EOSi

Nitrack®

Advanced Automation & Monitoring

Enhance MicroC® with The Nitrack® Program

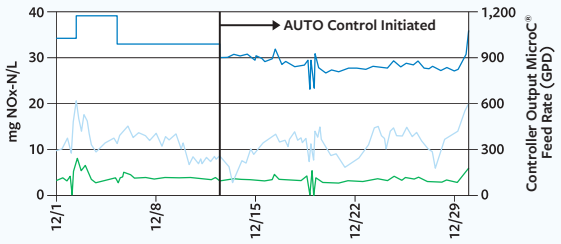
The award-winning optimization technology of the Nitrack® Program is the pinnacle of EOSi's engineering service offerings. The Nitrack® Program combines EOSi's wastewater processes expertise and real-time process monitoring with automated controls to dynamically optimize biological nutrient removal (BNR) processes. With EOSi's ongoing oversight, customers minimize chemical costs while consistently achieving compliance.

The Nitrack® Program gives EOSi's technical staff remote, real-time visibility into key BNR process parameters, and enables customers to automatically control the feed rate of MicroC® products. The result is an "adaptive denitrification program" customized for each plant's processes and treatment objectives. With the assistance of EOSi's engineers the program monitors process data and optimizes set-points and control parameters based on the dynamic circumstances at a plant. EOSi is continuing to enhance the capability of this program and more functionality will be available.

GRAPHS REPRESENT DATA COLLECTED FROM TWO NITRACK® PROGRAM INSTALLATIONS

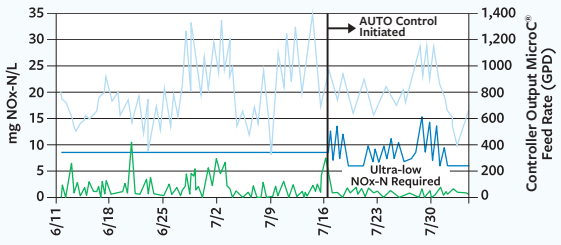
PROJECT 1
15–20% reduction in MicroC® feed rate with comparable NOx-N performance.

- Anoxic Influent NOx-N
- Anoxic Effluent NOx-N
- MicroC® Usage



PROJECT 2
Pacing MicroC® feed to meet demand signifi-cantly improved effluent NOx-N performance.

- Anoxic Influent NOx-N
- Anoxic Effluent NOx-N
- MicroC® Usage



CHEMICAL SAVINGS

- The Nitrack® Program optimizes feed rates using real-time plant process parameters and control schemes, compared with flow-paced or manual dosing.
- With this approach, MicroC® products are never under-fed or over-fed. Only the amount of MicroC® needed to achieve compliance is used.

COMPLIANCE-DRIVEN EFFLUENT CONTROL

- The Nitrack® Program continuously monitors nutrient concentrations and automatically optimizes the MicroC® feed rate to help maintain effluent quality, improve process stability, and support compliance goals.
- Optimization targets can be customized for each plant to balance effluent quality objectives, chemical efficiency, and process stability.

24/7 SYSTEM MONITORING

- The Nitrack® Program's real-time monitoring and alarm systems enable EOSi and plant operators to quickly identify and respond to problems such as plant equipment malfunctions, power outages, or process upsets.
- Remote system visibility allows EOSi staff to review changing process conditions and coordinate recommended adjustments with plant operators to help optimize performance and nutrient removal.

Why Automate?
Take Control of Budget, Time & Risk

EOSi collaborates with Nitrack® Program customers to optimize plant performance. EOSi conducts a thorough assessment to identify strategic and operational improvement opportunities, then helps customers prioritize and implement changes that reduce costs, minimize downtime, and lower operational risk.

MAXIMIZED PERFORMANCE

- Cloud-based data acquisition, storage, trend analysis and KPI visibility
- Continuous monitoring of real-time BNR performance
- 20% average reduction in chemical costs

ADVANCED CONTROL LOGIC

- Combines feed-forward and feedback control to deliver the optimized MicroC® dose
- Assessment of process parameters against configured setpoints to support effluent goals



Features & Benefits of the Nitrack® Program

FEATURE	BENEFIT
Real-Time Optimization of COD:N Ratio	▸ Reduces carbon source consumption and improves process efficiency ▸ Helps reduce out-of-compliance risk
24/7 System Monitoring and Alerts	▸ Continuous monitoring of key process conditions ▸ Automatic alerts for critical events via text, email, and/or voice for faster response to plant upsets
Bundled Pricing	▸ Cost of the Nitrack® Program can be included in the per gallon cost of a MicroC carbon source supply agreement, often provided at no additional charge if eligible
Secure Access from Any Device	▸ Accessible via computer, tablet, or smartphone ▸ No platform-specific software required
Quick Deployment with Reduced Hardware Requirements	▸ Pre-configured hardware supports fast startups in as little as 2-3 weeks ▸ Remote commissioning reduces implementation time
Compatible with Most Process Probes/Analyzers	▸ Works with existing equipment when appropriate ▸ Configured to fit process needs and goals
Analysis and Support by EOSi Experts	▸ Ongoing assessment of process performance ▸ Trend analysis and monthly reporting
Ongoing Nitrack® Program Optimization	▸ Continuous refinement of control strategy ▸ Monthly updates on improvements and results

ENVIRONMENTAL OPERATING SOLUTIONS, INC. 53 Portside Dr, Pocasset, MA 02559
TOLL FREE: 1-866-MicroC-1 | PHONE: (508) 743-8440 | FAX: (508) 743-8443
EMAIL: info@microc.com | ONLINE: www.MicroC.com