

Responses from girls in a Year 9 Science Class at Kildare College after research, experimental work and discussion around this topic.

For

I am for the radiation dump for the following reasons:

It will create many jobs for South Australians, it provides the world with somewhere to keep their radiation waste and will bring millions of dollars to our state. In my lessons I have learnt that we can store radiation safely in a variety of containers including lead pots and if we bury the pots underground as SA is stable in terms of geology, the pots are unlikely to be cracked by earthquakes or swamped by tidal waves. If we do have the dump we would need to do regular testing for alpha, beta and gamma radiation as radiation is invisible. The workers would also need to wear protective clothing and devices for determining if they were exposed to radiation. Having a waste dump for radiation is not the same as running a nuclear power plant so I don't think people should be afraid of accidents like those that happened at Chernobyl or Fukushima.

Against

After thorough research we have decided that we are against the construction of a radiation dump that will be situated in South Australia. We have many questions concerning the safety of this dump, not only will the people living nearby be affected if a leakage occurs but also the workers. The waste is also to be stored above ground while the dump is being constructed which is basically asking for all sorts of problems e.g. leaking into the water and soil. If this is to get out it can cause all sorts of injuries to the human body e.g. cancer and tissue damage. Aboriginal people have a strong relationship with the land and so we consider it is very disrespectful to the aboriginals that live on this land if we build a dump without consulting them.

Also if you are exposed to the radiation you wouldn't know because it's invisible, if you wanted to know if you were exposed you would need a Geiger counter. We feel as if the South Australian government are only taking into consideration the fact that they will be receiving a large sum of money and a couple thousand jobs will be created. The South Australian government really need to think about what this could do to affect our future.

I think having a radiation dump is a bad idea for the following reasons, first of all the radiation cylinders could build up heat and pressure and leak, this leakage could be very toxic and contaminate soil and the water and this could contaminate crops which will be dangerous for us and animals. Radiation is invisible so there is no way of knowing if it has leaked, and it can take years for symptoms of radiation poisoning to show up. Bushfires could also be a problem in the outback, burning down the storage facility. While SA is pretty stable geologically, there is still a small chance of earthquakes. People could argue that creating a nuclear waste dump would also make Australia a target for those wanting to access nuclear weapons, but this is probably unlikely. Finally, we are concerned with the storage material; what happens if a metal that we think is safe, slowly decays from the radiation? over time this structure could become less safe.

I strongly believe South Australia should not have a radiation dump. Radiation is scientifically proven to be dangerous to the human body and causes cancer if ingested; this is a major risk to human lives. It may also be a risk to animals and plants in the area of the dump. Radiation is invisible so you would not know you're exposed to it unless you have a Geiger counter. If the radiation is carried away from the site through ground water.... How would we know? The world has not had a very good history with nuclear radiation for example the disasters of Fukushima and Chernobyl where radiation was released, forcing people to leave their homes. If that happened here people wouldn't be able to return to their homes for a long time due to the long half-life of many of the types of radiation. Even though a radiation dump would make lots of money and provide lots of jobs it isn't worth risking South Australians lives.

We believe that the radiation dump should not be held in Australia because it's very dangerous. Radiation is invisible; therefore you will never know if you've been exposed unless you carry a Geiger counter or another radiation measuring device around. Radiation affects the animals and plants in their environment. If ingested, radiation can be harmful and cause fatality further on in life. The place in the Flinders Ranges, where the government have selected to build the nuclear waste dump, is only 3-4 hours away from the great artesian basin. The basin just happens to be the largest and deepest artesian basin in the world. Not only has the decision been made to put it near the only reliable source of fresh water for inland Australia but also seismic activity over the last 8 years has been increasing through the Flinders Ranges. If an earthquake were to disturb the dump there is a possibility that the radiation will leak into the soil and groundwater. We are worried that like Chernobyl and Fukushima our environment one day, may be un-inhabitable due to high radiation levels.

After researching as a class, our group has decided against the radiation dump. Our research showed that radiation is extremely dangerous and that radiation can cause cancer which may not be detected for many decades. If exposed to high levels of radiation for even a short period of time, it can cause sickness and death. Storing the toxic waste above ground before the storage facility has finished being built will be a dangerous thing and poses a risk to those in the area. Something could go wrong with this temporary storage plan, there could be a leakage which exposes the air around to radiation as well as the plants and animals. Another problem with the dump in general, is that if it were to seep into the ground it may find its way into the food chain and our water which can cause widespread sickness. This argument is also not helped by the fact that radiation is invisible unless a Geiger counter is present.

We believe that this dump is not a good idea as we are concerned for the people who will be working at the dump and those in the surrounding area as well as the health of our environment if any problems were to occur.

Unsure

Having a radiation dump in South Australia is a debatable subject. The radiation dump will provide an opportunity for thousands of people in terms of jobs. We have scientific means for safe storage radiation i.e. lead containers so if the radiation was kept in a lead based shelter we would be prevented from exposure. Over 3000 jobs will be lost in SA due to the closure of Holden and other manufacturers shutting down; having this dump will provide 5000 jobs for this and the next generation. Having this dump will also allow the government to earn 6 billion dollars per year which will provide money for other things such as education and improved health.

We are concerned, however, about the safety of the workers. Exposure to radiation can cause cancer and long-term illness. Specific types of radiation can interact with cells in the body and make them non-functional or destroy them completely. This is why the workers at a radiation dump would be at risk, no matter what type of radiation they were exposed to, as all types of ionising radiation are dangerous.

We also have concerns about the radiation penetrating our groundwater. Radiation could be filtered through the water we drink, which would spread illness and expose us to the radiation. It is dangerous because we cannot see it. We do not know if we are being exposed to it because it is invisible. Initially, the waste in the dump would be stored above the ground, which would spread radiation through the atmosphere.