:00**	**BL**
94	Visual Inspection by TA	100%	1 day	22 Jan 11:00	23 Jan 11:00	MPW
95	Replace U-Bend tube at 3ry SH (Back log from EMJ) 16	100%	26 days	23 Jan 11:00	18 Feb 11:00	BL
96	Sampling Tube U-Bend 3ry SH Sampling	100%	5 days	28 Jan 11:00	02 Feb 11:00	BL
97	RT Test	100%	24 days	25 Jan 11:00	18 Feb 11:00	BL
98	**1ryRH**	**100%**	**30.5 days**	**16 Jan 8:00**	**15 Feb 20:00**	**BL**
99	Visual Inspection by TA	100%	2 days	28 Jan 0:00	30 Jan 0:00	MPW
100	NDT inspection by R&D TA (Hardness Test, inner Oxide scale, Replica)	100%	3 days	28 Jan 0:00	31 Jan 0:00	MPW
101	Installation scaffolding Remove Insulation from externa	100%	3 days	16 Jan 8:00	19 Jan 8:00	ES-CR Asia
102	Remove skin casing Inlet Header	100%	2 days	19 Jan 8:00	21 Jan 8:00	Bidding
103	Remove refactory	100%	2 days	21 Jan 8:00	23 Jan 8:00	ES-Visuv.
104	Install lifting equipment then Transfer cutting tube to gro	100%	3 days	23 Jan 20:00	26 Jan 20:00	BL
105	Transfer tube inside boiler	100%	3 days	26 Jan 20:00	29 Jan 20:00	BL
106	**Right Side: Cut & Weld Upper #1R, #145R, (#30R to #36R) Lower (#1R to #4), (#29 to #32), (#33 to #36),**	**100%**	**13 days**	**29 Jan 20:00**	**11 Feb 20:00**	**BL**
107	**Front: Cut & Weld Upper #274F to #280F Lower (#274 to #277), (#278 to #281)**	**100%**	**14 days**	**30 Jan 20:00**	**13 Feb 20:00**	**BL**



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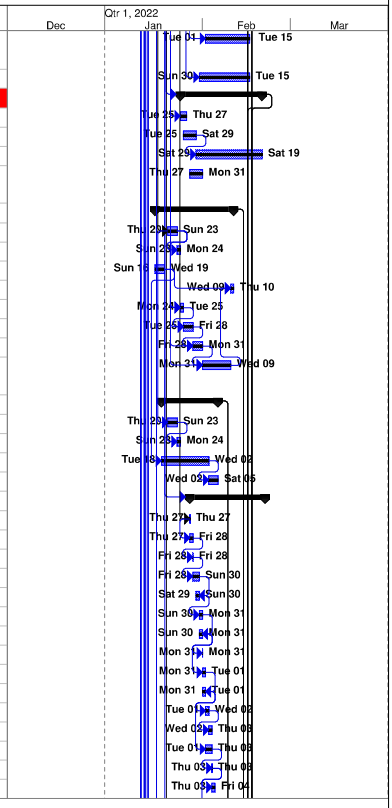
2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
108	**Left Side: Cut & Weld Upper #1L, #145L, (#136 to #142) Lower (#1R to #4), (#135 to #138), (#139 to**	**100%**	**14 days**	**01 Feb 20:00**	**15 Feb 20:00**	**BL**
109	RT Test	100%	16 days	30 Jan 20:00	15 Feb 20:00	BL
110	**2ryRH & 3ryRH**	**100%**	**25.08 days**	**25 Jan 0:00**	**19 Feb 2:00**	**BL**
111	Installation scaffolding internal	100%	2 days	25 Jan 0:00	27 Jan 0:00	ESCO-PEC
112	Magnetic test (288 joints)	100%	4 days	25 Jan 8:00	29 Jan 8:00	TISTR
113	Repair tube (414 joints)	100%	498 hrs	29 Jan 8:00	19 Feb 2:00	ESCO-PEC
114	Inspection (Magnetic + PMI + PAUT + RT) for maintenance priority (Go & monitoring, repair, replace)	100%	4 days	27 Jan 8:00	31 Jan 8:00	BL
115	**Penthouse (1ry SH De-SH & 2ry SH De-SH)**	**100%**	**25.33 days**	**16 Jan 8:00**	**10 Feb 16:00**	**BL**
116	Cutting Tube Nozzle	100%	3 days	20 Jan 19:00	23 Jan 19:00	ESCO-SKK
117	Desupervisor Inspecton nozzle (Bore Scope)	100%	1 day	23 Jan 19:00	24 Jan 19:00	MPW
118	Welding Retoration + RT	100%	3 days	16 Jan 8:00	19 Jan 8:00	ESCO-SKK
119	PWHT require by Thickness of CAP	100%	1 day	09 Feb 16:00	10 Feb 16:00	ESCO-JST
120	Visual Inspection by TA	100%	1 day	24 Jan 8:00	25 Jan 10:00	MPW
121	3ry SH Header Phaase Array at Nozzle No.3 Tube No.1	100%	3 days	25 Jan 10:00	28 Jan 12:00	MPW
122	1ry RH Header Phease Array at #141L, #143L, #145L b	100%	3 days	28 Jan 12:00	31 Jan 14:00	MPW
123	3ry RH Header MT, Replica & Phase Arreay Tube No.1 & No. 5 Hardness Test only tube No. 5 by R&D TA	100%	9 days	31 Jan 14:00	09 Feb 16:00	MPW
124	**Penthouse (RH De-SH Both A&B)**	**100%**	**18 days**	**18 Jan 8:00**	**05 Feb 8:00**	**BL**
125	Cutting Tube Nozzle	100%	3 days	20 Jan 19:00	23 Jan 19:00	ESCO-SKK
126	Desupervisor Inspecton nozzle (Bore Scope)	100%	1 day	23 Jan 19:00	24 Jan 19:00	MPW
127	Welding Retoration + RT	100%	15 days	18 Jan 8:00	02 Feb 8:00	ESCO-SKK
128	PWHT require by Thickness of CAP	100%	3 days	02 Feb 8:00	05 Feb 8:00	ESCO-SKK
129	**BCP-1C replacement spare**	**100%**	**24.13 days**	**27 Jan 8:00**	**20 Feb 11:00**	**BL. ACC**
130	Preparation for no load test	100%	0.5 days	27 Jan 8:00	27 Jan 20:00	BL. ACC
131	Fill water and leave 12 Hr.	100%	25 hrs	27 Jan 8:00	28 Jan 9:00	BL. ACC
132	No load test	100%	0.5 days	28 Jan 9:00	28 Jan 21:00	BL. ACC/HV
133	Preparation for roll out & roll in work	100%	1.5 days	28 Jan 21:00	30 Jan 9:00	BL. ACC
134	Bolt heating of existing BCP	100%	0.5 days	29 Jan 21:00	30 Jan 9:00	BL. ACC
135	Existing BCP dismantling to ground floor	100%	1 day	30 Jan 9:00	31 Jan 9:00	BL. ACC
136	Cooler dismantling to ground floor	100%	0.5 days	30 Jan 21:00	31 Jan 9:00	BL. ACC
137	Transport pump and cooler to TSST	100%	0.5 days	31 Jan 9:00	31 Jan 21:00	BL. ACC
138	Cleaning work, PT inspection upper casing	100%	1 day	31 Jan 9:00	01 Feb 9:00	BL. ACC
139	Preparation for lifting up the spare BCP	100%	0.5 days	31 Jan 21:00	01 Feb 9:00	BL. ACC
140	Lifting new pump and setting	100%	1 day	01 Feb 9:00	02 Feb 9:00	BL. ACC
141	Bolt heating	100%	1 day	02 Feb 9:00	03 Feb 9:00	BL. ACC
142	Cooler cleaning and inspection	100%	2 days	01 Feb 9:00	03 Feb 9:00	BL. ACC
143	Cooler transport back to BLCP	100%	0.5 days	03 Feb 9:00	03 Feb 21:00	BL. ACC
144	Cooler installation	100%	0.5 days	03 Feb 21:00	04 Feb 9:00	BL. ACC



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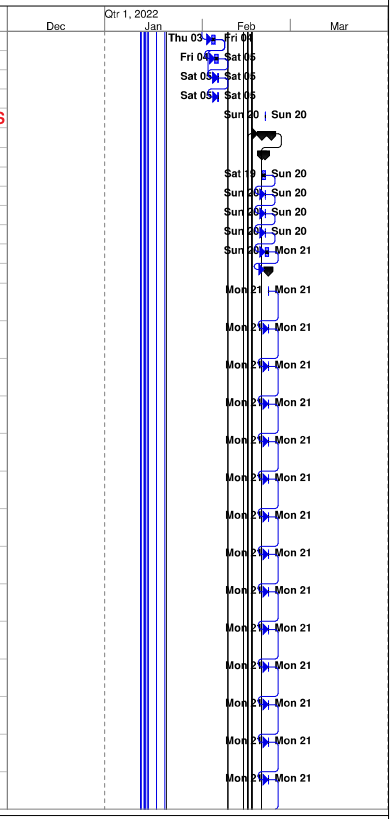
2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
145	Piping work ,assemble structure return	100%	1 day	03 Feb 21:00	04 Feb 21:00	BL. ACC
146	Remove lifting tools	100%	0.5 days	04 Feb 21:00	05 Feb 9:00	BL. ACC
147	Fill demin water by BLCP	100%	4 hrs	05 Feb 9:00	05 Feb 13:00	BL. ACC
148	Connect electric cable by BLCP	100%	4 hrs	05 Feb 13:00	05 Feb 17:00	BL. ACC/HV
149	**Test run**	**100%**	**1 hr**	**20 Feb 10:00**	**20 Feb 11:00**	**BL. ACC/HV/OPS**
150	**Remove IU scaffolding**	**100%**	**2.33 days**	**19 Feb 20:00**	**22 Feb 4:00**	**ES**
151	**SH**	**100%**	**1 day**	**19 Feb 20:00**	**20 Feb 20:00**	**ES**
152	Removal Level 6 and Mobilize from Boiler	100%	6 hrs	19 Feb 20:00	20 Feb 2:00	ES
153	Removal Level 4 and Mobilize from Boiler	100%	6 hrs	20 Feb 2:00	20 Feb 8:00	ES
154	Removal Level 3 and Mobilize from Boiler	100%	6 hrs	20 Feb 8:00	20 Feb 14:00	ES
155	Removal Level 2 and Mobilize from Boiler	100%	6 hrs	20 Feb 14:00	20 Feb 20:00	ES
156	**Dance floor**	**100%**	**6 hrs**	**20 Feb 20:00**	**21 Feb 2:00**	**ES**
157	**Water wall**	**100%**	**0.79 days**	**21 Feb 2:00**	**21 Feb 21:00**	**ES**
158	Removal Level 14 and Mobilize from Boiler (without spandeck)	100%	1 hr	21 Feb 2:00	21 Feb 3:00	ES
159	Removal Level 13 and Mobilize from Boiler (without spandeck)	100%	1 hr	21 Feb 3:00	21 Feb 4:00	ES
160	Removal Level 12 and Mobilize from Boiler (without spandeck)	100%	1 hr	21 Feb 4:00	21 Feb 5:00	ES
161	Removal Level 11.5 and Mobilize from Boiler (with spandeck)	100%	1 hr	21 Feb 5:00	21 Feb 6:00	ES
162	Removal Level 10.5 and Mobilize from Boiler (with spandeck)	100%	2.5 hrs	21 Feb 6:00	21 Feb 8:30	ES
163	Removal Level 9.5 and Mobilize from Boiler (with spandeck)	100%	3.5 hrs	21 Feb 8:30	21 Feb 12:00	ES
164	Removal Level 8 and Mobilize from Boiler (with spandeck)	100%	1.5 hrs	21 Feb 12:00	21 Feb 13:30	ES
165	Removal Level 7 and Mobilize from Boiler (with spandeck)	100%	1.5 hrs	21 Feb 13:30	21 Feb 15:00	ES
166	Removal Level 6 and Mobilize from Boiler (with spandeck)	100%	1 hr	21 Feb 15:00	21 Feb 16:00	ES
167	Removal Level 5 and Mobilize from Boiler (without spandeck)	100%	1 hr	21 Feb 16:00	21 Feb 17:00	ES
168	Removal Level 4 and Mobilize from Boiler (with spandeck)	100%	1 hr	21 Feb 17:00	21 Feb 18:00	ES
169	Removal Level 3 and Mobilize from Boiler (without spandeck)	100%	1 hr	21 Feb 18:00	21 Feb 19:00	ES
170	Removal Level 2 and Mobilize from Boiler (with spandeck)	100%	1 hr	21 Feb 19:00	21 Feb 20:00	ES
171	Removal Level 1 and Mobilize from Boiler (with spandeck)	100%	1 hr	21 Feb 20:00	21 Feb 21:00	ES



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Inactive Milestone | External Tasks | External Milestone | Critical | Critical Split | Baseline | Baseline Milestone
Finish-only | Progress | Deadline

2022 unit 1 Draft Outage Schedule

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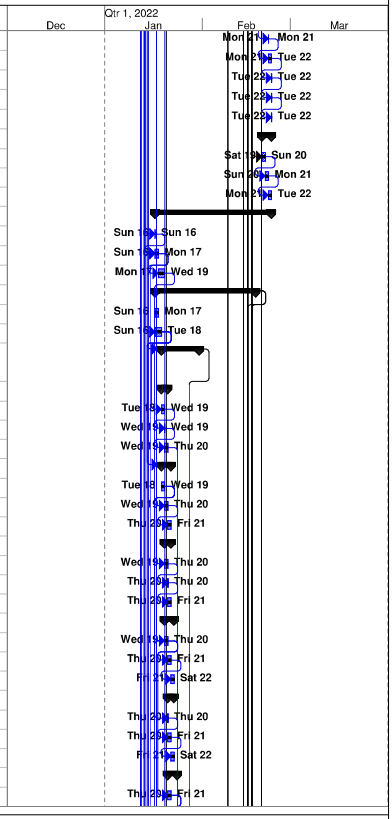
172	**Wing Truss**	**100%**	**2 hrs**	**21 Feb 21:00**	**21 Feb 23:00**	**ES**
173	**Base truss**	**100%**	**2 hrs**	**21 Feb 23:00**	**22 Feb 1:00**	**ES**
174	**Erection floor**	**100%**	**1 hr**	**22 Feb 1:00**	**22 Feb 2:00**	**ES**
175	**Hopper level - 1.5**	**100%**	**1 hr**	**22 Feb 2:00**	**22 Feb 3:00**	**ES**
176	**Hopper level - 2.5**	**100%**	**1 hr**	**22 Feb 3:00**	**22 Feb 4:00**	**ES**
177	**1ryRH outside after hydro-test**	**100%**	**3 days**	**19 Feb 20:00**	**22 Feb 20:00**	**BL/ES**
178	Welding skalob seal then Install refactory	100%	1 day	19 Feb 20:00	20 Feb 20:00	BL
179	Welding Close Skin casing	100%	1 day	20 Feb 20:00	21 Feb 20:00	BL
180	Instlation & remove scaffolding (outside)	100%	1 day	21 Feb 20:00	22 Feb 20:00	ES-Visuv.
181	**Back part**	**100%**	**36.83 days**	**16 Jan 8:00**	**22 Feb 4:00**	**BL**
182	**As found inspection**	**100%**	**2 hrs**	**16 Jan 19:00**	**16 Jan 21:00**	**BL**
183	**Install Scaffolding Economizer Lower**	**100%**	**24 hrs**	**16 Jan 21:00**	**17 Jan 21:00**	**BL**
184	**Install Scaffolding 1rySH**	**100%**	**2 days**	**17 Jan 21:00**	**19 Jan 21:00**	**BL**
185	**Economizer**	**100%**	**32.5 days**	**16 Jan 8:00**	**17 Feb 20:00**	**BL**
186	Visual Inspection by TA	100%	1 day	16 Jan 8:00	17 Jan 8:00	MPW
187	Set-Up Equipment, Mark Cut and Cutting tube for Inner U	100%	41 hrs	16 Jan 21:00	18 Jan 14:00	BLCP-WRC
188	**Inner UT (3 Set of Equipment) estimate max 4.5 Panels /day. Total 56 Panels**	**100%**	**12.25 days**	**18 Jan 14:00**	**30 Jan 20:00**	**MHI**
189	**Panel 1**	**100%**	**2.25 days**	**18 Jan 14:00**	**20 Jan 20:00**	**MHI**
190	Pig Cleaning	100%	0.5 days	18 Jan 14:00	19 Jan 2:00	MHI
191	Inspection	100%	0.5 days	19 Jan 2:00	19 Jan 14:00	MHI
192	Analysis	100%	1.25 days	19 Jan 14:00	20 Jan 20:00	MHI
193	**Panel 2,3,4 >> Plug panel 4**	**100%**	**3.25 days**	**18 Jan 14:00**	**21 Jan 20:00**	**MHI**
194	Pig Cleaning	100%	1 day	18 Jan 14:00	19 Jan 14:00	MHI
195	Inspection	100%	1 day	19 Jan 14:00	20 Jan 14:00	MHI
196	Analysis	100%	1.25 days	20 Jan 14:00	21 Jan 20:00	MHI
197	**Panel 5,6 >> Plug panel 5&6**	**100%**	**2.25 days**	**19 Jan 14:00**	**21 Jan 20:00**	**MHI**
198	Pig Cleaning	100%	0.5 days	19 Jan 14:00	20 Jan 2:00	MHI
199	Inspection	100%	0.5 days	20 Jan 2:00	20 Jan 14:00	MHI
200	Analysis	100%	1.25 days	20 Jan 14:00	21 Jan 20:00	MHI
201	**Panel 7,39,63**	**100%**	**3.25 days**	**19 Jan 14:00**	**22 Jan 20:00**	**MHI**
202	Pig Cleaning	100%	1 day	19 Jan 14:00	20 Jan 14:00	MHI
203	Inspection	100%	1 day	20 Jan 14:00	21 Jan 14:00	MHI
204	Analysis	100%	1.25 days	21 Jan 14:00	22 Jan 20:00	MHI
205	**Panel 80, 103**	**100%**	**2.75 days**	**20 Jan 2:00**	**22 Jan 20:00**	**MHI**
206	Pig Cleaning	100%	0.5 days	20 Jan 2:00	20 Jan 14:00	MHI
207	Inspection	100%	1 day	20 Jan 14:00	21 Jan 14:00	MHI
208	Analysis	100%	1.25 days	21 Jan 14:00	22 Jan 20:00	MHI
209	**Panel 23,24,25,26,27**	**100%**	**3.25 days**	**20 Jan 14:00**	**23 Jan 20:00**	**MHI**
210	Pig Cleaning	100%	1 day	20 Jan 14:00	21 Jan 14:00	MHI



Project: Major Outage
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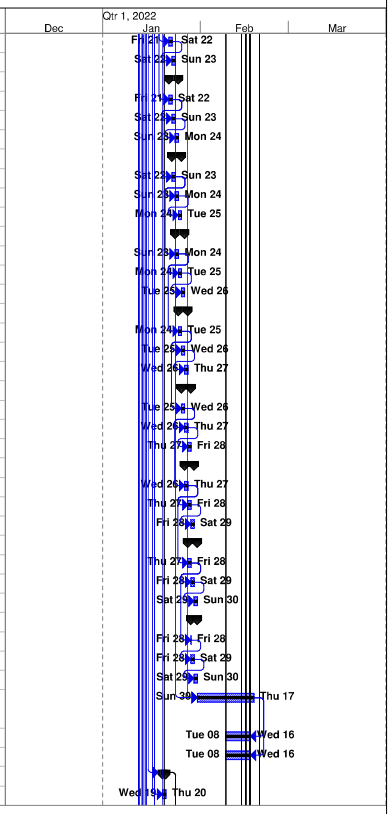
Task | Split | External Tasks | Project Summary | Group By Summary | Inactive Task | Inactive Milestone
Rolled Up Progress | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only
Inactive Milestone | External Tasks | External Milestone | Critical | Critical Split | Baseline | Baseline Milestone
Finish-only | Progress | Deadline

2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
211	Inspection	100%	1 day	21 Jan 14:00	22 Jan 14:00	MHI
212	Analysis	100%	1.25 days	22 Jan 14:00	23 Jan 20:00	MHI
213	**Panel 115,116,117,118,119 >> Plug 119**	**100%**	**3.25 days**	**21 Jan 14:00**	**24 Jan 20:00**	**MHI**
214	Pig Cleaning	100%	1 day	21 Jan 14:00	22 Jan 14:00	MHI
215	Inspection	100%	1 day	22 Jan 14:00	23 Jan 14:00	MHI
216	Analysis	100%	1.25 days	23 Jan 14:00	24 Jan 20:00	MHI
217	**Panel 120,19,20,130,140**	**100%**	**3.25 days**	**22 Jan 14:00**	**25 Jan 20:00**	**MHI**
218	Pig Cleaning	100%	1 day	22 Jan 14:00	23 Jan 14:00	MHI
219	Inspection	100%	1 day	23 Jan 14:00	24 Jan 14:00	MHI
220	Analysis	100%	1.25 days	24 Jan 14:00	25 Jan 20:00	MHI
221	**Panel 141,30,48,58,71**	**100%**	**3.25 days**	**23 Jan 14:00**	**26 Jan 20:00**	**MHI**
222	Pig Cleaning	100%	1 day	23 Jan 14:00	24 Jan 14:00	MHI
223	Inspection	100%	1 day	24 Jan 14:00	25 Jan 14:00	MHI
224	Analysis	100%	1.25 days	25 Jan 14:00	26 Jan 20:00	MHI
225	**Panel 84,112,36,52,83**	**100%**	**3.25 days**	**24 Jan 14:00**	**27 Jan 20:00**	**MHI**
226	Pig Cleaning	100%	1 day	24 Jan 14:00	25 Jan 14:00	MHI
227	Inspection	100%	1 day	25 Jan 14:00	26 Jan 14:00	MHI
228	Analysis	100%	1.25 days	26 Jan 14:00	27 Jan 20:00	MHI
229	**Panel 90,100,106,42,53**	**100%**	**3.25 days**	**25 Jan 14:00**	**28 Jan 20:00**	**MHI**
230	Pig Cleaning	100%	1 day	25 Jan 14:00	26 Jan 14:00	MHI
231	Inspection	100%	1 day	26 Jan 14:00	27 Jan 14:00	MHI
232	Analysis	100%	1.25 days	27 Jan 14:00	28 Jan 20:00	MHI
233	**Panel 59,65,77,89,37**	**100%**	**2.75 days**	**26 Jan 14:00**	**29 Jan 8:00**	**MHI**
234	Pig Cleaning	100%	0.75 days	26 Jan 14:00	27 Jan 8:00	MHI
235	Inspection	100%	1 day	27 Jan 8:00	28 Jan 8:00	MHI
236	Analysis	100%	1 day	28 Jan 8:00	29 Jan 8:00	MHI
237	**Panel 54,88,93,99,105**	**100%**	**2.75 days**	**27 Jan 8:00**	**30 Jan 2:00**	**MHI**
238	Pig Cleaning	100%	0.75 days	27 Jan 8:00	28 Jan 2:00	MHI
239	Inspection	100%	1 day	28 Jan 2:00	29 Jan 2:00	MHI
240	Analysis	100%	1 day	29 Jan 2:00	30 Jan 2:00	MHI
241	**Panel 43,67,86,92,94**	**100%**	**2.75 days**	**28 Jan 2:00**	**30 Jan 20:00**	**MHI**
242	Pig Cleaning	100%	0.75 days	28 Jan 2:00	28 Jan 20:00	MHI
243	Inspection	100%	1 day	28 Jan 20:00	29 Jan 20:00	MHI
244	Analysis	100%	1 day	29 Jan 20:00	30 Jan 20:00	MHI
245	**Inner UT tube recovery (448 joints) and Plug tube for Panel no. 4,5,6 & 119 = 23 Joints**	**100%**	**18 days**	**30 Jan 20:00**	**17 Feb 20:00**	**EGCO**
246	Estimate repair tube thickness reduction	100%	8 days	08 Feb 20:00	16 Feb 20:00	EGCO
247	Install protection plate	100%	8 days	08 Feb 20:00	16 Feb 20:00	EGCO
248	**1rySH**	**100%**	**1 day**	**19 Jan 21:00**	**20 Jan 21:00**	**BL**
249	Visual Inspection by TA	100%	1 day	19 Jan 21:00	20 Jan 21:00	MPW



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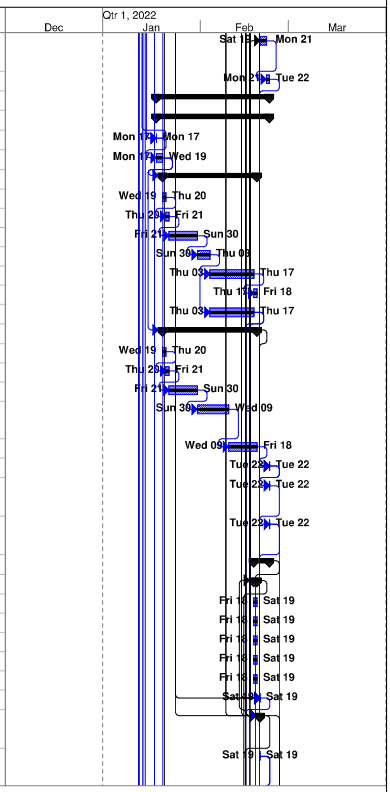
2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
250	**Boiler Remove Scaffolding 2, 3 ry RH, SH and Economizer**	**100%**	**50 hrs**	**19 Feb 20:00**	**21 Feb 22:00**	**BL**
251	**Economizer Hopper Cleaning**	**100%**	**6 hrs**	**21 Feb 22:00**	**22 Feb 4:00**	**BL**
252	**Bottom Ash handling Maintenance**	**100%**	**36.17 days**	**17 Jan 5:00**	**22 Feb 9:00**	**FGH**
253	**Drag chain conveyer**	**100%**	**36.17 days**	**17 Jan 5:00**	**22 Feb 9:00**	**LB**
254	**Pull DCC from original position**	**100%**	**2 hrs**	**17 Jan 5:00**	**17 Jan 7:00**	**BL**
255	**Clean DCC (OPS request vacuum truck)**	**100%**	**2 days**	**17 Jan 7:00**	**19 Jan 7:00**	**OPS/BL**
256	**DCC Maintenance**	**100%**	**30 days**	**19 Jan 7:00**	**18 Feb 7:00**	**BL. ACC**
257	Inspection and measurement of liner thickness etc.	100%	1 day	19 Jan 7:00	20 Jan 7:00	BL. ACC
258	Replace upper and lower guide roller	100%	1 day	20 Jan 7:00	21 Jan 7:00	BL. ACC
259	Replace drive gear,drive and non drive sprocket complete s	100%	9 days	21 Jan 7:00	30 Jan 7:00	BL. ACC
260	Welding of upper hopper of crusher	100%	4 days	30 Jan 7:00	03 Feb 7:00	BL. ACC
261	Welding and installation of DCC seal plates	100%	14 days	03 Feb 7:00	17 Feb 7:00	BL. ACC
262	Rust moving and Painting	100%	1 day	17 Feb 7:00	18 Feb 7:00	BL. ACC
263	**DCC Inspection and refractory work**	**100%**	**14 days**	**03 Feb 7:00**	**17 Feb 7:00**	**ES**
264	**BATC Maintenance**	**100%**	**30 days**	**19 Jan 7:00**	**18 Feb 7:00**	**BL. ACC**
265	Open cover plates of BATC and inspection	100%	1 day	19 Jan 7:00	20 Jan 7:00	BL. ACC
266	Replace the upper and lower double disc pulley and Clinkle	100%	1 day	20 Jan 7:00	21 Jan 7:00	BL. ACC
267	Replace bend pulley, tail pulley and drive pulley	100%	9 days	21 Jan 7:00	30 Jan 7:00	BL. ACC
268	Replace small pulley including horseback roller, return roller and side roller	100%	10 days	30 Jan 7:00	09 Feb 7:00	BL. ACC
269	Rust moving and Painting	100%	9 days	09 Feb 7:00	18 Feb 7:00	BL. ACC
270	**Push DCC to original position**	**100%**	**3 hrs**	**22 Feb 4:00**	**22 Feb 7:00**	**BL**
271	**Cleaning DCC spare tank and close man hole & Back part hopper**	**100%**	**1 hr**	**22 Feb 7:00**	**22 Feb 8:00**	**BL**
272	**Fill water to DCC, DCC running test and BTA conveyor running test**	**100%**	**1 hr**	**22 Feb 8:00**	**22 Feb 9:00**	**OPS**
273	**Boiler preparation for start up**	**100%**	**4.38 days**	**18 Feb 0:00**	**22 Feb 9:00**	**BL/OPS**
274	**Prepare water quality for filling/Washing**	**100%**	**1 day**	**18 Feb 0:00**	**19 Feb 0:00**	**BL/OPS**
275	Condenser Hot well (Local)	100%	1 day	18 Feb 0:00	19 Feb 0:00	TB/OPS
276	CEP recirculation pump (Local)	100%	1 day	18 Feb 0:00	19 Feb 0:00	TB/OPS
277	Deaearator recirculating pump (Local)	100%	1 day	18 Feb 0:00	19 Feb 0:00	TB/OPS
278	Instrument gag all equipment	100%	1 day	18 Feb 0:00	19 Feb 0:00	C&I/OPS
279	Hanger gag all	100%	1 day	18 Feb 0:00	19 Feb 0:00	BL/OPS
280	**Supply Aux. Unit 2 to unit 1 for heating up temp. for MSV**	**100%**	**10 hrs**	**19 Feb 2:00**	**19 Feb 12:00**	**TB/OPS**
281	**Water quality for Start up (Filling and drain down from Boiler)**	**100%**	**0.42 days**	**19 Feb 2:00**	**19 Feb 12:00**	**OPS**
282	Fill water to WW, Steam drum , MSV and flushing and circulating by BCP A and B	100%	6 hrs	19 Feb 2:00	19 Feb 8:00	OPS



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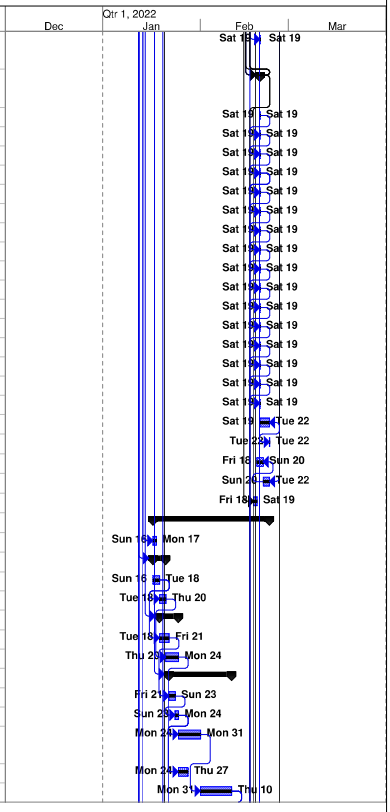
2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
283	M-BFP running circulation for increase water temperature.(60-70 C) or Deareator Dischage line for MSV	100%	4 hrs	19 Feb 8:00	19 Feb 12:00	OPS
284	**Hydrostatic testing , external high pressure pump at RH, SH, Water wall tube**	**100%**	**0.33 days**	**19 Feb 12:00**	**19 Feb 20:00**	**OPS/BL**
285	Presure rise from 0-37 barg	100%	2.25 hrs	19 Feb 12:00	19 Feb 14:15	OPS/BL
286	Gag RH safety valve @ 37 barg	100%	15 mins	19 Feb 14:15	19 Feb 14:30	OPS/BL
287	Pressure rise from 37 - 51 barg	100%	15 mins	19 Feb 14:30	19 Feb 14:45	OPS/BL
288	Hold pressure @ 51 barg for inspection RH system	100%	1 hr	19 Feb 14:45	19 Feb 15:45	OPS/BL
289	Pressure rise from 51 - 141.1 barg (2.5 - 3 barg/min)	100%	0.5 hrs	19 Feb 15:45	19 Feb 16:15	OPS/BL
290	Gag Main steam pipe safety valve @ 141.1 barg.	100%	15 mins	19 Feb 16:15	19 Feb 16:30	OPS/BL
291	Pressure rise from 141.1 - 160 barg	100%	10 mins	19 Feb 16:30	19 Feb 16:40	OPS/BL
292	Gag steam drum safety valve @ 160 barg.	100%	10 mins	19 Feb 16:40	19 Feb 16:50	OPS/BL
293	Pressure rise from 160 - 200 barg (2.5 - 3 barg/min)	100%	10 mins	19 Feb 16:50	19 Feb 17:00	OPS/BL
294	Hold pressure @ 200 barg.	100%	10 mins	19 Feb 17:00	19 Feb 17:10	OPS/BL
295	Release pressure from 200 - 160 barg. (3 - 5 barg/min)	100%	10 mins	19 Feb 17:10	19 Feb 17:20	OPS/BL
296	Remove gag steam drum safety valve @ 160 barg.	100%	10 mins	19 Feb 17:20	19 Feb 17:30	OPS/BL
297	Hold pressure @ 160 barg. For internal inspection	100%	1.5 hrs	19 Feb 17:30	19 Feb 19:00	OPS/BL
298	Release pressure from 160 - 141.1 barg. (3 - 5 barg/min)	100%	10 mins	19 Feb 19:00	19 Feb 19:10	OPS/BL
299	Remove gag Main steam pipe safety valve @ 141.1 barg.	100%	15 mins	19 Feb 19:10	19 Feb 19:25	OPS/BL
300	Release pressure from 141.1 - 0 barg. (3 - 5 barg/min)	100%	35 mins	19 Feb 19:25	19 Feb 20:00	OPS/BL
301	**Wrapping Equipment**	**100%**	**2.25 days**	**19 Feb 13:30**	**22 Feb 1:00**	**Facility**
302	**Boiler spray test**	**100%**	**1 hr**	**22 Feb 7:00**	**22 Feb 8:00**	**OPS/SH**
303	**Wall De-slagger Drive Test**	**100%**	**2 days**	**18 Feb 8:42**	**20 Feb 15:00**	**BL/LV**
304	**LSB / Furnace temp prob Drive Test**	**100%**	**35 hrs**	**20 Feb 15:00**	**22 Feb 9:00**	**C&I/BL**
305	**BCP, steam drum , Blow down tank return permit.**	**100%**	**24 hrs**	**18 Feb 0:00**	**19 Feb 0:00**	**BL**
306	**Combustion air and flue gas Maintenance**	**100%**	**37.13 days**	**16 Jan 8:00**	**22 Feb 11:00**	**FGH**
307	**COMMON Duct cleaning**	**100%**	**12 hrs**	**16 Jan 19:00**	**17 Jan 7:00**	**FGH**
308	**Cleaning fly ash by Vacuum truck**	**100%**	**3.88 days**	**16 Jan 19:00**	**20 Jan 16:00**	**BL**
309	AH-A	100%	45 hrs	16 Jan 19:00	18 Jan 16:00	BL. ACC
310	AH-B	100%	2 days	18 Jan 16:00	20 Jan 16:00	BL. ACC
311	**Cleaning by high pressure water**	**100%**	**6 days**	**18 Jan 16:00**	**24 Jan 16:00**	**BL**
312	AH-A	100%	3 days	18 Jan 16:00	21 Jan 16:00	BL. ACC
313	AH-B	100%	4 days	20 Jan 16:00	24 Jan 16:00	BL. ACC
314	**AH A**	**100%**	**20 days**	**21 Jan 16:00**	**10 Feb 16:00**	**BL**
315	Install scaffolding below cold end element for inspection	100%	2 days	21 Jan 16:00	23 Jan 16:00	ES
316	As found location of Soot Blowing system	100%	1 day	23 Jan 16:00	24 Jan 16:00	BL. ACC
317	Sampling remove and install 1 sector of hot end, intermediate and cold end element for weight measurement and inspection	100%	7 days	24 Jan 16:00	31 Jan 16:00	BL. ACC
318	Remote Howden TA for inspection	100%	3 days	24 Jan 16:00	27 Jan 16:00	Howden
319	Replace reducing gear unit	100%	10 days	31 Jan 16:00	10 Feb 16:00	BL. ACC



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Task, Rolled Up Progress, Inactive Milestone, Finish-only, Baseline Summary
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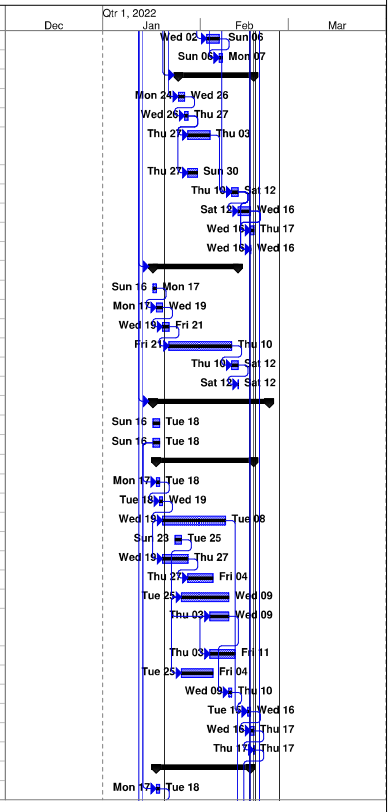
2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
320	Inspection and replacement of seal plates	100%	4 days	02 Feb 16:00	06 Feb 16:00	BL. ACC
321	Remove scaffolding and close man hole	100%	1 day	06 Feb 16:00	07 Feb 16:00	ES
322	**AH B**	**100%**	**23.5 days**	**24 Jan 16:00**	**17 Feb 4:00**	**BL**
323	Install scaffolding below cold end element for inspection	100%	2 days	24 Jan 16:00	26 Jan 16:00	ES
324	As found location of Soot Blowing system	100%	1 day	26 Jan 16:00	27 Jan 16:00	BL. ACC
325	Sampling remove and install 1 sector of hot end, intermediate and cold end element for weight measurement and inspection	100%	7 days	27 Jan 16:00	03 Feb 16:00	BL. ACC
326	Remote Howden TA for inspection	100%	3 days	27 Jan 16:00	30 Jan 16:00	Howden
327	Replace reducing gear unit	100%	2 days	10 Feb 16:00	12 Feb 16:00	BL. ACC
328	Inspection and replacement of seal plates	100%	4 days	12 Feb 16:00	16 Feb 16:00	BL. ACC
329	Remove scaffolding and close man hole	100%	0.5 days	16 Feb 16:00	17 Feb 4:00	ES
330	AH Fire fighting system test	100%	1 hr	16 Feb 16:00	16 Feb 17:00	OPS/SH
331	**FGD absorber tank**	**100%**	**27 days**	**16 Jan 19:00**	**12 Feb 19:00**	**FGH**
332	Open manhole	100%	1 day	16 Jan 19:00	17 Jan 19:00	FGH
333	Cleaning	100%	2 days	17 Jan 19:00	19 Jan 19:00	FGH
334	Install schaffolding	100%	2 days	19 Jan 19:00	21 Jan 19:00	ES
335	Inspection and repair outlet damper	100%	20 days	21 Jan 19:00	10 Feb 19:00	FGH
336	Remove scaffolding	100%	1.5 days	10 Feb 19:00	12 Feb 7:00	ES
337	Close manhole	100%	0.5 days	12 Feb 7:00	12 Feb 19:00	FGH
338	**ESP plant**	**100%**	**36.67 days**	**16 Jan 19:00**	**22 Feb 11:00**	**FGH**
339	**Continued Rapping by OPS**	**100%**	**2 days**	**16 Jan 19:00**	**18 Jan 19:00**	**OPS**
340	**Manual transfer ash by OPS**	**100%**	**2 days**	**16 Jan 19:00**	**18 Jan 19:00**	**OPS**
341	**EP-B**	**100%**	**31.04 days**	**17 Jan 19:00**	**17 Feb 20:00**	**FGH**
342	Vacuum truck cleaning	100%	0.75 days	17 Jan 19:00	18 Jan 13:00	OPS
343	Pre-Rapping test	100%	1 day	18 Jan 13:00	19 Jan 13:00	LV/FGH
344	Internal inspection for all Equipment as contract	100%	20 days	19 Jan 13:00	08 Feb 13:00	FGH
345	Install scaffolding for DE rapping shaft replacement	100%	2 days	23 Jan 8:00	25 Jan 8:00	ES
346	DE wire and CE plate inspection 100%	100%	8 days	19 Jan 13:00	27 Jan 13:00	FGH
347	Replace DE wire	100%	8 days	27 Jan 13:00	04 Feb 13:00	FGH
348	Replace DE hammer shaft, link and bushing 1S + 2S (Winc	100%	15 days	25 Jan 8:00	09 Feb 8:00	FGH
349	Replace DE hammer shaft, link and bushing 3S + 4S (Option)	100%	6 days	03 Feb 8:00	09 Feb 8:00	FGH
350	DE rapping anvil	100%	8 days	03 Feb 8:00	11 Feb 8:00	FGH
351	DE transmittion system + Crank alignment	100%	10 days	25 Jan 8:00	04 Feb 8:00	FGH
352	Remove scaffolding	100%	1.5 days	09 Feb 8:00	10 Feb 20:00	ES
353	Final inspection	100%	1 day	15 Feb 8:00	16 Feb 8:00	FGH
354	Final rapping test /Close man hole	100%	1 day	16 Feb 8:00	17 Feb 8:00	LV/FGH
355	Final Vacuum truck cleaning ESP hopper by OPS	100%	0.5 days	17 Feb 8:00	17 Feb 20:00	OPS
356	**EP-A**	**100%**	**30.04 days**	**17 Jan 19:00**	**16 Feb 20:00**	**FGH**
357	Vacuum truck cleaning	100%	0.75 days	17 Jan 19:00	18 Jan 13:00	OPS



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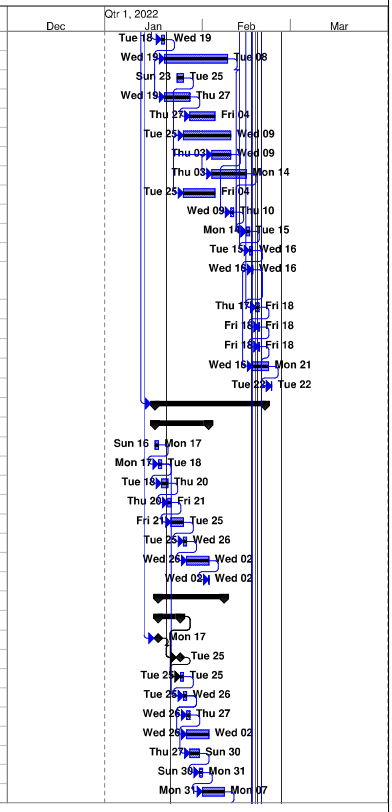
2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
358	Pre-Rapping test	100%	1 day	18 Jan 13:00	19 Jan 13:00	LV/FGH
359	Internal inspection for all Equipment as contract	100%	20 days	19 Jan 13:00	08 Feb 13:00	FGH
360	Install scaffolding for DE rapping shaft replacement	100%	2 days	23 Jan 8:00	25 Jan 8:00	ES
361	DE wire and CE plate inspection 100%	100%	8 days	19 Jan 13:00	27 Jan 13:00	FGH
362	Replace DE wire	100%	8 days	27 Jan 13:00	04 Feb 13:00	FGH
363	Replace DE hammer shaft, link and bushing 1S + 2S (Winc	100%	15 days	25 Jan 8:00	09 Feb 8:00	FGH
364	Replace DE hammer shaft, link and bushing 3S + 4S (Optio	100%	6 days	03 Feb 8:00	09 Feb 8:00	FGH
365	DE rapping anvil	100%	11 days	03 Feb 8:00	14 Feb 8:00	FGH
366	DE transmittion system + Crank alignment	100%	10 days	25 Jan 8:00	04 Feb 8:00	FGH
367	Remove scaffolding	100%	1.5 days	09 Feb 8:00	10 Feb 20:00	ES
368	Final inspection	100%	1 day	14 Feb 8:00	15 Feb 8:00	FGH
369	Final rapping test	100%	1 day	15 Feb 8:00	16 Feb 8:00	LV/FGH
370	Final Vacuum truck cleaning ESP hopper by OPS /Close man hole	100%	0.5 days	16 Feb 8:00	16 Feb 20:00	OPS
371	**Power up insulator heater**	**100%**	**12 hrs**	**17 Feb 20:00**	**18 Feb 8:00**	**LV/FGH**
372	**HV Tr and Discharge electrode IR testing (7 hrs)**	**100%**	**7 hrs**	**18 Feb 8:00**	**18 Feb 15:00**	**LV**
373	**Air load testing (4 hrs)**	**100%**	**4 hrs**	**18 Feb 15:00**	**18 Feb 19:00**	**LV**
374	**ESP Hopper cleaning**	**100%**	**5 days**	**16 Feb 8:00**	**21 Feb 8:00**	**OPS**
375	**Gas load test common with draft test**	**100%**	**2 hrs**	**22 Feb 9:00**	**22 Feb 11:00**	**LV**
376	**Main Fan works**	**100%**	**35.04 days**	**16 Jan 19:00**	**20 Feb 20:00**	**FGH**
377	**IDF A**	**100%**	**17.04 days**	**16 Jan 19:00**	**02 Feb 20:00**	**FGH**
378	Open manhole	100%	1 day	16 Jan 19:00	17 Jan 19:00	FGH
379	Install scaffolding for inspection impeller and silencer	100%	1 day	17 Jan 19:00	18 Jan 19:00	ES
380	Internal inspection by visual	100%	2 days	18 Jan 19:00	20 Jan 19:00	FGH
381	**No load test Motor**	**100%**	**15 hrs**	**20 Jan 17:00**	**21 Jan 8:00**	**HV**
382	Bearing Inspection	100%	4 days	21 Jan 8:00	25 Jan 8:00	FGH
383	Remove scaffolding for inspection impeller and silencer	100%	1 day	25 Jan 8:00	26 Jan 8:00	ES
384	Shaft Alignment	100%	7 days	26 Jan 8:00	02 Feb 8:00	FGH
385	Close man-hold	100%	0.5 days	02 Feb 8:00	02 Feb 20:00	FGH , ES
386	**IDF-B**	**100%**	**21.79 days**	**17 Jan 5:00**	**08 Feb 0:00**	**FGH**
387	**IDF-B service cooling down inside furnace**	**100%**	**7.79 days**	**17 Jan 5:00**	**25 Jan 0:00**	**OPS**
388	IDF start running for cooling down inside furnace	100%	0 days	17 Jan 5:00	17 Jan 5:00	OPS
389	IDF stop running for cooling down inside furnace	100%	0 days	25 Jan 0:00	25 Jan 0:00	OPS
390	Open manhole	100%	0.5 days	25 Jan 0:00	25 Jan 12:00	FGH
391	Install scaffolding for inspection impeller and silencer	100%	1 day	25 Jan 12:00	26 Jan 12:00	ES
392	Inspect Gear Coupling	100%	1 day	26 Jan 12:00	27 Jan 12:00	
393	Internal inspection	100%	7 days	26 Jan 12:00	02 Feb 12:00	FGH
394	Bearing Inspection	100%	3 days	27 Jan 12:00	30 Jan 12:00	FGH
395	Remove scaffolding for inspection impeller and silencer	100%	1 day	30 Jan 12:00	31 Jan 12:00	ES
396	Shaft Alignment	100%	7 days	31 Jan 12:00	07 Feb 12:00	FGH



Project: Major Outage
Date: 27 Apr 14:51

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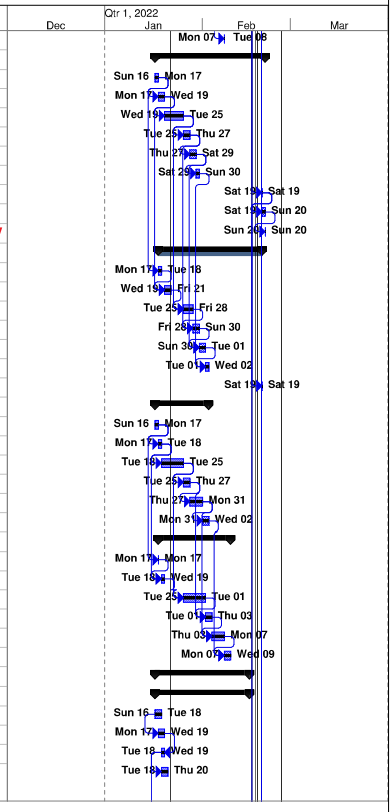
2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
397	Close man-hold	100%	0.5 days	07 Feb 12:00	08 Feb 0:00	FGH , ES
398	**PAF-A**	**100%**	**35.04 days**	**16 Jan 19:00**	**20 Feb 20:00**	**FGH**
399	Open manhole	100%	1 day	16 Jan 19:00	17 Jan 19:00	FGH
400	Inspect Gear Coupling	100%	2 days	17 Jan 19:00	19 Jan 19:00	FGH
401	Inspect Bearing	100%	6 days	19 Jan 19:00	25 Jan 19:00	FGH
402	Inspect Inside	100%	2 days	25 Jan 19:00	27 Jan 19:00	FGH
403	Inspect IGV.	100%	2 days	27 Jan 19:00	29 Jan 19:00	FGH
404	Close manhole	100%	1 day	29 Jan 19:00	30 Jan 19:00	FGH
405	Test run	100%	1 hr	19 Feb 9:00	19 Feb 10:00	OPS/FGH/ES
406	**Replace motor spare**	**100%**	**1.25 days**	**19 Feb 13:00**	**20 Feb 19:00**	**HV**
407	**Test run after replacement motor**	**100%**	**1 hr**	**20 Feb 19:00**	**20 Feb 20:00**	**OPS/FGH/ES/HV**
408	**PAF-B**	**100%**	**32.67 days**	**17 Jan 19:00**	**19 Feb 11:00**	**FGH**
409	Open manhole	100%	1 day	17 Jan 19:00	18 Jan 19:00	FGH
410	Inspect Gear Coupling	100%	2 days	19 Jan 19:00	21 Jan 19:00	FGH
411	Inspect Bearing	100%	3 days	25 Jan 19:00	28 Jan 19:00	FGH
412	Inspect Inside	100%	2 days	28 Jan 19:00	30 Jan 19:00	FGH
413	Inspect IGV.	100%	2 days	30 Jan 19:00	01 Feb 19:00	FGH
414	Close manhole	100%	1 day	01 Feb 19:00	02 Feb 19:00	FGH
415	Test run	100%	1 hr	19 Feb 10:00	19 Feb 11:00	OPS/FGH/ES
416	**FDF-A**	**100%**	**16.5 days**	**16 Jan 19:00**	**02 Feb 7:00**	**FGH**
417	Open manhole	100%	0.5 days	16 Jan 19:00	17 Jan 7:00	FGH , ES
418	Inspect Gear Coupling	100%	1 day	17 Jan 7:00	18 Jan 7:00	FGH
419	Inspect Bearing	100%	7 days	18 Jan 7:00	25 Jan 7:00	FGH
420	Inspect Inside	100%	2 days	25 Jan 7:00	27 Jan 7:00	FGH
421	Inspect IGV.	100%	4 days	27 Jan 7:00	31 Jan 7:00	FGH
422	Close man-hold	100%	2 days	31 Jan 7:00	02 Feb 7:00	FGH , ES
423	**FDF-B**	**100%**	**23 days**	**17 Jan 7:00**	**09 Feb 7:00**	**FGH**
424	Open manhole	100%	0.5 days	17 Jan 7:00	17 Jan 19:00	FGH , ES
425	Inspect Gear Coupling	100%	1 day	18 Jan 7:00	19 Jan 7:00	FGH
426	Inspect Bearing	100%	7 days	25 Jan 7:00	01 Feb 7:00	FGH
427	Inspect Inside	100%	2 days	01 Feb 7:00	03 Feb 7:00	FGH
428	Inspect IGV.	100%	4 days	03 Feb 7:00	07 Feb 7:00	FGH
429	Close man-hold	100%	2 days	07 Feb 7:00	09 Feb 7:00	FGH , ES
430	**BUF**	**100%**	**30 days**	**16 Jan 8:00**	**15 Feb 8:00**	**FGH**
431	**BUF replacment spare**	**100%**	**30 days**	**16 Jan 8:00**	**15 Feb 8:00**	**FGH**
432	Open Manhole and Cooling Down	100%	2 days	16 Jan 8:00	18 Jan 8:00	ESCO
433	Install chain block and liffting tools	100%	2 days	17 Jan 8:00	19 Jan 8:00	ESCO
434	Measuare gap inside	100%	1 day	18 Jan 8:00	19 Jan 8:00	ESCO
435	Dismantling the bend provided between the suction casing and impeller casing	100%	2 days	18 Jan 8:00	20 Jan 8:00	ESCO



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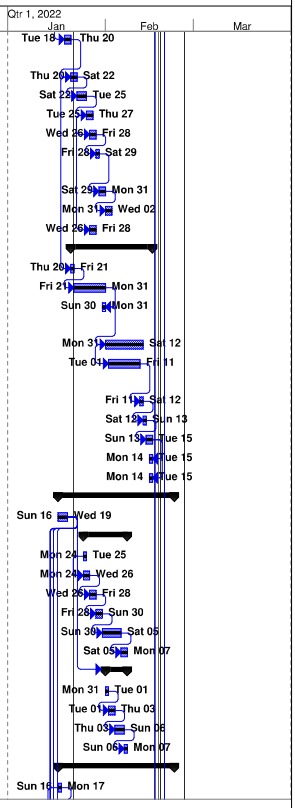
ID	Task Name	% Complete	Duration	Start	Finish	RO
436	Dismantling bolts the suction inner casing and the impeller inner casing	100%	2 days	18 Jan 8:00	20 Jan 8:00	ESCO
437	Dismantling bolts the inner and outer casing at flange joints	100%	2 days	20 Jan 8:00	22 Jan 8:00	ESCO
438	Dismantling impeller casing and rear casing	100%	3 days	22 Jan 8:00	25 Jan 8:00	ESCO
439	Install support the spacer inside the suction casing	100%	2 days	25 Jan 8:00	27 Jan 8:00	ESCO
440	Dismantling the coupling and the seal plate	100%	2 days	26 Jan 8:00	28 Jan 8:00	ESCO
441	Dismantling pilot valve and control oil supply line and connecting	100%	1 day	28 Jan 8:00	29 Jan 8:00	ESCO
442	Remove rotor and bearing complete set on Support	100%	2 days	29 Jan 8:00	31 Jan 8:00	ESCO
443	Remove rotor and bearing complete set to work shop	100%	2 days	31 Jan 8:00	02 Feb 8:00	ESCO
444	Clean and inspect casing lower and seal	100%	2 days	26 Jan 8:00	28 Jan 8:00	ESCO
445	**Technical Advisor Remote Support**	**100%**	**26 days**	**20 Jan 8:00**	**15 Feb 8:00**	**MPW/ESCO**
446	Cleaning Work	100%	1 day	20 Jan 8:00	21 Jan 8:00	MPW/ESCO
447	Install rotor and bearing complete set	100%	10 days	21 Jan 8:00	31 Jan 8:00	MPW/ESCO
448	Install pilot valve and control oil supply line and connecting	100%	1 day	30 Jan 8:00	31 Jan 8:00	MPW/ESCO
449	Oil Fushing after reinstate oil piping	100%	12 days	31 Jan 8:00	12 Feb 8:00	MPW/ESCO
450	Install the coupling and Dismantling support spacer and Realignment	100%	10 days	01 Feb 8:00	11 Feb 8:00	MPW/ESCO
451	Install the coupling and the seal plate	100%	1 day	11 Feb 8:00	12 Feb 8:00	MPW/ESCO
452	Fuction Test - Blade Pit	100%	1 day	12 Feb 8:00	13 Feb 8:00	MPW/ESCO
453	Install impeller casing and rear casing	100%	2 days	13 Feb 8:00	15 Feb 8:00	MPW/ESCO
454	Close manhole	100%	1 day	14 Feb 8:00	15 Feb 8:00	MPW/ESCO
455	Test run	100%	1 day	14 Feb 8:00	15 Feb 8:00	MPW/ESCO
456	**Steam Turbine Maintenance**	**100%**	**36.96 days**	**16 Jan 8:00**	**22 Feb 7:00**	**TB/EC&I**
457	**Turning gear and cooling down**	**100%**	**3 days**	**16 Jan 8:00**	**19 Jan 8:00**	**TB**
458	**Crossover pipe flange leakage rectification**	**100%**	**14 days**	**24 Jan 8:00**	**07 Feb 8:00**	**TB**
459	Remove insulation	100%	1 day	24 Jan 8:00	25 Jan 8:00	ES
460	Remove all flange (IP-LP1, LP1-LP2, Top LP1, Top LP2)	100%	2 days	24 Jan 8:00	26 Jan 8:00	TB
461	Replace gas ket for LP1-LP2	100%	2 days	26 Jan 8:00	28 Jan 8:00	TB
462	Re-Toruge for IP-LP1, Top LP1, Top LP2	100%	2 days	28 Jan 8:00	30 Jan 8:00	TB
463	*Spaghetti pipe flange inspection*	*100%*	*6 days*	*30 Jan 8:00*	*05 Feb 8:00*	*TB*
464	Install insulation	100%	2 days	05 Feb 8:00	07 Feb 8:00	TB
465	**L0 stellite strip inspection**	**100%**	**7 days**	**31 Jan 8:00**	**07 Feb 8:00**	**TB**
466	Open man hole for inspection	100%	1 day	31 Jan 8:00	01 Feb 8:00	TB
467	Cool down	100%	2 days	01 Feb 8:00	03 Feb 8:00	OPS/TB
468	Partial inspection	100%	3 days	03 Feb 8:00	06 Feb 8:00	TB
469	Close man hole	100%	1 day	06 Feb 8:00	07 Feb 8:00	TB
470	**Inspection and overhaul Turbine steam admission valve**	**100%**	**36.96 days**	**16 Jan 8:00**	**22 Feb 7:00**	**TB**
471	**Install scaffolding inside End closser**	**100%**	**1 day**	**16 Jan 8:00**	**17 Jan 8:00**	**ES**



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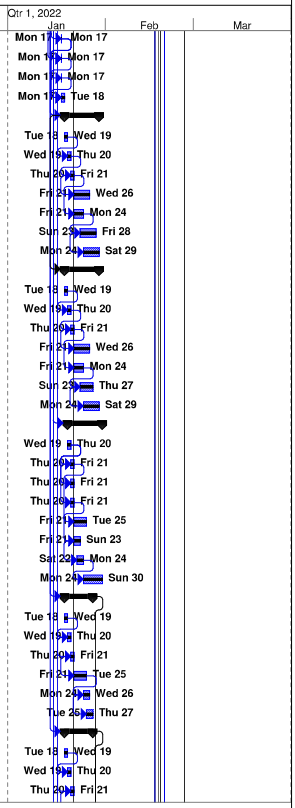
ID	Task Name	% Complete	Duration	Start	Finish	RO
472	**Remove Top End closser**	**100%**	**5 hrs**	**17 Jan 8:00**	**17 Jan 13:00**	**TB**
473	**Remove Instrument wiring**	**100%**	**5 hrs**	**17 Jan 13:00**	**17 Jan 18:00**	**C&I**
474	**Scaffolding adjustment after end closser remove**	**100%**	**5 hrs**	**17 Jan 18:00**	**17 Jan 23:00**	**ES**
475	**Remove insulation for all valve**	**100%**	**14 hrs**	**17 Jan 23:00**	**18 Jan 13:00**	**ES**
476	GV (No.1)	100%	11 days	18 Jan 8:00	29 Jan 8:00	TB
477	Remove spring Box	100%	1 day	18 Jan 8:00	19 Jan 8:00	TB
478	Remove bonnet	100%	1 day	19 Jan 8:00	20 Jan 8:00	TB
479	Valve disasssembly	100%	1 day	20 Jan 8:00	21 Jan 8:00	TB
480	Cleaning/Lapping/Inspection	100%	5 days	21 Jan 8:00	26 Jan 8:00	TB
481	Replace actuator valve	100%	3 days	21 Jan 8:00	24 Jan 8:00	TB
482	Contact Check and Install	100%	5 days	23 Jan 8:00	28 Jan 8:00	TB
483	Valve asssembly and install	100%	5 days	24 Jan 8:00	29 Jan 8:00	TB
484	GV (No.3)	100%	11 days	18 Jan 8:00	29 Jan 8:00	TB
485	Remove spring Box	100%	1 day	18 Jan 8:00	19 Jan 8:00	TB
486	Remove bonnet	100%	1 day	19 Jan 8:00	20 Jan 8:00	TB
487	Valve disasssembly	100%	1 day	20 Jan 8:00	21 Jan 8:00	TB
488	Cleaning/Lapping/Inspection	100%	5 days	21 Jan 8:00	26 Jan 8:00	TB
489	Replace actuator valve	100%	3 days	21 Jan 8:00	24 Jan 8:00	TB
490	Contact Check and Install	100%	4 days	23 Jan 8:00	27 Jan 8:00	TB
491	Valve asssembly and install	100%	5 days	24 Jan 8:00	29 Jan 8:00	TB
492	RSV (LH)	100%	11 days	19 Jan 8:00	30 Jan 8:00	TB
493	Remove top cover	100%	1 day	19 Jan 8:00	20 Jan 8:00	TB
494	Cooling down by air blow	100%	1 day	20 Jan 8:00	21 Jan 8:00	TB
495	Remove side cover trip pilot side	100%	1 day	20 Jan 8:00	21 Jan 8:00	TB
496	Valve disasssembly	100%	1 day	20 Jan 8:00	21 Jan 8:00	TB
497	Cleaning/Lapping/Inspection	100%	4 days	21 Jan 8:00	25 Jan 8:00	TB
498	Replace actuator valve	100%	2 days	21 Jan 8:00	23 Jan 8:00	TB
499	Contact Check and Install	100%	2 days	22 Jan 8:00	24 Jan 8:00	TB
500	Valve asssembly and install	100%	6 days	24 Jan 8:00	30 Jan 8:00	TB
501	ICV (No.1) LH	100%	9 days	18 Jan 8:00	27 Jan 8:00	TB
502	Remove spring Box	100%	1 day	18 Jan 8:00	19 Jan 8:00	TB
503	Remove bonnet	100%	1 day	19 Jan 8:00	20 Jan 8:00	TB
504	Valve disasssembly	100%	1 day	20 Jan 8:00	21 Jan 8:00	TB
505	Cleaning/Lapping/Inspection	100%	4 days	21 Jan 8:00	25 Jan 8:00	TB
506	Contact Check and Install	100%	2 days	24 Jan 8:00	26 Jan 8:00	TB
507	Valve asssembly and install	100%	2 days	25 Jan 8:00	27 Jan 8:00	TB
508	ICV (No.2) LH	100%	9 days	18 Jan 8:00	27 Jan 8:00	TB
509	Remove spring Box	100%	1 day	18 Jan 8:00	19 Jan 8:00	TB
510	Remove bonnet	100%	1 day	19 Jan 8:00	20 Jan 8:00	TB
511	Valve disasssembly	100%	1 day	20 Jan 8:00	21 Jan 8:00	TB



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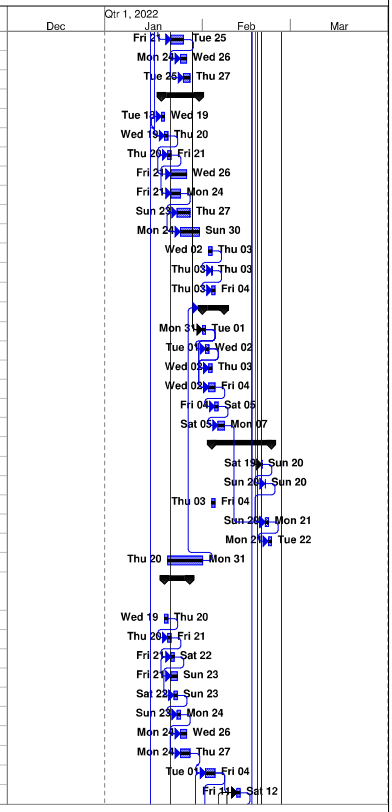
2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
512	Cleaning/Lapping/Inspection	100%	4 days	21 Jan 8:00	25 Jan 8:00	TB
513	Contact Check and Install	100%	2 days	24 Jan 8:00	26 Jan 8:00	TB
514	Valve asssembly and install	100%	2 days	25 Jan 8:00	27 Jan 8:00	TB
515	**MSV (LH)**	**100%**	**12 days**	**18 Jan 8:00**	**30 Jan 8:00**	**TB**
516	Remove spring Box	100%	1 day	18 Jan 8:00	19 Jan 8:00	TB
517	Remove bonnet	100%	1 day	19 Jan 8:00	20 Jan 8:00	TB
518	Valve disasssembly	100%	1 day	20 Jan 8:00	21 Jan 8:00	TB
519	Cleaning/Lapping/Inspection	100%	5 days	21 Jan 8:00	26 Jan 8:00	TB
520	Replace actuator valve	100%	3 days	21 Jan 8:00	24 Jan 8:00	TB
521	Contact Check and Install	100%	4 days	23 Jan 8:00	27 Jan 8:00	TB
522	Valve asssembly and install	100%	6 days	24 Jan 8:00	30 Jan 8:00	TB
523	**Install insulation for all valve**	**100%**	**1 day**	**02 Feb 8:00**	**03 Feb 8:00**	**ES**
524	**Install Top Enclosure (modification)**	**100%**	**0.5 days**	**03 Feb 8:00**	**03 Feb 20:00**	**TB**
525	**Remove scaffolding**	**100%**	**6 hrs**	**03 Feb 20:00**	**04 Feb 2:00**	**ES**
526	**EH oil flushing**	**100%**	**7 days**	**31 Jan 8:00**	**07 Feb 8:00**	**TB**
527	Install EH oil flushing box	100%	1 day	31 Jan 8:00	01 Feb 8:00	TB
528	Pre-Start pump for leak test	100%	1 day	01 Feb 8:00	02 Feb 8:00	ES
529	Start Main oil pump at Flushing cart and continue flushing	100%	1 day	02 Feb 8:00	03 Feb 8:00	ES
530	Flushing continue and Check Particle count	100%	2 days	02 Feb 8:00	04 Feb 8:00	ES
531	Final check	100%	1 day	04 Feb 8:00	05 Feb 8:00	ES
532	Remove flushing Box and Install EH oil pipe	100%	2 days	05 Feb 8:00	07 Feb 8:00	TB
533	**T-BFP & Main steam Turbine Valve adjustment.**	**100%**	**18.54 days**	**03 Feb 18:00**	**22 Feb 7:00**	**ICT**
534	Drain water	100%	4 hrs	19 Feb 20:00	20 Feb 0:00	OPS
535	Remove gag	100%	5 hrs	20 Feb 8:00	20 Feb 13:00	TB
536	T-BFP Valve adjustment.	100%	1 day	03 Feb 18:00	04 Feb 18:00	C&I
537	Steam Admission Turbine Valve adjustment.	100%	1.25 days	20 Feb 13:00	21 Feb 19:00	C&I
538	Install insulation for Main steam valve	100%	0.5 days	21 Feb 19:00	22 Feb 7:00	ES
539	**Actuator valve RH side replacement**	**100%**	**11 days**	**20 Jan 8:00**	**31 Jan 8:00**	**TB**
540	**Remove Thrust bearing for ICT check bad signal of metal temp.**	**100%**	**8 days**	**19 Jan 8:00**	**27 Jan 8:00**	**TB/ICT**
541	Remove insulation	100%	1 day	19 Jan 8:00	20 Jan 8:00	ES
542	Remove pedestal cover	100%	1 day	20 Jan 8:00	21 Jan 8:00	TB
543	Remove instrument wire	100%	1 day	21 Jan 8:00	22 Jan 8:00	ICT
544	Disassembly thrust bearing	100%	2 days	21 Jan 8:00	23 Jan 8:00	TB
545	NDT PT,MT	100%	1 day	22 Jan 8:00	23 Jan 8:00	TB
546	ICT verify & replace wire as damage	100%	1 day	23 Jan 8:00	24 Jan 8:00	ICT
547	**Re-assembly & setting thrust bearing**	**100%**	**2 days**	**24 Jan 8:00**	**26 Jan 8:00**	**TB**
548	**Re-assembly pedestal cover**	**100%**	**3 days**	**24 Jan 8:00**	**27 Jan 8:00**	**TB**
549	**Turbine Bearing Lube Oil Flushing**	**100%**	**3 days**	**01 Feb 8:00**	**04 Feb 8:00**	**TB**
550	**Turbine on turning**	**100%**	**1 day**	**11 Feb 8:00**	**12 Feb 8:00**	**TB/OPS**



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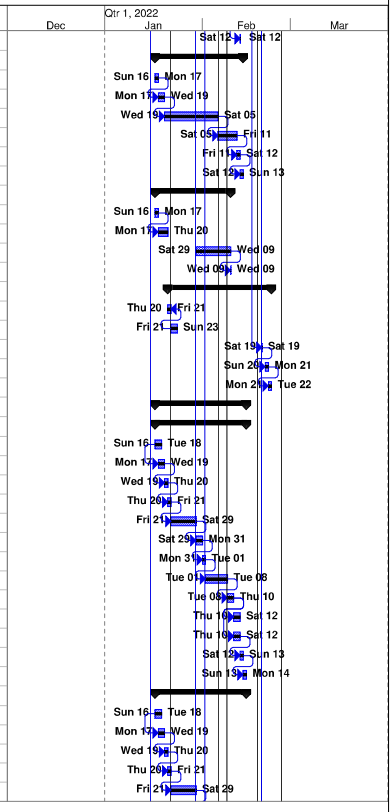
Task | Rolled Up Progress | Inactive Milestone | Finish-only | Baseline Summary
Critical Task | Split | Inactive Summary | External Tasks | Progress
Milestone | External Tasks | Manual Task | External Milestone | Deadline
Summary | Project Summary | Duration-only | Critical
Rolled Up Task | Group By Summary | Manual Summary Rollup | Critical Split
Rolled Up Critical Task | Inactive Task | Manual Summary | Baseline
Rolled Up Milestone | Inactive Milestone | Start-only | Baseline Milestone

2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
551	**Steam Turbine water ingress protection test**	**100%**	**8 hrs**	**12 Feb 8:00**	**12 Feb 16:00**	**C&I**
552	**Condenser water box inspection**	**100%**	**28 days**	**16 Jan 8:00**	**13 Feb 8:00**	**TB**
553	Open man hole	100%	1 day	16 Jan 8:00	17 Jan 8:00	TB
554	Install scaffolding	100%	2 days	17 Jan 8:00	19 Jan 8:00	ES
555	Inspection & Repair rubber linning	100%	17 days	19 Jan 8:00	05 Feb 8:00	TB
556	Inspection and replacement scaficial anode	100%	6 days	05 Feb 8:00	11 Feb 8:00	TB
557	Remove scaffolding	100%	1 day	11 Feb 8:00	12 Feb 8:00	ES
558	Final Inspection and close manhole	100%	1 day	12 Feb 8:00	13 Feb 8:00	TB
559	**Condenser Hot well inspection**	**100%**	**24.5 days**	**16 Jan 8:00**	**09 Feb 20:00**	**TB**
560	Open Manhole	100%	1 day	16 Jan 8:00	17 Jan 8:00	TB
561	Support OPS cooling down Main steam turbine	100%	3 days	17 Jan 8:00	20 Jan 8:00	OPS/TB
562	Hot well cleaning	100%	11 days	29 Jan 8:00	09 Feb 8:00	TB
563	Final Inspection and close manhole	100%	0.5 days	09 Feb 8:00	09 Feb 20:00	TB+OPS
564	**RH spool pipe.**	**100%**	**32.75 days**	**20 Jan 8:00**	**22 Feb 2:00**	**TB**
565	Install scaffolding and remvoe insulation	100%	1 day	20 Jan 8:00	21 Jan 8:00	ES
566	Remove spool pipe and install blind flange	100%	2 days	21 Jan 8:00	23 Jan 8:00	TB
567	Drain water for RH system	100%	4 hrs	19 Feb 15:45	19 Feb 19:45	OPS
568	Remove Blind Flange & Install RH spool pipe.	100%	1.25 days	20 Feb 8:00	21 Feb 14:00	TB
569	Install insulation	100%	0.5 days	21 Feb 14:00	22 Feb 2:00	ES
570	**High pressure feed water heater**	**100%**	**29.25 days**	**16 Jan 8:00**	**14 Feb 14:00**	**TB**
571	**No.6 HP feed water heater**	**100%**	**29.25 days**	**16 Jan 8:00**	**14 Feb 14:00**	**TB**
572	Remove diaphragm of manhole by machine	100%	2 days	16 Jan 8:00	18 Jan 8:00	TB
573	cooling down & air blow	100%	2 days	17 Jan 8:00	19 Jan 8:00	TB
574	Remove partition cover	100%	1 day	19 Jan 8:00	20 Jan 8:00	TB
575	Remove perforated plate	100%	1 day	20 Jan 8:00	21 Jan 8:00	TB
576	Tube cleaning	100%	8 days	21 Jan 8:00	29 Jan 8:00	TB
577	Tube dry out by air blow	100%	2 days	29 Jan 8:00	31 Jan 8:00	TB
578	NDT PT	100%	1 day	31 Jan 8:00	01 Feb 8:00	TB
579	NDT RFT	100%	7 days	01 Feb 8:00	08 Feb 8:00	TB
580	Pressure test on shell side by pressurize air 5 bar	100%	2 days	08 Feb 8:00	10 Feb 8:00	TB
581	Assembly partition cover	100%	2 days	10 Feb 8:00	12 Feb 8:00	TB
582	Assembly perforated pate	100%	2 days	10 Feb 8:00	12 Feb 8:00	TB
583	Re-welding diaphragm of manhole & close manhole	100%	1.25 days	12 Feb 8:00	13 Feb 14:00	TB
584	Pressure test on tube side by demin. Water 200 bar	100%	1 day	13 Feb 14:00	14 Feb 14:00	TB
585	**No.8 HP feed water heater**	**100%**	**29 days**	**16 Jan 8:00**	**14 Feb 8:00**	**TB**
586	Remove diaphragm of manhole by machine	100%	2 days	16 Jan 8:00	18 Jan 8:00	TB
587	cooling down & air blow	100%	2 days	17 Jan 8:00	19 Jan 8:00	TB
588	Remove partition cover	100%	1 day	19 Jan 8:00	20 Jan 8:00	TB
589	Remove perforated plate	100%	1 day	20 Jan 8:00	21 Jan 8:00	TB
590	Tube cleaning	100%	8 days	21 Jan 8:00	29 Jan 8:00	TB



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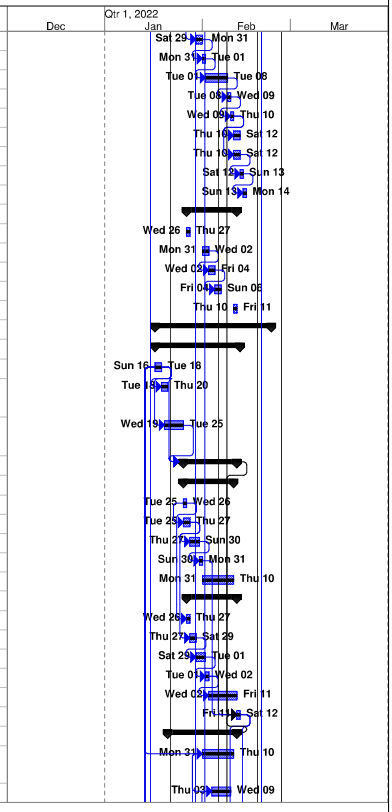
Task | Rolled Up Progress | Inactive Milestone | Finish-only | Baseline Summary
Critical Task | Split | Inactive Summary | External Tasks | Progress
Milestone | External Tasks | Manual Task | External Milestone | Deadline
Summary | Project Summary | Duration-only | Critical
Rolled Up Task | Group By Summary | Manual Summary Rollup | Critical Split
Rolled Up Critical Task | Inactive Task | Manual Summary | Baseline
Rolled Up Milestone | Inactive Milestone | Start-only | Baseline Milestone

2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
591	Tube dry out by air blow	100%	2 days	29 Jan 8:00	31 Jan 8:00	TB
592	NDT PT	100%	1 day	31 Jan 8:00	01 Feb 8:00	TB
593	NDT RFT	100%	7 days	01 Feb 8:00	08 Feb 8:00	TB
594	NDT IRIS	100%	1 day	08 Feb 8:00	09 Feb 8:00	TB
595	Pressure test on shell side by pressurize air 5 bar	100%	1 day	09 Feb 8:00	10 Feb 8:00	TB
596	Assembly partition cover	100%	2 days	10 Feb 8:00	12 Feb 8:00	TB
597	Assembly perforated pate	100%	2 days	10 Feb 8:00	12 Feb 8:00	TB
598	Re-welding diaphragm of manhole & close manhole	100%	1 day	12 Feb 8:00	13 Feb 8:00	TB
599	Pressure test on tube side by demin. Water 200 bar	100%	1 day	13 Feb 8:00	14 Feb 8:00	TB
600	**CTCS ball strainer-A1,A2,B1,B2 Inspection grid strainer**	**100%**	**16 days**	**26 Jan 8:00**	**11 Feb 8:00**	**TB+ECT+OPS**
601	Open manhole (Complete)	100%	1 day	26 Jan 8:00	27 Jan 8:00	TB
602	Internal inspection grid strainer by TB team	100%	2 days	31 Jan 8:00	02 Feb 8:00	TB
603	Replace sacrificial anode by TB team	100%	2 days	02 Feb 8:00	04 Feb 8:00	TB
604	Functional test grid strainer 3 party TB+ECT+OPS	100%	2 days	04 Feb 8:00	06 Feb 8:00	TB+ECT+OPS
605	Closse manhole	100%	1 day	10 Feb 8:00	11 Feb 8:00	TB
606	**Balance Of Plant Maintenance**	**100%**	**36.92 days**	**16 Jan 8:00**	**22 Feb 6:00**	**BOP**
607	**Intake & Outfall**	**100%**	**27.5 days**	**16 Jan 8:00**	**12 Feb 20:00**	**BOP**
608	**Close Stop log (intake and inlet outfall) (Start at 13:00)**	**100%**	**2 days**	**16 Jan 8:00**	**18 Jan 8:00**	**BOP**
609	**Yearly Inspection support of shock & continue diffuser (NaOCL) at intake pit 1A and 1B**	**100%**	**2 days**	**18 Jan 8:00**	**20 Jan 8:00**	**BOP**
610	**Intake Pit A,B Burnacle, Shell and Mud at Floor and Clean Bar Screen**	**100%**	**6 days**	**19 Jan 8:00**	**25 Jan 8:00**	**BOP**
611	**Travelling screen, CWP inspection , Recondition**	**100%**	**17 days**	**25 Jan 8:00**	**11 Feb 8:00**	**BOP**
612	**Travelling screen A**	**100%**	**16 days**	**25 Jan 8:00**	**10 Feb 8:00**	**BOP/ES**
613	Remove screen panel	100%	1 day	25 Jan 8:00	26 Jan 8:00	BOP
614	Install Scaffolding for Internal Inspection	100%	2 days	25 Jan 8:00	27 Jan 8:00	ES
615	Inspection	100%	3 days	27 Jan 8:00	30 Jan 8:00	BOP
616	Remove Scaffolding for Internal Inspection	100%	1 day	30 Jan 8:00	31 Jan 8:00	ES
617	CWP inspection , Recondition	100%	10 days	31 Jan 8:00	10 Feb 8:00	BOP
618	**Travelling screen B**	**100%**	**16 days**	**26 Jan 8:00**	**11 Feb 8:00**	**BOP/ES**
619	Remove screen panel	100%	1 day	26 Jan 8:00	27 Jan 8:00	BOP
620	Install Scaffolding for Internal Inspection	100%	2 days	27 Jan 8:00	29 Jan 8:00	ES
621	Inspection	100%	3 days	29 Jan 8:00	01 Feb 8:00	BOP
622	Remove Scaffolding for Internal Inspection	100%	1 day	01 Feb 8:00	02 Feb 8:00	ES
623	CWP inspection , Recondition	100%	9 days	02 Feb 8:00	11 Feb 8:00	BOP
624	***Open Stop log***	***100%***	***1.5 days***	***11 Feb 8:00***	***12 Feb 20:00***	***BOP***
625	**FGD System**	**100%**	**22 days**	**20 Jan 8:00**	**11 Feb 8:00**	**BOP**
626	FGD Canal Outfall U1 (Damage Area) , FRP Lining 2 Layer & Tissue 1 Layer	100%	10 days	31 Jan 8:00	10 Feb 8:00	BOP
627	FGD Seawater Pump 1A , 1B, 1C (Replace Packing)	100%	6 days	03 Feb 8:00	09 Feb 8:00	BOP



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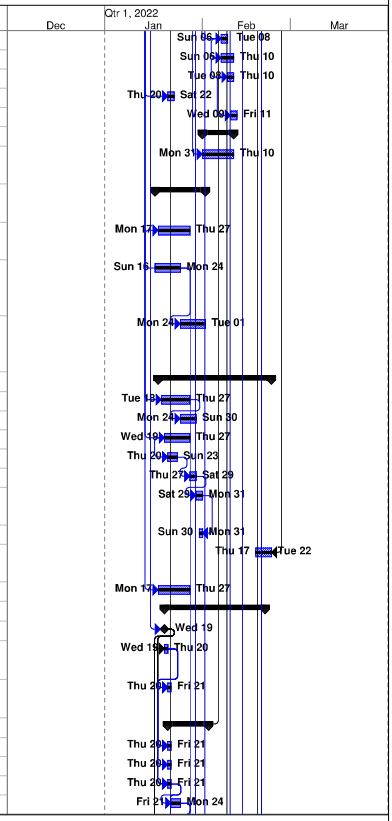
2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
628	FGD Aeration Air Cooler 1A , 1B (Clean Inlet Strainer)	100%	2 days	06 Feb 8:00	08 Feb 8:00	BOP
629	FGD Aeration Blower 1A, 1B, 1C, 1D (Clean Suction Filter)	100%	4 days	06 Feb 8:00	10 Feb 8:00	BOP
630	FGD Aeration Air Filter 1A , 1B (Clean Filter)	100%	2 days	08 Feb 8:00	10 Feb 8:00	BOP
631	Aeration Blower Pipe Air Diffuser U1, Inspection	100%	2 days	20 Jan 8:00	22 Jan 8:00	BOP
632	Antiform Net U1, Replace New Net	100%	2 days	09 Feb 8:00	11 Feb 8:00	BOP
633	**CWP system**	**100%**	**10 days**	**31 Jan 8:00**	**10 Feb 8:00**	**BOP**
634	CWP Underground Pipe U1, Inspection (Coal Tar Painting at Damage Area)	100%	10 days	31 Jan 8:00	10 Feb 8:00	BOP
635	**Plate heat exchanger mechanical Cleaning and Replace gasket works**	**100%**	**16 days**	**16 Jan 8:00**	**01 Feb 8:00**	**BOP**
636	T-BFP A1/A2 , B1/B2 , Mechanical Cleaning, BFP-T Oil Cooler	100%	10 days	17 Jan 8:00	27 Jan 8:00	BOP
637	CCCW cooler A; Mechanical Cleaning (must be informed Chemist to collect deposit scale from cooler plate for analysis).	100%	8 days	16 Jan 8:00	24 Jan 8:00	BOP
638	CCCW cooler B; Mechanical Cleaning (must be informed Chemist to collect deposit scale from cooler plate for analysis).	100%	8 days	24 Jan 8:00	01 Feb 8:00	BOP
639	**Main Plant & Boiler Feed System**	**100%**	**35.92 days**	**17 Jan 8:00**	**22 Feb 6:00**	**BOP**
640	T-BFP-1A Mech.Seal Replacement	100%	9 days	18 Jan 8:00	27 Jan 8:00	BOP
641	T-BFP-1B Mech.Seal Replacement	100%	5 days	24 Jan 8:00	30 Jan 0:00	BOP
642	Deaeration & Storage Tank, Inspection, UTM	100%	8 days	19 Jan 8:00	27 Jan 8:00	BOP
643	CEP 1B (Replace Packing, Clean Suction Strainer)	100%	3 days	20 Jan 8:00	23 Jan 8:00	BOP
644	CCCW Pump 1A , 1B (Replace Packing)	100%	2 days	27 Jan 8:00	29 Jan 8:00	BOP
645	Seawater Booster Pump 1A , 1B (Replace Packing, Clean Suction Strainer PHE)	100%	2 days	29 Jan 8:00	31 Jan 8:00	BOP
646	Instrument Air System 1A , 1B (Replace Filter)	100%	1 day	30 Jan 8:00	31 Jan 8:00	BOP
647	T-BFP Booster Pump A/B clean suction stainner and run. (During water preparation for Hydro-Test)	100%	4.75 days	17 Feb 10:00	22 Feb 6:00	OPS/BOP
648	**Overhaul BOP Valve**	**100%**	**10 days**	**17 Jan 8:00**	**27 Jan 8:00**	**BOP**
649	**Generator Maintenance**	**100%**	**32.17 days**	**19 Jan 8:00**	**20 Feb 12:00**	**EC&I/TB**
650	**Off Turning Gear**	**100%**	**0 days**	**19 Jan 8:00**	**19 Jan 8:00**	**OPS**
651	**Discharging of H2 Gas, Isolation of Electrical Source, Stopping Stator Coil Cooling Water, Discharging of Water**	**100%**	**1 day**	**19 Jan 8:00**	**20 Jan 8:00**	**OPS**
652	**Isolation of Cooling Water System, Water Draining of Gas Cooler**	**100%**	**1 day**	**20 Jan 8:00**	**21 Jan 8:00**	**OPS**
653	**Robot Inspection**	**100%**	**13 days**	**20 Jan 8:00**	**02 Feb 8:00**	**HV**
654	Training for MARC	100%	1 day	20 Jan 8:00	21 Jan 8:00	HV/MELCO
655	Disassembly of Man-Hole	100%	1 day	20 Jan 8:00	21 Jan 8:00	HV/TB
656	Preparation of Inspection	100%	1 day	20 Jan 8:00	21 Jan 8:00	HV/MELCO
657	EL-CID	100%	3 days	21 Jan 8:00	24 Jan 8:00	HV/MELCO



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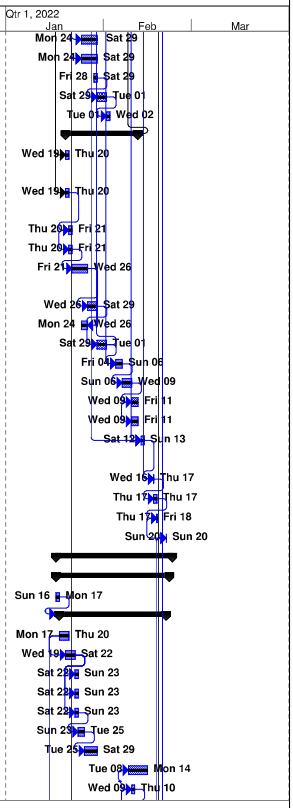
2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
658	Slot Tapping Test	100%	5 days	24 Jan 8:00	29 Jan 8:00	HV/MELCO
659	Visual Inspection (by Camera)	100%	5 days	24 Jan 8:00	29 Jan 8:00	HV/MELCO
660	Jacking oil , Lube oil preparation	100%	1 day	28 Jan 8:00	29 Jan 8:00	OPS
661	Inspection Rotor cooling hole for H2	100%	3 days	29 Jan 8:00	01 Feb 8:00	HV/MELCO
662	Assembly of Man-Hole	100%	1 day	01 Feb 8:00	02 Feb 8:00	HV/TB
663	**Exciter module replacement**	**100%**	**23 days**	**19 Jan 8:00**	**11 Feb 8:00**	**HV/TB**
664	Isolation of Electrical Source, Discharging of Exciter cooler water	100%	1 day	19 Jan 8:00	20 Jan 8:00	HV/TB
665	Isolation of Cooling Water System, Water Draining of Gas Cooler	100%	1 day	19 Jan 8:00	20 Jan 8:00	HV/TB
666	Disassembly of BL-Exc Housing	100%	1 day	20 Jan 8:00	21 Jan 8:00	HV/TB
667	Discoupling between BL-Exc & Generator	100%	1 day	20 Jan 8:00	21 Jan 8:00	HV/MELCO
668	Replacement of BL-Exciter Fuse & Diode (including clean-up parts)	100%	5 days	21 Jan 8:00	26 Jan 8:00	HV/MELCO
669	Assembly of BL-Exciter Fuse	100%	3 days	26 Jan 8:00	29 Jan 8:00	HV/MELCO
670	BL-EXC Electrical test (High voltage test)	100%	2 days	24 Jan 8:00	26 Jan 8:00	HV
671	BL-EXC Electrical test (Reverse voltage application)	100%	3 days	29 Jan 8:00	01 Feb 8:00	HV
672	Alignment between BL-Exc & Generator	100%	2 days	04 Feb 8:00	06 Feb 8:00	HV/MELCO
673	Confirm data	100%	3 days	06 Feb 8:00	09 Feb 8:00	MELCO
674	Assembly of BL-Exc Housing	100%	2 days	09 Feb 8:00	11 Feb 8:00	HV/MELCO
675	Final Inspection	100%	2 days	09 Feb 8:00	11 Feb 8:00	HV/MELCO
676	**Generator air leakage testing (OPS preparation day time and night time start test)**	**100%**	**0.75 days**	**12 Feb 20:00**	**13 Feb 14:00**	**HV**
677	**Hydrogen filling (~ 10 hrs)**	**100%**	**10 hrs**	**16 Feb 14:00**	**17 Feb 0:00**	**HV**
678	**Stator coil water quality**	**100%**	**12 hrs**	**17 Feb 0:00**	**17 Feb 12:00**	**OPS**
679	**On turning gear**	**100%**	**0.5 days**	**17 Feb 12:00**	**18 Feb 0:00**	**OPS**
680	**Megger Test by Electrical**	**100%**	**4 hrs**	**20 Feb 8:00**	**20 Feb 12:00**	**HV**
681	**Electrical HV Maintenance**	**100%**	**37.13 days**	**16 Jan 8:00**	**22 Feb 11:00**	**HV**
682	**Generator Transformer - Gasket replacement**	**100%**	**36 days**	**16 Jan 8:00**	**21 Feb 8:00**	**HV**
683	Install scaffolding	100%	1 day	16 Jan 8:00	17 Jan 8:00	ES
684	**IPB**	**100%**	**34 days**	**17 Jan 8:00**	**20 Feb 8:00**	**HV**
685	GTR - IPB Interface disassembly	100%	3 days	17 Jan 8:00	20 Jan 8:00	HV
686	IPB - IPB Interface disassembly	100%	3 days	19 Jan 8:00	22 Jan 8:00	HV
687	GTR IPB Unit removing	100%	1 day	22 Jan 8:00	23 Jan 8:00	HV
688	Temporary placing	100%	1 day	22 Jan 8:00	23 Jan 8:00	HV
689	Curing cover	100%	1 day	22 Jan 8:00	23 Jan 8:00	HV
690	GTR IPB Terminal disassembly	100%	2 days	23 Jan 8:00	25 Jan 8:00	HV
691	Reused parts cleaning	100%	4 days	25 Jan 8:00	29 Jan 8:00	HV
692	Scaffolding as required for IPB reassembly	100%	6 days	08 Feb 8:00	14 Feb 8:00	HV
693	GTR IPB Unit re-installing	100%	1 day	09 Feb 8:00	10 Feb 8:00	HV



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Baseline Summary, Progress, Deadline

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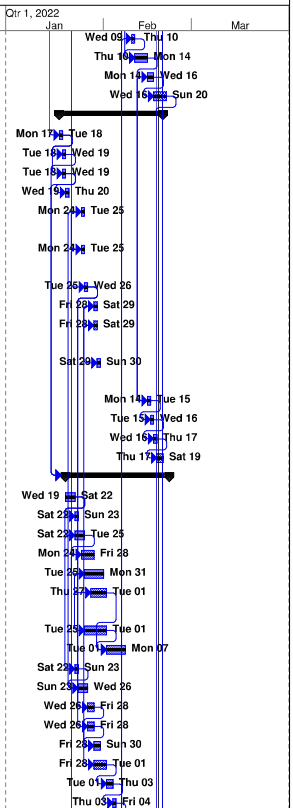
ID	Task Name	% Complete	Duration	Start	Finish	RO
694	GTR IPB Unit alignment	100%	1 day	09 Feb 8:00	10 Feb 8:00	HV
695	IPB - IPB Interface assembly	100%	4 days	10 Feb 8:00	14 Feb 8:00	HV
696	GTR - IPB Terminal reassembly	100%	2 days	14 Feb 8:00	16 Feb 8:00	HV
697	GTR - IPB Interface assembly	100%	4 days	16 Feb 8:00	20 Feb 8:00	HV
698	**GIS**	**100%**	**33 days**	**17 Jan 8:00**	**19 Feb 8:00**	**HV**
699	Preparation work (Organized & equipment)	100%	1 day	17 Jan 8:00	18 Jan 8:00	HV
700	Degas of BSG tank to atmosphere	100%	1 day	18 Jan 8:00	19 Jan 8:00	HV
701	Degas of adjacent BSG tank to 0.05Mpa	100%	1 day	18 Jan 8:00	19 Jan 8:00	HV
702	Disconnecting of GIS internal conductor of BSG	100%	1 day	19 Jan 8:00	20 Jan 8:00	HV
703	Disconnecting of BSG tank with TR tank (Removing existing HVL-Bushing)	100%	1 day	24 Jan 8:00	25 Jan 8:00	HV
704	Disconnecting of BSG tank from TR tank (Removing existing HVL-Bushing)	100%	1 day	24 Jan 20:00	25 Jan 20:00	HV
705	Connecting of temporary cover	100%	1 day	25 Jan 8:00	26 Jan 8:00	HV
706	Disconnecting of temporary cover	100%	1 day	28 Jan 8:00	29 Jan 8:00	HV
707	Reconnecting of BSG tank to TR tank (Attaching new HVL-Bushing)	100%	1 day	28 Jan 20:00	29 Jan 20:00	HV
708	Reconnecting of BSG tank and TR tank (Attaching new HVL-Bushing)	100%	1 day	29 Jan 8:00	30 Jan 8:00	HV
709	Reconnecting of GIS internal conductor	100%	1 day	14 Feb 8:00	15 Feb 8:00	HV
710	Functional test	100%	1 day	15 Feb 8:00	16 Feb 8:00	HV
711	Replacement of absorbent & Filling of SF6 gas	100%	1 day	16 Feb 8:00	17 Feb 8:00	HV
712	Functional test	100%	2 days	17 Feb 8:00	19 Feb 8:00	HV
713	**Transformer**	**100%**	**33 days**	**19 Jan 8:00**	**21 Feb 8:00**	**HV**
714	Checking transformer condition	100%	3 days	19 Jan 8:00	22 Jan 8:00	HV
715	Draining insulation oil from TR body	100%	1 day	22 Jan 8:00	23 Jan 8:00	HV
716	Disassembling aux.wiring	100%	3 days	22 Jan 8:00	25 Jan 8:00	HV
717	Disassembling air release pipes & oil cooling pipes	100%	4 days	24 Jan 8:00	28 Jan 8:00	HV
718	Flange cleaning	100%	6 days	25 Jan 8:00	31 Jan 8:00	HV
719	Assembling air release pipes & oil cooling pipes with new gasket	100%	5 days	27 Jan 8:00	01 Feb 8:00	HV
720	No.1 & 2 OLTC work	100%	7 days	25 Jan 8:00	01 Feb 8:00	HV
721	Assembling aux.wiring	100%	6 days	01 Feb 8:00	07 Feb 8:00	HV
722	Preparation for TR tank inside work	100%	1 day	22 Jan 8:00	23 Jan 8:00	HV
723	Disconnecting TR inner lead (For HVL, HVN, LV)	100%	3 days	23 Jan 8:00	26 Jan 8:00	HV
724	Replacement of HVL-bushing	100%	2 days	26 Jan 8:00	28 Jan 8:00	HV
725	Removing HVN & LV-bushing	100%	2 days	26 Jan 8:00	28 Jan 8:00	HV
726	Attaching HVN & LV-bushing	100%	2 days	28 Jan 8:00	30 Jan 8:00	HV
727	Connecting TR inner lead with inside inspection	100%	4 days	28 Jan 8:00	01 Feb 8:00	HV
728	Oil filling & Oil leakage test (More than 24hrs)	100%	2 days	01 Feb 8:00	03 Feb 8:00	HV
729	Draining all insulation for final oil treatment	100%	1 day	03 Feb 8:00	04 Feb 8:00	HV



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Baseline Summary, Progress, Deadline

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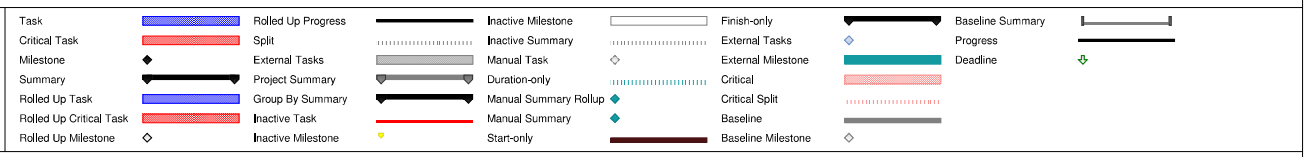
730	Pulling vacuum (Less than 0.5Torr) & Keeping vacuum (More than 8hrs) → Note (*5)	100%	3 days	04 Feb 8:00	07 Feb 8:00	HV
731	Final oil filling under vacuum → Note (*5)	100%	2 days	07 Feb 8:00	09 Feb 8:00	HV
732	Oil circulation (More than 2cycles) → Note (*5)	100%	1 day	09 Feb 8:00	10 Feb 8:00	HV
733	Oil stabilization (More than 72hrs)	100%	3 days	10 Feb 8:00	13 Feb 8:00	HV
734	Checking transformer condition	100%	8 days	09 Feb 8:00	17 Feb 8:00	HV
735	Site cleaning & Report	100%	1 day	20 Feb 8:00	21 Feb 8:00	HV
736	**Unit Transformer - Gasket replacement**	**100%**	**18 days**	**16 Jan 8:00**	**03 Feb 8:00**	**HV**
737	**IPB**	**100%**	**18 days**	**16 Jan 8:00**	**03 Feb 8:00**	**HV**
738	Preparation & Meeting (for UTR IPB)	100%	1 day	16 Jan 8:00	17 Jan 8:00	HV
739	Disassembling UTR-IPB flexible conductor	100%	0.25 days	17 Jan 8:00	17 Jan 14:00	HV
740	Removing IPB rubber bellows	100%	0.75 days	17 Jan 14:00	18 Jan 8:00	HV
741	Reused parts cleaning	100%	2 days	18 Jan 8:00	20 Jan 8:00	HV
742	Removing IPB adapter	100%	1 day	21 Jan 20:00	22 Jan 20:00	HV
743	Attaching IPB adapter	100%	1 day	23 Jan 8:00	24 Jan 8:00	HV
744	Reassembling UTR-IPB flexible conductor	100%	0.25 days	02 Feb 8:00	02 Feb 14:00	HV
745	Attaching IPB rubber bellows	100%	0.75 days	02 Feb 14:00	03 Feb 8:00	HV
746	**Transformer**	**100%**	**17 days**	**17 Jan 8:00**	**03 Feb 8:00**	**HV**
747	Transformer condition check before work	100%	0.5 days	17 Jan 8:00	17 Jan 20:00	HV
748	Draining insulation oil from TR body → Note (*2)	100%	0.5 days	17 Jan 20:00	18 Jan 8:00	HV
749	Disconnecting BCT wiring / Reconnecting BCT wiring	100%	0.5 days	17 Jan 20:00	18 Jan 8:00	HV
750	Disassembling aux.wiring	100%	1.5 days	17 Jan 20:00	19 Jan 8:00	HV
751	Removing radiator and disassembling oil cooling pipes (Cleaning flanges)	100%	3 days	19 Jan 8:00	22 Jan 8:00	HV
752	Preparation for TR tank inside work	100%	0.5 days	19 Jan 8:00	19 Jan 20:00	HV
753	Disconnection of TR inner lead (HV / LVL & LVN)	100%	2.5 days	19 Jan 20:00	22 Jan 8:00	HV
754	Removing existing LVL & LVN-bushing	100%	0.5 days	19 Jan 20:00	20 Jan 8:00	HV
755	Flange Cleaning	100%	0.75 days	20 Jan 8:00	21 Jan 2:00	HV
756	Installing new LVL & LVN-bushing	100%	0.5 days	21 Jan 2:00	21 Jan 14:00	HV
757	Removing existing HV-bushing and pulling out from IPB inspection hole	100%	1 day	21 Jan 14:00	22 Jan 14:00	HV
758	Removing HV bushing case	100%	0.75 days	22 Jan 14:00	23 Jan 8:00	HV
759	Attaching HV bushing case with new gasket	100%	0.5 days	23 Jan 2:00	23 Jan 14:00	HV
760	Installing new HV-bushing	100%	0.75 days	23 Jan 14:00	24 Jan 8:00	HV
761	Reconnection of TR inner lead (HV / LVL & LVN)	100%	1 day	23 Jan 8:00	24 Jan 8:00	HV
762	Assembling oil cooling pipes and attaching radiator	100%	2.5 days	23 Jan 20:00	26 Jan 8:00	HV
763	Gasket replacement for connecting pipes & protective relays → Note (*3)	100%	1.5 days	26 Jan 8:00	27 Jan 20:00	HV
764	Assembling aux.wiring	100%	1.5 days	27 Jan 20:00	29 Jan 8:00	HV
765	Oil filling & Oil leakage test (More than 24hrs)	100%	1 day	29 Jan 8:00	30 Jan 8:00	HV



Project: Major Outage
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Task, Critical Task, Milestone, Summary, Rolled Up Task, Rolled Up Critical Task, Rolled Up Milestone
Rolled Up Progress, Split, External Tasks, Project Summary, Group By Summary, Inactive Task, Inactive Milestone
Inactive Milestone, Inactive Summary, Manual Task, Duration-only, Manual Summary Rollup, Manual Summary, Start-only
Finish-only, External Tasks, External Milestone, Critical, Critical Split, Baseline, Baseline Milestone
Baseline Summary, Progress, Deadline

2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
766	Draining all insulation for final oil treatment	100%	0.5 days	30 Jan 8:00	30 Jan 20:00	HV
767	Pulling vacuum (Less than 5Torr) & Keeping vacuum (More than 4hrs)	100%	0.5 days	30 Jan 20:00	31 Jan 8:00	HV
768	Final oil filling under vacuum	100%	1.25 days	31 Jan 8:00	01 Feb 14:00	HV
769	Oil stabilization (More than 6hrs)	100%	0.75 days	01 Feb 14:00	02 Feb 8:00	HV
770	Transformer condition check after work	100%	1.75 days	01 Feb 14:00	03 Feb 8:00	HV
771	Reassembling UTR-IPB flexible conductor	100%	0.25 days	02 Feb 8:00	02 Feb 14:00	HV
772	Attaching IPB rubber bellows	100%	0.75 days	02 Feb 14:00	03 Feb 8:00	HV
773	**Station Transformer**	**100%**	**17 days**	**03 Feb 8:00**	**20 Feb 8:00**	**HV**
774	**IPB**	**100%**	**17 days**	**03 Feb 8:00**	**20 Feb 8:00**	**HV**
775	Disassembling STR-IPB flexible conductor	100%	0.25 days	03 Feb 8:00	03 Feb 14:00	HV
776	Removing IPB rubber bellows	100%	0.75 days	03 Feb 14:00	04 Feb 8:00	HV
777	IPB curing cover & Reused parts cleaning	100%	2 days	04 Feb 8:00	06 Feb 8:00	HV
778	Checking transformer condition	100%	0.5 days	03 Feb 8:00	03 Feb 20:00	HV
779	Draining insulation oil from TR body → Note (*2)	100%	0.5 days	03 Feb 20:00	04 Feb 8:00	HV
780	Disconnecting BCT wiring / Reconnecting BCT wiring	100%	0.5 days	03 Feb 20:00	04 Feb 8:00	HV
781	Disassembling aux.wiring	100%	1.5 days	03 Feb 20:00	05 Feb 8:00	HV
782	Removing radiator and disassembling oil cooling pipes (Cleaning flanges)	100%	16 days	04 Feb 8:00	20 Feb 8:00	HV
783	Preparation for TR inside work	100%	1 day	04 Feb 8:00	05 Feb 8:00	HV
784	Disconnecting TR inner lead (HV / LVL & LVN)	100%	2 days	03 Feb 8:00	05 Feb 8:00	HV
785	**Bay2 500kV GIS**	**100%**	**20 days**	**16 Jan 8:00**	**05 Feb 8:00**	**HV**
786	Install Schafold	100%	1 day	16 Jan 8:00	17 Jan 8:00	ES
787	Oil sampling for OF cable	100%	1 day	19 Jan 8:00	20 Jan 8:00	TADS
788	Test relay & Meter	100%	2 days	17 Jan 8:00	19 Jan 8:00	TADS
789	Clean & Inspect GIS	100%	1 day	17 Jan 8:00	18 Jan 8:00	TADS
790	Clean & Inspect OF Cable	100%	2 days	18 Jan 8:00	20 Jan 8:00	TADS
791	Test PT (Dc resistance & Ratio)	100%	1 day	20 Jan 8:00	21 Jan 8:00	TADS
792	IR Test 500kV Circuit	100%	1 day	03 Feb 8:00	04 Feb 8:00	TADS
793	Remove schafold	100%	1 day	04 Feb 8:00	05 Feb 8:00	ES
794	**500kV GIS BSG at Gen TR**	**100%**	**19 days**	**16 Jan 8:00**	**04 Feb 8:00**	**HV**
795	Degassing SF6 & Disconnect GIS internal conductor	100%	3 days	16 Jan 8:00	19 Jan 8:00	TADS
796	Disconnect BSG tank with TR tank	100%	2 days	16 Jan 8:00	18 Jan 8:00	TADS
797	Disconnect temporary cover & Reconnect BSG tank	100%	2 days	16 Jan 8:00	18 Jan 8:00	TADS
798	Reconnect GIS internal conductor	100%	1 day	30 Jan 8:00	31 Jan 8:00	TADS
799	Function test	100%	4 days	31 Jan 8:00	04 Feb 8:00	TADS
800	Replace absorbent and fill SF6	100%	1 day	01 Feb 8:00	02 Feb 8:00	TADS
801	**Unit1 11kV Motor (Overhaul)**	**100%**	**37.13 days**	**16 Jan 8:00**	**22 Feb 11:00**	**HV**
802	**Dismount Motor**	**100%**	**9.67 days**	**16 Jan 8:00**	**26 Jan 0:00**	**HV**
803	CEP-A&B (remove grating)	100%	1 day	16 Jan 8:00	17 Jan 8:00	HV



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Task, Critical Task, Milestone, Summary, Rolled Up Task, Rolled Up Critical Task, Rolled Up Milestone
Rolled Up Progress, Split, External Tasks, Project Summary, Group By Summary, Inactive Task, Inactive Milestone
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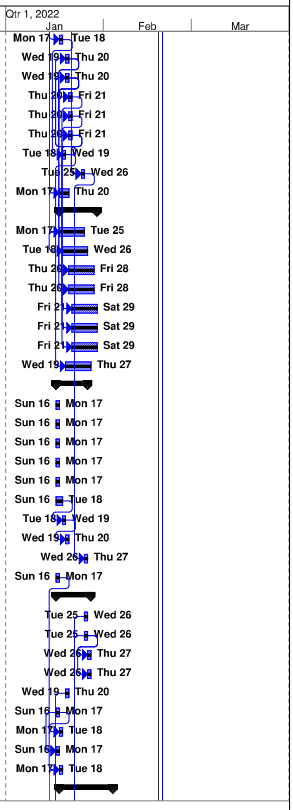
Finish-only, External Tasks, External Milestone, Critical, Critical Split, Baseline, Baseline Milestone
Baseline Summary, Progress, Deadline

2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
804	CEP-A&B	100%	1 day	17 Jan 8:00	18 Jan 8:00	HV
805	CP-B (use spare)	100%	1 day	19 Jan 8:00	20 Jan 8:00	HV
806	CP-C	100%	1 day	19 Jan 8:00	20 Jan 8:00	HV
807	CP-D	100%	1 day	20 Jan 8:00	21 Jan 8:00	HV
808	CP-E	100%	1 day	20 Jan 8:00	21 Jan 8:00	HV
809	CP-F	100%	1 day	20 Jan 8:00	21 Jan 8:00	HV
810	CCCWP-A	100%	1 day	18 Jan 8:00	19 Jan 8:00	HV
811	IDF-B (use spare)	100%	1 day	25 Jan 0:00	26 Jan 0:00	HV
812	CWP-B	100%	3 days	17 Jan 8:00	20 Jan 8:00	HV
813	**Overhaul at Work Shop**	**100%**	**12 days**	**17 Jan 8:00**	**29 Jan 8:00**	**HV**
814	CEP-A	100%	8 days	17 Jan 8:00	25 Jan 8:00	HV
815	CEP-B	100%	8 days	18 Jan 8:00	26 Jan 8:00	HV
816	CP-B	100%	8 days	20 Jan 8:00	28 Jan 8:00	HV
817	CP-C	100%	8 days	20 Jan 8:00	28 Jan 8:00	HV
818	CP-D	100%	8 days	21 Jan 8:00	29 Jan 8:00	HV
819	CP-E	100%	8 days	21 Jan 8:00	29 Jan 8:00	HV
820	CP-F	100%	8 days	21 Jan 8:00	29 Jan 8:00	HV
821	CCCWP-A	100%	8 days	19 Jan 8:00	27 Jan 8:00	HV
822	**Install Motor**	**100%**	**10.67 days**	**16 Jan 8:00**	**27 Jan 0:00**	**HV**
823	CP-B (by spare)	100%	1 day	16 Jan 8:00	17 Jan 8:00	HV
824	CP-C	100%	1 day	16 Jan 8:00	17 Jan 8:00	HV
825	CP-D	100%	1 day	16 Jan 8:00	17 Jan 8:00	HV
826	CP-E	100%	1 day	16 Jan 8:00	17 Jan 8:00	HV
827	CP-F	100%	1 day	16 Jan 8:00	17 Jan 8:00	HV
828	CEP-A	100%	2 days	16 Jan 8:00	18 Jan 8:00	HV
829	CEP-B	100%	1 day	18 Jan 8:00	19 Jan 8:00	HV
830	CCCWP-A	100%	1 day	19 Jan 8:00	20 Jan 8:00	HV
831	IDF-B (use spare)	100%	1 day	26 Jan 0:00	27 Jan 0:00	HV
832	CWP-B (use spare)	100%	1 day	16 Jan 8:00	17 Jan 8:00	HV
833	**Alignment**	**100%**	**11 days**	**16 Jan 8:00**	**27 Jan 8:00**	**HV**
834	CP-B (by spare)	100%	1 day	25 Jan 8:00	26 Jan 8:00	HV
835	CP-C	100%	1 day	25 Jan 8:00	26 Jan 8:00	HV
836	CP-D	100%	1 day	26 Jan 8:00	27 Jan 8:00	HV
837	CP-E	100%	1 day	26 Jan 8:00	27 Jan 8:00	HV
838	CP-F (by Mechanic)	100%	1 day	19 Jan 8:00	20 Jan 8:00	HV
839	CEP-A (by Mechanic)	100%	1 day	16 Jan 8:00	17 Jan 8:00	HV
840	CEP-B (by Mechanic)	100%	1 day	17 Jan 8:00	18 Jan 8:00	HV
841	CCCWP-A	100%	1 day	16 Jan 8:00	17 Jan 8:00	HV
842	CWP-B (use spare)	100%	1 day	17 Jan 8:00	18 Jan 8:00	HV
843	**Noload test & re-connect coupling**	**100%**	**17 days**	**17 Jan 8:00**	**03 Feb 8:00**	**HV**



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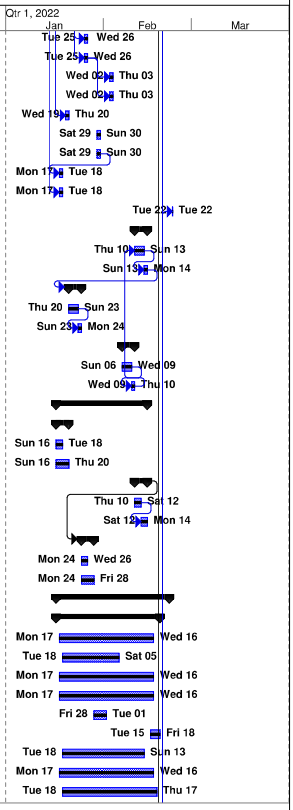
Task, Split, External Tasks, Project Summary, Group By Summary, Inactive Task, Inactive Milestone, Rolled Up Progress, Inactive Summary, Manual Task, Duration-only, Manual Summary Rollup, Manual Summary, Start-only, Finish-only, External Milestone, Critical, Critical Split, Baseline, Baseline Milestone, Baseline Summary, Progress, Deadline

2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
844	CP-B (by spare)	100%	1 day	25 Jan 8:00	26 Jan 8:00	HV
845	CP-C	100%	1 day	25 Jan 8:00	26 Jan 8:00	HV
846	CP-D	100%	1 day	02 Feb 8:00	03 Feb 8:00	HV
847	CP-E	100%	1 day	02 Feb 8:00	03 Feb 8:00	HV
848	CP-F	100%	1 day	19 Jan 8:00	20 Jan 8:00	HV
849	CEP-A	100%	1 day	29 Jan 8:00	30 Jan 8:00	HV
850	CEP-B	100%	1 day	29 Jan 8:00	30 Jan 8:00	HV
851	CCCWP-A	100%	1 day	17 Jan 8:00	18 Jan 8:00	HV
852	CWP-B (use spare)	100%	1 day	17 Jan 8:00	18 Jan 8:00	HV
853	**Load test MV motor during start up plant**	**100%**	**2 hrs**	**22 Feb 9:00**	**22 Feb 11:00**	**HV**
854	**Unit1 FGD SWGR**	**100%**	**4 days**	**10 Feb 8:00**	**14 Feb 8:00**	**HV**
855	Clean & Inspect	100%	3 days	10 Feb 8:00	13 Feb 8:00	HV
856	IR test	100%	1 day	13 Feb 8:00	14 Feb 8:00	HV
857	**Unit1 SWGR- A**	**100%**	**4 days**	**20 Jan 8:00**	**24 Jan 8:00**	**HV**
858	Clean & Inspect	100%	3 days	20 Jan 8:00	23 Jan 8:00	HV
859	IR test	100%	1 day	23 Jan 8:00	24 Jan 8:00	HV
860	**Unit1 SWGR-B**	**100%**	**4 days**	**06 Feb 8:00**	**10 Feb 8:00**	**HV**
861	Clean & Inspect	100%	3 days	06 Feb 8:00	09 Feb 8:00	HV
862	IR test	100%	1 day	09 Feb 8:00	10 Feb 8:00	HV
863	**Unit1 11kV Motor (Inspection)**	**100%**	**29 days**	**16 Jan 8:00**	**14 Feb 8:00**	**HV**
864	**SWGR-A Motor**	**100%**	**4 days**	**16 Jan 8:00**	**20 Jan 8:00**	**HV**
865	-Clean & Inspect	100%	2 days	16 Jan 8:00	18 Jan 8:00	HV
866	-IR , PI , PD , PF test	100%	4 days	16 Jan 8:00	20 Jan 8:00	HV
867	**FGD Motor**	**100%**	**4 days**	**10 Feb 8:00**	**14 Feb 8:00**	**HV**
868	-Clean & Inspect	100%	2 days	10 Feb 8:00	12 Feb 8:00	HV
869	-IR , PI , PD , PF test	100%	2 days	12 Feb 8:00	14 Feb 8:00	HV
870	**SWGR-B Motor**	**100%**	**4 days**	**24 Jan 8:00**	**28 Jan 8:00**	**HV**
871	-Clean & Inspect	100%	2 days	24 Jan 8:00	26 Jan 8:00	HV
872	-IR , PI , PD , PF test	100%	4 days	24 Jan 8:00	28 Jan 8:00	HV
873	**DCS Maintenance**	**100%**	**36 days**	**16 Jan 8:00**	**21 Feb 8:00**	**ICT**
874	**Instrument maintenance**	**100%**	**33 days**	**16 Jan 8:00**	**18 Feb 8:00**	**ICT**
875	Field instrument calibration	100%	30 days	17 Jan 8:00	16 Feb 8:00	ICT
876	Turbine/BOP/FAN Vibration inspect and testing	100%	18 days	18 Jan 8:00	05 Feb 8:00	ICT
877	Igniter inspect and testing	100%	30 days	17 Jan 8:00	16 Feb 8:00	ICT
878	Flame detector inspect and testing	100%	30 days	17 Jan 8:00	16 Feb 8:00	ICT
879	Interlock testing	100%	4 days	28 Jan 8:00	01 Feb 8:00	ICT
880	Purge impulse line	100%	3 days	15 Feb 8:00	18 Feb 8:00	ICT
881	Valve overhaul(CV/SOV)	100%	26 days	18 Jan 8:00	13 Feb 8:00	ICT
882	Calibration&drive test control valve/shut off valve/sv	100%	30 days	17 Jan 8:00	16 Feb 8:00	ICT
883	All Damper/IGV control and shut off inspect and calibration	100%	30 days	18 Jan 8:00	17 Feb 8:00	ICT



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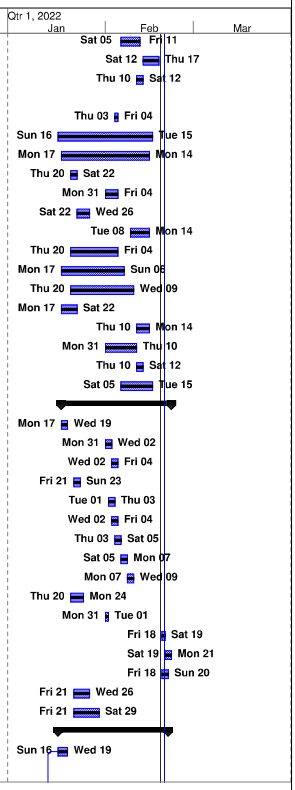
2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
884	Coal feeder A~F calibration/coal flow monitor inspection	100%	6 days	05 Feb 8:00	11 Feb 8:00	ICT
885	Burner gun drive test	100%	5 days	12 Feb 8:00	17 Feb 8:00	ICT
886	Verify and Test level/sensor transmitter tide level/cwp pit/bar/band screen.	100%	2 days	10 Feb 8:00	12 Feb 8:00	ICT
887	H2 Purity analyzer calibration	100%	1 day	03 Feb 8:00	04 Feb 8:00	ICT
888	Support work (Disconnect, remove and Reinstall)	100%	30 days	16 Jan 8:00	15 Feb 8:00	ICT
889	Sampling rack with analyzers & condenser leak detector clean	100%	28 days	17 Jan 8:00	14 Feb 8:00	ICT
890	Preventive Maintenance of conductivity analyzer (Stator Coil C	100%	2 days	20 Jan 8:00	22 Jan 8:00	ICT
891	Economizer oxygen analyzer inspect and calibration	100%	4 days	31 Jan 8:00	04 Feb 8:00	ICT
892	Yearly inspect belt sway/slip/emergency switch of bottom ash	100%	4 days	22 Jan 8:00	26 Jan 8:00	ICT
893	Calibration roller gap pulverizer A-F	100%	6 days	08 Feb 8:00	14 Feb 8:00	ICT
894	Overhaul COD analyzer Outfall Model : OPSA-150 HORIBA	100%	15 days	20 Jan 8:00	04 Feb 8:00	ICT
895	YEARLY INSPECTION AND CLEANING OPC SOLENOID VA	100%	20 days	17 Jan 8:00	06 Feb 8:00	ICT
896	Yearly inspection and test pulverizer spillage hopper level swit	100%	20 days	20 Jan 8:00	09 Feb 8:00	ICT
897	Replace DCS card and compact flash for common system and	100%	5 days	17 Jan 8:00	22 Jan 8:00	ICT
898	Replace CEP A&B inlet strainer diff. press. switch with diff. pre	100%	4 days	10 Feb 8:00	14 Feb 8:00	ICT
899	Coal feeder upgrade	100%	10 days	31 Jan 8:00	10 Feb 8:00	ICT
900	DCC big slag detector	100%	2 days	10 Feb 8:00	12 Feb 8:00	ICT
901	Install boiler metal temp 2ry SH	100%	10 days	05 Feb 8:00	15 Feb 8:00	ICT
902	**DCS Maintenance**	**100%**	**35 days**	**17 Jan 8:00**	**21 Feb 8:00**	**DCS**
903	MASTER OM : UNIT 1 DCS CCR GROUP	100%	2 days	17 Jan 8:00	19 Jan 8:00	DCS
904	MASTER OM : UNIT 1 DCS CER GROUP 1	100%	2 days	31 Jan 8:00	02 Feb 8:00	DCS
905	MASTER OM : UNIT 1 DCS CER GROUP 2	100%	2 days	02 Feb 8:00	04 Feb 8:00	DCS
906	MASTER OM : UNIT 1 PLC GROUP	100%	2 days	21 Jan 8:00	23 Jan 8:00	DCS
907	MASTER OM : UNIT 1 VVVF PLC GROUP	100%	2 days	01 Feb 8:00	03 Feb 8:00	DCS
908	MASTER OM : UNIT 1 DCS TURBINE BLD GROUP 1	100%	2 days	02 Feb 8:00	04 Feb 8:00	DCS
909	MASTER OM : UNIT 1 DCS TURBINE BLD GROUP 2	100%	2 days	03 Feb 8:00	05 Feb 8:00	DCS
910	MASTER OM : UNIT 1 DCS BOILER BLD GROUP 1	100%	2 days	05 Feb 8:00	07 Feb 8:00	DCS
911	MASTER OM : UNIT 1 DCS BOILER BLD GROUP 2	100%	2 days	07 Feb 8:00	09 Feb 8:00	DCS
912	MASTER OM : UNIT 1 INTERLOCK /AUX PANEL TEST	100%	4 days	20 Jan 8:00	24 Jan 8:00	DCS
913	OM-1 YEAR UNIT 1 CCTV FOR FURNACE	100%	1 day	31 Jan 8:00	01 Feb 8:00	DCS
914	MASTER OM : UNIT 1 BFPT VALVE TEST	100%	1 day	18 Feb 8:00	19 Feb 8:00	DCS
915	MASTER OM : UNIT 1 TURBINE VALVE TEST	100%	2 days	19 Feb 8:00	21 Feb 8:00	DCS
916	MFT drive test interlock	100%	2 days	18 Feb 8:00	20 Feb 8:00	DCS
917	PI replace power supply unit ASH&ESP panel	100%	5 days	21 Jan 8:00	26 Jan 8:00	DCS
918	DCS logic modification work	100%	8 days	21 Jan 8:00	29 Jan 8:00	DCS
919	**MHM-Mill Maintenance**	**100%**	**35 days**	**16 Jan 8:00**	**20 Feb 8:00**	**MHM-Mill**
920	**Annual Inspection, Repairs and Modifications to Pulverizer - 1A**	**100%**	**3 days**	**16 Jan 8:00**	**19 Jan 8:00**	**Mill**



Project: Major Outage
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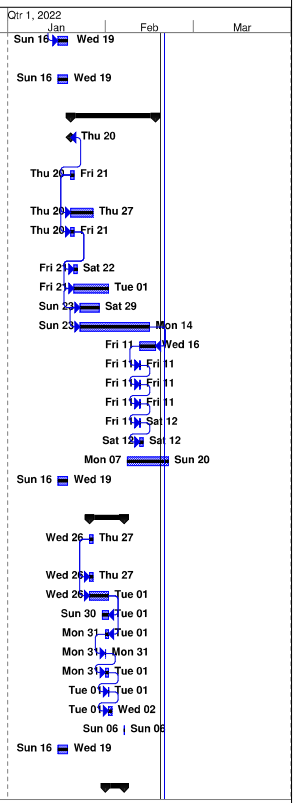
Task	Rolled Up Progress	Inactive Milestone	Finish-only	Baseline Summary
Critical Task	Split	Inactive Summary	External Tasks	Progress
Milestone	External Tasks	Manual Task	External Milestone	Deadline
Summary	Project Summary	Duration-only	Critical	
Rolled Up Task	Group By Summary	Manual Summary Rollup	Critical Split	
Rolled Up Critical Task	Inactive Task	Manual Summary	Baseline	
Rolled Up Milestone	Inactive Milestone	Start-only	Baseline Milestone	

2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
921	**Pulverizer-1A (OH replace Hydraulic Cylinder of loading journal 1AR1)**	**100%**	**3 days**	**16 Jan 8:00**	**19 Jan 8:00**	**Mill**
922	**Annual Inspection, Repairs and Modifications to Pulverizer - 1B**	**100%**	**3 days**	**16 Jan 8:00**	**19 Jan 8:00**	**Mill**
923	**Pulverizer-1B (OH replace journal roller)**	**100%**	**27 days**	**20 Jan 8:00**	**16 Feb 8:00**	**Mill**
924	Install Scaffolding for Hydralic loading all roller before shut down finish	100%	0 days	20 Jan 8:00	20 Jan 8:00	ES
925	Disconnect and remove cable with conduit limit switch for outlet valve and roll lift	100%	1 day	20 Jan 8:00	21 Jan 8:00	ICT
926	Replace journal roller 3 sets	100%	7 days	20 Jan 8:00	27 Jan 8:00	Mill
927	Remove Scaffolding for Hydralic loading all roller for open journal cover	100%	1 day	20 Jan 8:00	21 Jan 8:00	ES
928	Install Scaffolding for replace blade rotary separator	100%	1 day	21 Jan 8:00	22 Jan 8:00	ES
929	Replac blade rotary separator with V-belt drive	100%	11 days	21 Jan 8:00	01 Feb 8:00	Mill
930	Replace seal air gasket lower housing	100%	6 days	23 Jan 8:00	29 Jan 8:00	Mill
931	Replace wear parts internal pulverizer	100%	22 days	23 Jan 8:00	14 Feb 8:00	Mill
932	Replace dust seal middle piston hydraulic loading	100%	5 days	11 Feb 8:00	16 Feb 8:00	Mill
933	Install scaffllding for Hydraulic loading no.1,2,3	100%	4 hrs	11 Feb 8:00	11 Feb 12:00	Mill
934	Install cable with conduit limit switch for outlet valve and roll lif	100%	4 hrs	11 Feb 12:00	11 Feb 16:00	ICT
935	Adjust gap roller	100%	4 hrs	11 Feb 16:00	11 Feb 20:00	Mill
936	Adjust lub oil level all journal roller	100%	4 hrs	11 Feb 20:00	12 Feb 0:00	ES
937	Adjust gap Hydraulic	100%	4 hrs	12 Feb 0:00	12 Feb 4:00	Mill
938	**Pulverizer-1C**	**100%**	**13 days**	**07 Feb 8:00**	**20 Feb 8:00**	**Mill**
939	**Annual Inspection, Repairs and Modifications to Pulverizer - 1D**	**100%**	**3 days**	**16 Jan 8:00**	**19 Jan 8:00**	**Mill**
940	**Pulverizer-1D (Replace blade rotary separator)**	**100%**	**11.17 days**	**26 Jan 8:00**	**06 Feb 12:00**	**Mill**
941	Disconnect and remove cable with conduit limit switch for outlet valve roller no.2	100%	1 day	26 Jan 8:00	27 Jan 8:00	ICT
942	Install Scaffolding for replace blade rotary separator	100%	1 day	26 Jan 8:00	27 Jan 8:00	ES
943	Replace blade rotary separator with V-belt drive unit	100%	6 days	26 Jan 8:00	01 Feb 8:00	Mill
944	Replace seal air gasket lower housing	100%	2 days	30 Jan 8:00	01 Feb 8:00	Mill
945	Replace dust seal middle piston hydraulic loading	100%	1 day	31 Jan 8:00	01 Feb 8:00	Mill
946	Install scaffllding for Hydraulic loading no.2	100%	0.5 days	31 Jan 8:00	31 Jan 20:00	ES
947	Install cable with conduit limit switch for outlet valve and roll lif	100%	0.5 days	31 Jan 20:00	01 Feb 8:00	ICT
948	Adjust gap roller	100%	0.5 days	01 Feb 8:00	01 Feb 20:00	Mill
949	Adjust lub oil level all journal roller	100%	0.5 days	01 Feb 20:00	02 Feb 8:00	ES
950	Adjust gap Hydraulic	100%	4 hrs	06 Feb 8:00	06 Feb 12:00	Mill
951	**Annual Inspection, Repairs and Modifications to Pulverizer - 1E**	**100%**	**3 days**	**16 Jan 8:00**	**19 Jan 8:00**	**Mill**
952	**Pulverizer-1E (Replace blade rotary separator)**	**100%**	**6.5 days**	**31 Jan 8:00**	**06 Feb 20:00**	**Mill**



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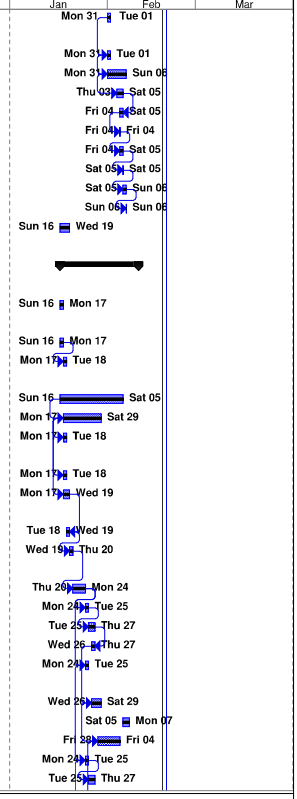
Task	Rolled Up Progress	Inactive Milestone	Finish-only	Baseline Summary
Critical Task	Split	Inactive Summary	External Tasks	Progress
Milestone	External Tasks	Manual Task	External Milestone	Deadline
Summary	Project Summary	Duration-only	Critical	
Rolled Up Task	Group By Summary	Manual Summary Rollup	Critical Split	
Rolled Up Critical Task	Inactive Task	Manual Summary	Baseline	
Rolled Up Milestone	Inactive Milestone	Start-only	Baseline Milestone	

2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
953	Disconnect and remove cable with conduit limit switch for outlet valve roller no.2	100%	1 day	31 Jan 8:00	01 Feb 8:00	ICT
954	Install Scaffolding for replace blade rotary separator	100%	1 day	31 Jan 8:00	01 Feb 8:00	ES
955	Replace blade rotary separator with V-belt drive unit	100%	6 days	31 Jan 8:00	06 Feb 8:00	Mill
956	Replace seal air gasket lower housing	100%	2 days	03 Feb 8:00	05 Feb 8:00	Mill
957	Replace dust seal middle piston hydraulic loading	100%	1 day	04 Feb 8:00	05 Feb 8:00	Mill
958	Install scaffllding for Hydraulic loading no.2	100%	0.5 days	04 Feb 8:00	04 Feb 20:00	ES
959	Install cable with conduit limit switch for outlet valve and roll lif	100%	0.5 days	04 Feb 20:00	05 Feb 8:00	ICT
960	Adjust gap roller	100%	0.5 days	05 Feb 8:00	05 Feb 20:00	Mill
961	Adjust lub oil level all journal roller	100%	0.5 days	05 Feb 20:00	06 Feb 8:00	ES
962	Adjust gap Hydraulic	100%	0.5 days	06 Feb 8:00	06 Feb 20:00	Mill
963	**Annual Inspection, Repairs and Modifications to Pulverizer - 1F**	**100%**	**3 days**	**16 Jan 8:00**	**19 Jan 8:00**	**Mill**
964	**Pulverizer-1F (OH replace journal roller, Replace planetary Gear and Replace rotary separator)**	**100%**	**25 days**	**16 Jan 8:00**	**10 Feb 8:00**	**Mill**
965	Disconnect and remove cable with conduit limit switch for outlet valve and roll lift	100%	1 day	16 Jan 8:00	17 Jan 8:00	ICT
966	Remove limit switch all outlet valve for replace separator	100%	1 day	16 Jan 8:00	17 Jan 8:00	ICT
967	Install Scaffolding remoce coal pipe for replace rotary separator	100%	1 day	17 Jan 8:00	18 Jan 8:00	ES
968	Replace journal roller 3 sets	100%	20 days	16 Jan 8:00	05 Feb 8:00	Mill
969	Replace separator complete set	100%	12 days	17 Jan 8:00	29 Jan 8:00	Mill
970	Install scaffolding for loosen bolts lock upper casing for replace separator	100%	1 day	17 Jan 8:00	18 Jan 8:00	ES
971	Disconnect power supply for remove motor	100%	1 day	17 Jan 8:00	18 Jan 8:00	LV
972	Desmantle coal pipe, feeder pipe on the pulverizer for remove rotary separator	100%	2 days	17 Jan 8:00	19 Jan 8:00	Mill
973	Remove outlet valve complete set put on the floor	100%	1 day	18 Jan 8:00	19 Jan 8:00	Mill
974	Remove scaffolding on the separator for lifting replace separator	100%	1 day	19 Jan 8:00	20 Jan 8:00	ES
975	Replacerotary separator complete set	100%	4 days	20 Jan 8:00	24 Jan 8:00	Mill
976	Install outlet valve on the separator	100%	1 day	24 Jan 8:00	25 Jan 8:00	Mill
977	Install motor and V-belt drive unit	100%	2 days	25 Jan 8:00	27 Jan 8:00	Mill
978	Connecting power supply after install motor finished	100%	1 day	26 Jan 8:00	27 Jan 8:00	LV
979	Install Scaffolding remoce coal pipe after install rotary separator	100%	1 day	24 Jan 8:00	25 Jan 8:00	ES
980	Install feeder pipe and coal pipe	100%	3 days	26 Jan 8:00	29 Jan 8:00	Mill
981	Test run rotary separator complete set	100%	2 days	05 Feb 8:00	07 Feb 8:00	Mill / ES
982	Replace planetary gear complete set	100%	7 days	28 Jan 8:00	04 Feb 8:00	Mill
983	Remove and drain lub oil for replaced planetary gear	100%	1 day	24 Jan 8:00	25 Jan 8:00	ES
984	Remove pipe line lub oil for planetary gear	100%	2 days	25 Jan 8:00	27 Jan 8:00	Mill



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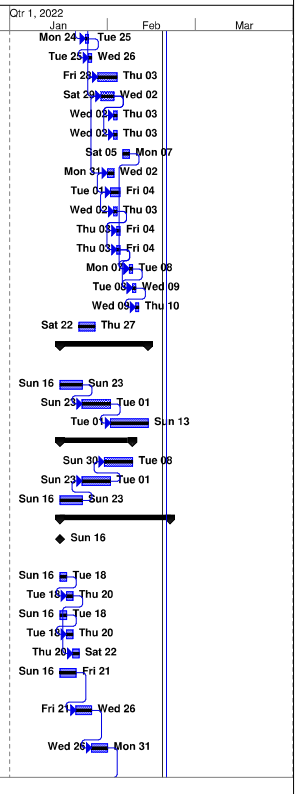
2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
985	Disconnect power supply for remove motor	100%	1 day	24 Jan 8:00	25 Jan 8:00	HV
986	Disconnect and remove cable temp and Vibration	100%	1 day	25 Jan 8:00	26 Jan 8:00	ICT
987	Replaced new planetary gear complete set and Alignment	100%	6 days	28 Jan 8:00	03 Feb 8:00	Mill
988	Connecting power supply after install motor finished	100%	4 days	29 Jan 8:00	02 Feb 8:00	HV
989	Connect and install cable temp and Vibration	100%	1 day	02 Feb 8:00	03 Feb 8:00	ICT
990	Refill lub oil in the new planetary gear	100%	1 day	02 Feb 8:00	03 Feb 8:00	ES
991	Test run planetary gear with grinding Table	100%	2 days	05 Feb 8:00	07 Feb 8:00	Mill / ES
992	Replace seal air gasket lower housing	100%	2 days	31 Jan 8:00	02 Feb 8:00	Mill
993	Replace wear parts internal pulverizer	100%	3 days	01 Feb 8:00	04 Feb 8:00	Mill
994	Replace dust seal middle piston hydraulic loading	100%	1 day	02 Feb 8:00	03 Feb 8:00	Mill
995	Install scaffllding for Hydraulic loading no.2	100%	1 day	03 Feb 8:00	04 Feb 8:00	ES
996	Install cable with conduit limit switch for outlet valve and roll lif	100%	1 day	03 Feb 8:00	04 Feb 8:00	ICT
997	Adjust gap roller	100%	1 day	07 Feb 8:00	08 Feb 8:00	Mill
998	Adjust lub oil level all journal roller	100%	1 day	08 Feb 8:00	09 Feb 8:00	ES
999	Adjust gap Hydraulic	100%	1 day	09 Feb 8:00	10 Feb 8:00	Mill
1000	**Annual Inspection of Pulverizer Spillage System**	**100%**	**5 days**	**22 Jan 8:00**	**27 Jan 8:00**	**Mill**
1001	**Overhaul maintenance of pulverizer Inert Steam valves for Puverizer system**	**100%**	**28 days**	**16 Jan 8:00**	**13 Feb 8:00**	**Mill**
1002	OH inerting steam valve pulverizer 1A and 1B	100%	7 days	16 Jan 8:00	23 Jan 8:00	Mill
1003	OH inerting steam valve pulverizer 1C and 1D	100%	9 days	23 Jan 8:00	01 Feb 8:00	Mill
1004	OH inerting steam valve pulverizer 1E and 1F	100%	12 days	01 Feb 8:00	13 Feb 8:00	Mill
1005	**Annual inspection coal feeder for PUL. 1A to 1F**	**100%**	**23 days**	**16 Jan 8:00**	**08 Feb 8:00**	**Mill**
1006	Replace inlet chute and PM coal feeder 1A and 1B	100%	9 days	30 Jan 8:00	08 Feb 8:00	Mill
1007	Replace inlet chute and PM coal feeder 1C and 1D	100%	9 days	23 Jan 8:00	01 Feb 8:00	Mill
1008	Replace inlet chute and PM coal feeder 1E and 1F	100%	7 days	16 Jan 8:00	23 Jan 8:00	Mill
1009	**Annual inspection coal pipe for PUL.**	**100%**	**35 days**	**16 Jan 8:00**	**20 Feb 8:00**	**Mill**
1010	Install Scaffolding for inspection coal pipe before shut down finish	100%	0 days	16 Jan 8:00	16 Jan 8:00	ES
1011	Install Scaffolding for inspection coal pipe on Pul' 1B	100%	2 days	16 Jan 8:00	18 Jan 8:00	ES
1012	Install Scaffolding for inspection coal pipe on Pul' 1C	100%	2 days	18 Jan 8:00	20 Jan 8:00	ES
1013	Install Scaffolding for inspection coal pipe on Pul' 1D	100%	2 days	16 Jan 8:00	18 Jan 8:00	ES
1014	Install Scaffolding for inspection coal pipe on Pul' 1E	100%	2 days	18 Jan 8:00	20 Jan 8:00	ES
1015	Install Scaffolding for inspection coal pipe on Pul' 1F	100%	2 days	20 Jan 8:00	22 Jan 8:00	ES
1016	Group1 - Dismantle/clean/inspect and reassembly the bend pipe 9 sets	100%	5 days	16 Jan 8:00	21 Jan 8:00	Mill
1017	Group2 - Dismantle/clean/inspect and reassembly the bend pipe 9 sets	100%	5 days	21 Jan 8:00	26 Jan 8:00	Mill
1018	Group3 - Dismantle/clean/inspect and reassembly the bend pipe 9 sets	100%	5 days	26 Jan 8:00	31 Jan 8:00	Mill



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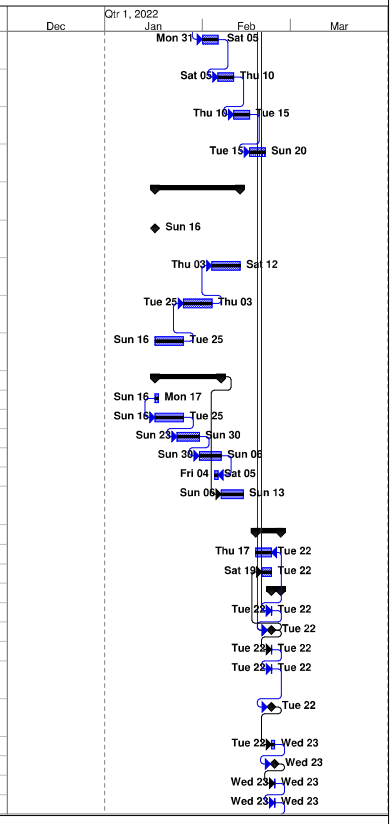
2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
1019	Group4 - Dismantle/clean/inspect and reassembly the bend pipe 9 sets	100%	5 days	31 Jan 8:00	05 Feb 8:00	Mill
1020	Group5 - Dismantle/clean/inspect and reassembly the bend pipe 9 sets	100%	5 days	05 Feb 8:00	10 Feb 8:00	Mill
1021	Group6 - Dismantle/clean/inspect and reassembly the bend pipe 9 sets	100%	5 days	10 Feb 8:00	15 Feb 8:00	Mill
1022	Group7 - Dismantle/clean/inspect and reassembly the bend pipe 9 sets	100%	5 days	15 Feb 8:00	20 Feb 8:00	Mill
1023	**Annual inspection primary Hot & Cold air damper for Pulverizer system**	**100%**	**27 days**	**16 Jan 8:00**	**12 Feb 8:00**	**Mill**
1024	Install Scaffolding for inspec and repair damper before shut down finish	100%	0 days	16 Jan 8:00	16 Jan 8:00	ES
1025	Annual inspection primary Hot & Cold air damper for PUL. 1A & 1B	100%	9 days	03 Feb 8:00	12 Feb 8:00	Mill
1026	Annual inspection primary Hot & Cold air damper for PUL. 1C & 1D	100%	9 days	25 Jan 8:00	03 Feb 8:00	Mill
1027	Annual inspection primary Hot & Cold air damper for PUL. 1E & 1F	100%	9 days	16 Jan 8:00	25 Jan 8:00	Mill
1028	**Annual inspection Outlet valve for Pulverizer system**	**100%**	**21 days**	**16 Jan 8:00**	**06 Feb 8:00**	**Mill**
1029	Disconnect and remove limit switch for outlet valve	100%	1 day	16 Jan 8:00	17 Jan 8:00	ICT
1030	Annual inspection Outlet valve for PUL. 1A & 1B	100%	9 days	16 Jan 8:00	25 Jan 8:00	Mill
1031	Annual inspection Outlet valve for PUL. 1C & 1D	100%	7 days	23 Jan 8:00	30 Jan 8:00	Mill
1032	Annual inspection Outlet valve for PUL. 1E & 1F	100%	7 days	30 Jan 8:00	06 Feb 8:00	Mill
1033	Install and connect limit switch for outlet valve	100%	1 day	04 Feb 8:00	05 Feb 8:00	ICT
1034	**Annual inspection Dust collector for coal bunker - unit 1 (floor 6)**	**100%**	**7 days**	**06 Feb 8:00**	**13 Feb 8:00**	**Mill**
1035	**Operation start up plant**	**100%**	**7.96 days**	**17 Feb 13:00**	**25 Feb 12:00**	**OPS**
1036	**Return all permit**	**100%**	**5 days**	**17 Feb 13:00**	**22 Feb 15:00**	**OPS**
1037	OPS start to line up and check sheet	100%	3 days	19 Feb 15:00	22 Feb 15:00	OPS
1038	***Start Up***	***100%***	***3.13 days***	***22 Feb 9:00***	***25 Feb 12:00***	***OPS/ENG***
1039	*Air flow and Draft confirmation test by OPS start*	*100%*	*1 hr*	*22 Feb 9:00*	*22 Feb 10:00*	*OPS*
1040	***Boiler light Off #1***	***100%***	***0 hrs***	***22 Feb 10:00***	***22 Feb 10:00***	***OPS***
1041	*Condenser vacuum up*	*100%*	*4 hrs*	*22 Feb 10:00*	*22 Feb 14:00*	*OPS*
1042	*Increase speed to 0 rpm to 500 rpm ; 1.5 hours @500 rpm : rub check*	*100%*	*1 hr*	*22 Feb 14:00*	*22 Feb 15:00*	*OPS , TB , ES*
1043	MFT because M-BFP booster pump inlet strainer differential pressure high high >0.5 bar	100%	0 days	22 Feb 15:00	22 Feb 15:00	OPS
1044	***Clean strainer CEP & MBFP#1***	***100%***	***22 hrs***	***22 Feb 15:00***	***23 Feb 13:00***	***TB, OPS***
1045	***Boiler light Off #2***	***100%***	***0 hrs***	***23 Feb 13:00***	***23 Feb 13:00***	***OPS***
1046	*Condenser vacuum up*	*100%*	*3 hrs*	*23 Feb 13:00*	*23 Feb 16:00*	*OPS*
1047	*Increase speed to 0 rpm to 500 rpm*	100%	15 mins	23 Feb 16:00	23 Feb 16:15	*OPS*



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Task
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Baseline
Baseline Milestone
Baseline Summary
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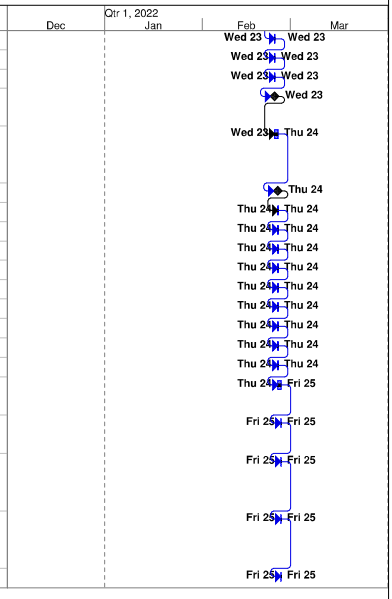
Deadline

2022 unit 1 Draft Outage Schedule

ID	Task Name	% Complete	Duration	Start	Finish	RO
1048	Hold speed@500 rpm : rub check	*100%*	*30 mins*	*23 Feb 16:15*	*23 Feb 16:45*	*OPS , TB , ES*
1049	*Increase speed 500 rpm to 1900 rpm*	*100%*	*25 mins*	*23 Feb 16:45*	*23 Feb 17:10*	*OPS*
1050	Hold speed@1900 rpm : Heat soak	100%	30 mins	23 Feb 17:10	23 Feb 17:40	*OPS , TB , ES*
1051	MFT because M-BFP booster pump inlet strainer differential pressure high high >0.5 bar	100%	0 days	23 Feb 17:40	23 Feb 17:40	*OPS*
1052	***Clean strainer BFP#2, inspection D/A feedwater storage tank, inspection Condenser hotwell A/B, Debis filter inspection and repair***	***100%***	***21 hrs***	***23 Feb 17:40***	***24 Feb 14:40***	***TB, OPS***
1053	***Boiler light Off #3***	***100%***	***0 days***	***24 Feb 14:40***	***24 Feb 14:40***	***OPS***
1054	*Condenser vacuum up*	*100%*	*110 mins*	*24 Feb 14:40*	*24 Feb 16:30*	*OPS*
1055	*Increase speed 0 to 1900 rpm*	*100%*	*0.5 hrs*	*24 Feb 16:30*	*24 Feb 17:00*	*OPS*
1056	Hold speed@1900 rpm : Heat soak	100%	2 hrs	24 Feb 17:00	24 Feb 19:00	OPS
1057	*Increase speed 1900 rpm to 3000 rpm*	*100%*	*20 mins*	*24 Feb 19:00*	*24 Feb 19:20*	*OPS*
1058	Collect data 1 hour @ 3000 rpm	100%	1 hr	24 Feb 19:20	24 Feb 20:20	OPS , ES
1059	***Confirm data EIT***	***100%***	***10 mins***	***24 Feb 20:20***	***24 Feb 20:30***	***MELCO***
1060	***Unit Syn. Initial load 36 MW***	***100%***	***1 hr***	***24 Feb 20:30***	***24 Feb 21:30***	***OPS***
1061	***Confirm data 20 min.***	***100%***	***10 mins***	***24 Feb 21:30***	***24 Feb 21:40***	***MELCO***
1062	***At 25% load (Load 161 MW)***	***100%***	***110 mins***	***24 Feb 21:40***	***24 Feb 23:30***	***OPS***
1063	***Load 165 MW LP,HP heater flushing ERT, BFPT clean strainer***	***100%***	***2.5 hrs***	***24 Feb 23:30***	***25 Feb 2:00***	***OPS/MELCO***
1064	**Load 334 MW, Steam drum hot bolt, BFPT clean strainer, ERT**	**100%**	**4 hrs**	**25 Feb 2:00**	**25 Feb 6:00**	**OPS/BL**
1065	**Boiler PSV Travi Test (Steam drum and SH), at Load 470 MW, Range pressure 130 barg – 156.7 barg @Steam Drum & silica purging >> Resumption test, ERT**	**100%**	**3.5 hrs**	**25 Feb 6:00**	**25 Feb 9:30**	**BL**
1066	**Boiler PSV Travi Test (RH inlet & outlet and Soot blower), at Load 640 MW, Range pressure 175.4 barg - 181.9 barg @Steam Drum >> Resumption test ERT**	**100%**	**2 hrs**	**25 Feb 9:30**	**25 Feb 11:30**	**BL**
1067	***Full load ERT***	***100%***	***0.5 hrs***	***25 Feb 11:30***	***25 Feb 12:00***	***OPS***



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Baseline Summary
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ภาคผนวก ง-2

ข้อกำหนดการทำงานในบริเวณที่มีเสียงดัง

BLCP POWER

BLCP INSTRUCTION	BLCP	I	SHE	01	007	H
Title: **Noise Protection**						

[redacted]

Associated Documents:	BLCP-MP-SHE-01-003 Hearing Conservation Policy BLCP-P-SHE-01-001 Hazards Identification, Risk Assessment and Control of Risks BLCP-P-SHE-01-004 Working in Confined Spaces BLCP-P-SHE-01-003 Use of Personal Protective Equipment and Safety Equipment BLCP-F-SHE-01-003 Noise Risk Assessment

Change History

Rev	Date	Author	Owner	Endorsed By	Authorized By	Modifications/Reason for change	Status
A	11/09/06	RWD	Safety Engineer	N/A	SHE Mgr	First Issue	Withdrawn
B	28/11/08	RWD	Safety Engineer	N/A	SHE Mgr	Second Issue	Withdrawn
C	18/10/10	PM	SHM	SHM	GM	1. Issue to BLCP template and new coding (refer to BLCP-P-CS-01-001) 2. Add Hearing conservation program	Withdrawn
D	06/12/12	Safety Engineer	SH Mgr.	SH Mgr.	GM	Adding hearing protection must be wore on item # 5	Withdrawn
E	05/03/15	Safety Engineer	SH Mgr.	OD	GM	Revised the Control of record Add Disposable hearing protection for CCB & Work shop	Withdrawn

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F	22/03/17	Safety Engineer	SH Mgr.	OD	DGM	Add definition of TWA, dB (A) and table summarizes the differences between ear plugs and ear muffs	Withdrawn
G	05/04/19	Safety Engineer	SH Mgr.	OD	GM	• Adding Decibel, TWA, Hearing Protection Zone, Sound level meter, Noise dosimeter into tem#3 • Adding hearing conservation program into item #4 • Updated standard limit of noise level into item #5	Withdrawn
H	25/02/22	Safety and Security Engineer/ Occupational Health Engineer	SH Mgr.	DGM/GM	MD	1. Revised Author responsibility from Safety Engineer to Safety and Security Engineer and Occupational Health Engineer 2. Revised Endorsed responsibility from OD to DGM and GM 3. Revised Approved responsibility from GM to MD 4. Revised instruction coding from SH to SHE	Issued

CONTENTS

1. Introduction/Purpose
2. Scope
3. Definition
4. Responsibilities
5. Instruction
6. Training
7. Control of Records
8. Review and Audit

Appendix

Appendix A: Ear plugs and ear muffs comparison for using

1. Introduction/Purpose

This Instruction sets out the precautions to be considered when working in the noise exposure area at BLCP Power Station.

2. Scope

This Instruction to be considered as part of the control measures when working is required noise risk assessment. The risk of noise induced hearing loss can be reduced by the implementation of the precautions, control of noise source, or passive control by effective PPE used.

3. Definition

Time-weighted average (TWA) sound level - That sound level, which is constant over an 8 hours of exposure would result in the same noise dose as is measured.

Decibel (dB) - Unit of measurement of sound level.

dB (A) -A decibel, or dB, is an appraised signal strength in terms of relative loudness heard by the ears.

Action level - An 8 hours time-weighted average of 85 decibels measured on the A-scale, slow response of noise level at working area.

Criterion sound level - A sound level of 85 decibels.

Noise dosimeter - An instrument that integrates a function of sound pressure over a period of time in such a manner that it directly indicates a noise dose.

Representative exposure - Measurements of an employee's noise dose or 8 hours time-the weighted average sound level that the employers deem to be representative of the exposures of other staff in the workplace.

Sound level meter - An instrument for the measurement of sound level.

Hearing Protection Zones - A working area that noise level exceeds standard limit or noise level over 85 dB (A).

4. Responsibilities

Nominated Supervisors are responsible for determining what control measures are required to reduce the risk to the lowest level reasonably practicable whenever work activities are exposed to noise, a written noise risk assessment must be carried out by a Competent Risk Assessor. SH Manager/Safety and Security Engineer are responsible for providing risk assessment training and auditing compliance with this instruction.

BLCP POWER

SH Team is responsible to conduct the hearing conservation program in case of the Time Weighted Average-TWA (the daily personal noise exposure for a normal 8 hour working day) of 85 dB (A) is exceeded.
The hearing conservation program consists of:

- Hearing conservation policy
- Noise monitoring practice
- Hearing monitoring
- Noise contour map with signs and noise level alert communication.
- Noise level control with personal protection equipment (PPE) enforcement.
- Audiometric sting test and compare the result with baseline audiogram.
- Review noise management program.

All staff are required to wear hearing protection in Hearing Protection Zones, to use and maintain such equipment by training and instruction provided.

All staff are required to report plant defects that are producing high noise levels to their line manager immediately so that arrangements can be made for a noise assessment to be carried out.

5. Instruction

To control the exposure of all staff, the contractors and visitors engaged by BLCP Power Station to noise, the following instruction will be applied:

- Where the Time Weighted Average-TWA (the daily personal noise exposure for a normal 8 hour working day) of 85 dB(A) is exceeded, engineering solutions will be applied where practical to do so, to reduce the noise to the lowest level reasonably practical.
- In plant areas where the noise intensity cannot be reduced to TWA of 85 dB(A), then these areas will be designated as Hearing Protection Zones in which the wearing of hearing protection will be mandatory when the plant is running.
- Noise surveys will be undertaken by the Safety and Health department in all plant areas by a pre-determined plan at designated positions around the plant.
- The results of noise surveys will be communicated to all persons who may be affected.
- All BLCP staff will undergo audiometric testing yearly for the first years following their baseline audiogram taken at the time of joining BLCP Power Station and every year thereafter.
- Contractors will be advised in writing at the Tendering Stage of the Contract of the requirement to wear hearing protection in Hearing Protection Zones and this will be re-enforced during health and safety induction courses for contractors' staff before starting work.
- BLCP Staff will be consulted with the Safety and Health department regard to the selection of hearing protection.
- All BLCP staff that exposes noise will receive training on workplace access/SH module by the Safety Health department. Regular refreshment training and evaluation will be given every three years.

- BLCP staff, contractor workers who work or perform jobs at hearing protection zone that means noise level exceeded standard limit [over 85dB (A)] warning sign shall wear personal hearing protection (earplugs or earmuffs) at all working time to reduce the noise level.

Noise Risk Assessment

All staff are required to report plant defects that are producing high noise levels to their line manager immediately so that arrangements can be made for a noise assessment to be carried out. Noise risk assessments are to be carried out by the nominated supervisor when their staff report high noise levels or when required by using Noise Risk Assessment Form (BLCP-F-SHE-01-003).

Hearing Protection Zones

Hearing Protection Zones are areas of the plant where noise intensity levels exceed TWA of 85 dB (A) for 8 hours when the plant is running. Inside Hearing Protection Zones, all persons must wear hearing protection (earplugs or earmuffs) when the plant is running.
These zones will be designated at every point of access by the following safety sign and the words, **"Hearing Protection Must Be Worn".**



Hearing Protection for staff and visitors

Disposable hearing protection will be made available from the 1st floor of Administration Building (Exit door near first aid room), Control Center Building (CCB) 3rd floor, and 1st floor in front of elevator area, in front of the entrance of unit 2 turbine building, jetty office, and Work Shop. Contractors are required to provide hearing protection for their staff and visitors requiring access to Hearing Protection Zones when the plant is running, or where noise levels exceed the standard limits or noise level over 85 dB(A).
Reference noise protection program based on local regulatory requirements such as Department of Labour Protection and Welfare (DLPW) regulation B.E. 2549 and announcement B.E. 2561

6. Training

Training will be provided for the concerned Managers by the Owner of this instruction. The Managers will then cascade training to their team members as appropriate via briefing and/or on-the-job training.

7. Control of Records

All records covered within this instruction provide evidence of the ongoing operation and should be managed by the requirements of the BLCP-P-EN-02-001 Document control. All records must be readily available for scrutiny and other audits.

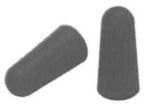
8. **Review and Audit**

All BLCP Procedures and Instructions will be subject to review every two years unless the need arises before the planned review date. Additionally, this procedure will be subject to audit by BLCP-P-SHE-03-003 – SHE Audit and Review. Any inaccuracies or omissions in this procedure should be notified to the procedure Owner immediately.

Appendix A: Earplugs and earmuffs comparison for using

The following table summarizes the differences between earplugs and earmuffs.

Comparison of Hearing Protection	
Earplugs	**Earmuffs**
Advantages: • small and easily carried • convenient to use with other personal protection equipment (can be worn with earmuffs) • more comfortable for long-term wear in hot, humid work areas • convenient for use in confined work areas	**Advantages:** • less attenuation variability among users • designed so that one size fits most head sizes • easily seen at a distance to assist in the monitoring of their use • not easily misplaced or lost • maybe worn with minor ear infections
Disadvantages: • requires more time to fit • more difficult to insert and remove • require good hygiene practices • may irritate the ear canal • easily misplaced • more difficult to see and monitor usage	**Disadvantages:** • less portable and heavier • more inconvenient for use with other personal protective equipment. • more uncomfortable in the hot, humid work area • more inconvenient for use in confined work areas • may interfere with the wearing of safety or prescription glasses: wearing glasses results in breaking the seal between the earmuffs and the skin and results in decreased hearing protection.







ภาคผนวก ง-3

โครงการอนุรักษ์การได้ยินของพนักงานโรงไฟฟ้าบีแอลซีพี

BLCP POLICY	BLCP	MP	SHE	01	003	G
Title: **Hearing Conservation Policy**						

[redacted]

Next Review Date:	November 2024	Effective Date :	2 Dec 2022
		Key Policies :	No
Associated Documents:	1. BLCP-DCC-LAW-0653 หลักเกณฑ์และวิธีการจัดทำมาตรการอนุรักษ์การได้ยินในสถานประกอบกิจการ 12 มิถุนายน 2561 2. BLCP-I-SHE-01-007; Noise Protection		

Change History

Rev	Date	Author	Owner	Endorsed By	Authorized By	Modifications/Reason for change	Status
A	8/09/10	PM	SHM	GM	MD	First Issue	Withdrawn
B	14/12/12	Safety Engineer	SHM	GM	MD	Merge the policy from six to five items	Withdrawn
C	17/08/15	Safety Engineer	SHM	GM	MD	- Add more safety engineer responsibility - Revise the review frequency to of this policy (twice years review)	Withdrawn
D	27/11/17	Safety Engineer	SHM	GM	MD	- To follow up new version of ISO 14001 requirement by change stakeholders to interested parties	Withdrawn
E	16/04/20	Assistant SH Manager	SHM	DGM/GM	MD	1. Annual review 2. Revised Author responsibility from Safety Engineer to Assistant SH Manager	Withdrawn

						LAW-0269 : Announcement by Department of Labor Protection and Welfare for hearing conservation program B.E 2553 /ประกาศกรมสวัสดิการและคุ้มครองแรงงานเรื่อง หลักเกณฑ์และวิธีการจัดทำโครงการอนุรักษ์การได้ยินในสถานประกอบกิจการ พ.ศ. 2553 to BLCP-DCC-LAW-0653 หลักเกณฑ์และวิธีการจัดทำมาตรการอนุรักษ์การได้ยินในสถานประกอบกิจการ 12 มิถุนายน 2561	
F	26/11/21	Occupational Health Engineer	SH Mgr.	DGM/GM	MD	1. Revised Author responsibility from Assistant SH Manager to Occupational Health Engineer 2. Added DGM to Endorsed responsibility 3. Revised policy coding from SH to SHE	Withdrawn
G	2/12/22	Occupational Health Engineer	SH Mgr.	DGM/GM	MD	Regular review without change	Issued

CONTENTS

1. Introduction/Purpose
2. Scope
3. Definition
4. Responsibilities
5. Policy
6. Training
7. Control of Records
8. Review and Audit

Appendix: N/A

1. INTRODUCTION/PURPOSE

The purpose of this policy is to define a hearing conservation policy in accordance with the Department of Labor Protection and Welfare for hearing conservation.

2. SCOPE

This policy is applicable to all activities within BLCP Power's scope of responsibility.

3. DEFINITION

Hearing conservation means the different measures taken to reduce exposure to noise, such as wearing hearing protection.

4. RESPONSIBILITY

The SH Manager is responsible for this policy and development of suitable procedures to ensure that it is successfully implemented.

The Occupational Health Engineer is responsible for coordinating the noise control and hearing conservation program, for directing periodic monitoring and evaluation of sources of potentially high noise exposure and ensuring that education and training is accomplished for relevant employees and contractors.

5. POLICY

BLCP Power Station prepare hearing conservation through the proper use of hearing protection and annual hearing test to detect early evidence of a decline in the ability to hear and according to the SHE Policy concerning the Safety, Health and the Environment of our employees, contractors, stakeholders and interested parties in accordance with Thai law on hearing conservation.

(English Version)
BLCP Power is committed to implement hearing conservation by the following means:

1. Establish and implement the Safety Health and Environment management system to comply with all relevant laws and regulations that support hearing conservation.
2. Where practicable eliminate or suppress sources of noise.
3. Perform noise monitoring and hearing surveillance. Communicate with employees, contractors and interested parties in matters of hearing conservation.
4. Encouraging all employees and interested parties to take responsibility and provide the necessary resources to support the hearing conservation program.
5. The hearing conservation program will be reviewed and updated annually in order to allow continuous improvement.

(Thai Version) บริษัท บีแอลซีพี เพาเวอร์ จำกัด มุ่งมั่นที่จะให้มีการดำเนินการด้านการอนุรักษ์การได้ยินโดยกำหนดนโยบายการอนุรักษ์การได้ยินดังนี้

1. ดำเนินการและพัฒนาระบบการจัดการอาชีวอนามัยและความปลอดภัย ตามมาตรฐานความปลอดภัยที่เกี่ยวข้องอย่างเหมาะสมและสอดคล้องกับข้อกำหนดของกฎหมายและข้อกำหนดอื่นๆ เพื่อสนับสนุนในด้านการอนุรักษ์การได้ยิน
2. ดำเนินการลด และกำจัด แหล่งกำเนิดเสียงให้ได้มากที่สุดเท่าที่สามารถจะทำได้
3. ดำเนินการเฝ้าระวัง ติดตาม ตรวจสอบ พื้นที่ ที่มีเสียงดัง และสื่อสารให้พนักงาน ผู้รับเหมา รวมทั้งผู้เกี่ยวข้องทุกคนให้ทราบ
4. ส่งเสริม สนับสนุนให้พนักงานและผู้มีส่วนเกี่ยวข้องทุกคน มีส่วนร่วมและให้การสนับสนุนทรัพยากรทั้งในเรื่อง บุคลากร เวลา งบประมาณ และการฝึกอบรมที่เหมาะสมและเพียงพอ เพื่อสนับสนุนการดำเนินกิจกรรมอนุรักษ์การได้ยินที่จัดทำขึ้นในองค์กร
5. จัดให้มีการประเมินผลการดำเนินโครงการ นโยบายการอนุรักษ์การได้ยินที่กำหนดไว้ข้างต้นเป็นประจำทุกปี เพื่อให้มีการปรับปรุงอย่างต่อเนื่อง

6. TRAINING

This policy will be communicated to staff and contractors via site induction training and safety forums.

7. CONTROL OF RECORDS

There are no records associated with this policy.

8. REVIEW AND AUDIT

This policy will be reviewed and updated annually unless the need arises before the planned review date. Any hearing conservation procedures and instructions will be subject to review and audit in accordance with the requirements of BLCP-P-SHE-03-003 – Safety, Health and Environment Audit and Review. Any inaccuracies or omissions in this policy should be notified to the policy owner immediately.