RECONSIDERING RANGER

a brief on the social, environmental and economic cost of uranium mining in Kakadu.

Rio Tinto's Energy Resources of Australia (ERA) has been mining uranium on Mirarr land under a no-consent lease at the Ranger mine for three decades. The mine is surrounded by the World Heritage listed Kakadu National Park.

ERA's current mining approval requires an end to mining and mineral processing in 2021 followed by a mandated five year rehabilitation period. License conditions include a requirement to rehabilitate the project area to a condition that would allow the site to be re- incorporated into the surrounding Kakadu National Park.

In 30 years of mining there have been over 200 documented leaks, spills and breaches of license conditions at Ranger and waste and water management continue to pose significant challenges.

A series of management and systems failures at Ranger over the last 12 months has resulted in significant public and regulatory scrutiny of the mine's operations and a suspension of processing operations.

In November 2013 the employee theft of a vehicle from the mine's controlled processing area through an existing hole in the security fence sparked an investigation into lax regulation at the Ranger mine, followed by the discovery of four abandoned uranium transport drums in Darwin's rural area. In March community concerns were again raised by the revelation that ERA were transporting uranium ore samples in unsecured drums on the back of a utility vehicle on the Arnhem Highway.

In December 2013 the Ranger mine experienced a serious industrial accident with the collapse of a uranium leach tank releasing over a million litres of highly acidic and radioactive slurry. The contaminant spilled over failed containment bunds and entered the mine's stormwater drainage system and generated a high level of public concern.

Top: Ranger Uranium Mine. Bottom: Damaged leach tank - Dec 2013.
Images: Gundjeihmi Aboriginal Corpration

Ranger Uranium Mine Tailings Storage Facility. Image: Hannah Seward

ERA'S PUSH FOR PROFITS PUTS NUCLEAR SAFETY & SECURITY AT RISK

The history of incidents and failures at the Ranger mine reflects a disturbing trend in the wider uranium sector. Australia's uranium industry is a minor contributor to employment and the economy. However it is a major source of domestic and international risk and is overdue for an independent inquiry into its effects on the environment, health, safety and security.

A 2003 Senate Inquiry into uranium mining found that 'ERA failed to inform stakeholders, failed to follow correct procedures and did not take timely action on a number of major incidents'. The Inquiry further identified 'a pattern of under-performance and non-compliance' and concluded that changes in the uranium sector were necessary in order to protect the environment and its inhabitants from 'serious or irreversible damage'[1] .

In the decade since the inquiry little has changed. Very few of the report's recommendations have been implemented at Ranger and a culture of regulatory complacency pervades the mine's operations, resulting in the increased frequency and severity of safety and security breaches and contamination incidents.

Public attention and stakeholder anger following the December 2013 leach tank collapse saw the Commonwealth suspend mineral processing at the mine. An investigative taskforce comprising the NT Department of Mines and Energy, NT Worksafe, the Department of Industry and the Office of the Supervising Scientist was established. The Gundjeihmi Aboriginal Corporation, representing Mirarr Traditional Owners, was subsequently added to the taskforce following criticism of its lack of transparency and the original member agencies' history of deficient regulation.

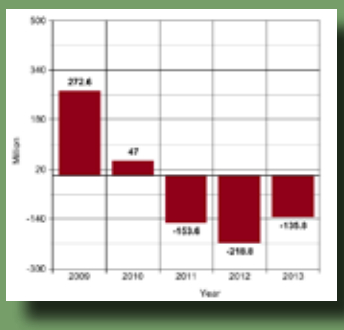
An ERA-commissioned investigation into the cause of the leach tank failure that was released in March 2014 raises serious concerns about the adequacy of both infrastructure and management systems at Ranger. The report found that the Ranger mine had 35 other failed pieces of critical plant infrastructure or equipment with the potential for major human safety or environmental impacts in operation at the time of the tank collapse. The investigation recommended that the plant not resume processing until these items have been repaired or retired. A further 48 critical assets were recommended to be serviced, repaired or retired within 6-12 months of any future plant restart.

ERA has confirmed the full financial and production impact of the tank failure will depend on a range of factors, including when it is authorised to restart processing operations. The investigator's findings and the requisite repair bill, on top of the indefinite processing suspension will add a significant cost burden to an already struggling operation.

1. http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Completed_inquiries/2002-04/uranium/report/index

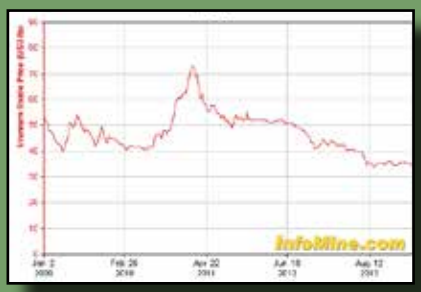
ERA has posted consecutive losses of over $350 million since 2011. Blame for the recent losses has been attributed to a five month shut down during the 2011 Wet season due to a near overflow in the Tailings Storage Facility that necessitated ERA purchasing more than 2000 tonnes of uranium to meet contracts, the axing of a controversial planned Heap Leach Facility for the treatment of low grade uranium oxide and capital expenditure on process water treatment and the R3D underground decline. In reality ERA's problems are far more pervasive.

ERA Profit and Loss 2009 - 2013



The long-term trends for energy production have worked against nuclear power compared to alternative energy generation like gas, wind and solar. The slump in uranium prices has coincided with uranium projects around the world being shut down or delayed, including the 2012 decision by BHP Billiton to shelve the expansion of Olympic Dam and the cessation of production at the Honeymoon mine in South Australia and Australian miner Paladin Energy's suspension of its operations at the Kayelekera uranium mine in Malawi.

Uranium Oxide Price USD $34/lb 2014



The recent confirmation that Ranger mine's final supply of low grade ore will be exhausted by mid-2014 and ERA will be forced to purchase uranium on the spot market to fulfil existing supply contracts demonstrates that mining companies can't fix persistent profitability problems by simply digging a bigger hole.

RANGER 3 DEEPS – A RETURN TO PROFITABILITY OR JUST MORE RISK?

ERA hopes that its proposed Ranger 3 Deeps (R3D) underground mine will be the start of a new chapter. But the assessment process which began in 2013 has been indefinitely halted while regulators assess the level of risk Ranger poses. Despite this, ERA has not updated the timeframe for R3D production from its 2013 Annual Report to take into account the indefinite suspension of processing. Even by the company's most optimistic predictions production at R3D would not begin until late 2015, leaving less than five years for mining before the expiration of the mineral lease.[2]

Under the allowable timeframe ERA would at best have access to only a fraction of the 34,000 tonne resource, the production and sale of which at current prices would scarcely make a dent in capital recovery.

The R3D proposal needs to be assessed on the understanding that there is a mandated and fixed end date of January 2021 for mining and mineral processing on the Ranger Project Area. In this context it is clear that, if approved, the Ranger 3 Deeps project would add unnecessary and unacceptable cost, complexity and time to the overall rehabilitation of ERA's Ranger operation.

Given ERA's economic uncertainty and the significant capital investment required if the Ranger 3 Deeps proposal were to proceed a transparent and fully costed rehabilitation plan should be made public to address concerns about the company capacity and willingness to meet the complex and costly challenge of rehabilitation commitments. This plan is needed to address stakeholder concerns and to avoid burdening future Northern Territory and Federal governments and taxpayers with possible long term uranium legacy mine issues and costs.

CUSTOMER COUNTRIES & FAILED UTILITIES

In the wake of the Japanese nuclear crisis, in which the Fukushima Daiichi reactor complex suffered nuclear meltdowns, numerous fires and hydrogen explosions following the March 2011 tsunami and earthquake, it was confirmed that Australian uranium was found inside all the failed reactors.

Decontaminating the reactor site and the wide tracts of surrounding contaminated land will take decades has been estimated to cost hundreds of billions of dollars. Confidence in the so-called clean-up operation has been undermined by damaging scandals and failures, and over 150,000 people remain displaced because of the nuclear disaster.[3]

The triple meltdown prompted the Japanese government to shut down all of Japan's commercial nuclear reactors and led many other nuclear countries to re-examine their plans to introduce or expand nuclear power programs, with some deciding to phase out all existing nuclear plants.

The United Nations System Wide Study on the Implications of the Accident at the Fukushima Daiichi Nuclear Power Plant found that inadequate regulation and lack of adherence to safety protocols at TEPCO-operated facility was a major factor behind the continuing crisis and explicitly called for an urgent review and dedicated cost-benefit analysis of the health and environmental impacts of uranium mining in Australia.[4]

Despite the clear UN recommendation successive Australian governments have failed to act to initiate a review into the operations and impacts of the Australian uranium sector or review the adequacy of domestic and international regulatory regimes.

Globally the uranium export market is deeply depressed and ERA is desperate to expand into new markets, even if it means contributing to increased global nuclear insecurity through trade agreements outside the Nuclear Non Proliferation Treaty (NPT) such as India.

The government and ERA's shared indifference to the efficacy of international safeguards also extends to the export relationship with South Korean nuclear utilities. Australia has supplied South Korea with uranium since 1986. In 2004, South Korea disclosed information about a range of weapons-related research and development over the preceding 20 years. It remains unconfirmed whether Australian uranium or its by-products were used in any of the illicit research in South Korea.

In 2012 revelations of bribery and faked safety tests for critical plant equipment resulted in mass arrests of South Korean utility operators, contractors and government officials.

The scandal highlighted the close ties between nuclear power companies, their suppliers and contracting companies, and prompted South Korea's Prime Minister to liken the culture of collusion pervading the industry to a mafia operation. More than a hundred company officials and contractors have been arrested following investigator's discovery of reactor components with faked safety certificates having been installed in fourteen of South Korea's twenty-three nuclear power plants.

Australia has export agreements with all of the 'declared' nuclear weapon states – the U.S, U.K, China, France and Russia, although none have taken their NPT obligation to pursue nuclear disarmament seriously. Selling uranium to countries in breach of nuclear non-proliferation and disarmament norms violates Australian government policy and contributes to security tensions globally.

Uranium sales agreements to Russia and China, where International Atomic Energy Agency safeguards inspectors have limited access, were advanced in conflict with a Federal Parliament Treaties Committee recommendation to reject the agreement and has set a further damaging precedent for the undermining of international safeguards.

[2]. http://www.energyres.com.au/documents/Annual_Report_2013.pdf
[3]. http://ajw.asahi.com/tag/Crooked%20Cleanup
[4] United Nations system-wide study on the implications of the accident at the Fukushima Daiichi nuclear power plant, 22 September 2011. http://www.un.org/ga/search/view_doc.asp?symbol=SG/HML/2011/1

CLOSE RANGER PROTECT KAKADU

The recent and historic litany of incidents, accidents and security breaches at the Ranger mine and its customer utilities demonstrate that ERA has neither the capability nor the credibility to operate in accordance with Australian and international regulatory safeguards.

Any approval to restart operations at Ranger or progress the Ranger 3 Deeps proposal would inevitably increase in the severity and frequency of accidents at Ranger and put workers, local communities and the environment at unacceptable risk. The rapid economic decline of the company should be the final counterweight to any risk vs benefit assessment of the industry and its long-term health, environmental and social impacts.

Federal and NT assessors should act to retain suspension on any future processing at the Ranger mine and reject the Ranger 3 Deeps proposal, with plans for the accelerated closure and rehabilitation of Ranger brought forward.

ENVIRONMENT CENTRE NT,
APRIL 2014.
WWW.ECNT.ORG

RECOMMENDATIONS

- That the Australian government, consistent with the UN recommendation, initiate a review into the operations and impacts of the Australian uranium sector and declare a moratorium on uranium exports until it has reassessed Australian standards and responsibilities in supplying uranium to all customer utilities.
- The Ranger 3 Deeps proposal be rejected by Federal and NT assessors and plans for the accelerated closure and rehabilitation of Ranger brought forward.
- That uranium mining is retained as a nuclear action trigger for Federal assessment under the Environmental Protection and Biodiversity Conservation (EPBC) Act and not further devolve licensing and approval powers for uranium projects to the States or the Northern Territory.
- Federal and NT regulators to conduct a transparent and independent review of the adequacy of the Ranger mine rehabilitation and closure fund to prevent Ranger becoming another uranium legacy burden to future Australin governments and taxpayers.