

Senate Standing Committee on Economics
ANSWERS TO QUESTIONS ON NOTICE
Department of Industry, Science and Resources
Inquiry into the Atomic Energy Amendment (Mine Rehabilitation and Closure) Bill 2022
[Provisions]
18 October 2022

AGENCY/DEPARTMENT: DEPARTMENT OF INDUSTRY, SCIENCE AND RESOURCES

TOPIC: Frequency of studies

REFERENCE: Question on Notice (Hansard, 18 October 2022, Page 18)

QUESTION No.: 1

Senator COX: How are we measuring the comparison of the adjacent park to the standards of rehabilitation?

Mr Crawshaw: In ERA's mine closure plan there are closure criteria. They are the quantifiable measures that would be used in a long time to measure whether the environmental conditions at the site match the environmental conditions in nearby Kakadu. They would be things like water quality data over a period of time, radiological surveys, density measures of flora and fauna and things like that. I don't have the specific measures in front of me, but broadly that's how the framework would be judging close-out on an evidence base. I should note also that, as you've heard from previous witnesses, there are cultural criteria considerations involved as well.

Senator COX: How often are those samples of photographs or studies undertaken? Do you know?

Mr Crawshaw: I'd have to take that on notice. The closure criteria have been developed by ERA in consultation with the Northern Land Council and with the advice of the supervising scientist. They have been put into plans and identified as the measures that will be relied upon at a future date to assess close-out. The science work in that is about establishing the closure criteria for use at a later date, and not so much monitoring them now for closure. The monitoring that takes place at the site now is around the real-time performance, managing environmental risks, water qualities in rivers and things like that.

ANSWER

Energy Resources of Australia (ERA) must complete the rehabilitation of the Ranger Project Area (RPA) in accordance with the *Environmental Requirements of the Commonwealth of Australia for the Operation of Ranger Uranium Mine*. The Environmental Requirements require, amongst other things, that ERA rehabilitate the RPA to establish an environment similar to the adjacent area of Kakadu National Park. The Environmental Requirements further provide that vegetation on the rehabilitated RPA must use local native plant species similar in density and abundance to those in adjacent areas. These and other Environmental Requirements are significant and, by their nature, involve both ERA and the Australian and Northern Territory (NT) Governments monitoring the site for some time after ERA has completed physical rehabilitation works. The Environmental Requirements are published at <https://www.dcceew.gov.au/science-research/supervising-scientist/publications/environmental-requirements-ranger-uranium-mine>.

Closure criteria have been established to support the Australian and NT Governments, and Traditional Owners, to determine if ERA has satisfied the Environmental Requirements. Closure criteria relate to several themes (e.g. cultural, landform, water and sediment, ecosystem). Criteria were developed over several years and informed by significant environmental research, studies and stakeholder consultation. The Supervising Scientist Branch (within the Commonwealth

Environment portfolio) led this process on behalf of the Australian Government. Closure criteria are summarised in ERA's Ranger Mine Closure Plan (refer <https://www.energyres.com.au/ranger-rehabilitation/mine-closure-plan/>, Chapter 8). For completeness, the Australian and NT Governments are yet to approve all closure criteria, and close-out of the first part of the RPA is likely still some years away.

Operations at Ranger are subject to significant environmental monitoring. ERA must meet various monitoring and reporting requirements under NT legislation (e.g. ERA must undertake continuous monitoring of pH in Magela Creek). The Supervising Scientist Branch also undertakes extensive monitoring, verification and inspection activities to ensure ERA is complying with its requirements, and to detect potential environmental impacts. Further information on the Supervising Scientist's environmental monitoring activities is available at <https://www.dcceew.gov.au/science-research/supervising-scientist/ranger-mine/monitoring>.

The focus of monitoring activities will shift once ERA completes rehabilitation works. At that point, monitoring activities will assess whether the RPA is performing as modelled at an ecosystem level (e.g. whether the vegetation mix and density are on a trajectory toward that of the reference ecosystem). In time, results of this monitoring will be used to determine if ERA has achieved the environmental outcomes set out in the closure criteria and the Environmental Requirements. Further information on ERA's closure monitoring plans for each rehabilitation theme, including the frequency of the proposed monitoring, is at Chapter 10 of ERA's 2022 Mine Closure Plan (refer <https://www.energyres.com.au/ranger-rehabilitation/mine-closure-plan/>).