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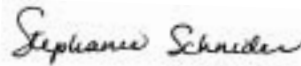
## Letter from the editor

Season's Greetings to you all! We hope this year-end issue of MIEX<sup>®</sup>PRESS finds you all well and enjoying the holiday season with those closest to you.

In this issue, we take a closer look at the global MIEX<sup>®</sup> Business with contracts being awarded for systems in the United Kingdom and New Zealand and with business development agreements being signed by senior delegates in China.

In the U.S. the first full-scale MIEX<sup>®</sup> Installation treating California State Project Water is now online at the Department of Water Resources in Gustine, CA. And even more is yet to come, with 6 new U.S. installations scheduled for start-up by Spring 2008. Stay tuned for details on these in future issues of MIEX<sup>®</sup>PRESS.

Best Regards,



Stephanie Schneider  
[www.miexresin.com](http://www.miexresin.com)

## Collaboration Agreement Signed with Senior Chinese Delegation

Orica Managing Director Graeme Liebelt joined with Mr Zhai Haohui, chairman of China Agricultural Water-saving Technology Association in Melbourne last month to sign collaboration agreements which form the first steps for the MIEX<sup>®</sup> water treatment

technology to be used in China.

The agreement between Orica and China Water will involve the establishment of a large demonstration Water Treatment Plant in Jiangsu Province using the MIEX<sup>®</sup> Technology for drinking water treatment.

Photo: Graeme Liebelt & Mr Zhai Haohui sign the agreement watched by Victorian & Chinese Government representatives.



## Start-up of System on CA State Project Water

A MAGNAPAK® System was commissioned at the California Department of Water Resources' San Luis Field Division/O&M Facility in October.

This system is pre-treatment to an existing conventional coagulation/clarification plant that had not been meeting the TTHM standard set by the Stage 1 DBP Rule. The source water for this plant is State Project Water (SPW), which is renowned for TOC that is difficult to remove with coagulation and which subsequently forms high levels of THMs after disinfection with free chlorine.

While a number of trials have recently been performed on SPW, this is the first full-scale MIEX® Installation to treat this water source. Initial samples show the MAGNAPAK® System to be working very well, reducing the raw water TOC from 2.2 mg/L to 0.97 mg/L.

SPW is the water source for many other water treatment facilities in California, serving approximately 19 million Southern Californians in all. As such, there is significant interest in the MIEX® Process from utilities who wish to stay on free chlorine disinfection rather than change to chloramines for DBP compliance.



Photo: 50 gpm MAGNAPAK® System at the DWR San Luis Field Division WTP



The project team from left to right: Tony Price, Robert Walton, and Steve Carroll of Orica Watercare; Simon Balding, Paul Robins, and Alan Bennet of Yorkshire Water Services.

## Yorkshire Water to Install MIEX® Pre-treatment at Albert WTW

Yorkshire Water Services (YWS) have chosen to install the MIEX® DOC Process at their 60 megalitre per day (16 MGD) Albert potable water treatment plant in Halifax West Yorkshire.

The works currently treats surface water from a Pennine catchment using DAF coagulation and filtration. Over the last decade increasing dissolved natural organic carbon concentrations (DOC) have created demand for additional treatment.

The MIEX® Process has been chosen ahead of other technologies for the efficient removal of DOC. The MIEX® System is to be installed as a pre-treatment step at Albert to reduce disinfection by-product formation and increase treated water throughput at times of high DOC loading.

This project is the result of a four year investigation and evaluation by YWS into the benefits of MIEX® Technology. Orica will work closely with both YWS and their selected large scheme contractor Earth Tech Morrison

(ETM) to deliver the project through 2008.

Orica Watercare's European Business Manager Tony Price commented on the new installation, "This is a significant step for Orica Watercare not only in the UK but also in Europe. YWS is a key European adopter of innovative technology, and we are thrilled they have chosen to adopt the MIEX® Process. This will be our first large installation in Europe, and we are confident it will lead to a greater appreciation of what the MIEX® Process can achieve and the benefits it can bring."

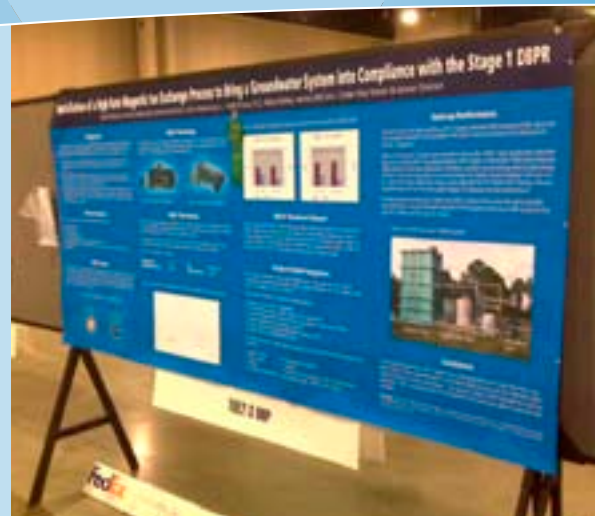
Orica will supply the MIEX® Resin needed for the project and long term operation as well as a proprietary equipment package including the regeneration system and process treatment guarantees.

### Trade Show Schedule, Spring 2008

Colorado RWA	February 18-21	Shared Booth with Hydrologx
Illinois AWWA	March 11-13	Shared Booth with Peterson & Matz
Alabama Rural	March 16-19	Shared Booth with Eco-Tech
Kansas RWA	March 25-28	Shared Booth with Fluid Equipment
Texas AWWA	March 25-28	Shared Booth with Hartwell Environmental
CA/NV Spring	April 21-24	Orica Watercare Booth
Ontario AWWA	April 27-30	Shared Booth with Pro Aqua
AWPCA, Arizona	April 30 - May 2	Orica Watercare Booth

# The Water Quality Technology Conference

in Charlotte, North Carolina, once again provided an ideal platform for showcasing the benefits of the MIEX® Technology. A total of four Technical Papers and two Posters focused on the MIEX® Technology were presented at the show. One of the posters was awarded 3rd place in the overall poster category.



## 12MLD MIEX® System Contract Awarded in New Zealand

**The Whangarei District Council (WDC) in New Zealand recently procured a 12MLD (3.2MGD) High Rate MIEX® Pre-treatment system to improve drinking water quality and ensure compliance to the highest level in the New Zealand Drinking Water Standards – NZDWS (i.e. class A1).**

The water source (surface water) has a high component of DOC that is very difficult to remove using coagulation (i.e. aluminium sulphate). The residual DOC in the water after coagulation was reacting with the chlorine used for disinfection and resulted in moderate

to high levels of Trihalomethanes (THMs) Harrison Grierson Consultants, on behalf of WDC, conducted an extensive options assessment to determine the most appropriate treatment solution for reducing THM levels. This assessment investigated alternative coagulants, enhanced coagulation and alternative disinfectants. The MIEX® Process was recommended as the preferred treatment solution to ensure the reduction in THMs is obtained consistently throughout the year and will comply with the drinking water quality standards in New Zealand.

Harrison Grierson Consultants have been appointed as the project managers and Orica has been contracted to supply, install and commission the plant upgrade. The plant

upgrade is currently in progress with MIEX® System installation to begin in April 2008. This system is anticipated to be fully commissioned by June 2008.

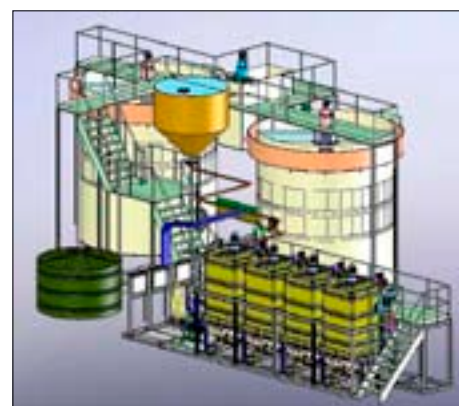


Figure Above: 12MLD MIEX® Pre-treatment System

## Employee Spotlight: Barbara Martin



Barbara Martin started working for Orica Watercare in October 2007 as Western Regional Manager. Before joining the Watercare team, Barbara worked at HACH for nine years where she held numerous positions including Application Specialist for disinfection practices, Regional Sales Manager for Northern Ohio, and Operator Trainer, where she trained water and wastewater operators in more than 25 states.

Barbara's academic background includes a Bachelors degree in Chemistry from Boston University, a Masters in Geochemistry from Colorado School of Mines and an MBA from Colorado State University.

In her spare time, Barbara plays the trombone and baritone in several bands. She also enjoys running and spending time with her husband, Chuck, and their three-and-a-half year old son, Bryce.

# Illinois MIEX® Installation to Remove Color, DOC & Arsenic

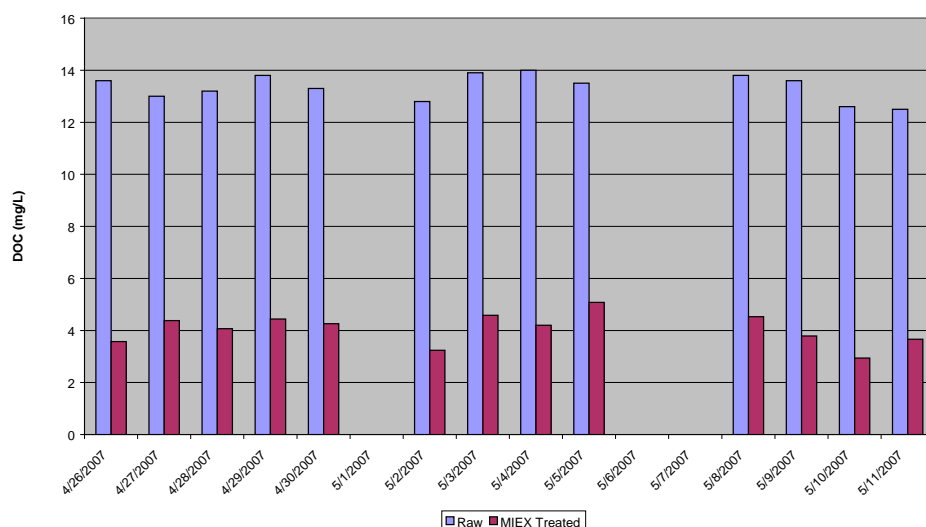
Following a successful trial for the removal of color, DOC, and arsenic, the Village of Goodfield, IL, under the guidance of its engineer Lewis, Yockey & Brown, recently procured a 300 gpm Pressurized MIEX® System.

Goodfield, a community of approximately 700 residents in the heartland of America, tested the MIEX® Process from April 26 to May 11, 2007. The objective of the trial was to improve the aesthetics of the treated water by reducing color levels and to remove precursors that form disinfection by-products (DBPs) in order to comply with current and forthcoming U.S. Environmental Protection Agency (EPA) regulations. A secondary objective was to provide additional removal of arsenic to supplement downstream removal with aeration and filtration.

Orica Watercare's 5gpm High Rate pilot plant was used for the trial, running at a regeneration rate of 600 bed volumes (1.66 gallons of resin regenerated per thousand gallons of water treated). This allowed consistent removal of color and DOC with minimal waste.

During the trial, much was learned about the ability of MIEX® Resin to remove arsenic. It demonstrated that As V could be efficiently removed by MIEX® Resin, but the As III, since it is not anionic, could not be removed by MIEX® Resin. The downstream aeration and filtration processes in place at Goodfield facilitated the removal of this remaining form of Arsenic to within the EPA regulations.

DOC Removal at the Village of Goodfield, IL Trial



Caption: DOC Removal with MIEX® Treatment helped at the Village of Goodfield, IL achieve higher levels of color and DBP reduction

## Trial Results:

- Raw water true color was reduced on average by 88%, which will produce much more aesthetically acceptable water for consumers.
- Throughout the trial, the MIEX® pilot plant consistently reduced the raw water DOC level by around 70% from an average level of 13.4 mg/L to an average of 4.1 mg/L.
- The reduction in DOC provided on average a 67% reduction in the treated water TTHM formation potential and an 81% reduction in the HAA5 formation potential. These reductions should bring distribution DBP levels to well within the current and future EPA standards using

current disinfection practices.

- MIEX® resin treatment allowed raw water arsenic levels to be reduced by an average of 19% which will supplement removal by downstream aeration and filtration.

The Village of Goodfield WTP is already in compliance with the EPA's DBP and arsenic regulations but the additional removal of DOC and arsenic provided by the MIEX® Process will provide a comfort margin that will ensure compliance with new regulations into the future.

The village's engineer, Lewis, Yockey & Brown, is responsible for the design of the new water treatment plant set to be commissioned in March 2008.