

Chief Executive  
**Rob Atkinson**

Our product, uranium oxide, is highly valued because of the potential power that can be generated with low carbon emissions. In meeting the future demand for uranium, and the expectations of electricity consumers the world over, ERA strives for safety leadership, environmental protection and strong and enduring relationships with all stakeholders. ERA continues to engage with the Mirarr Traditional Owners, local communities and governments to maintain Jabiru as an important regional centre, and to create cultural, social and economic development opportunities for our neighbours and future generations.

As one of the world's leading uranium mining operations, we take pride in our focus on safety, in our commitment to the highest operating standards and performance in environmental protection, in our initiatives to build a strong and resilient community, and in our ability to maintain a profitable business. We operate in a highly sensitive location, internationally recognised as one of the most environmentally and culturally significant places in the world, with unique ecosystems and biodiversity, and a long tradition of human habitation.



> Message from the Chief Executive

> Energy Resources of Australia Ltd (ERA) acknowledges the Mirarr Traditional Owners on whose land the Company's operations take place.



**ERA**

**ERA** Energy Resources of Australia Ltd

Energy Resources  
of Australia Ltd



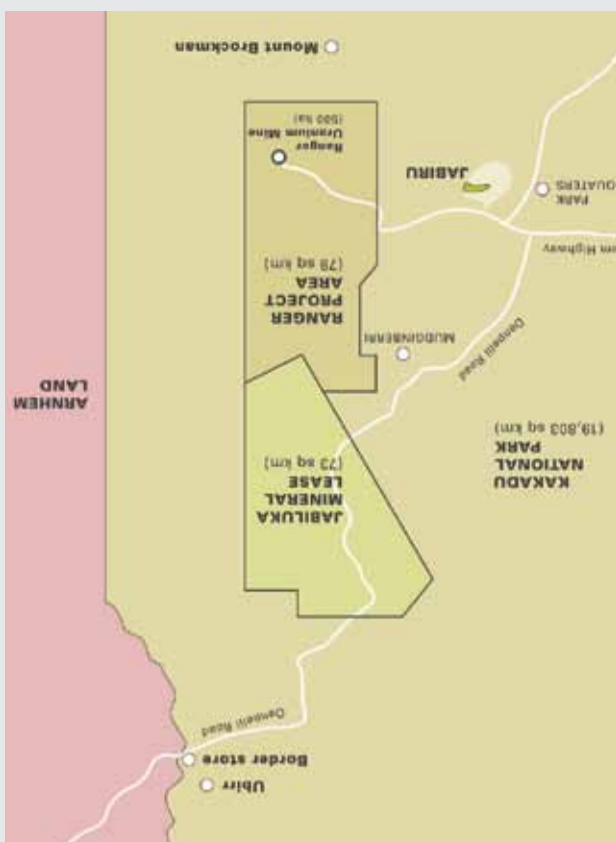
Originally constructed as a mining town to support the Ranger mine, Jabiru is today a diversified regional centre and the gateway to the Kakadu National Park. Jabiru supports many of the estimated 216,000 tourists who visit the region each year. It has a population of approximately 1,200 and continues to provide housing and other accommodation for ERA employees and contractors.

## > Jabiru township



## > Location

The Ranger uranium mine is located 260 kilometres east of Darwin in the 'Top End' of Australia's Northern Territory. Known as the Alligator Rivers Region, the landscape in this area ranges from tidal flats and flood plains near the coast to the spectacular backdrop of the sandstone Arnhem Land escarpment.



## > Introduction

As one of the world's major uranium producers, Energy Resources of Australia Ltd (ERA) mines and processes uranium ore at the Ranger mine in the Northern Territory. The Ranger mine is Australia's major uranium producer, producing approximately 10 per cent of the world's mined uranium.

ERA also holds the Jabiluka mineral lease located to the north of the Ranger mine. The Ranger mine and Jabiluka mineral lease are located on lands of the Mirarr people. The conditions for operating at Ranger and Jabiluka are set out in agreements made by the Northern Land Council on behalf of the Mirarr Traditional Owners under the Commonwealth *Aboriginal Land Rights (Northern Territory) Act 1976*.

ERA's export product, uranium oxide, is sold to power utilities in Asia, Europe and North America under strict international safeguards. Uranium oxide from the Ranger mine is used solely to fuel nuclear power plants for the generation of electricity.

Approximately 500 permanent employees work at the Ranger mine with Indigenous people representing about 18 per cent of the workforce. Through carefully scrutinised management of the Ranger operation, ERA continues to protect the World Heritage values of the surrounding Kakadu National Park.

> For further information visit  
[www.energyres.com.au](http://www.energyres.com.au)

### > Head office

Level 10, TIO Centre  
24 Mitchell Street  
GPO Box 2394  
Darwin NT 0801  
T: +61 (0) 8 8924 3500  
F: +61 (0) 8 8924 3555

### > Ranger mine

Locked Bag 1  
Jabiru NT 0886  
T: +61 (0) 8 8938 1211  
F: +61 (0) 8 8938 1203



## > History

The Ranger orebodies were discovered by an airborne radiometric survey in October 1969 and confirmed by drilling in the mid 1970s. The Alligator Rivers Region was soon recognised as a world-class minerals province, particularly for uranium.

In 1977 an agreement covering mining at Ranger was signed with the Northern Land Council, representing the interests of the Indigenous people of the area.

Total capital cost of construction of the Ranger mine was approximately A\$388 million, including the establishment of Jabiru.

The 520-hectare Ranger mine site is situated on the 79 square kilometre Ranger Project Area, most of which is undisturbed. The Ranger Project Area has been progressively surrounded by, but remains separate from, Kakadu National Park.



## > Safety and Occupational Health

### > Radiation

At the Ranger operations, radiation doses are kept as low as practicable through a combination of engineering controls and comprehensive work procedures.

Radiation exposure pathways are measured and reported throughout the year by reference to the limits recommended by the International Commission of Radiological Protection. These limits are 100 millisieverts (mSv) over five years (average of 20 mSv per year), with a maximum of 50 mSv in any one year. Workers at the Ranger mine receive less than five mSv per annum.

The United Nations Scientific Committee on the Effects of Atomic Radiation reports that for members of the public in daily life, "worldwide annual exposures to natural radiation sources would generally be expected to be in the range 1–10 mSv, with 2.4 mSv being the present estimate of the central value".

### > Safety and health

The safety and wellbeing of our people is of paramount importance to ERA. The Company has established measurable objectives and targets to ensure continued improvement in safety and health performance.

A range of safety management tools and training programs are in place to help employees and contractors manage their work and practice safe work behaviours, as we strive towards our goal of zero injuries and occupational illnesses.

We promote the importance of safety and health at work and at home, and discuss safety matters in an open and honest manner.

Ranger has comprehensive security and emergency procedures, a fully trained response group, and facilities to effectively keep the site secure and manage any emergency.

## > Geology and mining

The Ranger Project Area contains a number of geological formations which are favourable for the presence of uranium. The southern most six kilometres of the Ranger Project Area contains the uranium orebodies known as Ranger 1 and Ranger 3. Using open cut methods, mining of Ranger 1 began in 1980 and was completed in 1994. Open cut mining of Ranger 3 began in 1997 and continues today.

The first stage of the mining process involves drilling and blasting. An average blast breaks approximately 40,000 tonnes of material. Blasts are controlled to avoid excessive vibration and noise. The broken material is then mined using two excavators and a fleet of 12 haul trucks, each truck with a carrying capacity of between 90 to 135 tonnes.

The loaded haul trucks pass under a radiometric discriminator, which measures how much uranium is contained in each load. The read-out, together with production requirements, determines the destination of the load – either directly to the ore crusher, to specific ore stockpiles, or to the waste rock stockpiles.

## > Rehabilitation

ERA will rehabilitate disturbed areas to establish an environment similar to adjacent areas of Kakadu National Park, so that the Ranger Project Area is capable of being incorporated into the Kakadu National Park.

Rehabilitation at the Ranger mine is an ongoing process. ERA has a regulatory requirement to backfill all waste materials and rock into the mined-out pits. ERA will rehabilitate areas disturbed by mining operations in line with these requirements. ERA provides the Commonwealth Government every year with a detailed plan for the required rehabilitation work, which is fully secured by a financial bond. Regulators review and approve this rehabilitation plan each year, and the amount of the bond is adjusted accordingly.

## > Environmental management

ERA recognises that the natural and cultural values of the surrounding World Heritage-listed Kakadu National Park must continue to be protected.

Exemplary environmental management is a core business requirement that is essential to ERA's long-term success.

ERA's environmental management system is certified to the international standard ISO 14001. The system identifies and manages environmental hazards and risks in line with ERA's environment policy, objectives and targets.

ERA's environmental performance is monitored by a range of regulators including the Northern Territory Department of Resources, the Northern Land Council and the Commonwealth Government's Supervising Scientist Division.

The Supervising Scientist Division conducts extensive independent monitoring of the Ranger mine site and since 1979 has continued to report that "the extensive monitoring and research programmes of the Supervising Scientist Division confirm that the environment has remained protected through the period." - Supervising Scientist Annual Report 2008–2009.

## > Regulatory stakeholder consultation

Consultation between ERA, supervising authorities and key stakeholders regarding environmental management at Ranger occurs through a number of formal and informal channels.

Ranger Minesite Technical Committee (MTC) meetings review and approve operational environmental management programs. A monthly inspection program involves key regulators in reviewing aspects of Ranger's operations, while the MTC conducts annual environmental audits of the Ranger mine site.

The Alligator Rivers Region Advisory Committee (ARRAC) provides regular opportunity for broader stakeholder discussion on the impact of uranium mining in the region.

The Alligator Rivers Region Technical Committee (ARRTC) reviews and recommends environmental research to minimise the potential impacts of uranium mining in the region.

ERA also hosts site visits for local Aboriginal people, environmental groups and interested parties.

## > Indigenous involvement

ERA offers Indigenous employment opportunities at Ranger; approximately 18 per cent of the Ranger workforce is Indigenous. ERA also supports indirect employment opportunities and works with Indigenous organisations to promote business enterprise and skills development. Cultural awareness courses are conducted on a regular basis for all employees. These courses increase awareness and respect for Indigenous culture and issues.

## > Royalties

ERA makes royalty payments of 5.5 per cent of its net sales revenues from Ranger. Payments of 4.25 per cent of Ranger net sales revenues, plus an annual rental of \$200,000 for use of the Ranger Project Area, are made to the Commonwealth Government which distributes this money to Northern Territory-based Aboriginal groups, including the Mirarr Aboriginal Traditional Owners. An additional 1.25 per cent of Ranger net sales revenues is paid to the Commonwealth for distribution to the Northern Territory Government.

## > Community partnerships

ERA is a strong and dynamic part of the local community, and makes significant contribution to the Northern Territory. We support a range of organisations that share our goal of delivering sustainable outcomes for the communities in which we operate. Organisations ERA support include Territory Teams programme, Indigenous Music Awards, George Chaloupka Fellowship and an education partnership with the Northern Territory Department of Education and Training.



## > Water management

Managing water to ensure it can be safely contained and when appropriate released from the mine site is a critical aspect of ERA's operations.

ERA employs a number of systems to manage, treat and release water, which include water treatment plants, constructed wetland filters, approximately 250 hectares of land application areas, and water management ponds, which act as dams and billabongs to store waters for release.

Strict monitoring by Commonwealth and Northern Territory regulators verifies the findings of ERA's own extensive monitoring programs. These monitoring programs help protect people and Kakadu National Park, and include assessment of bush tucker (food) and in-situ creek side monitoring of sensitive aquatic animals.

