UNIT TRIPPING REPORT

UNIT No: 2   STATION: NTPL, TUTICORIN.

OUTAGE NO: 91

REPORT NO: 91

1.Date of tripping	: 24-08-2024
2.Time of tripping	: 01:43Hrs
3.Status before tripping	
a) Unit load	: 393MW
b) Mills in service	: A, C, E, G & H
c) Oil guns in service	: NIL
d) Boiler feed pumps in service	: TDBFP A & B
e) CEPs in service	: A & B
f) ID fans in service	: A & B
g) FD fans in service	: A & B
h) PA fans in service	: A & B
i) CWP in service	: A & B
4.First Up protection acted	: Turbine Tripped on Control fluid pr low
5.Other relays/protection acted	: Boiler tripped on reheater protection.
6.Supporting documents attached	: S.O.E & Trends
7.Any operation done prior to tripping	: Nil
8.Analysis of tripping	:

Unit was running at 393 MW in CMC. HPCF pump 2 got tripped @01:43 hrs and HPCF pump 1 came into service but control oil pressure did not develop resulted in turbine trip, vacuum breaker opened on control oil pressure low and condenser vacuum deteriorated resulted in HP & LP bypass trip close and boiler got tripped on Re heater protection.

9. Root cause   :

Running HPCF pump motor has failed and standby HPCF pump has started but control oil pressure not developed, due to Foaming/air lock. Standby pump pressure not developing, which is the root cause of unit trip.

10. Remedial measures taken/to be taken:

    i.   Venting provision may be provided in HPCF discharge line to tank.

    ii.   HPCF pump-2 motor replaced and taken into service

11. Time/Date of boiler light up and sync:

                  Light Up: : 02:10 Hrs on 24/08/2024

                  Sync'd: : 03:45 Hrs on 24/08/2024

12. Delay for Synchronization   : NIL

13. Recommendation / Action plan   :

    i) Venting provision may be provided in HPCF discharge line to tank, with a root valve.

    ii) Periodical start/stop of stand by HPCF pump to be done to ensure the stand by pump is developing pressure.

14. Any specific learning / feedback   :

    i.   Healthiness of HPCF motor is to be checked periodically.

EE/EEMG

EE / OS

DCE / C&I

ACM /OS
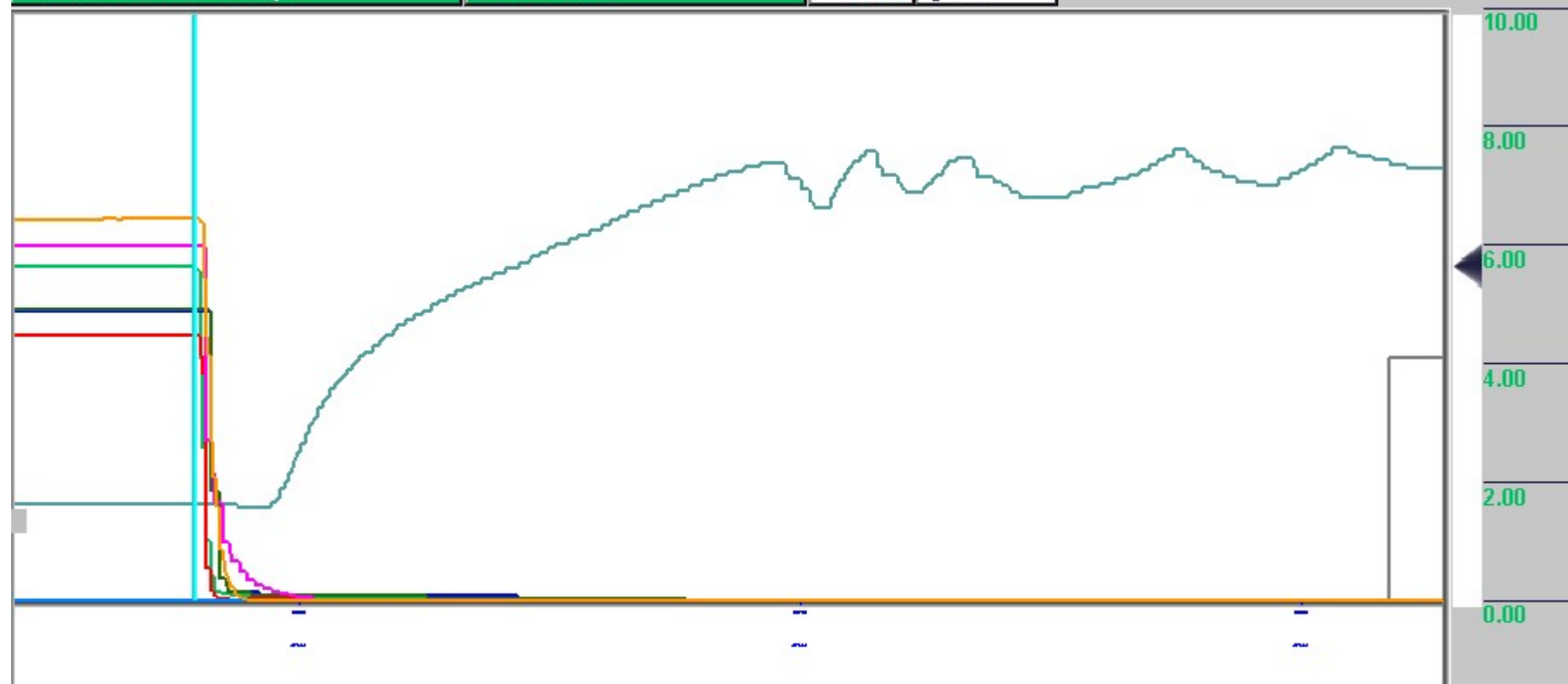
CM/OS

Copy submitted to CEO / NTPL

Copy submitted to GM/O&M

Copy submitted to CM/TMD

Dynamic 8 Point Trend

2MAX45CP002XQ01.Out.Sample | SEC OIL PR TO IP | 5.7323 Kg/cm2

24Aug2024 01:43:47.6

	ACTUAL LOAD	391.7976		HPCF PR BEF PMP-1	-0.1071
	HPCF PR BEF PMP-2	36.4373		TRIP FLUID PRESS	7.9564
	TRIP FLUID PRESS	7.9081		SEC OIL PR TO HP	4.5575
	SEC OIL PR TO IP	5.7323		2condvacsel.Out.Sample	0.1334
	MFT CH 1	0.0000		.Out.Sample	Pending...

Dynamic 8 Point Trend

2MAX51CP001XQ01.Out.Sample	TRIP FLUID PRESS	-0.0549	KG/CM2
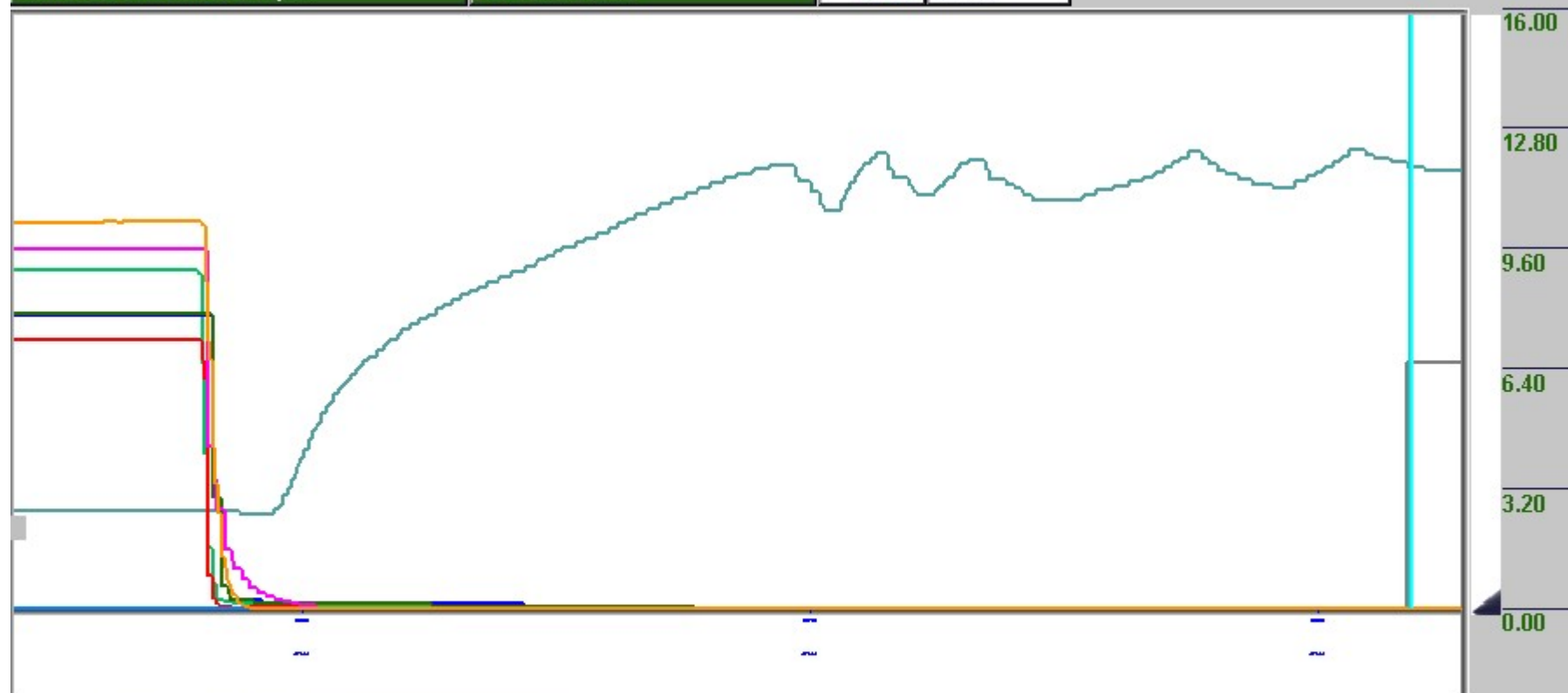
24Aug2024 01:46:11.1

ACTUAL LOAD	0.2693		HPCF PR BEF PMP-1	-0.1071
HPCF PR BEF PMP-2	-0.2966		TRIP FLUID PRESS	-0.0549
TRIP FLUID PRESS	-0.0886		SEC OIL PR TO HP	-0.0169
SEC OIL PR TO IP	-0.0192		2condvacsel.Out.Sample	0.5970
MFT CH 1	1.0000		.Out.Sample	Pending...

Event Summary

☑ Start Time: Saturday 24/Aug/2024 ▼ 01:43 ⬍ ☑ End Time: Saturday 24/Aug/2024 ▼ 01:47 ⬍ ▶ ⏭ ■ 🖼 🖨 ↶ ▽ₓ 3425

Time ▲	TagName	Description	Event Text
24/Aug/24 01:43:47.390	2MAX16AP002XB01	HPCF PUMP-2 FDBK	Digital_State Old=ON New=FALSE 2ATR
24/Aug/24 01:43:47.393	2MAX16AP002XB02	HPCF PUMP-2 FDBK	Digital_State Old=FALSE New=OFF 2AT
24/Aug/24 01:43:47.866	2MAB10CG001BXG01	POS OF INTCPT ESV-1 LHS	Digital_State Old=OPEN New=FALSE 2A
24/Aug/24 01:43:47.867	2MAB10CG001DXG01	IP STOP VLV-1(LHS)	Digital_State Old=100 % New=FALSE 2
24/Aug/24 01:43:47.899	2MAA20CG001CXG02	POS OF HP ESV-2 RHS	Digital_State Old=FALSE New=CLOSE
24/Aug/24 01:43:47.900	2MAA10CG001BXG51	POS OF HP ESV-1 LHS	Digital_State Old=FALSE New=NOT OP
24/Aug/24 01:43:48.491	2MAB20CG001EXG52	IP STOP VLV-2(RHS)	Digital_State Old=>0 % New=FALSE 2A
24/Aug/24 01:43:48.491	2MAB10CG001EXG52	IP STOP VLV-1(LHS)	Digital_State Old=> 0 % New=FALSE 2A
24/Aug/24 01:43:48.822	2TurHPSV2_Clsd		Digital_State Old=FALSE New=TRUE 2
24/Aug/24 01:43:48.907	2MAG10AA001XB02	VACCUM BRKR FDBK	Digital_State Old=OFF New=FALSE 2AT
24/Aug/24 01:43:49	2MKY02GX219_XG51	STG1 AVR CH-2 MANUAL	Alarm Digital Value =FAULT 2B24CRE6
24/Aug/24 01:43:49	2MKY02GX214_XG51	STG1 AVR CH-1 MANUAL	Alarm Digital Value =FAULT 2B24CRE6
24/Aug/24 01:43:50	2MAA01EG001ZV02_1	TURBINE	Alarm Digital Value =TRIPPED 2ATRS1_
24/Aug/24 01:43:50	22TURBINE_TRIPPD	TURBINE TRIPPED FROM ...	Alarm Digital Value =TURBINE TRIP 2E
24/Aug/24 01:43:50	2MAA00EG001_ZV09...	TUR SHFT VIB	Alarm Clear Value =N HIGH 2ATRS1_s
24/Aug/24 01:43:50	2MAA00EG001_ZV08...	TUR BRG VIB	Alarm Digital Value =HIGH 2ATRS1_s
24/Aug/24 01:43:50	2BLIVE_PR_LOW_1	LIVE STM PR LOW	Alarm Digital Value =TRUE 2TATRSB2_
24/Aug/24 01:43:50	2MKY02GX222_XG48	STG1 AVR COM ALARM I	Alarm Digital Value =OPERATED 2B24C
24/Aug/24 01:43:50	2MSFLT40Pct	MSF LOAD <40%	Alarm Digital Value =True 2B10CRE23_s
24/Aug/24 01:43:50	2MSFGT30Pct	MSF LOAD >30%	Alarm Clear Value =False 2B10CRE23_s
24/Aug/24 01:43:50	2MSFGT25Pct	MSF LOAD >25%	Alarm Clear Value =False 2B10CRE23_s

Event Summary (filtered)

☑ Start Time: Saturday 24/Aug/2024 ▾ 01:43 ⬍ ☑ End Time: Saturday 24/Aug/2024 ▾ 01:47 ⬍ ▶ ▮ ■ 🗗 🖶 ↶ ▽ₓ 3425

Time △	TagName	Description	Event Text
24/Aug/24 01:46:09	2CEPAFlowLow	CEP-A Flow Low	Alarm Clear Value =N.True 2B12CRE29_
24/Aug/24 01:46:09	2MillOffHCADOpnG	MILL-G Off HAD/CAD Open	Alarm Clear Value =FALSE 2B08CRE19
24/Aug/24 01:46:09.152	2Speed_Slope_Low		Digital_State Old=TRUE New=FALSE 2E
24/Aug/24 01:46:09.231	21MAN51EZ110YT02	LPBP2 PROT TRIP CMD1.2	Digital_State Old=FALSE New=ON 2TP1
24/Aug/24 01:46:09.231	21MAN51EZ110YT01	LPBP2 PROT TRIP CMD1.1	Digital_State Old=FALSE New=ON 2TP1
24/Aug/24 01:46:09.272	2Speed_Slope_Low		Digital_State Old=FALSE New=TRUE 2E
24/Aug/24 01:46:09.371	2HBK01EG200_XE52	RHP TRIP	Digital_State Old=FALSE New=TRUE 2N
24/Aug/24 01:46:09.635	2HBK01EG300_XE52	RHP TRIP	Digital_State Old=FALSE New=TRUE 2N
24/Aug/24 01:46:09.637	2HBK01EG100_XE52	RHP TRIP	Digital_State Old=FALSE New=TRUE 2N
24/Aug/24 01:46:09.687	22HBK01EZ110ZK97	TP1 MFT PROT TP CH-1	Digital_State Old=N.FAULT New=FAULT
24/Aug/24 01:46:09.751	21HBK01EZ110ZK97	TP1 MFT PROT TP CH-1	Digital_State Old=N.FAULT New=FAULT
24/Aug/24 01:46:09.871	2HBK01EZ200_XE46	MFT CH 2	Digital_State Old=FALSE New=TRUE 2N
24/Aug/24 01:46:09.952	2Speed_Slope_Low		Digital_State Old=TRUE New=FALSE 2E
24/Aug/24 01:46:10	2HHA10EB000_XE18	UNSUCCESSFULSHUTDO...	Alarm Digital Value =TRUE 2OILAB_s
24/Aug/24 01:46:10	2HFC04EB150_YD00	ELEV D FEEDER TRIP	Alarm Digital Value =TRIP 2COALCD_s
24/Aug/24 01:46:10	2HFC03EB150_YD00	ELEV C FEEDER TRIP	Alarm Digital Value =— — 2COALCD_s
24/Aug/24 01:46:10	2HFB04AF001_XF02	FEEDER D PROTECTION C...	Alarm Digital Value =TRUE 2COALCD_s
24/Aug/24 01:46:10	2HFB03AF001_XF02	FEEDER C PROTECTION C...	Alarm Digital Value =TRUE 2COALCD_s
24/Aug/24 01:46:10	21HBK01EZ110ZK97	TP1 MFT PROT TP CH-1	Alarm Clear Value =N.FAULT 2TP1_p
24/Aug/24 01:46:10	21HBK01EZ110ZK96	TP1 MFT PROT TP CH-1	Alarm Clear Value =N.OPTD 2TP1_p
24/Aug/24 01:46:10	2HFC01EB150_YD00	ELEV A FEEDER TRIP	Alarm Digital Value =— — 2COALAB_p
24/Aug/24 01:46:10	2HFB01AF001_XF02	FEEDER A PROTECTION C...	Alarm Digital Value =TRUE 2COALAB_