EVENT ANALYSIS REPORT

UNIT NO : 03	TPS : Khaperkheda TPS		Unit Capacity : 210 MW	
1. *HO Code :	Station Code : T003	Time – 08:40 Hrs.	Date - 12/07/2017	No. of days from last sync. : 4 days.

2. Operating conditions at the time of Event :

Load	Coal Cycles in service	Oil Support
70 MW	B & C	Nil

3. Nature of Event: Set withdrawn due to BTL in economizer zone and continued trip due to "Zero Scheduling" given by MSLDC.

4. Name of First Up , Main Protections & Protection on which GCB tripped :
Hand Tripped [First Up], MFT operated, Turbine Tripped, Trip Gear Operated.

5A) Observations: On dt. 12/07/2017 at 08:00 hrs, set was on load at 160 MW with five coal cycles in service (C/c-E-U/P) and no oil support. Considerable variation in feed flow was observed, with abnormal sound at Economizer hopper and also near LRSB -81. Drum level found dropping and DM make-up found increased to 81 TPH. After confirmation of boiler tube leakage in Economizer zone, load reduced gradually by withdrawing coal cycles one by one. Set hand tripped at 08.40 hrs, when the load was 70 MW with coal cycles B & C in service. After attending BTL, unit became available on 13/07/17 at 11:00 hrs. but could not be started due to "Zero Schedule".

MSLDC requested by email dt. 13/07/17 for "Zero Schedule " from its availability till further communication. Therefore set continued withdrawn as per received mail.

5B) Remedial Action/Work done:

Primary Failure: Economizer upper bank coil no. 161 tube no. 21 found fish mouth opening punctured.
Secondary Failure: 1) Economizer upper bank coil no. 162 tube no. 21 found fish mouth opening punctured.
2) During hydraulic test RHS SCW manhole door front side bend no.1 found punctured and bend no.2 found eroded.
Work carried out:
1) Economizer coil no.162 &161 attended by welding hemispherical spool at economizer intermediate & economizer inlet header and Eco. Coil no 100 &156 repaired by welding joints.
2) Replacement of RHS steamed cooled wall man hole door front side bend no.1 &2.
Total no. of joints =10 Nos.

6. Root Cause Analysis: Localized flue gas erosion is the root cause of failure of tube no. 21 of economizer coil no.161.

7. Preventive action suggested (Short Term) :-

8. Preventive action suggested (Long Term):-
1) Normalization of eco. coil no. 162 & 161 will be carried out during forth coming AOH of unit 3.
2) Replacement of all eco. coils will be carried out during forth coming AOH of Unit-3.

9. Similar event occurred last time:-	Unit No # 2 , 210 MW	Time: 10:25 Hrs	Date: 04/02/2017

Event: TA set forced withdrawn due to boiler tube leakage at Economiser zone.
Remedial Actions: Primary Failure – Economiser Upper Bank Coil No.20 Tube No.3 found punctured.
Secondary Failure – Economiser Upper Bank Coil No.21 Tube No.2 & 3 found punctured.
Economiser Upper Bank Coil No.23 Tube No.3 found severely eroded.
Work carried out - 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.**)

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

10. Boiler lighted up	Time – 20:30 Hrs	Date - 07/08/2017
11. T-A Set Synchronized	Time – 04:20 Hrs	Date - 08/08/2017

12. Remark :

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Chief Engineer

13. Recommendations of Works Section: