UNIT TRIPPING REPORT

UNIT No:2 STATION: NTPL, TUTICORIN.

OUTAGE: NO. 62

REPORT NO: 62

1.Date of tripping : 18-12-2021

2.Time of tripping : 17:55:12 Hrs

3.Status before tripping

a) Unit load : 500 MW

b) Mills in service : A, B, C, D, E, F & G

c) Oil guns in service : Nil

d) Boiler feed pumps in service : A & B

e) CEPs in service : B & C

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 : Over Speed from EHTC

5.Similar occurrences in the Financial Year : Nil

6.Other relays/protection acted : TG tripped. Boiler in service.

7.Supporting documents attached : SOE & Trend

8.Any operation done prior to tripping : MHG taken into service.

9.Analysis of tripping :

Speed signal 1 fault appeared @ 16:30 hrs while unit load was 459 MW. To attend this fault, EHC was isolated after taking Mechanical Hydraulic Governing into service. C&I availed LC and while checking the speed sensors *Turbine Over speed EHTC* acted and unit got tripped. However, Boiler was in service and the Unit was resynchronized immediately after return of LC.

10.Root cause:

Speed signal 1 fault initiated "Speed channel monitoring Fault" for that channel. In order to attend this, Turbine governing was changed over from EHG to MHG and LC was issued. While checking speed sensor

cable healthiness in the local JB, Turbine got tripped on *Speed Sensor Monitoring Fault* (2 out of 3) through direct hardwire trip contact from EHTC to Turbine Protection Panel @ 17:55 hrs. Common Protection Relay Contact is used for *Turbine Overspeed* and *Speed Sensor Monitoring Fault*, which triggered the trip even as all the speed values were forced at 3000 rpm.

11. Remedial measures taken/to be taken:

In future this overspeed hardwiring also needs to be bypassed while attending to any speed sensor fault on-line. During this period the hydraulic over speed device will protect the turbine against over speeding.

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

Light Up: : Boiler was in service
Sync'd : : 18-12-2021 19:46 hrs

13. Delay for Synchronizing : Nil
14. Recommendation / Action plan :

Sl.No.	Recommendations/Action plan	Responsibility	Time line
1)	OS hard wiring to TP1&2 need to be bypassed while attending to speed input faults on-line. *Hydraulic OS healthiness to be checked before issuing LC.*	C&I	Immediate.

15. Any specific learning / feedback :

During attending to speed signal faults on-line, we solely rely on the hydraulic overspeed trip mechanism for protecting the machine if the electrical protections are bypassed. Hence prior to issuing LC for such C&I work, hydraulic OS test to be conducted and values checked.

22/12/21 — DGM/OS
DGM/EE/MG
1/1/2022 — DGM/C&I
30/12/21 — DGM/ELECT

GM / C&I and Opn

Copy submitted to CEO / NTPL
Copy submitted to GM/O&M