



Rehabilitation and closure

ERA

The Ranger 3 Deeps underground mine will not materially alter the strategy or timeframe for closure of ERA operations

Ranger 3 Deeps closure strategy

The Project will have a very small surface footprint and the underground workings will be progressively backfilled as mining progresses. Consequently the Project will not materially alter the plan or schedule for the whole of site closure. The Project closure strategy will be fully integrated into the overall Ranger mine operations closure planning.

Tailings and waste rock management

The chemical and radiological properties of the Ranger 3 Deeps ore are very similar to that previously mined. Thus tailings generated from the processing plant and waste rock from the mine can be managed using the same approach as currently used or planned. A portion of tailings will be incorporated in the underground backfill material, and the remainder placed in Pit 3, the intended tailings storage facility from 2015.

Only a very small quantity of waste rock will be generated, compared to existing stockpiles and its management will be the same as for current operations

The change in the volumes of waste rock and tailings in Pit 3 should the Project proceed will be minor and will not alter the final design of this facility.

Backfill of underground mine

Mined out stopes will be progressively backfilled with a paste mixture of tailings, cement and crushed waste rock, designed to minimise the potential for leaching of contaminants into local groundwater.

Post mining the decline and ventilation shafts will be backfilled to make them safe on the surface and to eliminate pathways for contaminant movement in the groundwater.

A range of modelling, such as for salt migration in the deep groundwater, demonstrates a negligible contribution of the Project to post closure impacts.

Infrastructure removal and grouting of surface holes

All Project surface equipment will be removed at the completion of operations. All paste delivery holes installed for the Project will be grouted and/or capped to make the area safe for the public and to prevent fauna falling down the voids.

Revegetation of disturbed areas

Surface areas disturbed by the Project will be rehabilitated as a minor component of the final landform construction. Revegetation of these areas will use local native plant species and be consistent with ERA's revegetation strategy that is based on the knowledge gained through 30 years of trials and research.

Management of fire and weeds

Fire management with exclusion in the first years after planting, followed by controlled cool burns for fuel reduction will be employed. Weed management will be carried out consistent with existing operational procedures.

Rehabilitation monitoring

A key component of closure planning for Ranger is the development of closure criteria and the associated rehabilitation monitoring program. These are currently being developed in collaboration with key stakeholders. The Project will not require specific closure criteria parameters or a separate monitoring program.

Further reading:

Refer to Chapter 13 of the *ERA Ranger 3 Deeps Draft Environmental Impact Statement*.



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Ranger mine trial landform.

Fast Facts

- Underground workings will be progressively backfilled during mining with a combination of tailings, cement and crushed waste rock made into a paste.
- Project waste streams such as tailings and waste rock can be accommodated into Pit 3.
- Project closure and rehabilitation activities will be incorporated into the current mine closure planning and schedule.
- The Project does not alter the dates for cessation of operations and closure nor have any material impact on the predicted post closure environmental impact.