uranium free new south wales

WHO ARE WE?

Uranium Free NSW is a community group working to keep NSW Free from uranium exploration and mining.

SUBMISSION ON THE DUBBO ZIRCONIA PROJECT

Members and supporters of Uranium Free NSW have serious objections to Alkane's proposal to construct an open cut mine outside Dubbo for the extraction of radioactive rare earth elements (REES). We feel the project poses an unacceptable level of risk to both human and natural environments: it will impact significantly on air quality, and hence on the quality of health and life, for all surrounding communities; it will consume inordinate amounts of water and energy, while emitting extremely high levels of greenhouse gas; it runs a high risk of permanently contaminating groundwater and local natural habitats.

We are concerned that there is an ulterior motive to mine the uranium and thorium which have been also found to be present. However, even if they are stored on-site, as suggested in the proposal, the disturbance of uranium and thorium on the mining site creates the potential for severe harm to miners, surrounding communities and the environment. If, in time, uranium and thorium are taken off-site, and re-directed for use in nuclear power generation or weapon production, it is likely to bring even more catastrophic health and safety risks to both local and international communities, for generations to come.

WHAT ARE RARE EARTHS?

- Set of 17 chemical elements. They are all grouped together and mined as one product but are then separated into individual components.
- Despite their name, most rare earth elements are relatively plentiful - the name comes from the fact that they are not often found in concentrations large enough to mine.

- Minerals which contain REEs invariably contain some thorium and uranium, which are radioactive. Additionally, toxic acids are required during their refining process. http://www.abc.net.au/news/2013-10-09/an-lynas-corporation-sparks-fresh-anger-in-malaysia/5011284

HEALTH AND SAFETY ISSUES RELATED TO RARE EARTH MINING

Radon gases: Even if operations are restricted to rare earth minerals, small amounts of uranium and thorium are present and will need to be extracted and stored. In areas where uranium is disturbed, radon gases are emitted. Radon is a tasteless, colourless, odourless by-product of uranium. It is radioactive and its inhalation can cause cancer, particularly bronchial and lung cancers. Erosion by wind can carry radioactive particles and radon many kilometres.
http://www.ippnw.org/pdf/uranium-factsheet4.pdf

Dust particles: Blastings, rock evacuations and the exposure of the open-cut mine to winds will have a significant effect on air quality. Southerly winds would carry mining dust to Dubbo. The harmful effect of fine particles on health in other mining communities, such as the Upper Hunter, has been well documented. In this case however, there would be the added hazard of radioactivity. The amounts of radioactivity may be small, but the effects are cumulative and carcinogenic. Each dose inhaled adds to the risk of cancer.
http://www.independentaustralia.net/politics/politics-display/uranium-mine-expansion-to-unleash-radioactive-dust-storms-across-australia,3706

PROBLEMS IN OTHER RARE EARTH MINES & REFINERIES

- 90% of rare earth elements are produced in China, which has recently reduced production due to the widespread pollution and environmental damage which has resulted.
  Two thirds of China's production is from Inner Mongolia, where the rare earth minerals are mined at Bayan Obo, and then brought to the town of Baotou, 120km south, for processing.
  The mining began in the late 1950s and within 30 years, crops began to fail on surrounding farms and villagers found they could no longer grow vegetables. Farm animals died and the villagers themselves became sick. According to studies by the local environmental protection agency, pollution from the rare earth mining had saturated the soils and groundwater with toxins.
  Families began to move away and in the past 10 years the population of 2,000 has dropped to 300.
  http://www.theguardian.com/environment/2012/aug/07/china-rare-earth-village-pollution

- In the community of 11,000 at the Bukit Merah mine in Malaysia claims were made that there were many birth abnormalities and 8 cases of leukaemia within 5 years, where there'd been none previously. Seven of the victims died. Massive demonstrations by local people forced closure of the mine in 1992 and led to an out-of-court settlement to the victims. In 2011 the company, Mitsubishi Chemicals, embarked on a US$100 million clean up. It is now one of Asia's largest radioactive waste clean up sites.
  Dr. Jayabalan A. Thambyappa, a general practitioner physician and toxicologist whotreated the leukaemia patients in Malaysia, makes a salient point about the classification of radioactivity at these mine sites. "'Low' is just a matter of perception — it's a carcinogen," he said.
  http://www.nytimes.com/2011/03/09/business/energy-environment/09rareside.html

- The Australian mining company Lynas Corporation extracts rare earth minerals from Australia's largest rare earth mine in WA, and transports them to be processed in a refinery in the port city of Kuantan, in Malaysia. According to a scientific report by Germany's Oeko Institute, the project's pollution and waste management are seriously deficient. The project is vehemently opposed by at least a million Malaysians. http://tasmaniantimes.com/index.php?/pr-article/malaysians-to-occupy-lynas-hq-in-sydney-protest-s/

IS THE ZIRCONIA PROJECT AS A PRECURSOR TO URANIUM MINING?

In February 2012 the NSW government overturned a 26 year ban on the exploration of uranium. In September 2012 Alkane submitted an Expression of Interest in a licence to explore for Group 11 elements (uranium and thorium) on this Toongi site (EL 5548), which is now referred to as the DZP Site. In May 2013 the company applied for a licence to explore for the Group 1 minerals (Zirconium, Niobium, Hafnium), and subsequently began preparations for the construction of the infrastructure it required to mine the latter- a water and energy supply system and a transport network. According to the EIS, mining is proposed to commence in 2015.

The mining of uranium is still prohibited in NSW, but the government has indicated that the ban will soon be lifted. (http://www.abc.net.au/news/2013-01-11/uranium-will-be-lifted---just-not-yet/4460562)

It is therefore clear that if this "Zirconia Project" goes ahead as planned, Alkane plans to have the paperwork, approvals, and infrastructure all in place for the immediate commencement of uranium mining, once the mining ban is lifted and licences issued. That is clearly the company's intention and the likely outcome, unless very specific and binding exclusions are put in place.

INCREASED CANCER RATES IN MINERS & COMMUNITIES NEAR URANIUM MINES

- According to the Fact Sheet on uranium, prepared by the International Physicians for the Prevention of Nuclear War, "The whole population in the area surrounding the mine is endangered. Lung cancer, leukaemia, stomach cancer and birth defects are the diseases most likely to be found as a result of uranium mining."
  http://www.ippnw.org/pdf/uranium-factsheet4.pdf

- "CANCER cases among Aboriginal people living near Australia's biggest uranium mine appear to be almost double the expected rate, a study by the Federal Government's leading indigenous research body shows.
  The study compared the number of Aboriginal people diagnosed with cancer in the Kakadu region with the cancer rate among all Aboriginal people in the Northern Territory from 1994 to 2003. It found the diagnosis rate was 90 per cent higher than expected, with 27 cases reported.
  http://www.smh.com.au/articles/2006/11/22/1163871481956.html

- According to a long-term study of workers in the Colorado Plateau mines in the US, the death rate from lung cancer among uranium miners is five times as great as that of U.S. men in general.
  http://www.cdc.gov/niosh/pgms/worknotify/uranium.html

HOW SAFE ARE OUR URANIUM MINES?

The most recent independent assessment of the Australian uranium industry – an inquiry by the Australian Senate in October 2003 – found the sector characterised by underperformance and non-compliance, an absence of reliable data to measure contamination or its impact on the environment and an operational culture focussed on short term considerations.
http://www.acfonline.org.au/be-informed/northern-australia-nuclear/uranium-mining-australia?gclid=CIyDz8DK_LoCFUlLpgodeBwAEA

DO WE NEED TO MINE URANIUM?

Uranium is used in roughly equal measure for the generation of nuclear power, and for the production of nuclear weapons. A tiny amount is used for medecine and industry but most radioisotopes used in medicine and industry do not require uranium to produce. They can be produced by more up-to-date less dangerous equipment known as cyclotrons and synchrotrons. http://www.ccsa.asn.au/nuclearsa/b1.html

Of the 1100 nuclear reactors operating throughout the world, only 430 are used to generate electricity. Uranium provides about 4% of the world's non-renewable energy.

Australian uranium was used in four Fukushima nuclear reactors at that went into meltdown following the disastrous earthquake and tsunami that hit north-east Japan in 2011. Nearly 3 years on, over 30,000 square kilometres of land surface is contaminated, and 800 sq km evacuated as permanent exclusion zones. 150,000 people have been evicted from their homes and communities, never to return.
http://www.psr.org/environment-and-health/environmental-health-policy-institute/responses/costs-and-consequences-of-fukushima.html

In the aftermath of Fukushima, therefore, the use of uranium for nuclear power generation, can no longer be justified. We must look to safe and efficient renewable sources for our energy needs.

RARE EARTHS - WHY DO WE NEED THEM?

REE are used in the production of technology such as hybrid car batteries, computers, smart phones, wind turbines and weapons. However, rather than releasing more radioactivity into the atmosphere through rare earth mining and refining we wonder if we shouldn't instead look for alternative technologies, or research better ways to recycle rare earth from electronic waste.

Recycling

A recently developed source of rare earths is electronic waste and other wastes that have significant rare earth components. New advances in recycling technology have made extraction of rare earths from these materials more feasible, and recycling plants are currently operating in Japan, where there is an estimated 300,000 tons of rare earths stored in unused electronics. In France, the Rhodia group is setting up two factories, in La Rochelle and Saint-Fons, that will produce 200 tons a year of rare earths from used fluorescent lamps, magnets and batteries.

http://www.rhodia.com/en/news_center/news_releases/Recycle_rare_earths_031011.tcm

CONCLUSION

The amount of radioactivity released into our atmosphere and oceans is already of epic proportions. Radioactive substances are carcinogenic to humans and toxic to all life. Uranium and other radioactive ores are best kept in the ground.
We therefore object strongly to the proposal going ahead.