


EVENT ANALYSIS REPORT				
UNIT NO : 03	TPS : Khaperkheda TPS		Unit Capacity : 210 MW	
1. *HO Code :	Station Code : T003	Time - 10:25 Hrs	Date - 04/02/2017	No. of days from last sync. : 27 days
2. Operating conditions at the time of Event :-				
Load		Coal Cycles in service		Oil Support
110 MW		B, C & D		NIL
3. Nature of Event : TA set forced withdrawn due to boiler tube leakage at Economiser zone.				
4. Name of First Up , Main Protections & Protection on which GCB tripped : Hand Tripped (First Up), MFT Operated, Turbine Tripped, Turbine Trip Gear Operated.				
5 A) Observations : - On dt. 04/02/2017 at 10:00 hrs, set was on load at 200 MW with five coal cycles in service (A - S/by) and no oil support. Drum level found dropping and DM make-up found increased up to 70 Cubic Meter. After confirmation of boiler tube leakage, load reduced gradually by withdrawing coal cycles-F & E one by one. Set hand tripped at 10:25 hrs when the load was 110 MW with C/M-B, C & D in service. GCB opened on generator reverse power protection.				
5 B) Remedial Action/work done :- <u>Primary Failure</u> - Economiser Upper Bank Coil No.20 Tube No.3 found punctured. <u>Secondary Failure</u> - Economiser Upper Bank Coil No.21 Tube No.2 & 3 found punctured. Economiser Upper Bank Coil No.23 Tube No.3 found severely eroded. <u>Work carried out</u> - Economiser Upper Bank Coil no.20, 21 & 23 attended by welding hemispherical spools at Economiser intermediate and inlet header. During hydraulic test, leakage at Economiser coil no.159 detected at weld joint of middle connection bend. Cutting of the same done & re-welded. (Total HP Weld Joints = 08 Nos.)				
6. Root Cause Analysis : Economiser Upper Bank Coil No.20 Tube No.3 failed due to localized flue gas erosion.				
7. Preventive action suggested (Short Term) :- (1) OLC for Unit-3 is being declared less by 10 MW. (2) Load raising & lowering is being done gradually, i.e. @ 1.5 to 2.0 MW/min. Circular (No. 619 dtd 03.12.16) issued to all the concerned for implementation of the practice. (3) Every time during BTL occurrence erosion prone area is being checked thoroughly and the tubes with marginal thickness (Reduced by 20% of the original thickness, or lesser than that) are also dummied / attended. (4) Physical survey of approachable tubes of economizer coils carried out.				
8. Preventive action suggested (Long Term) :- Replacement of all economizer coils is already planned in FY 2017-18.				
9. Similar event occurred last time :		Unit No # 3 , 210 MW	Time : 00:52 Hrs	Date: 07/01/2017
Event : TA set withdrawn due to boiler tube leakage at economizer zone. Remedial Action / Work done : Economiser Upper Bank Coil no. 149 & 150 attended by welding hemispherical spools at Economiser Intermediate and Inlet header. (Total HP Weld Joints = 04 Nos.)				
9A. Implementation Status of Long Term/Short Term measures stated at Sr No 7 & 8:-				
10. Boiler lighted up		Time - 13:00 Hrs	Date - 05/02/2017	
11. T-A Set Synchronized		Time - 17:27 Hrs	Date - 05/02/2017	
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)				