Nalco Water offers OMNI, a comprehensive platform that combines in-depth system audits, unique diagnostic tools, 24/7 monitoring, and high-performance chemistry, for the nitrogen processing industry.

A first-of-its-kind program guaranteed to maximize operational efficiency and improve your business outcomes – safely and sustainably.

**PREDICT**
Performance is predicted by using cloud analytics in partnership with Microsoft.

**PREVENT**
Generate insights about performance that allow our customers to prevent unscheduled downtime and make adequate business decisions.

**PROLONG**
Extend asset life and prolong runtime by enhancing the ability to take proactive actions based on data insights.

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**Partnership:**
Leverage the power of the cloud to analyze data and securely deliver insights to a local plant or across an enterprise.
OMNI™ Total Heat Exchanger Performance
Optimizes Reliability, Asset Protection, and Total Operating Costs in Two Nitrogen Production Facilities

**CHALLENGE:**
Two different nitrogen fertilizer production facilities were facing challenging cooling water conditions:
- >20mils of localized corrosion of the heat exchanger tubes reducing life-cycle.
- High organic deposits of microbiological fouling cause potential downtime for cleaning.

**SOLUTION:**
The OMNI Heat Exchanger Performance platform was used to diagnose the root cause on each case, and identify potential mechanical, operational or chemistry solutions to the issues.
The OMNI solution included simulations of the actual conditions, online KPI tracking, simulation of critical conditions of the heat exchanger, in-depth system audits, and 24/7 monitoring.

**RESULTS:**
In the first facility, based on this new understanding of the nature of the corrosion deposits and the performance under actual heat flux conditions, the cooling water treatment program was adjusted. After these program changes, only slight corrosion was observed and pit depths were 0.1 mpy, a 99% improvement and a quantum change in asset protection.

In the second facility, the amount of bleach being added was adjusted using KPIs and ORP, Free Chlorine residuals. Restoring and maintaining U-Value performance, the plant avoided a projected cleaning date and was able to extend their production run until the scheduled maintenance turnaround.

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**OMNI Impact at Nitrogen Facilities:**

**PREVENT**
- Production losses >$2.4M

**PROLONG**
- HX Time To Failures >5 months
- Life Cycle Extension >$80K
- Cleaning Cost >$75K

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**NALCO WATER DIFFERENCE**
We provide a unique combination of world-class service, total impact solutions and unsurpassed expertise to guarantee reliable high performance.