

Off-gas monitoring

Permanent installation

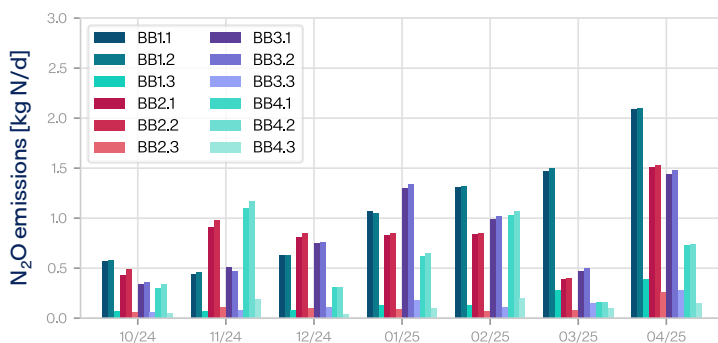


For the long-term optimization of N₂O emissions, continuous emission measurements are highly beneficial. Measurements of different gas species (N₂O, O₂, CO₂) provide insight into the condition and dynamics of a treatment plant and enable holistic optimization.

Included services

- Permanent off-gas monitoring on multiple treatment lanes
- Notos measuring device with optional airflow measurement on hoods
- Installation and commissioning
- Maintenance and monitoring
- Integration of measurement data into the process control system (PCS), evaluated data as PDF report
- Consulting and customized evaluations according to customer needs

Case study N₂O-Optimization, ARA Glarnerland



Procedure

- Notos gas measurement device with 13 off-gas hoods in the biological treatment + Anammox
- Specialized software for evaluating oxygen transfer and emissions

Results (see figure)

- High emissions from Anammox (50% of total emissions)
- Seasonal emission dynamics visible with strong weekly fluctuations
- Biological treatment emission factor: 0.8%

Recommendations

- Deactivation of intermittent aeration
- Implementation of alternating/intermittent operation
- Implementation of dynamic control
- Seasonal sludge age adjustment