

Knowledge Centre

Common Effluent Treatment Plant

In order to minimize environmental pollution due to the small and medium-scale industries, clean production technologies and formation of waste minimization circles are being encouraged in India. Besides, collective treatment at a centralized facility, known as Common Effluent Treatment Plant (CETP) is considered as a viable treatment solution to overcome the constraints associated with effluent treatment in small to medium enterprises.

Design and Operational Aspects of CETP

Some important factors that influence the design of CETP in industrial areas are:

- Type of industries discharging wastewater
- Characteristics of wastewater discharged
- Qualitative and quantitative fluctuations of effluent discharges
- Pre-treatment by individual industries
- Effluent collection/conveyance system
- Place of disposal for treated waste water



The criteria for consideration for financial assistance are as follows:

- CETPs should be in industrial estates or in a cluster of Small Scale Industrial units.
- Central Assistance will be available only for clusters of SSIs.
- Projects for assistance will be prioritized on the basis of toxicity of pollutants; Pollution load being generated and to be treated; and number of units covered.

- The CETPs are to be set up and managed by the State Industrial Infrastructure Corporation (by whatever name known) or through an appropriate institution including a cooperative body of the concerned units as may be decided by the State Governments/SPCBs concerned.
- The project should be self-supporting for repayment of the loan and meeting operation and maintenance costs.
- The project must formulate adequate institutional arrangements for cost sharing, recovery of dues and management and ensure observation of prescribed standards.
- The scheme must have the technical recommendation of the State Pollution Control Boards.
- The CETP project should have the conveyance system from the individual units to the CETP.
- Sludge characteristics (i.e. hazardous vs. non-hazardous) from the primary and secondary treatment of the CETP should be estimated. Therefore, the CETP should have a sludge management plan which should be prepared based on the sludge characterization and be documented in the feasibility report of the CETP project.
- Possibility of recycling/reusing the treated effluent from the CETPs by the member units should be explored and be documented in the feasibility report of the CETP project.
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Advantages CETP

Saving in Capital and Operating cost of treatment plant. The Common treatment is always cheaper than small scattered treatment units.

- Availability of land which is difficult to be ensured by all individual units in the event they go for individual treatment plants.
- Contribution of nutrient and diluting potential, making the complex industrial waste more amenable to degradation.
- The neutralization and equalization of heterogeneous waste makes its treatment techno-economically viable.
- Professional and trained staff can be made available for operation of CETP which is not possible in case of individual plants.
- Disposal of treated wastewater & sludge becomes more organized.
- Reduced burden of various regulatory authorities in ensuring pollution control requirement.