






EFFLUENT TREATMENT PLANT
WASTE MANAGEMENT FACILITY, TROMBAY
WASTE MANAGEMENT DIVISION

Effluent Treatment Plant (ETP) is mandated with the task for management of Radioactive Low Level Liquid waste (LLW) generated by various plants and radiochemical facilities in Trombay. The Plant was commissioned on 26/07/1966 and since then engaged in receipt/collection, treatment and conditioning of LLW generated by Research Reactors, Plutonium Plant, Waste Immobilization Plant, Radiological Laboratories, etc. Chemical Treatment Flow sheet is employed at ETP for treatment of LLW. Cementation process is used for solidification of concentrated chemical sludge resulting from chemical treatment and centrifugation operations. Spent TBP from Plutonium Plant is also managed at ETP. Alkaline hydrolysis system used to partition the radioactivity into aqueous stream leaving behind a relatively low active Dodecane. The aqueous stream is cementised and Dodecane stream is incinerated.

In order to follow **ALARA** principle and in accordance with “**near-zero-discharge**” philosophy, a hybrid process comprising of membrane processes and ion exchange process is being evaluated to further reduce the discharges and to recycle the decontaminated effluent.

ETP is thus fulfilling its mandate, within regulatory limits, for more than 50 years and will continue to support BARC activities in the coming years.

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| <p style="text-align: center;">Ultra-Filtration module</p> | <p style="text-align: center;">Reverse Osmosis unit</p> | <p style="text-align: center;">Pilot scale ion exchange system</p> |
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| <p style="text-align: center;">Clariflocculator</p> | | <p style="text-align: center;">Alkaline Hydrolysis Process</p> |