

FOREWORD

Subsection 36(1) of the *Environment Protection (Alligator Rivers Region) Act 1978* requires the Supervising Scientist to provide an Annual Report to Parliament on the operation of the Act and on certain related matters. The Act requires the following information to be reported:

- all directions given to the Supervising Scientist by the Minister for the Environment and Heritage;
- information on the collection and assessment of scientific data relating to the environmental effects of mining in the Alligator Rivers Region;
- standards, practices and procedures in relation to mining operations adopted or changed during the year, and the environmental effects of those changes;
- measures taken to protect the environment, or restore it from the effects of mining in the region;
- requirements under prescribed instruments that were enacted, made, adopted or issued and that relate to mining operations in the Alligator Rivers Region and the environment;
- implementation of the above requirements; and
- a statement of the cost of operations of the Supervising Scientist.

SUPERVISING SCIENTIST'S OVERVIEW

I would like to start this overview by paying tribute to my predecessor, Dr Arthur Johnston, who retired in October 2005. Dr Johnston had been Supervising Scientist since June 1999, and had been Director of the Environmental Research Institute of the Supervising Scientist (*eriss*) between 1989 and 1999. He started working at *eriss* as Senior Research Scientist in 1982. Dr Johnston's contribution to environmental protection in the Alligator Rivers Region in these various roles cannot be overstated and his extensive knowledge of the work undertaken in the area is to be envied.

Dr Johnston's expertise in health physics and environmental protection continues to be recognised and utilised. Since retiring from the Division he has been appointed to the Prime Minister's Uranium Mining, Processing and Nuclear Energy Review (UMPNER) Taskforce, and he remains a member of the Australian Radiation Health and Safety Advisory Council and of the Environment Committee of the International Commission on Radiological Protection (ICRP).

The Supervising Scientist plays an important role in the protection of the environment of the Alligator Rivers Region through the supervision, monitoring and audit of uranium mines in the Region, as well as research into the possible impact of uranium mining on the environment of the Region.

Ranger is currently the only operational uranium mine in the Region, and is owned and operated by Energy Resources of Australia Ltd (ERA). Production commenced at Ranger in August 1981, and current plans will see mining in Pit 3 cease in 2008 with milling of ore expected to continue through until 2014.

As the time of mine closure and rehabilitation draws closer, the work of the Supervising Scientist has included a growing focus on these themes. Staff have been engaged with a broad range of stakeholders in discussions and research activities associated with rehabilitation and closure.

Apart from rehabilitation and mine closure planning, staff of the Division remained active in ongoing supervision, inspection and audit, radiological, biological and chemical monitoring, and research activities in relation to both present and past uranium mining activities in the Region.

The Jabiluka project remains on long-term care and maintenance, and the next stage of the project is a matter for discussion between ERA and the area's traditional Aboriginal owners.

The Nabarlek mine in western Arnhem Land was decommissioned in 1995 and the adequacy of the rehabilitation of this site remains under ongoing assessment. Tropical Cyclone Monica passed very close to the Nabarlek site on the evening of 24 April 2006 and assessments of the site since then have indicated extensive damage to vegetation as well as to residual mine infrastructure.

Tropical Cyclone Monica also passed close to the Ranger mine site and the Jabiru township. Jabiru experienced widespread damage to trees and infrastructure, with some minor damage

inflicted on the Division's Jabiru Field Station near the mine site and a number of staff houses in the township. Thankfully, there were no injuries.

Details on research outcomes of the Environmental Research Institute of the Supervising Scientist (*eriss*) are published in journal and conference papers and in the Supervising Scientist and Internal Report series. Some important programs have been highlighted in this annual report.

In particular, the water quality monitoring programme has been considerably enhanced with the installation of continuous monitoring equipment for pH, electrical conductivity and turbidity in Magela Creek upstream and downstream of Ranger mine during the past wet season. This programme will continue in parallel with the normal water quality monitoring programme for a number of seasons to provide baseline information prior to a review of monitoring programmes.

An extended report has been provided of the outcomes of a benchmark landscape environmental risk assessment of threats and pressures to the Magela floodplain. This assessment is the final part of the 'Landscape-scale analysis of impacts' programme, established in 2002 following the report of the International Science Panel into the potential impacts of uranium mining at Jabiluka and Ranger on the World Heritage values of Kakadu National Park. The objective of this work was to help to clearly differentiate the relative risks posed by mining and non-mining impacts, whilst contributing to a broader assessment of the World Heritage values of the Park.

A major programme of research on characterisation of northern tropical rivers, and assessment of risk from actual and potential threats is being carried out under the framework of the Tropical Rivers Inventory and Assessment Project (TRIAP). The work is funded by Land and Water Australia and the Natural Heritage Trust and is a collaborative effort between *eriss*, James Cook University and the University of Western Australia, with additional involvement of the University of Wageningen in the Netherlands. This programme will continue during 2006–07.

In May 2006 the Australian Government announced funding of \$7.3 million over four years to undertake rehabilitation of former uranium mining sites in the South Alligator River Valley in the southern part of Kakadu National Park. The Supervising Scientist Division has provided advice and assistance to the Director of National Parks on management of these sites for a number of years, and we will continue to provide scientific and technical advice and assistance as the rehabilitation works move into the next phase.

The Alligator Rivers Region Technical Committee (ARRTC) continues to play a vital role in assessing the science used in making judgements about the protection of the environment from the impacts of uranium mining. Professor Barry Hart, who chaired ARRTC since 2001, retired from the role in September 2005. During his tenure, Professor Hart made a significant contribution to the work of ARRTC and my sincere thanks are extended to him.

The Hon Greg Hunt MP, Parliamentary Secretary to the Minister for the Environment and Heritage, subsequently appointed Mr Ray Evans as the new chair. Mr Evans has been a member of the committee since 2001 and has an extensive knowledge of the activities of the committee and of the Alligator Rivers Region.

Finally, I would like to offer my personal thanks to all the staff of the Supervising Scientist Division for their efforts during the year. The commitment and professionalism of all the Division's staff has been a vital factor in the Division being able to fulfil its role in ensuring that the environment of the Alligator Rivers Region remains protected.

A handwritten signature in black ink, appearing to read 'Hughes', with a stylized, sweeping flourish extending from the end.

Alan Hughes

Supervising Scientist