

Lynas in Western Australia

FAQs

Q. Who is Lynas?

A. Lynas is a publicly listed Australian company. Lynas has a long standing commitment to the Goldfields region as we have been in production at Mt Weld, near Laverton, since 2011.

Lynas mines and processes ore at Mt Weld, which is one of the world's highest grade Rare Earth mines. Currently, the concentrate produced at Mt Weld is shipped to Lynas' Malaysian refinery, the largest, most advanced Rare Earths chemical processing plant in the world.

As the only integrated miner and processor of scale outside China, we provide an important alternative for outside China manufacturers in high technology markets, including green technology.

Lynas was purpose-designed as an ethical and environmentally-responsible producer, and we are certified under international standards. This includes being assessed by 3rd parties for our approach to sustainability.

Q. What are Rare Earths and why are they important?

A. Rare Earths are a group of 15 elements in the periodic table known as the Lanthanide series, plus Yttrium and Scandium. Rare Earths are used in the manufacture of many things we use every day – from smart phones to cars, electrical appliances, and importantly, hybrid and electric vehicles.

Q. What are Lynas' plans for Kalgoorlie?

A. We are excited to be building a new Rare Earths plant to process the Rare Earth concentrate from our mine at Mt Weld which is also in the Goldfields region of WA. The material produced in Kalgoorlie will be further processed at our Lynas Malaysia refinery. We currently truck the concentrate from Mt Weld to the rail services linking the northern Goldfields to the Port of Fremantle.

We are committed to the Goldfields region and Kalgoorlie offers close proximity to our mine as well as a skilled workforce and a rich history in the mining and processing industries. We are looking forward to being part of the Kalgoorlie community. Lynas has an excellent track record of complying with laws and regulations and we will apply the same high environmental standards in Kalgoorlie as we do in all of our operations.

Q. Will you create jobs for people in Kalgoorlie?

A. Yes, it's our preference to develop a residential workforce and we expect the plant will create around 500 jobs during peak construction and over 100 new ongoing jobs. As with all industrial activity, we expect there will also be significant flow on benefits to local suppliers and businesses in Kalgoorlie from this residential workforce.

Q. Will you be mining in Kalgoorlie?

A. No, our mine is at Mt Weld, near Laverton.

Q. Is the material Lynas processes radioactive?

A. We are all exposed to natural sources of radiation in our daily lives because of the presence of the radioactive elements such as potassium, uranium and thorium in rocks and soils, as well as in foods we eat and drink. For instance, bananas and milk have small concentrations of potassium.

Rare Earths are commonly found alongside low level naturally occurring radioactive material. Typically, this material contains low levels of radioactive thorium and uranium. An advantage of the mineral composition of Lynas' Mt Weld deposit is that it has lower levels of natural radioactivity compared to other Rare Earth deposits.

Mt Weld ore is mined and fed into the Mt Weld processing plant where the Rare Earth minerals are recovered into a Rare Earth concentrate. Both the ore and the concentrate from our Mt Weld mine are non-hazardous, are not classified as a "Dangerous Good" and, due to the very low radioactivity, are not classified as radioactive material for transport

Fast Facts

1. Rare Earths are often called the "vitamins of modern industry" because of their special properties which help to improve technologies.
2. Lynas' Mt Weld mine is the second largest source of Rare Earth production in the world.
3. Lynas has been in production in the Goldfields for nearly a decade. Lynas has already invested over \$400m in plant and equipment at Mt Weld.

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purposes (≥ 10 Becquerel per gram (Bq/g)). The Mt Weld concentrate has radioactivity of approx. 6 Bq/g which is defined as “very low level radioactive material”.

During our first stage processing (cracking & leaching) in Kalgoorlie, we will recover the Rare Earths in our concentrate from the surrounding elements which are mainly iron and phosphorous. The recovered Rare Earths are not radioactive materials. The resulting by-product is an iron phosphate and its radioactivity remains the same as it was in the concentrate, i.e. approx. 6 Bq/g.

Q. What will happen to the by-product of the Cracking & Leaching process in Kalgoorlie?

A. WA has proven regulations for the management of industrial by-products which contain naturally occurring radioactive material. Currently, WA regulators oversee mining and processing by-products with up to 500 Bq/g radioactivity. By comparison, Lynas’ iron phosphate by-product is classified as very low level radioactive material at just 6 Bq/g and our operations are overseen by the EPA.

In keeping with Australian and international best practice, the iron phosphate will be dry stacked and stored in approved, purpose-built long term storage facilities.

Q. How does the radioactivity of the iron phosphate compare to other radioactive materials?

A. The radioactivity of the iron phosphate is comparable to the radioactivity of rock phosphate used in fertiliser. In fact, Lynas’ Mt Weld deposit was initially explored as a phosphate resource.

Q. How much radioactivity will workers be exposed to?

A. As Mt Weld ore contains very low level naturally occurring radioactive material, the people working at our mine and in our cracking & leaching plant are monitored for their exposure to radiation. Extensive data shows that their annual radiation exposure is less than 10% of the annual radiation exposure limit for radiation workers and comparable to public dose levels depending on location and lifestyle. A Sievert (Sv) is the unit for radiation Equivalent Dose and Effective Dose. A millisievert (mSv) is one thousandth of a Sievert. Lynas workers at Mt Weld

handling the ore or concentrate are exposed to less than 2 mSv/year while the statutory limit for workers is 20 mSv/year.

You would receive a higher dose of radiation from a long-haul flight than you do from standing alongside concentrate from our mine in Mt Weld or our iron phosphate.

Did you know?

1. A single smartphone contains 8 different rare-earth materials.
2. Rare Earth Elements are not rare in the earth’s crust – but they’re rarely found in commercial concentrations as they are at Mt Weld.
3. Rare Earths make cars greener – Cerium (Ce) is used in catalytic converters to reduce exhaust gas pollution.
4. Neodymium (Nd) is the strongest known magnetic substance.
5. Many MRI machines use Neodymium (Nd) magnets.