



# Uranium and Queensland

***With the nuclear push in full swing now, it is vital for Queenslanders to consider Queensland's position in the debate. Current Queensland Labor Party policy does not allow for uranium to be mined in Queensland, though exploration is taking place. The Coalition and some members of the Labor Party would like to see Queensland's uranium sites opened up for business.***

Australia has 20% of the world's uranium and the largest known deposits of high grade uranium ore. Most of these are in SA, WA and NT. Despite the enthusiastic support of the Howard government for uranium mining, just one new uranium mine has begun production in Australia in the past decade. The Beverley mine in South Australia began commercial production in 2001 and produces about 10% of Australia's uranium exports, with Ranger in the NT and Olympic Dam (Roxby Downs) in SA producing the rest. Queensland has at least 13 uranium sites under lease or exploration, though the total amount of uranium in Queensland is estimated to be 2% of Australia's total and is almost entirely graded as low-grade ore.

## **The problems with uranium mining**

Uranium is a radioactive heavy metal. Uranium normally makes up only a small percentage of the mineral content of the rock in which it is found. When it is mined and milled, it is made "bio-available" in a more concentrated form than in its natural environment. Even when stable inside rock or unprocessed, uranium emits (alpha and beta) radiation and radon gas. After uranium is mined and milled, the radioactive waste sludge from the process is left either in large tailings ponds on the site or is pumped back into the ground, potentially contaminating water sources and seeping back up through the earth.

Uranium mining is the first step in a nuclear chain which leads to the unsustainable nuclear power industry, nuclear weapons proliferation, and millions of years of radioactive waste.

## **Economics of uranium**

Rising uranium prices have driven a wave of uranium exploration in the past two years. However, uranium actually accounts for only 1% of Australia's resource exports. As most of Queensland's known uranium is of poor quality the cost, the infrastructure, the CO2 emissions from the processing and the waste means that most of the sites are unviable or uneconomical to mine. Deposits near Mt. Isa at Valhalla are seen as the most possibly lucrative if developed.

## **Coal v uranium - the wrong question**

Queensland is the world's number one exporter of coal. Premier Beattie has stated that he would consider allowing uranium to be mined if the uranium industry did not interfere with Queensland's coal industry. As global energy consumption is predicted to increase, there is no doubt that the uranium and coal industry could co-exist in Queensland. In fact, coal reserves are much greater than uranium reserves and even "green" models of energy production include coal well into the future. Queensland and its coal industry are responsible for 26% of Australia's greenhouse emissions and nuclear power is an

environmental hazard with its own radioactive waste and emissions. Neither coal nor nuclear are long term sustainable solutions to meeting our energy needs or addressing global warming. Queensland already has the capacity to generate its own electricity through geothermal, wind, biomass, and solar generation. By developing its sustainable industries, Queensland can truly be the sunshine state.



**Queensland's toxic legacy:  
Mary Kathleen**

*Queensland has played an important role in shaping Australia's nuclear landscape. Mary Kathleen (MK) was one of the first uranium mines opened in Australia and one its most contentious. Initially used to supply uranium for British nuclear weapons manufacture, MK's life was dotted with scandal: in 1971, the mine was involved in exposing Australia's uranium cartel; in 1980, in 2 tonnes of yellowcake was stolen from the mine; throughout the late 70s to early 80s union and community action against uranium exports thwarted work at the site leading to the mine's closure in 1982. The strength of Queensland's opposition to Mary Kathleen inspired national debate on the issue and has ensured that no new mines have been opened in Queensland since.*

## Would you like to live downstream from a uranium mine?

Tainted water flowing through taps at Burdekin schools.

In April 2006, uranium and selenium was detected in the Millaroo and Dalbeg water supplies at levels higher than the Australian Drinking Water Guidelines recommend. A water company official stated that a uranium deposit behind Townsville at Keelbottom Creek

was responsible for the tainted groundwater.

Queensland Health assessed the water and declared it safe to drink, though a spokesperson would not reveal any possible health implications linked to drinking water with levels of uranium or selenium higher than the Australian standard. Rainwater tanks were subsidised for concerned residents.

“Queensland Health won’t speculate about possible implications if the water was not safe to drink,” he said (reported in the Townsville Bulletin April 28, 2006).

The risk to children from uranium contamination is greater than that of adults due their smaller bodyweight and less developed excretory systems. Rates of ‘safe’ exposure to uranium are measured with only adults in mind. However, many scientists believe there is no safe dose of radiation exposure.

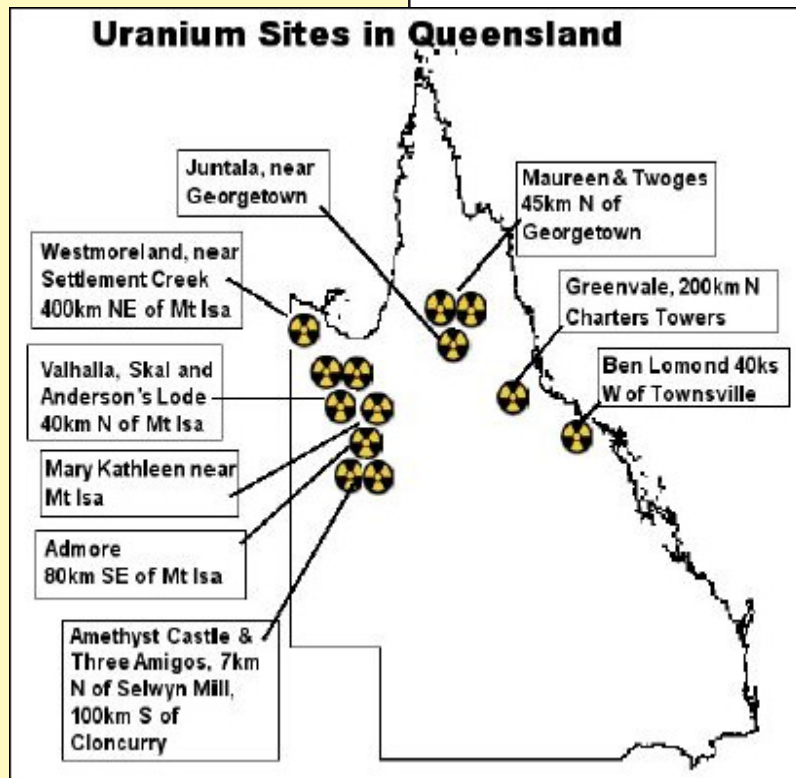
Ben Lomond uranium site, near Keelbottom Creek, had its mining permit rejected in the 70s after high levels of radiation leaking from its trial stockpile of 3500 tonnes were in the local creek. A substantial stockpile was abandoned and it remains a source of contamination today.

## Water Crisis

Queensland is experiencing long-term drought and water restrictions apply, however the mining industry is being given unprecedented access to our water resources. Uranium mining is a water intensive industry (as is nuclear power). The Olympic Dam uranium mine in SA uses up to 42,000,000 of water per day in its operations (The average Australian uses 1,000,000 litres per year). After its use in uranium mining, the contaminated water is left unusable in tailings ponds or, in some cases, pumped back into the

ground. Both above ground and below ground tailings dams are notorious for seepage and overflows, especially during the wet season.

Some of Queensland’s uranium sites are also in environmentally sensitive areas. The Westmoreland site, for example, sits on the Settlement Creek water catchment area. Settlement Creek is a near pristine environment which feeds into the Gulf of Carpentaria and is number 1 on the list of rivers slated to be protected as wild rivers in Qld.



Desalination has been promoted as a possible answer to the water crisis and nuclear power has been proposed for desalination plants. As 70% of Australia’s water is used in irrigation, not domestic use, focusing on domestic use does not provide a long-term solution. Industry, the largest water consumers, should pay realistic costs for their consumption and encouraged to explore efficiency and recycling. In addition, nuclear power to run desalination will risk contaminating our natural water sources, as many nuclear power plants have in the USA, Canada and Europe, at great risk to our health.



**Uranium mines today are toxic nuclear waste dumps tomorrow. Queensland doesn't need a uranium industry. We can't afford the risk it poses to our water, our environment, our economy, and our health.**



Nuclear Free Queensland is an initiative of  
The Queensland Nuclear Free Alliance  
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