



# TAMIL NADU POLLUTION CONTROL BOARD

## ABSTRACT

TNPCB - Issuing instructions to all the IETPs Textile Processing units (Bleaching, Dyeing and Printing) and Tannery units who have provided Solar Evaporations Pans for disposal of final RO rejects shall switch over to Mechanical Evaporator followed by Agitated Thin Film Dryer – Reg.

B.P.No. 01

Dated: 22.01.2019

- Ref: 1. B.P. No. 31 dated 30.07.2018  
2. Board Resolution No. BM/CA/02/2019, dated 22.01.2019

## ORDER

Based on various Court directions, TNPCB has made mandatory that all the textile processing units and Tannery units operating in Tamil Nadu to install Zero Liquid Discharge (ZLD). Accordingly the textile processing units and Tannery units in Tamil Nadu have provided ZLD plant either by way of Individual Effluent Treatment Plant (IETP) or Common Effluent Treatment Plant (CETP).

Zero Liquid discharge (ZLD) system completely eliminates the liquid discharge from a system by reducing the volume of wastewater that requires further treatment and producing a clean stream suitable for reuse and the provision of ZLD results in the reduction in the pollution of land and water bodies. The trade effluent generated from industries after primary, secondary and tertiary treatment is sent to Reverse Osmosis, Nano-Filtration, Mechanical Vacuum Re-compressor Evaporator/Multiple Effect Evaporator, Agitated Thin Film Dryer / Solar Evaporation Pan so as to meet ZLD.

In the ZLD plant, the treatment of Reverse Osmosis (RO) plant rejects which is having high concentration of Total Dissolved Solids (TDS) is major concern. The CETPs and large scale IETP units have provided Mechanical Evaporators (ME)



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followed by Solar Evaporation / Agitated Thin Film Dryer (ATFD) and recover salt in crystal form. This ensures zero liquid discharge.

Whereas majority of small scale units and some of medium/large scale units who are having IETPs are directly discharging the final RO reject into solar evaporation. The solar evaporation pan occupies a huge land area. It requires a minimum of 2220 sq.m area of evaporation pan for the disposal of 10 KL of RO reject. More over during the rainy season, the solar pan is getting overflow and the high TDS effluent pollute the ground water and the nearby water bodies. In some cases, it came to know that there are cracks in the solar pan/damages in HDPE liner which allowed for seepage of high TDS effluent into the ground. Once groundwater is polluted, it's restoration will take long time.

The subject was discussed in the review meeting conducted by the Hon'ble Minister for Environment held on 17.07.2018 along with the all the JCEEs (M) and all the DEEs at Head Office. In the meeting it was unanimously recommended for directing all the textile bleaching, dyeing and printing units to go for ME & ATFD to meet ZLD and avoid solar evaporation pan.

The subject was placed before the Board, in the meeting held on 25.07.2018. The Board vide resolution No. 274-1-19 resolved that all the existing IETPs of textile bleaching, dyeing and printing units generating effluent of more than 100 KLD who have now provided solar evaporation pan for disposal of final RO reject to switch over to mechanical evaporator followed by Agitated Thin Film Dyer within six months and to dismantle the existing Solar Evaporation Pan completely after commissioning of mechanical evaporator followed by Agitated Thin Film Dyer. Accordingly B.P. No. 31 dated 30.07.2018 was issued.

A similar proposal for Tannery sector was placed before the Board vide item No. 275-1-6 in the meeting held on 6.12.2018 (i.e) to consider for issuing instructions



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to the Tannery sectors who have provided / proposed to provide Zero Liquid Discharge system shall provide mechanical evaporator followed by Agitated Thin Film Dyer. The Board after deliberation resolved to approve the proposal for issuing instructions to the Tannery sectors who generate trade effluent more than 100 KLD and who have provided / proposed to provide Zero Liquid Discharge system shall provide mechanical evaporator followed by Agitated Thin Film Dyer within six months. With respect to the tannery units generating trade effluent 100 KLD and less, a consultation shall be given to them before fixing time limit.

In the meantime complaints were received about the ground water pollution due to stagnation of high TDS effluent in solar pan. Stagnating high TDS effluent in the solar pan will be a threat to the water bodies and subsurface water. Any cracks in the structure / rupture of HDPE liner will lead to seepage of high TDS effluent into the soil and pollute the groundwater which is very difficult for restoration and also leads to public complaints. Moreover the small scale units generating less than 100 KLD trade effluent are not maintaining the solar pan efficiently and hence leakages/over flow from the solar pan occurs. More illegal discharges of untreated effluent are found to be made through solar evaporation pans. In order to avoid such happenings, it is decided to insist that irrespective of the trade effluent generation, all the Textile processing units (bleaching, dyeing and printing) and Tannery units shall compulsorily provide ME and ATFD within three months.

In view of the above, circulation agenda was again placed before the Board to consider to issue following instructions to all the Textile Processing units and Tannery units who have provided IETP:-

"All the existing IETP of Textile processing units (bleaching, dyeing and printing) and Tannery units who have now provided solar evaporation pan for disposal of final RO reject shall switch over to Mechanical Evaporator (ME) followed by Agitated Thin Film Dryer (ATFD) irrespective of quantity of trade effluent generation **within three**

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**months.** The existing solar evaporation pan shall be dismantled completely after commissioning of Mechanical Evaporator followed by Agitated Thin Film Dryer”.

The Board vide circulation in No. BM/CA/02/2019, dated 22.01.2019 has resolved to approve the proposal and to issue following instructions to all the Textile Processing units and Tannery units who have provided IETP:-

“All the existing IETP of Textile processing units (bleaching, dyeing and printing) and Tannery units who have now provided solar evaporation pan for disposal of final RO reject shall switch over to Mechanical Evaporator (ME) followed by Agitated Thin Film Dryer (ATFD) irrespective of quantity of trade effluent generation **within three months.** The existing solar evaporation pan shall be dismantled completely after commissioning of Mechanical Evaporator followed by Agitated Thin Film Dryer”.

Sd/- D.Sekar  
Member Secretary

**To**

All JCEEs (Monitoring), TNPCB  
All DEEs, EEs Flying Squad, TNPCB

**Copy to**

ACEE, TNPCB, Chennai-32.  
All JCEEs, TNPCB, Chennai-32.  
BMS Section, TNPCB, Chennai-32.  
PS to Chairman & PA to Member Secretary, TNPCB, Chennai-32.  
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22/1/2019  
For Member Secretary  
20.1.19