

EVENT ANALYSIS REPORT				
UNIT NO : 04	TPS : Khaperkheda TPS		Unit Capacity : 210 MW	
1. *HO Code :	Station Code : T003	Time - 21:17 Hrs	Date - 05/04/2015	No. of days from last sync. : 01 days
2. Operating conditions at the time of Event :-				
Load		Coal Cycles in service	Oil Support	
180 MW		A, B, C, E & F	Nil	
3. Nature of Event : T.A. Set hand tripped due to Fire observed near HPT and below HPT CV-1.				
4. Name of First Up , Main Protections & Protection on which GCB tripped : Turbine Hand tripped(First Up), MFT Operated, Turbine Tripped ,Generator Protection operated, GCB opened on RPP.				
5A) Observations: T.A. Set hand tripped at 21:17 Hrs due to Fire observed near HPT and below HPT CV-1. TIC: Heavy fire observed around HPT Module, governing oil rack. Turbo supervisory instruments for bearing 1 & 2 such as Vibration pickups, HPCV1 position transmitters, ESV1 limit switches and HPT Body, ESV1 & HPCV1 thermocouples damaged. All cables of turbine governing rack, vacuum switches, vacuum transmitters, TSE thermocouples found burnt. During H2 purging heavy fire noticed at purging pipe. This fire damage Anchor point insulator of 220KV Y-phase bushing of ST-4 creating earth fault. As per fault & location, ST-4 transformer differential relay KBCH 120& over current relay KCGG clear the fault. Also additional mounted relay MICOM P632 also cleared the fault. Indication & the readings of this relay :- Reading on STPR KBCH 120(B**C**- Differential & high set trip on Y & B phase) HV currents IA-24.48 A, IB-4.633KA, IC-41.28A LV currents ia-694.6A, ib-2.190KA, ic-2.048KA Diff. currents IA diff-37.82mA, IB diff-33.71A, IC diff-33.74A. Indication on ST CPR KCGG 142(B-* second stage over current trip) Indication on MICOM P632 (Differential trip on phase RYB; HV ref trip)				
5B) Remedial Action/work done: -				
TIC: <ol style="list-style-type: none"> 1. HPT Body, ESV1, HPCV1 thermocouples burnt. Same were replaced. 2. ESV1 limit switch assembly, HPCV1 positioners both burnt. Same were repaired & replaced. 3. Governing Rack, vacuum switches, vacuum transmitters, Thermocouple cables burnt. Total 60 Nos. of cables were jointed. Same were checked for operation & protection. 4. Turbine & Generator protection trial given & found OK. EHC characteristics taken in co-ordination with TM. 5. ST4 isolated & Station Board OCJ & OCK charged from U-3 ST. All other boards charged & supply restored. 				

EM:

1. Replacement of Anchor bolt string insulator of Station X^{mer} 220KV line done in co-ordination with GCR.
2. Replacement of Burnt cable.
3. Replacement of ID Fan-4A motor

TM:

1. Cracked welding joint of Oil pipe line re-welded. DPT of welding joint carried out.
2. Replacement of HPCV1 & HPSV1 from Unit-3.
3. Replacement of trip device from Unit-3
4. Replacement of ½" valve 12Nos below HPSV1.
5. Replacement of all gaskets near HPCV1.

6. Root Cause Analysis : Fire caught due to sudden crack developed at welding joint of HPCV-1(due to ageing effect) An Oil leakage was developed near HPCV1 servo valve and oil started spill out. Due to Oil leakage and very hot zone, it caught fire.

7. Preventive action suggested (Short Term) :-**8. Preventive action suggested (Long Term) :-**

9. Similar event occurred last time:-	Unit No # 4 , 210MW	Time : Hrs	Date:
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Event: : No similar event found.

Remedial Actions :**9A. Implementation Status of Long Term/Short Term measures stated at Sr No 7 & 8 :-**

10. Boiler lighted up	Time - 16:50 Hrs	Date- 08/04/2015
11. T-A Set Synchronised	Time - 23:56 Hrs	Date- 08/04/2015

12. Remark :-


Chief Engineer

13. Recommendations of Works Section:

1. Procurement/Replacement Plan:

2. Operational Error:

3. Delay in Maintenance:

4. Delay in bringing back the Unit:

5. Training of Staff:

6. Whether remedial action is completed satisfactory & point is closed:

C E/Dy C E (Works)