

CHAPTER 3

ENVIRONMENTAL IMPACT ASSESSMENT - PRELIMINARY

Overview

3.1 The environmental impact assessment (EIA) process is intended to be one of the key decision-making elements in the consideration of any project. Ideally, it results in the highest level of scrutiny of development proposals and the establishment of failsafe environmental protection measures, and also yields important data about the affected ecosystem and social structure in order to allow for ongoing assessment and monitoring. It is intended to create scope for the expression and incorporation of meaningful public input, with a high priority being given to the views of key stakeholders and affected communities.

3.2 In the case of the Jabiluka uranium mine – a project constructed on Aboriginal land, in the midst of a World Heritage area, and with a range of potentially damaging environmental, social and cultural impacts – the EIA process has been of particular importance.

3.3 Major concerns raised in relation to the project, and which the assessment process was to address include:

- The potential damage to the ecology of the Park from contaminated water from the mine site;
- The disposal of tailings and the leaching of uranium from the tailings into the water system of the Park;
- Threats to the health of the local population from radiation;
- Threats to the cultural heritage of the Aboriginal population, including possible damage to significant art, archaeological and sacred sites; and
- The potential for damaging social impacts on Aboriginal people and culture.

3.4 However, the Committee received a great deal of evidence from the public, non-government organisations, scientists and Aboriginal organisations that in relation to Jabiluka the EIA process itself failed to meet the highest standards in many crucial respects. Similar concerns have been raised internationally, by the World Conservation Union (IUCN), the International Council on Monuments and Sites (ICOMOS) and the UNESCO World Heritage Committee.

3.5 While the Committee acknowledges that some aspects of the process have been thorough and of a high quality – such as the assessment reports of Environment Australia and the Northern Territory's Environmental Assessment Branch, and the most recent report to the World Heritage Committee by the Supervising Scientist – significant concerns about the totality of the EIA process remain. Submissions also

identified serious policy concerns about the legislative provisions and administrative conventions which currently frame the EIA process.

3.6 The EIA process, particularly when dealing with a project of such cultural and international sensitivity as this, must meet the highest standards at every level and at every stage. This includes the original environmental impact statements by the company, the level of assessment required, the time and scope provided for public comment, the assessment reports by the Commonwealth and Northern Territory, and the timing, appropriateness and enforceability of ministerial decisions based on those assessments. The EIA process must ensure that ecological, cultural and social impacts are all given due weight and understood in their interaction.

3.7 Broad concerns raised in submissions to the Committee included:

- The adequacy of the EIA process in allowing for public input and examination of proposals;
- The timing and content of ministerial decisions, particularly construction approvals, while the design and approval of specific environmental protection measures (and approval for the project as a whole) remained outstanding;
- Whether ministerial conditions placed on the mine's development can be meaningfully enforced;
- Difficulty in refining crucial run-off containment and tailings disposal measures;
- The exclusion of key environmental and policy questions from the EIA process, such as the appropriateness of uranium mining in the Kakadu region, the potential cumulative impacts of multiple uranium developments in the area, or Australia's role in the nuclear fuel cycle;
- Whether the EIA process properly took account of the mine's location within the cultural and ecological landscape of the Kakadu World Heritage area;
- The adequacy of the EIA process in identifying and protecting cultural heritage values, including the values of living Aboriginal cultures;
- Whether the assessment process incorporated an understanding of the mine's potential social impacts on Aboriginal people; and
- The resentment felt by Traditional Landowners against the EIA process as a whole, which they see as entrenching their marginalisation, given that it is weighted towards evaluating the conditions under which a project will be developed rather than considering whether it should proceed at all.

Recommendation 1

The Committee recommends that the environmental impact assessment process be reformed to ensure that consideration is given, both in impact statements and subsequently, to *whether* a project should proceed.

The Legislative and Regulatory Framework for Uranium Mining in Kakadu

3.8 Environmental approvals for the mine have been subject to a range of legislation, which provides for only two major stages of development permissions – the construction and export stages – which can be separated by a number of years. The Committee found that there was considerable concern about the adequacy of this environmental control regime, particularly as it applied to the approval of the Jabiluka project.

3.9 Relevant Commonwealth legislation includes the *Environment Protection (Impact of Proposals) Act 1974* (EPIP Act), which triggers environmental assessments of developments which might affect the environment to a significant extent and where a Commonwealth decision or action is involved, and governs ministerial decision-making¹; the *Environment Protection (Alligator Rivers Region) Act 1978*, which established the Office of the Supervising Scientist (OSS); and the *Atomic Energy Act 1953*.

3.10 Applicable Northern Territory legislation includes the *Mining Act 1982*, the *Environmental Assessment Act 1982*, and the *Uranium Mining (Environment Control) Act 1979* (UMEC Act).

3.11 Guidelines for the Commonwealth to require environmental impact assessment of development projects are contained in the Administrative Procedures of the *Environment Protection (Impact of Proposals) Act 1974*. Proposals are designated for environmental impact assessment by the Commonwealth ‘action minister’ or authority empowered to give final approval to the proposal. In the case of uranium mining that minister is the Commonwealth Minister for Industry, Science and Resources (formerly the Minister for Resources and Energy). Designation for many projects is discretionary, although this discretion is limited by the MOUs agreed between the Commonwealth Environment Protection Agency and other agencies, which contain guidelines for the identification of projects of environmental significance. However, no such MOU exists with the Commonwealth Department of Industry, Science and Resources.²

Recommendation 2

The Committee recommends that all relevant MOUs between State and Commonwealth Government agencies regarding environmental impact assessment be made public.

1 On 23 June 1999 the Environment Protection and Biodiversity Bill 1998 was passed by the Senate. It contains provisions for environmental assessment and when proclaimed it will supersede the EPIP Act.

2 Bernard Dunne, ‘Uranium Mining and the Commonwealth EIA Process’, *Australian Environment Review*, Vol 11 No 5, June 1996.

3.12 The EPIP Act allows for four levels of possible environmental impact assessment. These are:

- (1) Ministerial and departmental consideration of the project using information supplied by the proponent, without public review, and advice to the action minister about any recommendations which must apply. This level has been applied to further assessment of tailings disposal and radiological protection at Jabiluka;
- (2) A Public Environment Report (PER) ordered by the Minister, which is open to public comment. This level was applied to the assessment of the Jabiluka Mill Alternative.
- (3) An Environmental Impact Statement (EIS) which is open to public comment, and in which the proponent is required to respond to public comment prior to submitting the final EIS. This level was applied to the assessment of the Ranger Mill Alternative.
- (4) A public inquiry conducted by a Commissioner appointed by the Minister.³

3.13 In relation to projects in the Northern Territory, projects are jointly assessed under a cooperative arrangement between the NT Department of Lands, Planning and Environment (NTDLPE) and the Commonwealth Department of Environment and Heritage. The NTDLPE forwards its assessment of the EIS or PER to the Commonwealth Minister, who then takes into account the assessment of his or her own Department before making recommendations for conditions, and action, to the action minister.

Environmental Impact Assessments and Approvals for Jabiluka

Summary

3.14 The Jabiluka lease was originally granted to Pancontinental in August 1982 under Section 64 of the NT Mining Act. 38 Environmental Requirements were simultaneously placed on the project under the NT *Uranium Mining (Environment Control) Act 1979* (UMEC Act). In 1996, when ERA indicated that it wished to develop the mine under the changed policy of the Liberal-National Government, the company was instructed to prepare a new Environmental Impact Statement (EIS) on the mine proposal. This was triggered and framed by the Commonwealth *Environment Protection (Impact of Proposals) Act 1974* and the Northern Territory's *Environmental Assessment Act 1982*.

3.15 The proposal advanced by ERA at this time was substantially different from the Pancontinental proposal which had been given environmental approval under the UMEC Act in 1982. It involved a new underground approach to the orebody, a different site for the entrance portal and mine workings, and the trucking of ore along

3 Administrative Procedures under the *Environment Protection (Impact of Proposals) Act 1974*.

a new, purpose-built road for milling at Ranger. Tailings disposal was also to take place at Ranger.

3.16 ERA prepared the EIS for this option, which was termed the Ranger Mill Alternative (RMA), despite the fact that under the 1991 Deed of Transfer negotiated between ERA and the Northern Land Council the consent of Traditional Owners to milling at Ranger had to be sought, and that that consent was being withheld. When the company then altered plans to the Jabiluka Mill Alternative (JMA) as a result of the refusal of the Traditional Owners to approve the RMA, it was instructed to prepare a Public Environment Report (PER) on the changed environmental implications of that operation.

3.17 On 2 June 1998, following the conclusion of the EIS process for the Ranger Mill Alternative, but prior to the conclusion of the PER process for the new Jabiluka Mill Alternative, the Northern Territory granted an authorisation under the UMEC Act allowing the construction of those parts of the project 'common' to both the RMA and JMA, including the portal, access decline and associated infrastructure. This construction has proceeded and is now largely complete. Further construction, mining and milling operations remain contingent on the outcomes of additional environmental impact assessment and ministerial approval.

The Ranger Mill Alternative EIS

3.18 The draft guidelines for the first EIS were made available for public comment for four weeks. The draft EIS was prepared for ERA by consultants Kinhill Engineers Pty Ltd, and released for public comment for twelve weeks between 17 October 1996 and 9 January 1997. Public meetings were held in Darwin (100 people) and in Jabiru (60 people), and 85 written submissions were received and forwarded to ERA.

3.19 Taking into account concerns raised in these submissions, ERA prepared a supplement to the draft EIS. Both documents were then forwarded as the final EIS to the Commonwealth and Northern Territory Environment Ministers on 17 June 1997. A copy of the Northern Territory's report on the assessment, which made 40 recommendations, was in turn provided to the Commonwealth Minister, Senator Robert Hill. After examining the submissions from his own Department and the Northern Territory Government, Senator Hill wrote to the Minister for Resources and Energy, Senator Warwick Parer, recommending 77 conditions on the project proceeding. These included changes to the proposal, further research and monitoring, and the development of management strategies for groundwater, tailings and flora and fauna.

3.20 The Minister for Resources and Energy included most of these recommendations as conditions on the grant of an export licence to ERA. However, twenty-two of the recommendations appear to have been qualified, with words requiring ERA to 'take into account the intent of' the recommendation, while the terms of a few others were altered. This has raised doubts about the enforceability of the requirements; there appear to be no other enforcement mechanisms envisaged other than the conditionality of the export licence.

3.21 Key among the conditions recommended by both the Northern Territory Government and Environment Australia was a requirement that if ERA sought to modify the preferred proposal in the EIS (the Ranger Mill Alternative) ‘further environmental assessment should be required, including provision of further mine site design, processes and impacts before any export approval is given by the Commonwealth’.⁴ The Northern Territory stated that the EIS ‘lacks specific technical and background data in its discussion of the Jabiluka Mill Alternative. Submissions have cited lack of technical data, tailings dam seepage and hydro-geological modelling as inadequate.’⁵

3.22 However, Senator Parer modified the recommendation to require ERA only to ‘provide further information to the Minister for Resources and Energy regarding mine site design, processes and impacts to allow consideration of the necessity for any further environmental assessment of the Jabiluka Mill Alternative.’ The Minister then stated that:

There is no impediment from an environmental perspective that would not allow ERA to commence work on elements common to both proposals subject to compliance with the recommendations contained elsewhere in this document that impact on those parts of the project common to both proposals.⁶

The Jabiluka Mill Alternative PER

3.23 In May 1998 the Minister for the Environment received a referral from Senator Parer requesting him to determine the level and scope of environmental impact assessment of the JMA proposal. Supervising Scientist Dr Peter Bridgewater has been cited as pressing Senator Hill ‘in the strongest possible terms’ for a full EIS on the Jabiluka Mill Alternative.⁷ The Minister decided that a more limited level of assessment, a Public Environment Report (PER), should be prepared by ERA. The PER was the most appropriate level of assessment, he explained, ‘for the situation where public comment is required but impacts are expected to be focused on a restricted number of specific issues ... issues covered in the EIS need not be re-examined in the PER. Such matters may be cross-referenced within the PER.’⁸

3.24 While the Northern Land Council (NLC) and the Aboriginal and Torres Strait Islander Commission (ATSIC) made submissions to the JMA PER, the Mirrar-

4 Government of Australia, Submission to World Heritage Committee, *Appendix 9.11: Summary Table of Ministers Hill and Parer EIA conditions and ERA progress*.

5 Northern Territory Department of Lands, Planning and Environment, *Jabiluka Number 2 Uranium Mine Proposal: Environmental Assessment Report and Recommendations*, August 1997, p 23.

6 Government of Australia, Submission to World Heritage Committee, *Appendix 9.11: Summary Table of Ministers Hill and Parer EIA conditions and ERA progress*.

7 Uranium Research Group, *Submission to the World Heritage Committee*, p 65.

8 Environment Australia, *Guidelines for a Public Environment Report on the Proposed Development of the Jabiluka Mill Alternative at the Jabiluka No 2 Uranium Mine*, June 1998.

Gundjehmi people refused to participate in the process, presumably because of their fundamental opposition to the project. The Government received 2,204 submissions on the PER, 72 of them being substantive. According to Environment Australia, a majority of submissions expressed unhappiness with the level of the assessment.⁹

3.25 ERA's proposals for the JMA now included the construction of a mill on the Jabiluka lease with the partial disposal of tailings within the mined-out stopes and the remainder deposited in purpose-built pits on the surface (the 50-50 Option). These would then be capped with clean waste rock. The tailings would be mixed with a cement paste with the aim of reducing the viscosity of the tailings and increasing their stability and impermeability.¹⁰ The JMA clearly involved the disturbance of a far greater surface area of the Jabiluka mine site, raising new challenges for rehabilitation and run-off management, and new concerns about the potential leaching of tailings into the surrounding ecosystem.

3.26 The Northern Territory's assessment report of the JMA recommended that the project proceed with the implementation of seventeen recommendations. Key uncertainties identified related to:

- The location of the pits in which tailings would be stored, concerning their ability to prevent the leaching of sulfates and radionuclides over the long term; and
- The long-term behaviour and characteristics of the cement paste tailings mass, which was a new technology and which had never been trialed with uranium.

3.27 Environment Australia's assessment report endorsed and amplified these concerns, and recommended further assessment of these risks before the project be allowed to proceed. The Minister then commissioned a study from scientists at the University of NSW (Unisearch Ltd) which argued that the proposed location of Pit No 1 was unsuitable, and identified additional assessment and design work that was needed.

3.28 At this time, ERA made reference to a third tailings management option in which all tailings paste would be returned underground to the mined-out pits; this would in turn require the excavation of unmineralised rock from silos adjacent to the decline and its permanent storage on the surface as artificial landforms.¹¹

3.29 Senator Hill wrote to the Minister for Resources and Energy, Senator Parer, on 25 August 1998, and said that Environment Australia had advised that 'this option would avoid the uncertainties associated with ERA's preferred option'. A key recommendation in this letter stated that there was insufficient information to make a

9 Environment Australia, *Environment Assessment Report: The Jabiluka Mill Alternative at the Jabiluka No 2 Uranium Mine*, July 1998, p 11.

10 Kinhill in association with ERA, *The Jabiluka Mill Alternative Public Environment Report*, pp 4.1- 4.17.

11 Senator Robert Hill, letter to Senator Warwick Parer, 25 August 1998, tabled correspondence.

decision on whether ERA's preferred option for the JMA was environmentally acceptable, but that if 100 per cent of tailings were placed underground in the mine void, and a further series of recommendations were complied with, 'the milling of uranium ore at Jabiluka will be environmentally acceptable'.¹²

3.30 The Minister told Senator Parer that the JMA could proceed and export licences be granted, if ERA prepared an amended proposal for the underground tailings disposal and if that proposal was approved by the Supervising Scientist and the Northern Territory Government. Thus, the most limited level of assessment under the EPIP Act was to be applied; there was to be no EIS or PER, or public consultation, for the revised proposal. The Committee believes that this level of assessment is inadequate.¹³

3.31 On 27 August 1998, the Minister for Resources and Energy wrote to ERA indicating conditional approval for the Jabiluka Mill Alternative (JMA), subject to the conditions recommended by Senator Hill. That is, approval would be given for the final option of complete disposal of tailings into the mined-out shafts (and newly excavated underground silos) after ERA had supplied more detail. Alternatively, if ERA wished to continue with the 50-50 option, it could submit a new assessment to the Environment Minister for consideration, with guidelines to be developed in consultation with the Commonwealth and NT, to address the identified inadequacies.¹⁴ Again, there was to be no higher level environmental impact assessment, or public consultation, for such a revised proposal.

3.32 However, during the course of this inquiry it became clear to the Committee that ERA has no intention of pursuing this (conditionally approved) proposal. Its preferred proposal remains the Ranger Mill Alternative or, if permission still cannot be obtained from the Mirrar, the original JMA proposal to dispose of part of the tailings in surface pits on site.¹⁵

3.33 Thus, ERA appears set on pursuing options for which no approval, from the Mirrar and the Government respectively, has been given. The Committee heard evidence that considerable scientific doubt remains that the 50-50 JMA option could ever be made environmentally acceptable. This directly contradicts the recent assurances provided to the World Heritage Committee by the OSS, which bases its claims that the natural values of Kakadu are not threatened on an assumption that 100 per cent of tailings will be disposed of underground.

12 Senator Robert Hill, letter to Senator Warwick Parer, 25 August 1998, tabled correspondence.

13 Senator Robert Hill, letter to Senator Warwick Parer, 25 August 1998, tabled correspondence.

14 Letter from Senator Warwick Parer to ERA, 27 August 1998, tabled correspondence.

15 Philip Shirvington, Energy Resources of Australia, *Proof Committee Hansard*, Canberra, 11 June 1999, p 95.