UNIT TRIPPING REPORT

UNIT No: 1

STATION: NTPL, TUTICORIN.

OUTAGE: NO.65

REPORT NO: 65

1.Date of tripping : 17-03-2022

2.Time of tripping : 09:04 Hrs

3.Status before tripping

a) Unit load :315 MW

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

c) Oil guns in service : Nil

d) Boiler feed pumps in service : TDBFP 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 : Generator trip on "Low Forward Power"

5.Other relays/protection acted : Boiler tripped on RH 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 315MW in CMC with Tracking Device ON. Suddenly load started reducing drastically and Generator Class-A protection acted on low forward power. HP bypass fast opened on TG trip but later got trip closed on downstream temperature high protection. Boiler got tripped on reheater protection.

9.Root cause :

Tracking Device was ON with SLD tracking at 91% with EHTC in service. Suddenly SLD feedback jumped to 109% showing bad signal. Since TD was ON, continuous auto close command was going to SLD, thereby closing the control valves. This finally resulted in low forward power protection trip.

HPBP Fast Open came at turbine trip. But subsequently BPV1&2 were continuously getting closed in auto as the set point was formed at a high value due to turbine control valve closure prior to TG trip. This condition resulted in sluggish response of BPE 1&2 leading to high downstream temperature trip close of HPBP.

10. Remedial measures taken/to be taken:

Unit was lighted up immediately and synchronised keeping the Tracking device in turned off condition and forcing SLD feedback to 100%.

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

Light Up: : 10:15 Hrs on 17/03/2022

Sync'd: : 11:49 Hrs on 17/03/2022

13. Delay for light up : nil

14. Recommendation / Action plan :

i) Any SLD feedback failure should trigger "Fault" switching OFF TD. C&I to check and make necessary logic modifications immediately.

ii) HP bypass system auto operation to be ensured by board engineers, manually intervening if necessary, during every short TG trip in order to save the boiler.

15. Any specific learning / feedback :

Till logic modification is completed, tracking device of both units will be kept in OFF condition. Board Engineers are sensitized about HPBP auto operation.

EE / OS	EE/ ELECT	ACM/BOS
DGM / C&I	DGM/EEMG	DGM / O& SAFETY

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