

26 July 1999

Mr Ian Dundas
Secretary
House of Representatives Standing Committee on Environment
and Heritage
Parliament House
CANBERRA ACT 2600

Dear Mr Dundas

INQUIRY INTO CATCHMENT MANAGEMENT

I write this submission to the Committee's Inquiry as the Director of the Cooperative Research Centre (CRC) for Water Quality and Treatment, an unincorporated joint venture established in 1995 under the Australian Government's Cooperative Research Centres Program.

INTRODUCTION

The CRC for Water Quality and Treatment provides a national strategic research capacity for the Australian water industry in the crucial area of drinking water quality. The research program conducted by the Centre has the two underlying themes of health risk reduction and water quality improvement.

Through formal strategic long-term agreements between research providers and research users in the public and private sectors, it has forged and strengthened collaborative research links between the Australian water industry, research organisations, universities and relevant government agencies.

By bringing expertise from these areas together, the CRC is assisting the water industry update its technological skills and processes. And by bringing researchers and research users together it is developing a broader understanding of what research is about and the challenges associated with implementing research outcomes.

Initially seventeen parties (CRC Parties) came together as signatories to the unincorporated Joint Venture Agreement for the establishment and operation of the CRC. This has since increased to twenty-two and further parties may also be admitted.

Currently the CRC Parties to the unincorporated Joint Venture Agreement are the Australian Water Quality Centre (where the Head Office is located in Adelaide), ACTEW Corporation; Australian Water Services; Australian Water Technologies; CSIRO; Egis Consulting Australia; Melbourne Water Corporation; Monash University;

Orica Australia; RMIT University; South Australian Water Corporation; South East Water; Sydney Water; The Australian National University; The University of Adelaide; The University of New South Wales; United Water International; University of South Australia; Victorian Department of Human Services; Victorian Department of Natural Resources and Environment; Water Corporation of Western Australia; and the Water Services Association of Australia.

The CRC is involved in a range of activities. Commercial opportunities arising from research activities are pursued on a case by case basis. CRC personnel are involved in the rolling review of the 1996 Australian Drinking Water Guidelines, published jointly by the National Health and Medical Research Council (NHMRC) and the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ). The CRC also conducts an education and training program which includes, amongst other things, masters and PhD programs at each of the six participating universities. The CRC conducts a vigorous technology transfer program. As part of this program, it publishes two newsletters, Water Quality News and Health Stream, both of which are available on a free subscription basis from the CRC.

Additional information is available from the CRC for Water Quality and Treatment Website at <http://www.med.monash.edu.au/epidemiology/crc>

CATCHMENT MANAGEMENT

There is a greater need in Australia to manage catchments with a view to protecting potable water supplies. Whilst there have been many valuable initiatives in recent years to direct policy and resources towards catchment protection, these have not always given due consideration to water supply issues.

Whilst it is technically feasible to turn any water source into a potable supply, it can be an expensive proposition where the raw water source has been degraded. Failure to adequately protect water sources from eutrophication and microbiological contamination also raises public health issues. The aesthetic appeal of drinking water is also an important consideration for Australian consumers.

For many Australian communities, untreated or inadequately treated water supplies drawn from poorly managed catchments constitute a risk to public health. Treating water from degraded sources to provide an adequate water supply of potable standard may involve significant expense for those communities. Failure to provide a safe reliable water supply in a region can act as a significant inhibitor to economic development, compounding the disadvantage.

THE ROLE OF THE CRC FOR WATER QUALITY AND TREATMENT

The mission of the CRC for Water Quality and Treatment is to help the Australian water industry produce high quality water at an affordable price.

This task is being accomplished by furthering the understanding of water quality and treatment issues by conducting research, by developing education and training programs,

by various technology transfer activities, by our commercialisation activities and by our activities in relation to public good, particularly in the provision of advice to government on water supply policy and regulatory issues.

I do wish to bring to the Committee's attention that the CRC has, since its formation in 1995, conducted a specific research program into catchment and source water management as a tool for water quality control as one of its four major areas of research activity.

The CRC advocates a risk management approach to catchment issues consisting of:

- **Identification of potential hazards,**
- **Assessment of the risks of those hazards impacting on water supplies,**
- **Development of management strategies to minimise those risks.**

Potential hazards include water borne pathogens, blue-green algae, taste and odour compounds, colour and turbidity, iron and manganese, agriculture chemicals, industrial chemicals and nutrients.

Management options should include both point source and diffuse pollution. The control of industrial discharges, domestic waste, such as septic tanks, intensive animal husbandry, rubbish dumps and mining are important actions to implement. Land management initiatives include control of erosion through maintenance of vegetation cover and appropriate cultivation techniques, use of buffer strips and riparian vegetation to protect streams and minimising the use of agricultural chemicals.

CONCLUDING REMARKS

I draw to the Committee's attention the existence of the CRC for Water Quality and Treatment, its mission, its various activities, particularly its research activities into catchment and source water management as a tool for water quality control.

I encourage the Committee to give careful consideration to the importance of water supply issues in its Inquiry into Catchment Management.

If the Committee wishes, I would be pleased to appear before it, to speak to this submission and to answer questions.

Yours sincerely

**PROFESSOR DON BURSILL
DIRECTOR**