

Nuclear in the news again

It seems I have to go back to this issue as people have forgotten the lessons we learned in the 80's with Chernobyl and Three Mile Island "incidents". We used to protest against nuclear energy and weapons in the 80's, now we sell uranium to India.

If you seek information please note that the AUA (Australian Uranium Association) is a radical pro-nuclear body. They also avoid getting involved in debate about alternate energy. On the anti-nuclear side is the ANAWA (Anti-Nuclear Alliance of Western Australia) who put forward a lot of good arguments and information which I have always been able to confirm through industry sources. My favourite site for information is the U.S.NCR (US Nuclear Regulatory Commission) for confirming information, industry knowledge, technical information and leads for my research.

The following information is from the ANAWA web site and worth knowing if you are planning to mine uranium. It outlines the process needed to produce one year of electricity in one 1000MW nuclear reactor (for comparison Mica Creek is a small 325MW power plant).

146,000 tonnes of raw ore has to be mined (average grade 0.11% uranium). This produces around 150 tonnes of Yellowcake (U₃O₈) and 145,850 tonnes of tailings (finely milled radioactive sand). The Yellowcake is processed to produce 33 tonnes enriched UF₆ (uranium hexafluoride) and 117 tonnes Depleted Uranium (DU is used to harden US bomb casings and bullets). The UF₆ is converted into 33 tonnes UO₂ fuel which will power a 1000MW nuclear reactor for one year.

At the end of the year you have 33 tonnes of spent fuel which requires storage away from humans, animals and groundwater for thousands of years. The spent nuclear fuel contains 300 kilograms plutonium which is enough for 60 NUCLEAR WEAPONS.

Reprocessing removes the weapons grade plutonium from the reactor waste and this plutonium is blended into uranium to make more reactor fuel. This process does not recover most of the reactor waste, only a percentage of the high grade plutonium, leaving 32.7 tonnes of waste. Other processes for recycling waste have proven to be expensive and are still only experimental.

At this time there are around 160,000 tonnes of nuclear waste scattered around the world and at this time no solid plan for its disposal, reuse or storage. Pangea Resources, who put forward plans for a waste dump in Western Australia, estimate that by 2015 there will be roughly 250,000 tonnes of reactor waste. This only accounts for reactor waste, Australia does not record how much material exists in radioactive mine tailings.

160,000 tonnes of reactor waste equals around 700,000,000 tonnes of waste when you include tailings.

Facts About Reactors: Starting price, 6 billion US dollars. When a coal power station has a problem with its core it takes one person an afternoon to fix, when the same happens in a nuclear plant it takes 6 months and lots of people. Each person working on a nuclear reactor is only allowed near it for 3 hours during which they receive their full year's radiation dose. They are then not allowed near a nuclear plant for twelve months. On top of that the materials taken from the plant are all radioactive and must be treated as nuclear waste.

We are constantly told nuclear energy is safe. As a measure of the safety record of nuclear power here are some "incidents" that have occurred since 2000.

Hungary 2003: Partially spent fuel rods ruptured and spilled fuel pellets.

UK 2005: 20 metric tons of uranium and 160 kilograms of plutonium leaked over several months into a stainless steel sump chamber.

USA 2005: Tritium contamination of groundwater was discovered.

USA 2006: 35 liters of a highly enriched uranium solution leaked during transfer into a lab. The incident caused a seven-month shutdown and a public hearing on the plant licensing.

Japan 2007: 3.4 tonnes of radioactively contaminated water leaked from a reactor which has now been shut down for maintenance.

Nuclear power is NOT safe. There is no safe dose of radiation. Gamma rays through one cell can cause cancer. This fact is not well-liked by the nuclear industry, which depends for its operation on being able to expose workers and the

public to "safe" doses of radiation. A "safe dose" or "safe level" of radiation is legally allowed to be leaked into the environment worldwide because it can't ALL be contained.

For those of you in favour of waste dumps; IT IS NOT URANIUM WE ARE GETTING BACK. What we get back is depleted uranium, plutonium, polonium, strontium and a number of other dangerous items. Refined, that means they purified it and made it more dangerous and then they radiated it and created even more deadly toxins. Burying toxic waste in a dry country which relies on underground water may yet be the most stupid idea anyone ever thought up. Radiation leaches through everything eventually.

Please think about these things, it is still not too late to ban uranium mining.

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Willing to talk the ear off anyone.