



Yeelirrie Uranium Project

Environmental Management





Yeelirrie Uranium Project

Yeelirrie is one of Australia's largest undeveloped uranium deposits. The deposit is located approximately 660 km north east of Perth and 420 km north of Kalgoorlie, in the Shire of Wiluna in Western Australia.

Originally discovered by Western Mining Corporation (WMC) in 1972, the Yeelirrie uranium deposit was acquired by Cameco from BHP Billiton in 2012.

Since acquiring the project, Cameco has undertaken a comprehensive review of the work completed by both WMC and BHP Billiton and conducted a number of additional technical and environmental studies. We have also spent time getting to know the communities and stakeholders around the Yeelirrie project, to address their questions and keep them informed of our plans.

Cameco is advancing the Yeelirrie project at a pace aligned with market conditions. A development decision by Cameco has not yet been made and would require favourable market conditions and government approval.

Cameco commenced the environmental approvals process for the Yeelirrie project in late 2014.

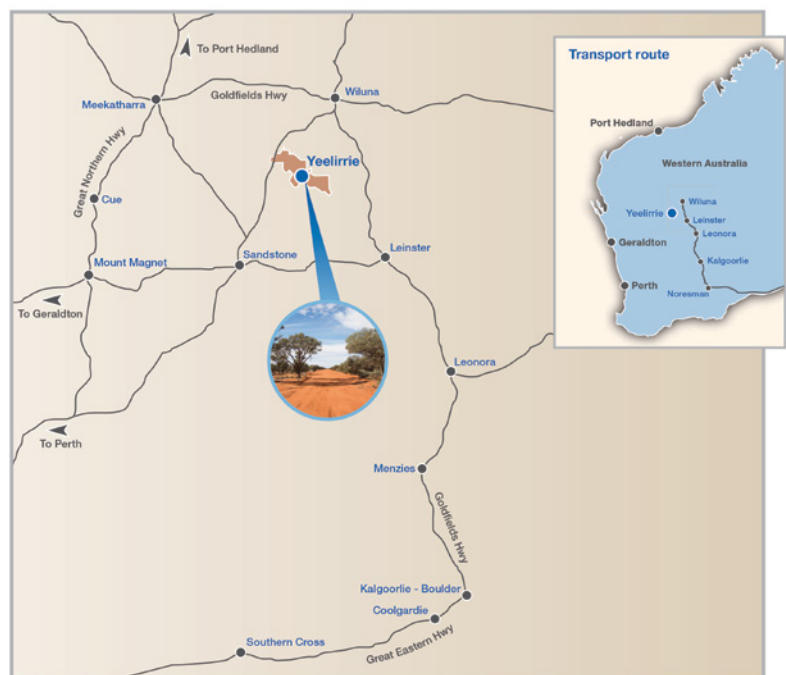
Cameco strives to be a leader in environmental best practices and performance by complying with regulatory

requirements and moving beyond them where possible and the Yeelirrie project is no exception.

We believe the Yeelirrie project can be safely operated with minimal impact on the environment and public amenity.

This information booklet outlines how Cameco plans to manage the key environmental aspects of the project.

For more information visit our website: www.cameco.com/australia/yeelirrie/communityinformation





Project Overview

The Yeelirrie uranium project will consist of an open cut mine, metallurgical plant and associated infrastructure and facilities that will produce uranium concentrate for export.

Ore will be mined from shallow pits by open cut techniques with the ore processed using alkaline leaching. The open pit mine will be about 9km long, up to 1.5km wide and about 10m deep.

The project is expected to produce up to 7,500 tonnes or 16.5 Mlbs (averaging 3,850 tonnes or 8.49 Mlbs) per year of uranium oxide concentrate over the 15 year ore processing period.

The project has an operational life of 22 years, which includes 3 years of pre-production construction, dewatering and mining, 15 years of processing and 4 years of decommissioning and rehabilitation. The project will be progressively rehabilitated as mining occurs.

The uranium concentrate, commonly known as yellowcake, will be transported by road from the mine site to the Port of Adelaide in South Australia for export. The uranium concentrate will be used to generate clean electricity in nuclear power plants around the world.

The project is expected to deliver significant economic benefits to the state of Western Australia and in particular the Northern Goldfields region. It is anticipated the project will employ an average of 225 people during operations and up to 1200 people during the peak construction phase. Priority will be given to training and hiring local people.

Engaging communities and keeping them informed throughout project development phases is a priority at all Cameco operations. It is our goal to ensure local people are aware of and understand Cameco's activities and have opportunities to provide input.

Cameco is one of the world's largest uranium producers, with operations in Canada, the United States and Kazakhstan. We have considerable experience operating uranium projects safely and responsibly to ensure workers and the environment are protected. We plan to apply these industry-leading standards to our Australian operations and to the Yeelirrie project.

What is uranium and uranium ore concentrate?

Uranium is a naturally occurring radioactive material that can be found at very low levels in almost all typical soil, rock, rivers and oceans.

Concentration of uranium through geologic processes can result in high accumulations of the metal forming discrete ore bodies, such as Yeelirrie.

Uranium ore bodies are mined and processed to extract the uranium metal. The resulting uranium concentrate has a relatively low volume, is non-toxic, non-flammable and is classified as a low level radioactive product.





Transport

Uranium concentrate produced at Yeelirrie will be transported by road from the mine site to the Port of Adelaide for export.

Cameco proposes to use the existing heavy haulage route from Yeelirrie along the Goldfields Highway to Norseman, along the Eyre Highway to Port Augusta and then the Princes Highway to Adelaide.

How many trucks per week will transport the uranium concentrate?

Two-trailer road train vehicles will be used to transport the product from Yeelirrie to Adelaide. It is expected that an average of two road trains (4 containers) per week will operate along the route.

Packaging and shipping

Transport of uranium concentrate from Yeelirrie will be undertaken in accordance with the strict codes and regulations overseen by state, national and international organisations. These regulations outline the requirements and controls for the safe transportation of uranium worldwide.

Uranium concentrate is placed into 200-litre steel drums which are then tightly sealed and stowed into shipping containers and secured using a Kevlar-based strapping system to keep the drums in place during transit.

Each drum is registered and recorded before the shipping container is sealed. The containers are then locked at the mine site and will not be opened, unless for official inspections, until they reach their overseas destination, ensuring the secure movement of the product.

Cameco has more than 25 years' experience transporting uranium concentrate across Canada and North America and will use this experience to plan and manage transport operations in Australia.

What emergency response plans would be established to support transport?

The company's Canadian operations alone truck approximately 600 loads by road annually, with a total distance travelled at just under two million kilometres. Using experience gained from many thousands of transport movements and many years of operation, Cameco has put into place a number of controls and initiatives to improve both the safety of transport as well as emergency preparedness and response to transport incidents.

Cameco maintains a 24-hour emergency telephone service to report any transportation-related incidents and retains the services of a professional spill response organisation, available to provide initial response services and support local emergency response organisations.

In Australia, we will establish similar systems and work alongside state and federal authorities and support agencies to develop a comprehensive emergency response plan.

In the unlikely event of an incident involving the transport of uranium concentrate, we will work with local government authorities, police, Main Roads, DFES and other state and federal agencies to ensure a fully coordinated response.

In Canada, Cameco has initiated its own first responders program. This highly successful program involves Cameco specialists working with both professional and volunteer emergency response crews along Cameco's main transport routes to inform them about the properties of uranium, the risks associated with a spill and appropriate first response spill containment and clean-up measures.

Cameco also conducts spill response exercises in conjunction with emergency services to trial spill response procedures. We will establish a similar program along the proposed transport route for the Yeelirrie project.



Radiation

Cameco has considerable experience in the management of radiation during mining and milling operations.

At Yeelirrie, our aim is to:

- Minimise potential human and environmental radiation exposure to as low as reasonably achievable.
- Minimise emissions and potential radiation exposures to workers through design and management measures.

As part of the planning for Yeelirrie, Cameco has completed baseline studies, radiation modelling and emissions and dispersion studies to understand any risks to the public, workers and the environment.

These studies have shown that only very low levels of radiation will occur outside of the immediate mine site. These levels are negligible compared to background levels and confirm mining operations pose no risk to the environment or the general public.

The studies also show that exposure received by workers is likely to be low and well within statutory limits.

Cameco has also undertaken modelling of radiation levels under proposed mine closure scenarios. The modelling has demonstrated mine closure can be effective and radiation levels at the site after closure can be safely managed to ensure successful rehabilitation of the site.

Cameco is committed to complying with all requirements relating to radiation protection and will provide transparent and accountable radiation management and performance records:

- Worker radiation exposure records will be made available to the Australian Radiation Protection and Nuclear Safety Authority (ARPANSA) via the Australian National Radiation Dose Register.

- Safety, radiation management and environmental performance will be reported annually to the public via reports to state and federal agencies.
- Meetings will be conducted regularly with key stakeholders to discuss any concerns regarding radiation management.

Dust

Cameco has completed baseline studies and dust modelling to understand the potential impacts to the environment, workers and public amenity from dust generated from the project.

The results of the dust dispersion modelling indicate that dust emissions from the project will comply with all relevant air quality criteria and will not result in unacceptable impacts to the environment or to public amenity.





Atriplex sp. Yeelirrie Station



Flora and Fauna

Cameco is committed to ensuring that the impacts of the project on flora and fauna are kept as low as possible.

Cameco has completed extensive flora and fauna surveys over the project area to understand the expected impacts of the project. In general terms, the surveys show that the flora that will be disturbed by the construction of the project is well represented in the wider region. A number of species of rare flora were located, and while some of these populations are able to be avoided by amendments to the mine plan, a population of one new species of saltbush, *Atriplex* sp. Yeelirrie Station will be impacted. Cameco will work with the Department of Parks and Wildlife to develop and implement a management plan to address and manage this impact.

The project will not have a significant impact on any rare or endangered fauna. While the Yeelirrie area is known for Malleefowl, surveys conducted over many years have shown that the Malleefowl mounds are mainly located away from the project area with the best habitat being located to the south of the project, which will not be impacted.

Bush Tucker

Cameco has undertaken work to understand the impact of dust and radiation on flora and fauna and to understand whether consumption of flora and fauna poses a risk to human health. The studies have shown that the only pathway for radiation contamination is via dust from the project area. As both dust levels and the grade of the uranium ore are low, the impact of dust and radiation on flora and fauna is considered very low and the consumption of bush food does not present any risk to human health.





Water

In planning the Yeelirrie project, Cameco has considered the impact of developing the project on both surface and ground water.

Surface water

The location of the proposed mine occurs low in the valley of the Yeelirrie landscape and construction of the open pit will interrupt minor surface water drainage lines that occur through the project area. Cameco has completed extensive surface water flow modelling and has determined that diversion banks can be constructed, which will divert water runoff around the project area and back into natural drainage channels downstream. This will not have a significant impact on stream flow.

Upon completion of mining, natural flow lines will be re-established.

Cameco also proposes to construct surface water bunds and storage ponds to capture and control rainfall and runoff that occur on site.

Groundwater

Extensive modelling of the groundwater at Yeelirrie has been conducted since the deposit was first discovered by WMC. This work provides a high level of confidence that the water supply required for the project can be obtained from groundwater without a significant impact on the groundwater aquifer, the environment and other users.

Indigenous Relations

Cameco is proud to be recognised as an industry leader in corporate responsibility and is Canada's largest industrial employer of indigenous people.

We respect the culture, heritage, values, beliefs and rights of traditional landowners and are committed to building long lasting and trusting relationships with the communities in which we operate.

At Yeelirrie, we are working to ensure local people benefit from development. Through our five-pillar corporate responsibility program, we will make a priority of training and hiring local Aboriginal people from nearby communities to work at the project and will contract local businesses for goods and services as much as we can.

Mine Closure and Decommissioning

Cameco has developed a preliminary mine closure and decommissioning plan for the closure of the project. This plan will be reviewed and updated as the project proceeds.

Cameco has planned the project so that all mine waste including tailings can be buried and stored in the mine open pit. This means there will be no waste rock piles or tailings dams remaining on the surface of the ground following mine closure. This is the safest long term storage solution for the mine tailings.

During mining, all tailings material will be discharged into tailings storage cells constructed within sections of the open pit where mining has concluded. Upon completion of mining the tailings will be covered with layers of waste rock and top soil and vegetation will be re-established to stabilise the rehabilitation. Once mine closure has been completed, the landscape, including natural drainage will be returned back to near its original state.

About Cameco

Canadian-based Cameco Corporation, with its head office in Saskatoon, Saskatchewan, is one of the world's largest uranium producers. The company's uranium products are used to generate electricity in nuclear energy plants around the world, providing one of the cleanest sources of energy available today. Cameco's shares trade on the Toronto and New York stock exchanges.

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