ultra sound bite
THE NEWSLETTER FOR SONICO'S GLOBAL FAMILY
SUMMER 2004

WELCOME TO THE FIRST EDITION...

"I'm pleased to say that Sonico is going from strength to strength, and with so much exciting news to report on, a newsletter is long overdue.

This is testament not only to the original concepts behind sonix™, but to the hard work of everyone involved in its development, and to the foresight of our clients, who saw the potential in such a novel technology.

If you are discovering sonix for the first time through these articles, I'm sure you will want to find out more.

So, enjoy, and I look forward to working with you all in the future."

Piers Clark
Managing Director

Swedish sonix™ installation dramatically confirms its value

Kävlinge, in the southern region of Sweden, is proud host to the world's first full scale sonix™ installation. Yet this 12kW installation, constructed in October 2002 and fully commissioned in January 2003, has been a well-kept secret. Why haven't we shouted about it until now? It's a question of data…

Following the sonix™ installation, biogas production showed a marked improvement. At the same time however, the site's two digesters were converted from a mesophilic (35°C) to a thermophilic (50°C) operation, and the digester retention time was reduced to nine days.

Kävlinge Wastewater Treatment Works

Although the sonix™ was clearly doing the job for which it was intended, it was not possible to state exactly how much of the biogas improvement was due to sonix™ and how much to the new, higher operating temperatures.

Then in April 2004, the sonix™ plant required its first routine service to replace the stacks. For the first time since installation, data for the sonix™ performance could be collected: the results were even more dramatic than anticipated.

As soon as the sonix™ plant was taken down, gas production began to drop rapidly. In fact, the reduction in biogas was so great that without sonix™ running, emergency oil supplies had to be bought in to make up the power deficit.

Tom Nielsen, Director of Operations at Kävlinge said of this new data: "Operations at Kävlinge are complicated, with many factors influencing overall plant performance. However we are convinced that the sonix™ is delivering a significant improvement to our digester performance, complimenting the thermophilic digestion."

"The recent servicing of the sonix™ plant provided an encouraging endorsement of the sonix performance."

We knew it was working: now we know just how well. You can guarantee that our first large-scale sonix™ plant won't be a secret any longer.

*For information about **sonix™ at Kävlinge** contact: Soren Gotthardsson of Purac AB on soren.gotthardsson@purac.se*

Major demo under way for Californian Energy Commission

July 2004 sees the start of a six month full-scale sonix™ demonstration at Riverside, California.

This important trial, funded by the Californian Energy Commission (CEC), reflects the growing interest in ultrasound as a pre-treatment process to maximize the quantity of biogas generated during anaerobic digestion.

Technologies that can yield more biogas, a recognized form of renewable energy, will be moving up the agenda for wastewater managers, especially with energy costs rising as oil hits $40 a barrel.

The Riverside trial will also explore changes in the dewaterability of digested sludge following ultrasound pre-treatment.

*For information about **sonix™ in North America** contact: Rupert Kruger on rkruger@sonico.net*

Q: IN HOW MANY CONTINENTS HAS SONIX™ BEEN INSTALLED? **A: 4**

So far it has reached Europe, North America, Asia and Australasia. sonix™ treats more sludge than any other ultrasound provider.

AQUATECH 2004

Amsterdam, September 28-October 2

Sonico will be exhibiting at Aquatech Amsterdam, for more details go to www.aquatechtrade.com or visit stand number 05.132

Singapore provides another prestigious win for sonix™

A 30kW plant to be installed summer 2004

The contract was awarded by Singapore Utilities International (SUI). Once the sonix™ plant is installed, SUI will undertake a period of comprehensive testing, with particular interest in how sonix™ enhances sludge disintegration during anaerobic digestion. The 30kW plant will be capable of handling sludge throughputs of up to 200m³/day.

The installation of sonix™ will reduce solids requiring final disposal and increase the amount of useful biogas generated.

Dr Piers Clark, managing director of Sonico, said, "We're delighted that sonix™ has been awarded this important project and look forward to working with SUI to ensure that this installation is a success."

*For information about **sonix™ in Singapore** contact: Fergus Rooksby on gfprooksby@purac.co.uk*

Egg-shaped Digesters in Singapore

Sonico set to create the world's largest ultrasonic digestion plant in New Zealand

sonix™ impressed a forward-looking utility company with its enhanced digestion, cost-effectiveness and environmental credentials…

Following highly successful trials, New Zealand's largest water and wastewater utility, *Watercare Services,* is to install seventy-two **sonix™** ultrasound horns at their flagship Mangere Wastewater Treatment Plant, serving a population of 800,000 near Auckland.

This will create the world's first large-scale ultrasonic plant for treating secondary sewage sludge.

Mangere Wastewater Treatment Plant

sonix™, which has won industry awards for innovation, uses intense ultrasound waves to cause cell lysis prior to anaerobic digestion and so optimising digester performance.

And with environmental regeneration and sustainability a key driver behind Watercare Services' investment at Mangere, **sonix™** was selected not only for its operational benefits but its 'green' credentials too.

By improving the digestion process using **sonix™**, Watercare Services will be able to realise greater quantities of biogas, making better use of co-generation facilities on site. Treatment with **sonix™** also minimises chemical usage for activities such as sludge dewatering, lime stabilisation and foam control.

Dr Piers Clark, Managing Director of Sonico, the joint-venture which has brought **sonix™** to the market, believes this installation marks an exciting new chapter in the technology's development:

"Using ultrasound to treat sludge is a pretty novel concept. We have shown that **sonix™** works, but never before at this scale. The Mangere plant gives us a wonderful opportunity to demonstrate just what an effective solution ultrasound can be for large wastewater utilities world-wide."

"It is gratifying to see **sonix™** adopted by a forward-thinking organisation like Watercare Services that will really extract the full benefits from our technology: immediate improvements to secondary sludge digestion and payback through energy savings and reduced biosolids – everything **sonix™** was designed for."

*For information about **sonix™ in Australia and New Zealand** please contact Sophie Mormede on smormede@sonico.net*

DID YOU KNOW?

Cats can hear ultrasound!

WEFTEC 2004

New Orleans, USA, October 2-6

If you're going to this year's exhibition call in and see us at booth no. 1558

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