

Ranger, Australia

Uranium mining site

Ranger is an open-pit uranium mine in the middle of the World Heritage Kakadu National Park. Numerous radioactive leaks and spills have contaminated the Kakadu wetlands, which are the home of the Mirarr Aboriginal people. Increased cancer rates have been found in the local population, but further studies have so far not been undertaken.



Energy Resources of Australia, Ltd, a subsidiary of Rio Tinto, opened the Ranger Mine in 1980. While the mine has an annual output of about 4,000 tons of uranium oxide, mine tailings and radioactive waste rock amount to 1.5 million tons per year. Photo credit: Alberto Otero Garcia / creativecommons.org/licenses/by/2.0



Radioactive refuse dumped into open tailings ponds still contains more than 80 % of the uranium ore's original radioactivity. Since 1981, there have been more than 120 spills of contaminated water into the National Park. Photo credit: Green MPs / creativecommons.org/licenses/by-nc-nd



Yvonne Margarula, Mirarr Senior Traditional Owner, fought and won against the third largest uranium company in the world. With international and local support, she was able to stop the uranium mine at Jabiluka on Aboriginal land in the Northern Territories. Photo: From the movie "Yellow Cake – The Dirt Behind Uranium," © 2010 Um Welt Film, Germany

History

Energy Resources of Australia, Ltd (ERA), a subsidiary of the global company Rio Tinto, began mining uranium at Ranger in 1980. While the mine has an annual output of about 4,000 tons of uranium oxide, mine tailings and radioactive waste rock amount to 1.5 million tons per year.¹ This nuclear waste is stored in so-called tailings ponds and still contains about 80 % of the ore's original radioactivity.² In order to prevent the spread of radioactive dust or radon gas, the tailings are supposed to be covered by two meters of water, which cannot always be ensured during dry season, with the result that radioactive dust is blown into the National Park. During the wet season, the tailings dams often overflow, spilling radioactively contaminated refuse into the wetlands.¹ Since 1981, there have been at least 120 such incidents.³ In 2004, the mine was temporarily shut down after it was discovered that workers drank water containing about 400 times the permissible level of uranium.² In 2009, a breached dam released six million liters of radioactively contaminated water into Gulungul Creek in the National Park.⁵ In 2011, operations at Ranger were suspended for six months because a tailings dam came close to overflowing. Uranium is transported on trucks straight through the National Park, posing an additional hazard to the vulnerable ecosystem.

Health and environmental effects

There is great concern among environmentalists and the local Aboriginal population about radioactive contamination of Australia's most famous National Park. In 2009, Alan Hughes, the Commonwealth Supervising Scientist appointed to monitor the environmental impacts of the mine, made public that the mine's tailings dam was leaking 100,000 liters of waste water every day, polluting the park's groundwater with heavy metals, toxic chemicals, and radioactive substances such as radium and uranium.^{2,4,5} The contamination of the wetlands and the park's diverse wildlife is poisoning the Mirarr's sources of food and water.

Even small levels of radiation exposure are known to be an increased risk to human health.³ In 2005/2006, a study performed by the Federal government's leading indigenous research body found that cancer incidence among the Aboriginal population of Kakadu had increased 90% more than would be expected.³ Radioactive contamination is the most likely explanation for this significant rise in cancer cases, but large-scale

References

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epidemiological and ecological studies are needed to further investigate these findings. The Gundjeihmi Aboriginal Corporation, which represents the Mirarr, has long been calling for proper health studies to assess rates of stillbirths, miscarriages, congenital malformations or cancer – symptoms which have been on the rise in the local population since the beginning of uranium mining.

Outlook

Although Ranger was slated to close in 2008, ERA announced it would extend the run-time of the mine until 2020, so it could extract an additional 11,000 tons of uranium from low-grade ore stockpiles using a dangerous technology known as Acid Heap Leaching. This proposal was abandoned in 2011, following strong opposition from environment, health and indigenous groups. The nearby Jabiluka site was also designated for uranium mining, but a huge domestic and international campaign led by the Mirarr was able to prevent this project. There are still no concrete plans for an effective monitoring of environmental or health effects. On December 7, 2013, about one million liters of radioactive refuse leaked into the National Park, prompting the temporary closure of Ranger Mine.

In January 2021, following four decades of imposed uranium mining and milling, operations at the Ranger uranium mine ended. This leaves a heavily impacted site that requires extensive rehabilitation. The rehabilitation will be complex and costly.⁷

Australia has a long history of sub-standard mine closure and rehabilitation in the uranium mining sector. Smaller and less complex mines than Ranger have failed to be successfully rehabilitated and this pattern must not be replicated. Two former Rio Tinto uranium operations at Rum Jungle and Mary Kathleen remain highly problematic. A far better approach and outcome is needed at Ranger.⁷

Otherwise the people of Kakadu continue to be Hibakusha – casualties of the nuclear industry and its endless appetite for cheap uranium.

Hibakusha worldwide



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