RAUL RAITER
CONSULTANT

13/ 10/ 2003

HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON SCIENCE AND INNOVATION

Inquiry into coordination of the science to combat the nation's salinity problem

Dear Committee members,

I would like to congratulate you for being able to narrow the search and focus on the real issue I also believe of being the core of the puzzled situation we, as a nation, our water resources and the water industry, found in lately.

I am writing this submission since like this committee, I also wandered for very long time whether the existing / available technologies are being used to the full extent towards solving the salinity problem and whether the people involved with the salinity problem are openly minded enough to consider ways "outside the square" in trying to solve the problem.

My prolonged wandering has brought me to the following conclusions:

- The solution to the salinity problem will come from an integrated approach based on many technologies and enterprises.
- All the necessary technologies and scientific knowledge is available today.
- All those involved in solving the salinity problem must step "outside the square" of conventional thinking, put aside egocentric desires, consider new approaches and continuously reconsider approaches dismissed in the past, in view of latest available knowledge.
- A permanent "salinity board" possessing enough money to attract, check, test and implement suggestions from anybody having even the slightest referrals towards alleviating the salinity problem. This board should be formed of people who are fully paid for a limited time to concentrate in one place all such suggestions. After that period, new members, the old ones being part of a voluntary consulting body, would replace theprevious ones. The board members would be: scientists (20%), business people (20%), agriculture people (20%), just graduated students (20%), and people interested in finding a solution but unrelated to the problem in their area of activity.

I have arrived to these conclusions after putting aside everything in my life, developing an integrated system for wastewater treatment that, in long run, could provide a partial solution to the overall approach to salinity, and yet, finding it impossible to even demonstrate the new system !!!!

Attached, find please a "paper" on the new system and its relation to the salinity problem, as well as a SWOT analysis of it.

Please be aware that I regard Australia to be one of the most innovative countries in the fields of water, wastewater and hydrometallurgical processing, together with U.S.A. and South Africa. Indeed, new concepts, designs, process and technologies found their birth in Australia, and we should be proud of this.

Unfortunately, it seems to me that Australia is not amongst the fore front countries (Israel, U.S.A. and South Africa) in the field of water usage and management, and this, despite giving birth to new concepts, designs, processes and technologies; It looks like Australia produces new concepts, designs, processes and technologies for others to use. This kind of attitude is quite natural in a country like Australia that has the vast majority of its population and industry concentrated in areas along the coast and abundant (until lately) in water.
In other words, since there is quite a challenge in investing and applying new concepts, designs, processes and technologies where the water is abundant and the old technologies work well, new developments from inside or outside Australia have been ignored for as long as possible.

Three typical examples to illustrate the above:

1. MIEX is an ion exchange process recently installed by the Water Corporation in Western Australia in one of its drinking water treatment works. The technology has been hailed as one of the latest in the field of water treatment. In fact, the technology has been developed by CSIRO and ICI in the early '80-ies (20 years ago!!), trailed in Adelaide, and sold for implementation in Europe, but not in Australia.

2. MICROFILTRATION is being used extensively throughout the world for water treatment for the last 20 years or so. Its use in Australia has only started about 5 years ago.

3. In Israel, for the last 50 years, fresh water for irrigation has been pumped and ducted/piped to the fields and there, sprinklers are used for dispersion over the fields. Such a scheme has only been recently inaugurated in Western Australia, saving huge amounts of water, and replacing open trench irrigation.

These examples confirm that only in a country abundant (?) in water, the water industry and industries related to it could ignore not only developments oversees but even its own inventions. This kind of approach to water has resulted in the salinity problem of today and only a radical change in thinking would produce results.

Yours sincerely,
Raul Raiter MIEA, B.Sc., M.Sc.(Chem. Eng.), D.Tech (Student)