


EVENT ANALYSIS REPORT				
UNIT NO : 04	TPS : Khaperkheda TPS		Unit Capacity : 210 MW	
1. *HO Code :	Station Code : T003	Time -12:22 Hrs	Date - 28/12/2016	No. of days from last sync. : 36 days
2. Operating conditions at the time of Event :-				
Load		Coal Cycles in service	Oil Support	
80 MW		D & E	NIL	
3. Nature of Event: T. A. set forced withdrawn due to boiler tube leakage at economizer zone.				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, MFT Operated, Trip Gear Operated.				
5 A) Observations: On dt. 28/12/16 at 12:00 hrs, set was on load at 185 MW with five coal cycles in service (A – U/p) & no oil support. DM make up found increased to 81 TPH and also abnormal sound was noticed near LRSB -79 at 38.5 mtr level. Difference between steam flow & feed flow was around 100 TPH and furnace draft drifted on positive side. After confirmation of boiler tube leakage, coal mills- B, C & F were withdrawn one by one for reducing load in order to withdraw the set. Finally, set was withdrawn at 12:22 Hrs. when the load was 80 MW and coal cycle – D & E in service. GCB opened on Reverse Power Protection.				
5 B) Remedial Action/work done : <u>Primary Failure</u> – Economizer upper bank coil no. 162 tube no.19 found punctured. <u>Secondary failure</u> – 1) Economizer upper bank coil no. 161 tube no.20 found punctured. 2) Economizer upper bank coil no. 160 tube no.20 found eroded. 3) RHS SCW manhole door opening rear side bend and tube no.1 beside the bend, were found punctured. 4) RHS SCW manhole door opening front side bend found eroded. <u>Work Carried Out</u> – 1) Economizer upper bank coil no, 160, 161 & 162 attended by welding hemispherical spools at economizer intermediate and economizer inlet header. 2) All the eroded and punctured SCW manhole door opening bends & tubes replacement work carried out. <b>Total No. of HP weld joints = 12 Nos.</b>				
6. Root Cause Analysis: Economizer upper bank coil no. 162 tube no.19 failed due to localized flue gas erosion.				
7. Preventive action suggested (Short Term) : 1) Dummied Coil no. 160, 161 & 162 will be normalized during forthcoming overhaul of Unit No.4. 2) Replacement of eroded & dummied coils will be carried out during forthcoming overhaul of Unit No.4.				
8. Preventive action suggested (Long Term) :				
9. Similar event occurred last time:		Unit No # 4 , 210 MW	Time: 13:49 hrs.	Date: 25/08/2016
<b>Event:</b> TA Set withdrawn to attend Boiler Tube Leakage at Economizer Zone. <b>Remedial Actions :</b> <u>Primary Failure</u> – Economizer upper bank coil no. 126, tube No.3 found punctured. <u>Secondary failure</u> – Economizer upper bank coil no. 124 & 125 tube no. 3 found punctured. Economizer upper bank coil no. 114 tube no. 6 found pin hole punctured. <b>Work done</b> - No. of HP joints welded 08 Nos. Economizer upper bank coil no. 124, 125, 126 & 114 attended by welding hemispherical spool pieces at economizer inlet header and economizer intermediate header.				
9A. Implementation Status of Long Term/Short Term measures stated at Sr No 7 & 8 :				
10. Boiler lighted up		Time - 17:05 Hrs	Date - 29/12/2016	
11. T-A Set Synchronized		Time - 21:10 Hrs	Date - 29/12/2016	
12. Remark :				
 <b>Chief Engineer</b>				
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)				