

Assessment of rehabilitated uranium mine sites, Australia.

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Recent research on rehabilitated uranium mine sites located in wet climates has revealed the varied success of the applied rehabilitation efforts. In comparison, there is little knowledge of the status and environmental impacts of rehabilitated uranium mines in dry climates. Mary Kathleen and Radium Hill represent first generation Australian uranium mines (operating from the 1950s to the 1980s), which are located in semi-arid regions. The aim of this communication is to report on the current environmental status and potential hazards of these former uranium mine sites.

The standards of rehabilitation of the Radium Hill and Mary Kathleen mine sites were basic compared by today's criteria. At Mary Kathleen, the physical erosion and chemical leaching of waste rock repositories and the leaching of the tailings repository are the dominant pathways of contaminants into surrounding environments. At Radium Hill, physical erosion of waste repositories is of on-going concern. Both uranium mine sites require monitoring and additional rehabilitation measures.