



ERA

Energy Resources of Australia Ltd
ABN 71 008 550 865

Supplementary Submission Appendix Four

November 2002 status report regarding:

Recommendations arising from investigation of the April 2000 Ranger mine process water leak incident by the Supervising Scientist

Supervising Scientist (2000). Investigation of tailings water leak at the Ranger uranium mine. *Supervising Scientist Report 153* (Supervising Scientist, Darwin). 46pp plus 5 appendices.

Note:

- No shading indicates compliance by ERA;
- Yellow shading and bold and underline of recommendation indicates that the responsibility is outside ERA's remit

	ERA responsibility - <i>Recommendations 1-4, 6, 7, 9, 11</i>
	Other agency responsibility - <u>Recommendations 5, 8, 10, 12-17</u>



Recommendation	Action & status
<p>Recommendation 1 <i>ERA should undertake a full review of the Tailings Dam Corridor with particular emphasis on the efficacy with which it performs the task of providing secondary containment. The terms of Reference for the Review should be approved by the Supervising Scientist.</i></p>	<p><i>Implemented.</i> Reviews of the Ranger Process Water System and the Tailings Dam Corridor were completed as part of a series of investigations into the leak incident. The Supervising Scientist commissioned SKM to review the adequacy of the design, operation and maintenance of the corridor road system. ANSTO was commissioned by the MTC to review the process water system, including the corridor road, and this review subsumed the recommendations in the SKM report.</p>
<p>Recommendation 2 <i>All Recommendations on maintenance procedures in the Tailings Dam Corridor made in the Sinclair Knight Merz Review of the Tailings Dam Corridor should be implemented.</i></p>	<p><i>In Progress.</i> An independent HAZOP study of the works proposed to implement all recommendations was completed by Myrna Hepburn Pty Ltd. A capital expenditure application to implement all appropriate recommendations was approved by the ERA Board and an application to rationalise existing infrastructure in the Corridor Road is now before NT DBIRD awaiting approval.</p>
<p>Recommendation 3 <i>ERA should strengthen the Ranger Management Team to ensure that there is an effective interface with external stakeholders and that decisions are made quickly to meet the expectations of the stakeholders.</i></p>	<p><i>Implemented.</i> ERA re-established the position of Ranger General Manager - Operations. A Manager - External relations was added to the Ranger Management Team. In addition, a General Manager Strategic Planning has been appointed. All positions have particular responsibilities relating to effective interfaces between the Company and stakeholders.</p>
<p>Recommendation 4 <i>ERA should take immediate steps to put in place an employee training program designed to ensure that all employees appreciate the need to keep the authorities informed of any event that could be perceived to be of concern to the local Aboriginal people or the broader community, not just incidents that are acknowledged infringements of the Ranger General Authorisation or the Environmental Requirements.</i></p>	<p><i>Implemented.</i> Communication and training are two key components of the ISO14001 Environmental Management System being implemented at Ranger. Policy development workshops have been implemented. General and work-area specific inductions are now in place for all employees. Training is undertaken where appropriate and awareness packages have been developed. A General Manager Environment Committee has been initiated. Environment department staff attend other departmental meetings. Environmental representatives have been appointed in the Mine and Mill. Environmental Performance Indicators are specified in all employee Job Purpose Statements and employee annual performance objectives and are reviewed annually.</p> <p>A Company-wide Environment Policy has been prepared and communicated to all staff, stating that 'environmental excellence' is a core business requirement. One of the stated cornerstones of the policy is that ERA will ensure 'open consultation with employees and stakeholders in setting environmental objectives and targets'.</p>
<p>Recommendation 5 <i>The Supervising Scientist should offer to assist ERA in the above training program. In particular, the Supervising Scientist should provide a briefing to ERA employees on issues of significance in this report, and any other issues that are considered to be of concern to members of the public.</i></p>	<p><i>Implemented.</i> The Supervising Scientist (SS) has provided advice to ERA about training requirements and commented on a draft training presentation from ERA. The SS has briefed senior ERA executives and members of the Ranger Management Team on issues of significance during ongoing liaison with ERA, in particular, at a meeting held on 3 August 2000.</p>



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<p><i>Recommendation 6</i></p> <p><i>ERA should upgrade the environment protection staff structure at Jabiru to ensure that the company has the on-site ability to effectively identify, interpret and rectify environmental incidents.</i></p>	<p><i>Implemented.</i> The employee managing the ESH Department at the time of the April 2000 incident at Ranger, and the subsequent incidents in March 2002, has been dismissed. The former ESH Department has been restructured to separate and focus Environment from Safety, Health & Radiation Protection. Each of these new Departments has a new Manager.</p> <p>The Environment Department itself has been re-organised. An assessment was made about the functions and directions of the Department into the future. A capabilities analysis and revised role descriptions and performance objectives were undertaken for all staff by an independent external consultant. Three new senior positions reporting to the Manager Environment were advertised and two have been filled by external applicants. A third applicant is under consideration.</p> <p>New working arrangements with ERA's environmental consultants (EWL Sciences) have been implemented to form an effective partnership with the Environment Department in managing environmental issues at Ranger and Jabiluka.</p>
<p><i>Recommendation 7</i></p> <p><i>ERA should complete a comprehensive investigation of additional sources of manganese, including previous tailings spills in the Tailings Dam Corridor, and provide a report to the Minesite Technical Committee.</i></p>	<p><i>Implemented.</i> ERA carried out a comprehensive review of its records and identified locations of previous spills of tailings and process water in the Tailings Dam Corridor. Contaminated materials were identified in two locations and removed. The Supervising Scientist Division had earlier undertaken a radiation survey of the corridor to locate former tailings and process water spills. A scientific investigation found that weathering of waste rock in the southern stockpiles is a possible 'additional' source of manganese and a report has been provided to the MTC.</p>
<p><u>Recommendation 8</u></p> <p><i>The Minister for Industry, Science and Resources should consider what action should be taken in response to the established breach of Environmental Requirements 3.4 and 16.1 taking into account:</i></p> <ul style="list-style-type: none"> • <i>The radiological and ecological impact arising from the leak of tailings water to the environment has been negligible</i> • <i>The leak resulted from poor maintenance practices in the Tailings Dam Corridor</i> • <i>The view of the traditional owners of the Ranger Project Area is that Aboriginal people will only believe that the Government takes their concerns seriously if substantive action is taken.</i> 	<p><i>Implemented.</i> Minister Minchin considered that ERA should not be prosecuted by the Commonwealth, and required that the recommendations of the Supervising Scientist leak report be implemented.</p>



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<p><i>Recommendation 9</i></p> <p><i>The statutory monitoring program should be extended to enhance its capacity to provide early warning of unplanned releases of contaminants. This extension should include the establishment of additional monitoring locations within secondary containment systems that would indicate the failure of primary containment systems.</i></p>	<p><i>In Progress.</i> In relation to the corridor drain, the works designed to enhance capacity to provide early warning of unplanned releases of contaminants includes installation of new bunding for pipelines, placement of a new clay liner between the plant and branch 'A', widening of branch 'A', regrading to ensure that runoff from the corridor is directed to Pit #1, and construction of a small sump upstream of the road culvert to collect samples of initial runoff from the tailings corridor. In branch 'B', works will include removal of redundant pipework and regrading of the drain, and construction of a small sump west of the transfer corridor sump to collect samples of initial runoff. Application to make these changes is currently with NT DBIRD awaiting approval.</p> <p>ERA's inspection procedures have been reviewed and the operational monitoring program extended to include additional early-warning water sampling sites within the corridor drain.</p> <p>On a wider front, a review of statutory and operational environmental monitoring has been undertaken by ERA and discussed with stakeholders and the MTC. The changes in the monitoring program are being incorporated into the Mining Management Plan that will be reviewed by the MTC prior to approval by the Supervising Authority.</p>
<p><u>Recommendation 10</u></p> <p><i>The Minesite Technical Committee should review the inspection and monitoring system at Ranger to establish and implement measures that will detect failures in the secondary containment systems and structures.</i></p>	<p><i>Implemented.</i> The auditing and inspection regime for Ranger and Jabiluka has been revised. Routine Periodic Inspections are carried out monthly by NTDBIRD, OSS and the NLC. Audits and Mid Term Reviews are made alternately every 6 months.</p>
<p><i>Recommendation 11</i></p> <p><i>ERA should provide the Supervising Scientist and the Supervising Authorities with all research data as they become available rather than at the end of research projects. Protocols should be developed for the appropriate use of research data.</i></p>	<p><i>Implemented.</i> A protocol for the exchange of research data has been agreed. Monthly R&D meetings with all stakeholders to discuss research issues and data have been conducted since March 2001.</p>
<p><u>Recommendation 12</u></p> <p><i>The Northern Territory Department of Mines and Energy should undertake a comprehensive review of its site inspection regime in the light of deficiencies identified in this report, and design and implement a new proactive inspection regime within a risk management framework.</i></p>	<p><i>Implemented.</i> NTDBIRD has reviewed its inspection and monitoring activities. A schedule of site inspections has been established to ensure the distribution of visits and skills is maintained throughout the year. In addition, the following inspection actions are continuing: <i>ad hoc</i> inspections triggered by incidents, follow up of outstanding actions and visits following requests for assistance from site personnel. Routine Periodic Inspections are carried out monthly by NTDBIRD, OSS and the NLC.</p>



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<p><u>Recommendation 13</u></p> <p><i>The Supervising Scientist should ensure that there is an adequate and independent on-site audit program related to potential off-site environmental consequences arising from operation of the Ranger mine and mill.</i></p>	<p><i>Implemented.</i> The MTC has implemented a new audit regime, complying with the ISO 14000 series of standards, which replaces the Environmental Performance Reviews. Environmental Audits and Mid Term Reviews are being carried out alternately every 6 months. OSS, NLC and NT DBIRD completed the first Annual Audit of Ranger and Jabiluka in April 2001. The first mid-term review was conducted by OSS, NLC and NT DBIRD in November 2001. An external accredited consultant auditor was used in the new Audit regime in May 2002.</p> <p>All stakeholders now participate in routine monthly site inspections, the first of which was in January 2001.</p>
<p><u>Recommendation 14</u></p> <p><i>The Supervising Scientist should develop and implement a routine environmental monitoring program whose focus should be the provision of advice on the extent of protection of the people and ecosystems of Kakadu National Park. A component of the program could also provide support to the on-site audit program referred to in Recommendation 13.</i></p>	<p><i>Implemented.</i> During 2000-01, the Supervising Scientist diverted resources from research to enable this program to commence. A full biological monitoring program was carried out during the 2000/01 Wet season as well as a chemical monitoring program of limited scope. A monitoring team has been established to further develop and implement the SS environmental monitoring program. The Government provided the Supervising Scientist with the additional resources required to undertake this task in the 2001-02 budget.</p>
<p><u>Recommendation 15</u></p> <p><i>The Working Arrangements between the Commonwealth and the Northern Territory regarding the regulation of uranium mining activities in the Alligator Rivers Region should be reviewed and amended to take into account changes in the activities of the Supervising Scientist arising from this report.</i></p>	<p><i>Implementation is not within the control of ERA.</i></p>
<p><u>Recommendation 16</u></p> <p><i>The Minesite Technical Committee should develop guidelines clarifying requirements for the reporting of incidents which retain the transparency of the current system, are consistent with Environmental Requirement 16.1, reduce the need for the exercise of judgement by staff of ERA and will assist in minimising undue concern for Aboriginal people and the broader community..</i></p>	<p><i>Implemented.</i> Although ERA developed an ‘unplanned events’ register early in 2000 to capture information about all unplanned events, and submits these reports weekly to stakeholders, it remains the responsibility of the MTC (particularly the NLC) to decide how to provide this information to Aboriginal people and the broader community in such a way that concerns are not unduly generated.</p> <p>“Focus” and “Action” levels have been set for the main compliance points in Magela Creek and Swift Creek for a number of key water quality variables. When a water sample shows a level at or above the “focus” level, an internal watching brief is required to be established. If a sample is recorded above the “action” level, an immediate investigation and notification to authorities is triggered.</p>
<p><u>Recommendation 17</u></p> <p><i>The Working Arrangements between the Commonwealth and the Northern Territory regarding the regulation of uranium mining activities in the Alligator Rivers region should be reviewed and amended to require the</i></p>	<p><i>Implementation is not within the control of ERA.</i></p>

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Recommendation	Action & status
<i>Northern Territory Department of Mines and Energy and the Supervising Scientist to immediately inform each other of any information they may require independently which could be of environmental significance.</i>	