

## UNIT TRIPPING REPORT

UNIT No: 1

STATION: NTPL TUTICORIN.

OUTAGE: NO. 70

REPORT NO:70

1. Date of tripping : 02-09-2022
2. Time of tripping : 07:27 Hrs
3. Status before tripping
  - a) Unit load : 498MW
  - b) Mills in service : A, B, C, D, E, F & H. (7 Mills,  
Coal flow 390t/hr)
  - 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 (Class A)
5. Similar occurrences in the Financial Year : NIL
6. Other relays/protection acted : 186A lead to Turbine trip  
RH protection lead to Boiler trip
7. Supporting documents attached : SOE
8. Any operation done prior to tripping : NIL
9. Analysis of tripping :

In Unit 1 Generator Transformer Y Phase, Differential protection, PRV, WTI, OTI and Bucholz relay acted. The failure of GT 1Y leading to the tripping of Unit 1 Generator on Class-A protection. In GT-1Y, OCTC top cover got opened and oil splashed. The splashed oil caught fire. The

Deluge valve corresponding to GT-1Y acted and quenched the fire. Fire fighting done by CISF to quench fire surrounding GT 1Y. Further spillage of oil is prevented by stopping the circulation pump.

Boiler got tripped on RH protection due to closure of HP bypass on downstream temp high.

**10.Root cause :**

The reason for GT-1Y phase failure will be analysed by internal committee and OEM-M/s Hitachi. The committee report will be submitted shortly.

**11.Remedial measures taken/to be taken:**

1. GT Transformer trip remedial measures will be taken up after detailed study of the failed equipment.

2. The HP bypass spray valve logic was modified to prevent boiler trip on RH protection from

a) Present logic: hp bypass spray valve opens after downstream temp raises above 300 deg cel even during fast open of hp bypass valve.

b) Modified logic:

A feed forward signal during fast open (proportional to the HP bypass opening for 5 sec ) has been included to maintain the downstream temp

**12.Time/Date of boiler light up and sync: 14-09-2022**

Light Up: 06:24 HRS

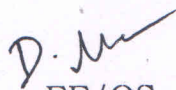
Sync'd : 16:52 HRS

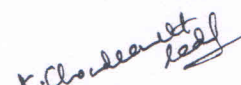
**13.Delay for light up/sync : SCC, OCC, GT protection Checking**

**14.Recommendation / Action plan :**

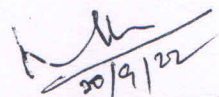
Sl.No.	Recommendations/Action plan	Responsibility	Time line
1	HP bypass spray valve opening logic modification	OS, C&I	Immediate

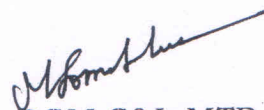
15. Any specific learning / feedback : nil

  
EE/OS

  
EE/ELEC

  
ACM/BOS

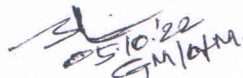
  
DGM/OS&SAFETY

  
DGM C&I, MTP

  
DGM EEMG

Copy submitted to GM/O&M

Copy submitted to CEO / NTPL

  
05.10.22  
GM/O&M