

## Being Safe Around Radiation

### Quick reference guide



#### What does keeping safe mean to us at Prominent Hill?

Radiation occurs naturally around us every day. It has beneficial effects including medical imaging and cancer therapy, while harmful exposure can lead to radiation sickness and an increased risk of cancer.

It's important to use radiation safely and responsibly. At Prominent Hill, we have measures in place to regulate and control our exposure to ionizing radiation so we can protect you and keep our already low radiation exposure as low as reasonably achievable.



#### What radiation are we exposed to?

Given radiation is a natural occurrence, there are a lot of sources around you. You breathe in radon gas, there is radiation coming from the sun and stars, rocks and soil give off gamma rays (unfortunately in real life, this won't make you become the Incredible Hulk) and even food can contain radioactive isotopes or material!



The humble banana is full of potassium (including the natural isotope potassium-40), which is radioactive. This exposed you to 0.01 microSieverts ( $\mu\text{Sv}$ ) of radiation the last time you ate a banana!

Prominent Hill still has this background radiation, but we also have a small increase in gamma rays, radon, and the potential to inhale trace amounts of radioactive material in the dust around the site. This comes from the small amounts of uranium within the ore.



#### How much additional radiation are we exposed to?

Radiation dosage is measured in milliSieverts (mSv). The amount you are naturally exposed to is around 2-3 mSv a year (that's about 2 million bananas a year – so keep eating your bananas!).

Under South Australian regulations, the maximum exposure from work activities you can have in a year (on top of the natural background radiation) is 20mSv. At Prominent Hill, our exposure is much lower – we measure an annual dose of around 2-3 mSv higher than natural background radiation.



This amount of radiation is like flying from Adelaide to New York and back twice, or living in Kerala, India, for a single week (Kerala is known to have one of the highest levels of natural radiation in the world due to high levels of granite and basaltic rocks, which both contain uranium deposits). In comparison, a single medical CAT scan comes with a dosage of around 10–30mSv.



#### Managing radiation as a critical hazard

While the dose is low, we consider radiation a critical hazard onsite. This means we take it seriously and ensure that everyone knows how to stay safe. We also make sure to contain any risk of increased radiation exposure within Prominent Hill through a radiation clearance procedure.



### What is radiation clearance?

At times, potentially contaminated equipment or items need to leave site. This includes any equipment or item that has been in contact with ore or processing material. Before the equipment or item can leave, we need to make sure to thoroughly clean and test it to confirm it's not contaminated above the accepted regulatory limits.



### How do I organise a radiation clearance?

- Contact the Environment team, providing as much notice as possible.
- Thoroughly clean and dry the equipment or item.
- Provide the equipment or item to the Environment team and follow their instructions.

To pass a radiation clearance, the equipment or item must be visibly clean and dry as wet or dirty surfaces interfere with detecting radiation.



## Monitoring radiation

We regularly monitor radiation doses in line with the South Australian Radiation Protection Control Act and regulations. We also have a detailed Radiation Management Plan (available to any team member via Aconex or through any member of the OZ Minerals Environment team) to cover how we manage and monitor radiation onsite. These regulations also require us to have Radiation Safety Officers available onsite.

You can find out who the current Radiation Safety Officers are on the [Prominent Hill SharePoint page](#).



## Your role in staying safe

The South Australian regulations have requirements for businesses and individuals who work around radiation. As an individual, this includes:

- immediately reporting any faults, defects or signs of damage to fixed radiation gauges.
- following all reasonable measures to control and assess exposure.
- reporting any matter that may compromise radiation protection.

Failing to meet these requirements can result in personal fines.

In practice, there is also basic hygiene and practices that keep you safe that will significantly reduce the risk of accidentally inhaling or ingesting any radioactive material. While onsite, make sure to:

- wash your hands and face before crib breaks and smoking.
- only eat and smoke in designated areas.
- shower at the end of each shift.
- wash your clothes regularly.
- wear a P2 dust mask when you could be exposed to dust.
- do not work within one metre of a fixed radiation gauge, without permission from your supervisor.
- check ventilation underground prior to commencing work in an area.

If you would like further information, a Radiation Workers Handbook funded by the Australian Uranium Association and the Department of Resources, Energy and Tourism is available upon request for all employees and contractors on site. Speak to the Radiation Safety Officers for more details.