



TotalCare Inspection & Auditing Services

CONDITION AUDITS FOR BIOLOGICAL TREATMENT FACILITIES



SANITAIRE
a xylem brand



Condition Audits

Identify and address system inefficiencies



Rising energy prices and stricter environmental regulations have resulted in a growing number of wastewater treatment plant operators looking for ways to simultaneously improve their effluent quality and reduce their energy consumption. It is not as difficult as it might sound - in most cases a site wide TotalCare Condition Audit carried out by a Xylem biological treatment process expert can provide you with the insight you need to achieve both of these goals.

What is a TotalCare Condition Audit?

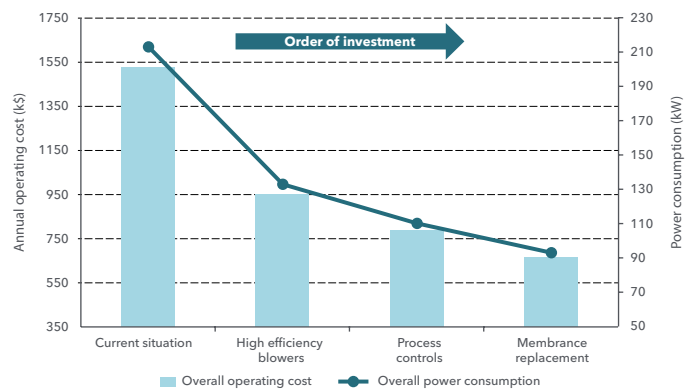
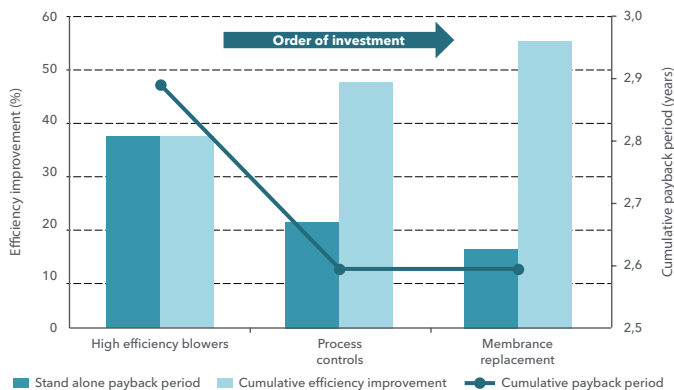
A TotalCare Condition Audit is a site wide assessment service that includes a visual and analytical inspection of the equipment and instrumentation associated with the biological process in order to identify opportunities for improvement.

After the condition audit, we will provide you with a condition audit report that highlights key improvement opportunities and includes tangible recommendations for reduced energy consumption, equipment maintenance and improved process controls. A follow-up meeting is then scheduled to review the key findings of the report together and plan the next steps.

By operating the biological process more efficiently, you can lower operating costs and improve discharge quality while simultaneously reducing your company's carbon footprint.

Why Xylem?

Xylem has many decades of experience in the design, installation and maintenance of biological treatment equipment. We also have deep process knowledge and expertise in a broad range of water and wastewater applications in municipal, commercial, agricultural and industrial settings.



Example of efficiency improvement and operating cost reduction that can be identified through Xylem's TotalCare Condition Audits for biological treatment.

Preliminary assessment

Xylem evaluates basic plant information available from the end user to assess the potential opportunities available for plant performance improvements.

- Initiate communication with end user
- Assessment of opportunities through dialogue with the end user

Audit planning

In the audit planning stage a preliminary assessment of plant performance in relation to effluent standards, and energy requirements is conducted. It is also important to plan the date for the on-site visit along with defining the scope of the condition audit.

- Obtain basic plant performance and requirement data
- Define the scope of the condition audit
- Plan date for conducting condition audit

Site visit

During the site visit Xylem's biological treatment process specialists engage with the site operations team to conduct a visual inspection of the equipment and instrumentation relating to the biological process. In addition, the operation of the biological process and control system is evaluated, complemented by collection of available plant performance data. As a result, some observations could lead to recommendations to be made directly on-site.

- Engagement with plant operations team
- Visual inspection of equipment, instrumentation and biological process
- On-site recommendations (where applicable)
- Collection of plant performance data

Data analysis/ report

After the site visit has been conducted, all observations and assessments made on-site are evaluated and used to generate tangible improvement recommendations. The findings are summarized in a condition audit report that outlines what measures can be taken to improve plant operations and reduce energy consumption. All cost savings and improvements are quantified based on our on-site observations and evaluation.

- Summarize observations and tangible recommendations
- Provide professional feedback on process performance and relevant equipment
- Quantify operational savings based on recommended upgrades

Recommendations

Depending on the findings during the site visit, the recommendations in the condition audit report may include upgrades, asset refurbishment, retrofits of existing equipment, the implementation of new instrumentation and/or improved process controls. It might also include a recommendation for services such as Preventative Maintenance Agreements (PMA), diffuser cleaning or instrumentation maintenance. If there is a requirement for a further analysis, Xylem can offer an in-depth process audit - a more detailed and comprehensive evaluation of your biological process and its performance.

- Upgrades, refurbishment and retrofits of equipment and instrumentation
- Implementation of process controls
- Process audit
- Preventative Maintenance Agreements
- Diffuser Cleaning

CASE STUDY 1

CHALLENGE: A large conventional activated sludge plant in the UK was suffering from performance issues and struggling to meet effluent requirements.

SOLUTION: The condition audit identified inefficient blowers, malfunctioning and inadequately maintained dissolved oxygen sensors, and leaking air pipework with aged diffusers. Ineffective process controls were also contributing to poor plant performance. Xylem recommended a solution consisting of new controls, a new fine-bubble diffused aeration system, new blowers and an instrumentation upgrade. The customer agreed and the solution has delivered dramatically improved performance as well as a £60,000 annual reduction in energy costs. At this rate of savings, the investment will have a payback period of three years.

CASE STUDY 2:

CHALLENGE: A wastewater treatment facility in Wisconsin, USA, had a biological treatment system that was in excess of 20 years old and power consumption was very high.













SOLUTION: Xylem conducted a condition audit and identified a number of potential improvements that would lead to annual energy savings of more than 100,000 kWh, with a payback period of less than two years. The solution included upgrading the existing ceramic diffusers to Sanitaire diffusers and implementing dissolved oxygen control to lower air flow demand.



Do you want ongoing support from Xylem to ensure that your biological treatment equipment keeps running at its best?

Consider signing a TotalCare Preventative Maintenance Agreement (PMA). We will tailor the agreement to suit your needs, and visit your site at regular intervals to ensure optimal performance and energy efficient operation. With a TotalCare PMA, Xylem’s wastewater treatment process experts are always just a phone call away.



 Design & Consultancy	 Installation & Commissioning	 Maintenance Contracts	 Repair & Maintenance	 Monitoring & Supervision	 Inspection & Auditing
 Plant Operation & Maintenance	 Parts & Logistics	 Rental & Onsite Services	 Asset Refurbishments	 Training & Technical Support	 Financial Solutions

Xylem TotalCare is a comprehensive, integrated portfolio of services designed to ensure that your water and wastewater equipment keeps running at its best. Our team of knowledgeable and highly skilled technicians pride themselves on their ability to help customers optimize their operations by providing the right solution every time.

What can Xylem do for you?

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