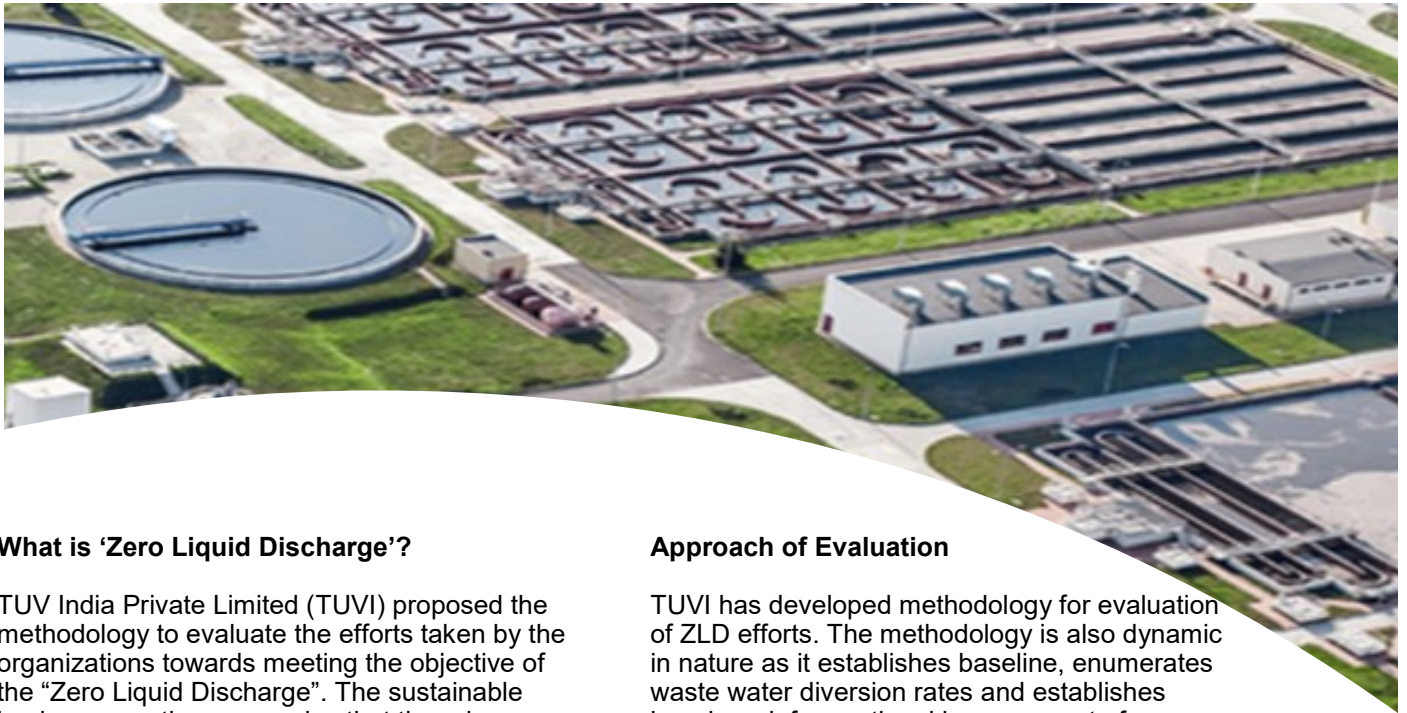


TUV India – “Zero Liquid Discharge” Verification & Certification



What is ‘Zero Liquid Discharge’?

TUV India Private Limited (TUVI) proposed the methodology to evaluate the efforts taken by the organizations towards meeting the objective of the “Zero Liquid Discharge”. The sustainable business practices recognize that there is obvious link between the improved use of resources and outlay savings.

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What are advantages of ‘Zero Liquid Discharge’?

- Recycle water on site, lowering water acquisition costs and risk
- Lowered waste volumes decrease the cost associated with waste management.
- Greenhouse Reduction
- Identification and improvements of processes or divisions
- Reduction in the adverse environmental impacts
- Meeting environmental goals
- Improved Corporate Social Responsibility
- Environmental performance additional to legal norms
- Institute as leader in the peer community
- Certified by TUVI’s standard

Approach of Evaluation

TUVI has developed methodology for evaluation of ZLD efforts. The methodology is also dynamic in nature as it establishes baseline, enumerates waste water diversion rates and establishes benchmark for continual improvement of diversion rate.

Categories of Waste Diversions

- Silver Diversion Rate
- Gold Diversion Rate
- Platinum Diversion Rate

What qualifies as diversion?

- Wastewater treatment levels and the parameters as per the prescribed norms.
- Organizational wastewater treatment can be a useful resource for other organization (Supply to other organization)
- Applications of treated wastewater in reuse and recycling

What is evaluated?

- Treated wastewater physio-chemical parameters
- Flow diagram of the waste water treatment
- Process flow diagram with water mass balance
- Waste water elimination methods
- Waste water reduction methods
- Waste water treatment methods
- List of steps applied in ZLD

Certification Procedure

- Acceptance of the proposal with agreed methodology
- Submission of data as requested after signing the contract
- Evaluation of documentation by TUVI & release of desk review
- Scheduling of onsite/remote audit with an objective of evidence collection and verification
- Submission of final documentation along with corrections / additional clarifications as applicable
- Final Evaluation documentation and recommendation to Final Approver of TUVI
- Award of Certification by TUVI

Audit Stages

- To collect necessary information with regard to the scope of the Certification, processes and location (s) of the client, and related statutory and regulatory aspects and compliance,
- To check the claims against the TUVI's methodology
- Evaluation of internal assessment and management reviews and the level of implementation of the criterion set by TUVI
- Assess Information and evidence about conformity to all requirements of the methodology or other normative document.
- Assess processes, review the mass balance for various processes
- To verify the water balance from the utility department
- Finalization of waste water Diversion data
- Issuance of Certificate

Zero Liquid Discharge Process

- ZLD Pre-treatment Stage
- ZLD recycle water stage
- ZLD Evaporation Stage
 - Hybrid Falling Film & Forced Circulation Evaporators (Multi Effect Evaporator - MEE)
 - Forced Film Evaporators (Multi Effect Evaporator - MEE)
 - AFTD (Agitated Thin Film Dryer) Crystallizers (MEE)

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TÜV®

Why TUV India?

- Established and reliable partner for inspection, certification and verification of 'Zero Liquid Discharge'
- Comprehensive knowledge
- Conducted extensive audits under similar portfolios like energy labelling, sustainability assurance, supply chain audits, green product certification, environmental compliance audit etc.

About Us:

With over 14,000 employees, TÜV NORD GROUP is one of the largest technical service providers, offering its advisory, service and inspection expertise in over 100 countries throughout the world.

Areas of activity include Industrial Services, Certification, Testing, Product Certification, Mobility, Training, and IT. TÜV NORD GROUP occupies a unique position in the sector based on its work in the fields of natural resources and aerospace and is firmly committed to its guiding principle and watchword: "Expertise for your Success".

TUV India Pvt. Ltd. was established in 1989 as part of the German RWTÜV group's Indian operations, now the TÜV NORD GROUP, as one of the first Certification Bodies to start operations in India; since then, it has been closely associated with the quality revolution in India. With over 1100 employees in more than 25 locations across India, TUV India is never far from its customers.

TUV India provides diverse services in Management Systems Certification, Industrial Services, Inspection Services, Infrastructure & Buildings, Roads & Highways, Renewable Energy, Railways, Petroleum, Chemicals & Gas Services, Food Testing and Certification, Training, Automotive Services, Product Testing (Electronics & Electricals) and Certification, Project Management, Social Accountability and Sustainability Services.

