

PSI Process & Equipment



Pumping Services, Inc.
An Employee Owned Company

Feb 2014

PSI Newsletter

ISSUE HIGHLIGHTS

**ASA Analytics
Nutrient Monitoring on
Long Island NY**

**ASA Analytics
Monitors 8 samples
in one unit**

**NYWEA-PSI-Exhibit
20 Manufacturers**

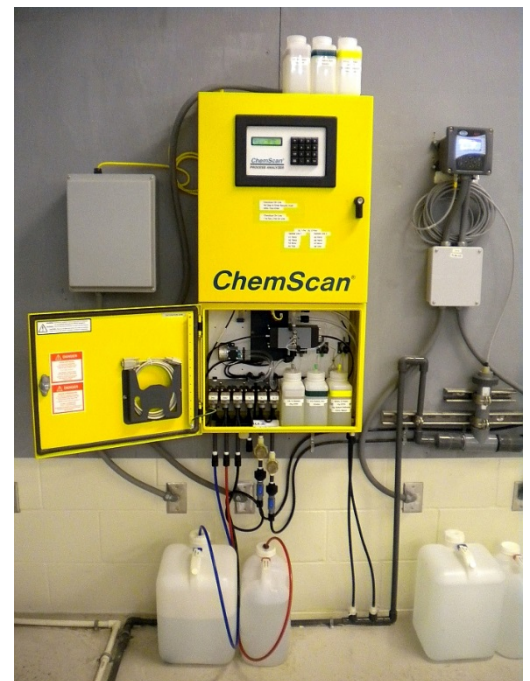
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Dear Readers:

PSI Process and Equipment a leading manufacturers' Rep Company focused on addressing the area's most challenging water issues, has been awarded contracts for the installation of ASA Analytics Chemscan® analyzers at three wastewater treatment plants in Suffolk County, Long Island. These analyzers are a powerful tool in the efforts to reduce nitrogen loadings to the Long Island Sound and local well supplies. To meet the TMDL requirements and protect local well supplies the three treatment plants which range in size up to 2.8-MGD must meet stringent limits that have been placed on many Long Island wastewater treatment plants, typically in the range of 1 mg/l. To achieve these nitrogen levels, more advanced and more complex processes for nutrient removal, and Denitrification Filters are being utilized for this purpose. Denitrification Filters are an attached growth microbiological process in which denitrifying microorganisms attach to the filter media, and methanol is added upstream of the filter system to provide a carbon source

as nitrified influent is filtered through the media. Methanol dose is determined using a compound loop which takes into account nitrate concentrations upstream and downstream of the filter. This compound loop utilizes online analysis results from the Chemscan® UV-3150 manufactured by ASA Analytics of Waukesha, WI. Chemscan® analyzers are multi-parameter online spectrophotometric analyzers that use special pattern recognition software to determine the concentration of dissolved constituents in water. The UV-3150 provides accurate real-time measurements of nitrate, nitrite down to concentrations less than 0.1 mg/l.



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Spotlight on

ASA Analytics

The Chemscan® analyzer ensures that methanol is not wasted, yet sufficient to maintain the microorganisms and achieve the Total Nitrogen limits. The Chemscan® nitrate analysis method uses the measurement of light absorbance at multiple wavelengths across the ultraviolet wavelength range plus a reference wavelength in the visible range. No reagents or sample alteration is required. A real time analysis can be performed without creating a toxic sample discharge from the analyzer. The use of multiple wavelengths (up to 30 wavelengths out of 256 wavelengths detected) provides sufficient information for pattern recognition software to accurately calculate nitrate while compensating for the presence of nitrite, metals, organics, oxidants and nutrients in the samples. The measurement of visible wavelengths is used to compensate for turbidity variations in the sample without the need for filtration of the sample. Chemscan® analyzers provide real-time monitoring of up to eight sample lines at one time and the samples are brought from sample points to the analyzer's sample cell, therefore there are no probes to clean and maintain.



Single unit monitors up to eight sample lines at one time

The Chemscan® analyzer performs sample rotation, calibration, zeroing and flushing automatically. Other Wastewater applications include monitoring and control of nitrification, biological nutrient removal (BNR), phosphate precipitation, denitrification and disinfection processes for secondary wastewater treatment, advanced wastewater treatment and water reuse. Municipal Water applications include control of water blending, chemical feed control, ion exchange breakthrough monitoring, filtration monitoring and disinfection control.



For drinking water applications, analyzers are available for monitoring UV absorbance (UV 254), iron, manganese, and other constituents, and for monitoring chloramination. Chemscan® UV-2150DC, a specialty analyzer for chlorination/dechlorination applications, can monitor chlorine residual down to 2 parts per billion (0.02 mg/l). "The Chemscan analyzers are an essential tool in optimizing the operation of water and wastewater processes", says David J. Silverman, P.E., of PSI Process and Equipment, ASA Analytics' manufacturer's representative for the New York region. "From biological nutrient removal to ion exchange, Chemscan® provides process control that enhances process reliability, saves energy and chemicals, and reduces operator effort and maintenance requirements". Chemscan® analyzers have been utilized for over 15 years in hundreds of installations nationwide offering the end user and operator reliability, ease of maintenance, and overall competitive cost of ownership.

PSI Process and Equipment will be exhibiting at the **New York Water Environmental Association's** 86th Annual Convention Feb 4-6, 2014 located at the NYC Marriott in Times Square, New York City.

Booth 164

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NOVA Water
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Filtronics Inc.
Fresh Creek Technologies,
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ICS Healy Ruff Inc.
SSP LTD Lobe Pumps
Verder Inc.
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Pump Around Systems

Contact the PSI team for your water and wastewater nutrient monitoring needs.