



OPERATOR



February 2003 Edition

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Anthony Evans Presenting his paper
at the 2002 Conference - Geelong



Tradies Competition Winners at the
2002 Conference - Geelong

Editorial



Christmas has passed and another year is well advanced. School holidays are over for some and just about for others. Hopefully now, as is usually the case the surf will pick up.

The bush fires that have been raging around our State, the ACT and NSW bring back memories for me of Ash Wednesday along the Surf Coast now 20 years ago this February. Our thoughts go out to those people who have been affected by the fires and to those involved with the fighting of the fires.

Keep those articles coming in. By now if you have been reading the newsletter you have a good idea of the type of articles we are looking for. Any item of news from your organisation no matter whether it is large or just a few lines, send it in.

THE EDITOR

President's Prattle

Welcome to 2003. I hope that you had a happy and safe Christmas and New Year.

The bush fires all around the country have affected a lot of people from all walks of life.

We in the water industry have not been immuned to these events. The fires have brought down power lines cutting supply to pump stations, treatment plants and the like. There is also the possibility of contamination of water supplies and the environment. Fighting fires particularly in urban areas can put a high demand on resources.

There will be new challenges for our industry and I encourage you all to support your colleagues and to provide assistance where you can. I can see that there will be an opportunity when things are back to normal to reflect on what has happened and pass the knowledge on to the rest of the industry. Using this newsletter "Operator" or our national magazine "Waterworks" or doing a presentation at the WIOA conference are great avenues to do just that.

"Happy Operating"

Russell Mack
WIOA President

Around the Traps South East



East Gippsland Water, Gippsland Water,
South Gippsland Water & Western Port Water

Gippsland Water

Moe Water Treatment Plant

Moe WTP supplies treated water to the areas of Moe, Newborough, Yallourn (including Yallourn W) Yallourn North, Morwell North, Trafalgar and Yarragon. This equates to a population of approx 25000 persons and 11000 customers. Moe WTP has the largest demand of all Gippsland Water's treatment plant.

The WTP produced 4060 ML during the 2001/02 financial year (1 ML = 1,000,000 litres). This provides an average daily production of 11.2 ML/day. The WTP has a maximum daily capacity of 24 ML/day.



The Moe WTP has two separate raw water supplies:

➤ From Narracan Ck (Whites Weir, approx 11km's Sth of Moe). This raw water supply has a maximum capacity of approx 12 ML/d, however this is seasonal and reduces in summer. The quality of this raw water supply is also affected by the weather and can deteriorate quickly following rainfall events.

➤ From Tanjil River (approx 7km's Nth of Moe) from a pump station located adjacent to the river (near the Walhalla Rd). This raw water supply has a capacity of approx 24ML/d. The quality of this raw water supply is also affected by rainfall events although the reaction is less dramatic and not as quick. Since this raw water supply is pumped it is used only when the Narracan supply is inadequate or of poor quality.

The Moe WTP treatment process involves conventional clarification (shown centre in the above photo), filtration (shown RHS) and disinfection processes. The treated water is stored in a 22 ML covered storage basin (shown if foreground) before distribution to customers or alternative storage basins at Newborough, Yallourn and Yallourn North.

The customers were supplied raw water until 1960, when the new WTP was constructed. The WTP at this stage consisted of 8 rectangular upflow clarifiers and a new concrete lined storage basin.

The WTP developed further over time, with the filters being constructed in 1996 and the basin being covered in 2001. In addition to these major improvements, minor improvements and optimisation of the treatment process is on-going

The operator of the Moe WTP is Wayne Shaw. For those who do not know Wayne has worked for Gippsland Water (or Tarago Water Board) for 11 years, most of this involved in Water Treatment. Prior to this Wayne worked as a tradesman for the SECV. In addition to his water treatment duties, Wayne is a proactive member of the OH&S organisation within Gippsland Water, being a member of the umbrella committee and the treatment group committee.

In his spare time, Wayne is a musician and regularly plays in a band. He also leads a Moe Scout group.

If anyone would like to know more information about the Moe WTP, please contact Wayne Shaw (03 5126 1118).

MAKING HAY WHILE THE SUN SHINES

Westernport Water is working with the Victorian Farmers Federation to ensure that the hay cut at its two Wastewater Treatment Plants will get to farmers in need elsewhere in the state. It is anticipated that the two sites will produce more than 300 rolls of hay.

The idea to donate the hay came from Treatment Plant Operator, Peter Dellevergine. "I'd been seeing pictures of the drought-affected areas and hearing about the farmers' plight and I just wanted to do something to help," said Peter. "We were getting ready to cut the grass in our paddocks at the treatment plants and it hit me that this hay might be one way to provide assistance."

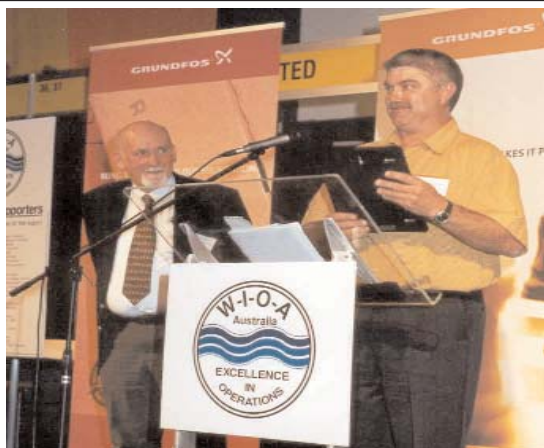
Peter made the suggestion and it has set off a chain of events. His proposal was adopted by the Board at its October meeting. The Victorian Farmers Federation was contacted and the grass was assessed for its quality and it was decided that the hay would be suitable for use. Since then a contractor has cut, raked and baled the hay into rolls at the King Road Wastewater Treatment Plant in Coronet Bay on behalf of the VFF. The Cowes Wastewater Treatment Plant will follow shortly.



**Peter Dellevergine
pictured next to
one of the rolls of
hay at the King
Road Wastewater
Treatment Plant at
Coronet Bay**

Mike Paine, the Authority's Chief Executive Officer, said that Westernport Water had adopted a Triple Bottom Line approach to its business and decision-making processes. "The donation of the hay is a practical example of this approach," said Mike. "The Authority has a social responsibility to the community it serves and beyond. Through Peter's fine suggestion the Authority aims to make a difference, be it in a small way, to aid the farmers at this difficult time."

For further details on this matter please contact Rose Thomas on 5952 8114.



**Conference 2002
Actizyme Prize and Hepburn Prize Winner
Anthony Evans - South West Water**

Secretary's Scrawl

Conference 2003

We are still to finalise the venue for the 2003 conference but expect to sort out the issues shortly and hope to advise our Members and supporters where we will be going in the next few weeks.



Sorting out the venue has delayed the publication and distribution of the "call for platform papers" but I can advise that we are now accepting abstracts. They will be accepted through until the end of March, so if you care to put pen to paper now and submit an abstract it will be considered. This is better than leaving it to the very last minute anyway!

If the platform presentation isn't your cup of tea, remember the "Operator poster papers" which will again be sponsored by the Water Industry Training Centre. Get to work on your material now.

Water Works

By now everyone would have received a copy of the December edition of "Water" with the third edition of the WIOA Journal "WaterWorks" included. This edition has the photo of the white suited Graeme Beasley getting ready to dose some lime into the wastewater treatment plant at Warragul.

We have an ongoing competition looking for photos suitable to place on the cover, so all you budding photographers out there get busy and send in some (work related) snaps. Those that get printed will win a handy prize.

We are always on the lookout for articles and would appreciate any suggestions from Members about the sort of content which should be included in the Journal. If you have something to contribute that may be of interest to other operators, or have a topic that we may be able to source someone to write a piece on, please contact either myself or Russell. The editorial team is willing to help you set up and even write the article if you think you need help, so don't be shy - get involved.

Training - AQF System

Members would be aware that the updated Water Industry Training Package was launched to the industry at our September 2002 conference in Geelong. In looking over the units available, we have discovered what our Committee thinks are some gaps in units offered within the package. We intend to make a submission to the organisation responsible for reviewing and maintaining the package with a request to consider the addition of some more modules, particularly at Certificate III level.

The units we have identified as advantageous to be included are Confined Space Entry, Advanced Maths (Maths 2), Chloramination, Reclaimed Water Irrigation, Blue-green Algae, Intro to Trade Waste, Fluoride and On-site Wastewater Treatment. We intend to suggest these units be added and want to hear if there are units other than these that Members feel could also be added. If you know of other missing units that should be added, please reply by the end of January so that we can finalise our submission.

Member Survey

The results of the Member survey completed some time ago are available, although the Committee has decided not to publish the results to the website. A copy of the results can be sent to interested members either by mail or e-mail so if you would like a copy, please let me know and I'll send them out.

Subscriptions Owing

All Members owing fees have been sent a Tax Invoice detailing the amount required to be paid. Although a number of people have responded and paid their fees, there are still a number of Members with various amounts outstanding. Although we don't want to remove names from our Members list, we will do this if the fees are not forthcoming in the near future. Please make an effort to pay or alternatively, if you don't wish to remain a Member, please let me know.

New Members

Welcome to the following people and companies who have recently joined our Association as a Member or Corporate Supporter.



Steven Hickin, John Allen, Allan Morris, Tony Taylor, Heath Seuren.

New Corporate Members include - none .

George Wall
WIOA Secretary



Around the Traps Private Industry

PROFILE OF AN OPERATOR

This is the fifth article in a series of interviews titled 'Profile of an operator' specifically dedicated to water and wastewater operators working in the private industry.

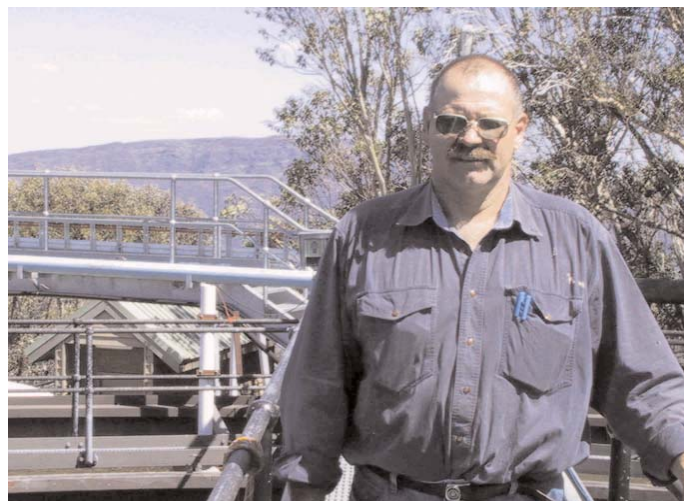
Profile: Stephen Holland

- > Works for Mt Buller Resort Management Board
- > Job title - Operator Waste Water Treatment
- > Main role - Maintaining and operating waste water treatment plant, backup operator water supply system, leading hand outside operations
- > Lives in - Mansfield VIC
- > Hobbies - Hunting, fishing, family, gardening

How did you become an operator?

I have worked at Mt Buller for twenty six years. I spent twelve years in the snow ski industry and ski lift construction. When a job came up with the land management agency, (then the Alpine Resorts Commission) I applied and was successful. There were a few staff changes which led me to taking over as plant operator.

I have now spent fourteen years in this role. The work environment is unique and enjoyable, the snow is only a small part of the attractions up here.



Describe Mt Buller Resort Management Board main business activities?

The MBRMB is the land manager of the Mt Buller Alpine Resort under the Crown Lands Act, and service provider under the Alpine Resorts (Management) Act. There is no free hold land on Mt Buller, it is all lease hold and crown land.

Our main focus is the proper management of the resort and surrounding land while continuing to provide the public services within the resort. The resort is not part of any municipal or area water board.

The water services include:

- > Waste water management and treatment
- > Potable water supply
- > Snow making water supply
- > Storm water management

Can you tell me a little about the Mt Buller Wastewater Treatment Plant?

The oldest part of the plant was built in 1972. Since then it has been regularly upgraded. The treatment plant now is based on extended aeration with two activated sludge plants. Within the activated sludge plants we operate fine bubble diffusers. Tertiary treatment involves chemical phosphorus removal and biological nitrogen removal.

Disinfection now occurs via ultra violet irradiation, in the past the disinfection method was chlorination. The plant is controlled by a PLC system. During the winter months the plant is heated to maintain a minimum twelve degrees celsius of mixed liquor.



What are the major challenges you face in your role?

Extremes of temperature, is the most challenging, in summer we reach thirty degrees and in winter we can get down to minus seven degrees. Also as we are a holiday resort, extreme variation in load to the plant occurs. Due to seasonal visitor numbers the population changes from 50 people in summer to 10,000 - 12,000 people on a busy winter Sunday.

At the moment I am closely involved on a new project where we are trialing onsite reuse of effluent for snow making. This process is an initiative of the Board and is using ultra filtration.

The project has won the United Nations of Association of Australia 2002 award for 'Best Specific Environmental Initiative'.

I have always enjoyed life on the mountain in both summer and winter. The alpine environment is very sensitive particularly to nutrient levels. Our EPA requirements are stringent and closely monitored to ensure we do not breach them and consequently detrimentally impact on the fragile alpine environment.

**Cynthia Lim and WIOA would like to thank
Stephen Holland and Mt Buller Resort
Management Board.**



Around the Traps Central

Barwon Water, Western Water &
Metropolitan Water Companies

Barwon Water

SEWER MINING AN INNOVATIVE WATER SOURCE

As part of its drive to ensure a sustainable water supply, Barwon Water will investigate the feasibility of harvesting water from Geelong's sewerage system and treating it locally to produce water suitable for re-use.

GHD Australia Pty Ltd has been appointed to assist Barwon Water with an investigation into sewer mining in the Geelong region. Barwon Water and the Western Victoria Water for Growth Committee are jointly funding the study.

Scheduled for completion by June 2003, the study will investigate sewer mining opportunities in the Lara, Clifton Springs/Drysdale/Leopold and Ocean Grove/Point Lonsdale areas.

Barwon Water Chief Executive Dennis Brockenshire said sewer mining was an innovative method of sourcing recycled water from the sewerage system and had the potential to reduce demand for potable water, lessen the load on the region's sewerage systems and open up re-use opportunities. "In addition this new, virtually drought-proof water source could attract new industries to the region," Mr Brockenshire said.

"Following an initial review of the three nominated sites, one site will be identified for further intensive investigation where potential re-use options across a wide range of sectors will be rigorously evaluated," he said. "We will work with the community, regulatory bodies and non-government organisations to identify sustainable options."

Mr Brockenshire said Barwon Water would only proceed with sewer mining after a full environmental, social and economic evaluation had been made. "Sewer mining is a relatively new concept and has only been trialed on a small scale in Australia," he said. "This study is looking at sewer mining on a much larger scale and if it proves to be a viable alternative water supply, Barwon Water will consolidate its position as an industry leader in promoting sustainable water usage."

Mr Brockenshire said part of GHD's brief was to develop a method of evaluating the feasibility of sewer mining opportunities. "As well evaluating opportunities in Barwon Water's service area, the system may be used by other Victorian Water Authorities," he said. "Sewer mining has the potential to be an important step toward ensuring a sustainable water supply for not only Barwon Water but for the State."

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NEXT EDITION

**Article Contribution Deadline
For the May Edition
April 11, 2003**

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Articles can be forwarded to area contacts or directly to
The Editor email: rgreenhough@useoz.com



**Conference 2002
WITC - Best Operator Poster Prize Winner
Len Ablett Gippsland Water**





Around the Traps North East

North East Water, Goulburn Valley Water, &
Coliban Water

Goulburn Valley Water

WATER RESTRICTIONS - THE GOULBURN VALLEY WATER EXPERIENCE

Water restrictions are something that we normally plan for every 10 to 15 years on average. Severe water restrictions - for example no outdoor use - are something that few of us have had to experience.

Goulburn Valley Water's (GVW) operators have been on a rapid learning curve over the last few months as increasingly severe restrictions have been imposed in one supply area, and mild restrictions have been imposed elsewhere.

GVW's Supply Situation

About 15,000 residents in Broadford, Kilmore, Wallan and Wandong/Heathcote Junction are supplied from the 1700ML Sunday Creek Reservoir. This is an annual storage which normally fills in winter and early spring and is then drawn down to relatively low levels during summer and autumn. Annual diversions are typically about 1100ML.

In autumn 2002 the storage was drawn down to about 35% of its capacity. However, rather than filling again during winter the storage remained at this low level. In accordance with its Drought Response Plan GVW introduced Stage 5 restrictions on the 14th August. Stage 7 restrictions followed on the 25th September and Stage 9 restrictions on the 1st November.

To supplement supplies GVW commenced trucking 600,000 litres of water each day from Seymour to Broadford. This is a distance of 17km, and the water supplies about 50% of Broadford's daily demand.

Sunday Creek Reservoir has, however, continued its decline and it now (13th January) holds only 27% of its capacity. At the current levels of restricted demand this is sufficient to last until May 2003.

Elsewhere in GVW's region Stage 2 water restrictions were introduced on the 1st November. These were introduced to encourage consumers to use water wisely, and are not designed to save significant volumes of water.

Stage 9 Restrictions?

GVW has a 10 stage water restriction by-law.

Stage 2 limits the use of sprinklers to between 6am and 9am and 6pm and 9pm daily.

Stage 9 restrictions are severe and ban the use of hoses and sprinklers. Watering of garden beds is permitted by means of buckets or watering cans filled directly from a tap for up to two hours each day. In addition, swimming pools cannot be filled, and car washing is permitted only if a bucket is used.

Water Carting

Part of our strategy to minimize restrictions involves the trucking of water to Broadford from Seymour. Broadford has

been chosen because of its good road access, and close proximity to plentiful supplies of treated water at Seymour.

After a tender process, McColl's Transport was engaged to transport the water. Currently 600,000 litres of water are being trucked each day, and this volume may increase in the future.

McColl's are using three 30,000 litre capacity tankers that usually transport milk. The trucks operate between 7am and 7pm daily, and have a turn round time of about 90 minutes. This consists of a filling time of 6 minutes, an unloading time of 15 minutes, and travel between the sites. Access constraints at the Broadford water treatment plant do not permit the use of "B" Doubles.

To minimize the filling time GVW installed a new 200mm diameter standpipe at Seymour. The tankers unload via their existing 100 mm outlets into two temporary 18,000 litre tanks at the Broadford water treatment plant. The water is then pumped into a high lift pump well at the treatment plant outlet.

Shire Council approval was required to the truck route, and we have also installed a dust suppressant on a section of gravel road near the treatment plant.

The water carting has been very successful, with no problems experienced to date. However, it is expensive at around \$90,000 per month in direct costs.

Bruce Anderson
Operations Manager, Goulburn Valley Water

Around the Traps South West



Glenelg Water, South West Water & Portland
Coast Water

No articles this edition

New Products

A recently developed UV/Visible spectrometer which completely submerges in water or wastewater has been tested here in Australia for a range of potential applications. Its initial focus has been in trade waste to locate and quantify discharges resulting in STP overload and failure to comply and for detection of potential toxic substances.

The unit has also been tested here to determine the ability to provide load control information at the STP inlet. The unit will correlate extremely well with BOD, COD, TOC by looking at the specific absorptions of the various components of the waste stream and mathematically processing the full spectral response across the UV/Visible range to provide accurate figures even in a changing matrix. This makes feed forward load control a very real possibility.

The time base for updates can be as short as every 15 seconds allowing rapid detection of sudden fluctuations such as the short-term presence of toxic or other unauthorised substances and will drive an auto sampler directly for lab confirmation.

Since it measures the full UV/Vis spectrum it also provides information on nitrate levels and suspended solids as separate outputs. This opens the door to investigations into C uptake

and N removal at any point in the treatment process. ie measurement of driving forces and resultant.

The unit requires no chemicals, and is virtually maintenance free, which makes it ideal for industrial and municipal influent and effluent along with many short-term investigative applications in the waste water treatment process. This is enhanced by it's portability, internal data logging and it's ability to run directly from a 12V DC battery.

Additional investigations are about to begin to test for the ability to determine chlorine demand in drinking water and the results of this testing will be made available at your request.

If you are interested in further information, please contact Dianne on ausoffice@dcmprocesscontrol.com, Carol on nzoffice@dcmprocesscontrol.com or visit our website at www.dcmprocesscontrol.com where you will find technical articles on the scan spectrolyser under SCAN in the "about us" section. Please excuse the temporary disarray in the website as we are in the process of rebuilding it.

If you would like a site demonstration of the system, contact either office and a mutually acceptable date can be arranged.

Dianne Wilson
DCM Process Control Pty Ltd



**taking the guesswork out of
water and wastewater**

Around the Traps North West



Central Highlands Water, Grampians Water,
and Lower Murray Water

No articles this edition



AWA - Wal Whiteside Operator of the Year 2002
Paul Keating - Gippsland Water (r) accepting the
plaque from AWA Victorian President, Peter
Robinson, at the 2002 Conference

2002 WEEKEND SEMINAR PARTICIPANTS



**See Page 8 for details of the
2003 Weekend Seminar**



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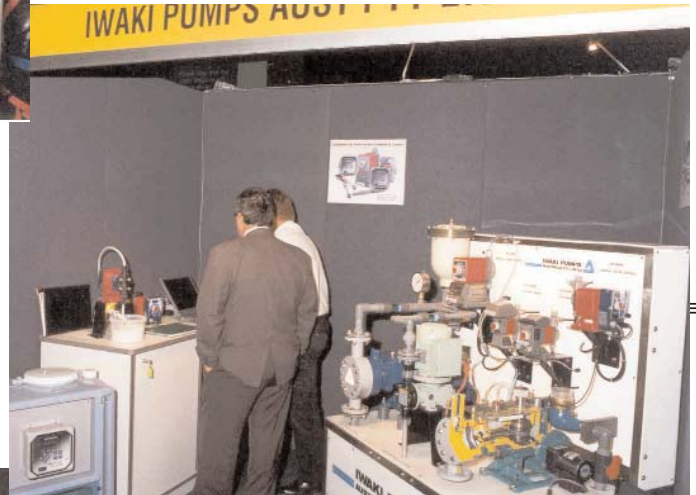
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2003 Weekend Seminar



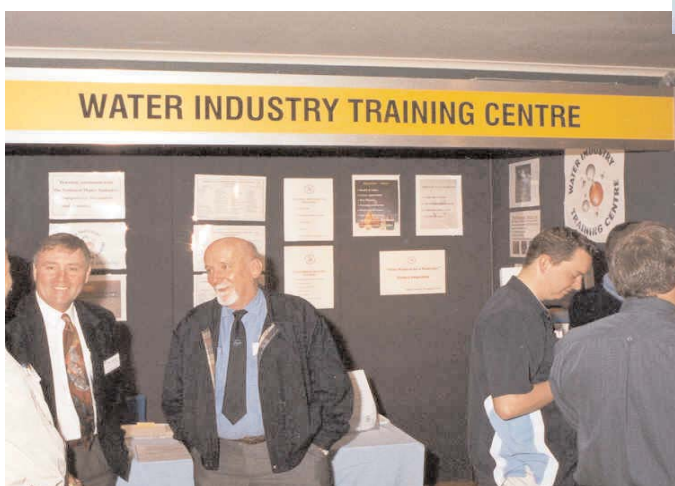
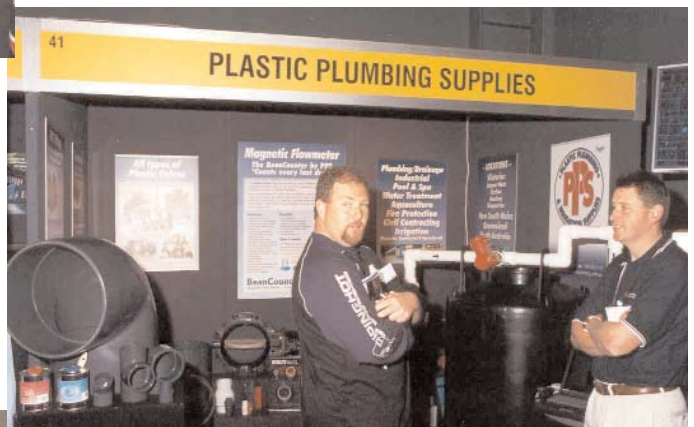
**Pinnacle Drive
Rawson
Victoria**



**Date
Saturday March 29th
&
Sunday March 30th**



**Trade Exhibitors
Plastic Plumbing & Irrigation Supplies
MSA (Aust) Pty. Limited
Iwaki Pumps
Aluminates
Water Industry Training Centre**



**For details
refer to the enclosed
*Registration form***

**Registration close
March 7, 2003**