


EVENT ANALYSIS REPORT				
UNIT NO : 03	TPS : Khaperkheda TPS		Unit Capacity : 210 MW	
1. *HO Code :	Station Code : T003	Time - 23:53 Hrs	Date - 08/06/2016	No. of days from last sync. : 31 days
2. Operating conditions at the time of Event :-				
Load		Coal Cycles in service	Oil Support	
80 MW		A & B	NIL	
3. Nature of Event : TA set tripped (hand tripped) due to boiler tube leakage at economizer zone.				
4. Name of First Up , Main Protections & Protection on which GCB tripped : Hand Tripped (First Up), Turbine Trip Gear Operated, Turbine Tripped, Gen. Protection Operated, MFT Operated				
5 A) Observations :- On dt. 08/06/2016 at 23.00 hrs, set was on load at 149 MW with five coal cycles in service (F-standby) and no oil support. Boiler tube leakage sound noticed near LRSB No. 79 (RHS). Considerable variation observed in feed flow (665 T/hr). Drum level found dropping and DM make-up (>41 TPH) found increased. The tube leakage got confirmed in economizer zone by BM-I and load started reducing by withdrawing coal cycles, one by one. Set hand tripped at 23:53 hrs when the load was 80 MW with C/M-A & B in service and no oil support.				
5 B) Remedial Action/work done :- <u>Primary Failure</u> - Economizer upper bank coil no. 151, tube No.4 found fish mouth opening punctured. <u>Secondary Failure</u> - 1) Economizer upper bank coil no. 152 tube no. 2 & 3 and coil no. 153 tube no. 2 & 3 found severely eroded. Coil no.153 tube no.2 & 3 also found punctured. 2) Front steam cooled wall inlet header SHH-5 Stub no. 1 found pin hole punctured. <u>Work carried out</u> : Total HP weld joints = 08 Nos. (07 Butt Joints & 01 Stub Joint) 1) Economizer upper bank coil no. 151, 152 & 153 attended by welding hemispherical spools at economizer intermediate and economizer inlet header . 2) Replacement of stub no. 1 of front steam cooled wall inlet header SHH-5.				
6. Root Cause Analysis : Localized and concentrated flue gas erosion of tube no. 4 of economizer upper bank coil no. 151.				
7. Preventive action suggested (Short Term) :- 1) Normalization of plugged economizer coils no. 151, 152 and 153 will be carried out during forthcoming AOH of Unit no.3. 2) Replacement of all eroded and plugged economizer coils will be carried out during forthcoming AOH of Unit no. 3. 3) D.P. test of stub of front steam cooled wall inlet header will be carried out during forthcoming AOH of Unit no. 3.				
8. Preventive action suggested (Long Term) :-				
9. Similar event occurred last time:-	Unit No # 4 , 210 MW		Time : 03:00 Hrs	Date: 11/05/2016
Event: T.A. Set withdrawn to attend boiler tube leakage at Economizer zone. Remedial Actions: Economizer upper bank coil No. 155 & 156 plugged by welding (Total 04 Nos.) hemispherical spools at economizer intermediate and economizer inlet header.				
9A. Implementation Status of Long Term/Short Term measures stated at Sr No 7 & 8:- The above corrective action will be implemented in August-16 by BM-I section.				
10. Boiler lighted up	Time - 02:15 Hrs		Date - 10/06/2016	
11. T-A Set Synchronized	Time - 06:16 Hrs		Date - 10/06/2016	
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)				