Water & Wastewater | Global

An industrial ZLD facility avoided an environmental audit penalty with full traceability

A zero liquid discharge facility put PM, chemical dosing, calibration and effluent logs into one system before a major discharge audit, and passed with complete, verifiable records.



0
missing calibration records at the audit

Near 100%
PM compliance across ZLD equipment

AT A GLANCE

INDUSTRY
Industrial wastewater treatment

FACILITY
Zero liquid discharge plant

SERVES
A major manufacturing plant

PREVIOUSLY
Registers, spreadsheets, operator diaries

FEATURES USED
Maintenance | Insight

01 The client

The client is a large industrial zero liquid discharge (ZLD) facility supporting a major manufacturing plant. It runs evaporators, RO units, ATFDs, clarifiers, dosing systems, blowers, pumps, flow meters and online analyzers.

Each must meet strict environmental standards, and with regulators increasing scrutiny, the plant needed documentation that would stand up to any audit.

02 The challenge

Ahead of a major environmental and discharge audit, the facility found high-risk gaps. Missing records could mean penalties, notices or even a temporary shutdown order.

- PM logs for evaporators, RO skids and pumps scattered across registers and diaries.
- Chemical dosing recorded inconsistently, so usage was hard to verify.
- Calibration lapses on pH meters, TDS analyzers, flow meters and online instruments.
- Effluent discharge logs missing timestamps or complete readings.
- No single view of PM, dosing, effluent quality or calibration status.

03 What they set up in Asset Infinity

The facility ran maintenance, dosing, calibration and effluent records in Asset Infinity, so every operational record was time-stamped and ready for an auditor.

Maintenance

Standard PM for all equipment

Preventive plans cover RO feed pumps, ATFD motors, blowers, dosing pumps and evaporators. Technicians record readings and photos, and overdue work is escalated.

Maintenance

Dosing and effluent checklists

Operators log chemical type, quantity, batch number and time, with before and after readings. Effluent checks record pH, conductivity, TDS, flow, temperature and sample photos.

Maintenance

Calibration on schedule

Calibration for pH, TDS, conductivity, turbidity and flow instruments runs on scheduled plans, with certificates stored on each instrument and overdue calibration flagged.

Insight

One compliance dashboard

PM compliance, calibration status, dosing patterns, effluent quality trends and repeated anomalies are shown together, so teams fix issues before an audit.

04 How it works day to day

Here is how a day of records builds up at the ZLD plant now.

OPERATOR

Logs each chemical dose

The dosing checklist asks for chemical type, quantity, batch number and time, with before and after process readings. Required fields cannot be skipped.

OPERATOR

Records effluent quality

pH, conductivity, TDS, flow rate and temperature are entered with a sample photo, time-stamped as they are recorded.

SYSTEM

Raises PM on time

Preventive plans create work orders for pumps, blowers, ATFD motors and evaporators when they are due.

TECHNICIAN

Completes maintenance with evidence

Readings and photos go on the equipment's record before the job can close.

INSTRUMENTATION TEAM

Keeps instruments calibrated

Calibration work orders arrive on schedule. Certificates are attached to each instrument, and an overdue calibration is flagged.

SYSTEM

Escalates anything overdue

PM and calibration that pass their due date are escalated to supervisors, so nothing stays unresolved.

PLANT MANAGER

Reviews compliance

The dashboard shows PM compliance, calibration status, dosing patterns and effluent trends, so anomalies are corrected early.

05 Before and after

	BEFORE	WITH ASSET INFINITY
PM logs	Registers, spreadsheets and diaries	Recorded against each asset with evidence
Chemical dosing	Recorded inconsistently	Type, quantity, batch and time for every dose
Calibration	Lapses on key instruments	Scheduled, with certificates on each instrument
Effluent logs	Missing timestamps and readings	Time-stamped with complete readings
Overall view	None	One compliance dashboard
Audit outcome	Risk of penalty or shutdown	Penalty avoided, zero missing calibration records

06 How it rolled out

1

Three teams included. Rolled out across operations, maintenance and laboratory and instrumentation teams with no disruption to the plant.

2

Operators on mobile. Operators were trained to record dosing and effluent logs on mobile devices.

3

History migrated. Historical calibration and effluent records were brought in for continuity.

07 The results

- A regulatory audit penalty avoided through complete traceability
- Accurate dosing logs improved treatment consistency and cut chemical wastage
- Effluent quality stabilized through closer monitoring and corrections
- A clean audit outcome, with praise for documentation quality
- A repeatable audit-readiness routine for future inspections

08 Why it worked

Records made as work happens

Doses, readings and calibrations are logged at the time, so their authenticity is easy to show an auditor.

Every instrument has a history

Calibration certificates and due dates sit on each instrument's record, which closed the gaps auditors look for.

Issues found before the audit

The dashboard shows overdue work and anomalies early, leaving time to correct them.

09 Looking ahead

By digitizing preventive maintenance, dosing, calibration and effluent logs, the ZLD facility avoided a significant audit penalty and showed auditors a complete, time-stamped trail.

Audit readiness is now part of daily work. Every dose, reading and calibration goes in as it happens, so the next inspection starts from records that are already complete.

See it on your own assets

A 30-minute demo, set up for an industrial water or wastewater plant.

The client's name is withheld for confidentiality. Results are as reported by the client.

Book a demo

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