



**ERA** Energy Resources of Australia Ltd

## **Chapter 12 Management of Information and Data**

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## 12 MANAGEMENT OF INFORMATION AND DATA

Quality information and data management is critical to ensuring successful management of progressive rehabilitation, closure and post closure activities. To support these activities, ERA has identified three key components that form the foundation of its closure strategy:

- Validation of site conceptual/numerical models:  
What are the conceptual models on which the closure strategy is based? What informs them and a brief explanation of why?
- Validation of construction standards:  
What construction standards are critical and how do we maintain them (i.e. survey records, geotechnical testing, as built reports for drains, dams and infrastructure and geochemical QA/QC)?
- Progressive rehabilitation:  
What are the data sets that will inform progressive rehabilitation (i.e. survey records, revegetation records, ecological surveys and geomorphic surveys)?

### 12.1 Data Collection and Management

ERA maintains accreditation to ISO 14001:2004 and AS4801 health, safety and environmental management systems, and has done so since 2003 and 2005 respectively. The management system provides for consistent performance indicators (including appropriate backup measures for electronic data and document control). The system also provides for compliance self-assessment, which is routinely verified through mechanisms such as routine periodic inspections and audits by Rio Tinto, regulators, committees and stakeholders.

Records and data are managed according to a range of policies, standards and work instructions that ensure that data is secure, maintained and accurate. For perpetuity, information is not kept on personal computers but in approved, managed data systems. This reduces the risk of lost information and provides stability in relation to retention of knowledge should key staff leave.

Table 12-1 is indicative of the types of data collection at ERA, and the internal/external departments and groups responsible for the maintenance and reporting of these data. Ongoing feasibility studies and projects undertaken by external consultants into closure activities are likely to influence this information as we move to closure implementation. As such, data storage will be subject to ongoing review. These data sets will inform and/or validate the various conceptual and numerical models on which the closure strategy and design criteria is developed, as well as other aspects of the overall design and construction of the final landform.

For a comprehensive outline of how data is used to inform and/or validate going closure activities including site conceptual models and numerical models, refer to Chapter 7.

Table 12-1: Indicative data collection types

Type	Collection	Storage/software	Reporting	Objective(s)
Surface water and groundwater monitoring (including spatial data)	Environment group	<ul style="list-style-type: none"> <li>Laboratory Information Management System (LIMS)</li> <li>Hydstra</li> <li>ERA server and centralised data storage systems (Map info files)</li> </ul>	<ul style="list-style-type: none"> <li>Mining management plan, subject to periodical review, assessment and approval via the Minesite Technical Committee (MTC)</li> <li>Ranger annual groundwater report</li> <li>Annual Ranger wet season report</li> <li>Routine water quality reports</li> <li>Ranger Mine closure plan, subject to periodical review, assessment and approval via the MTC</li> <li>ARRTC</li> </ul>	<ul style="list-style-type: none"> <li>Operational monitoring</li> <li>Validation of conceptual and numerical models</li> <li>Informs closure criteria</li> <li>Construction standards</li> </ul>
Revegetation records	Closure and water group	<ul style="list-style-type: none"> <li>TIMS Trimagic Enterprise Library</li> <li>ERA server and centralised data storage systems</li> </ul>	<ul style="list-style-type: none"> <li>Mining management plan, subject to periodical review, assessment and approval via the MTC</li> <li>Ranger Mine closure plan, subject to periodical review, assessment and approval via the MTC</li> <li>Annual Report</li> <li>Periodical reports (developed internally and externally)</li> </ul>	<ul style="list-style-type: none"> <li>Progressive (remediation and) rehabilitation</li> <li>Informs closure criteria</li> <li>Informs revegetation strategy</li> <li>Construction standards</li> </ul>



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Type	Collection	Storage/software	Reporting	Objective(s)
			<ul style="list-style-type: none"> <li>Alligator Rivers Region Technical Committee (ARRTC)</li> </ul>	
Ecological surveys	Closure and water group in collaboration with external consultants	<ul style="list-style-type: none"> <li>TIMS Trimagic Enterprise Library</li> <li>ERA server and centralised data storage systems</li> </ul>	<ul style="list-style-type: none"> <li>Periodical reports (developed internally and externally)</li> <li>Mine closure plan</li> <li>ARRTC</li> </ul>	<ul style="list-style-type: none"> <li>Progressive (remediation and) rehabilitation</li> <li>Informs closure criteria</li> <li>Informs revegetation strategy</li> </ul>
Radiation dose modelling	External consultant	<ul style="list-style-type: none"> <li>ERA server and centralised data storage systems and centralised data storage systems</li> </ul>	<ul style="list-style-type: none"> <li>Periodical reports (developed internally and externally)</li> <li>Ranger mine closure plan, subject to periodical review, assessment and approval via the MTC</li> </ul>	<ul style="list-style-type: none"> <li>Validation of models</li> <li>Informs closure criteria</li> <li>Construction standards</li> </ul>
As built records (drawings)	Projects group External consultants	<ul style="list-style-type: none"> <li>Dataviewer</li> <li>ERA server and centralised data storage systems</li> </ul>	<ul style="list-style-type: none"> <li>As built report</li> </ul>	<ul style="list-style-type: none"> <li>Construction standards</li> <li>Decommissioning and remediation</li> </ul>
Geomorphological surveys and data	External contractors	<ul style="list-style-type: none"> <li>ERA server and centralised data storage systems</li> <li>TIMS Trimagic Enterprise Library</li> </ul>	<ul style="list-style-type: none"> <li>Mining management plan, subject to periodical review, assessment and approval via the MTC</li> <li>Ranger mine closure plan, subject to periodical review, assessment and approval via the MTC</li> <li>Annual Report</li> </ul>	<ul style="list-style-type: none"> <li>Progressive (remediation and) rehabilitation</li> <li>Informs closure criteria</li> <li>Modelling inputs</li> </ul>



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Type	Collection	Storage/software	Reporting	Objective(s)
Geotechnical testing	Mining group	<ul style="list-style-type: none"> <li>ERA server and centralised data storage systems</li> </ul>	<ul style="list-style-type: none"> <li>Periodical reports (developed internally and externally)</li> </ul>	<ul style="list-style-type: none"> <li>Construction standards</li> <li>Modelling inputs</li> </ul>
Geochemical QA/QC	Mining group Closure group	<ul style="list-style-type: none"> <li>LIMS</li> <li>TIMS Trimagic Enterprise Library</li> <li>ERA server and centralised data storage systems</li> </ul>	<ul style="list-style-type: none"> <li>Mining management plan, subject to periodical review, assessment and approval via the MTC.</li> <li>Periodical studies and subsequent reports.</li> </ul>	<ul style="list-style-type: none"> <li>Ore grade control</li> <li>Informs closure criteria</li> <li>Validation of ground and surface water models</li> </ul>
Survey records	Mining group	<ul style="list-style-type: none"> <li>Vulcan</li> <li>ERA server and centralised data storage systems and centralised data storage systems</li> </ul>	<ul style="list-style-type: none"> <li>Mining management plan, subject to periodical review, assessment and approval via the MTC.</li> <li>Annual Report.</li> <li>Adherence with Joint Ore Resource Committee guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>Validation of conceptual and numerical models</li> <li>Construction standards</li> </ul>
Water treatment production (i.e. flows/volumes)	Plant operations group	<ul style="list-style-type: none"> <li>LIMS</li> </ul>	<ul style="list-style-type: none"> <li>Mining management plan, subject to periodical review, assessment and approval via the MTC.</li> </ul>	<ul style="list-style-type: none"> <li>Progressive (remediation and) rehabilitation</li> <li>Regulatory compliance</li> </ul>