

## (20) Earthlife Africa resources

"IAEA Cautions on PBMR Safety", Nuclear Engineering International, 31 July 2000, Members of the IAEA's International Nuclear Safety Advisory Group (INSAG) recommend a full review of the safety features of the Pebble Bed Modular Reactor (PBMR)

# **SUBMISSION 5**

*From: Mitchell Krog*

*Sent: Friday 15 June 2007 -03:45 am*

*Via: Email*

*Contents of Message:*

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### **ATTENTION: MS ALBERTINA KAKAZA**

MR LANGA ZITA  
CHAIRPERSON  
PORTFOLIO COMMITTEE  
DEPT OF ENVIRONMENTAL AFFAIRS AND TOURISM  
NUCLEAR ENERGY HEARINGS

Dear Sir

## **Introduction**

Firstly I welcome some sort of open, transparent dialogue regarding the issue of nuclear energy in South Africa. I assume from your very advert requesting submissions that you too are concerned about this issue and are finding the misinformation and propaganda presented in the media greatly inconsistent. Certainly the issue of nuclear energy is not one to be taken lightly as it will affect all generations to come and I trust that your portfolio committee will conduct a thorough and intensive investigation into all aspects of the nuclear industry.

I think it is crucially important to note at this early stage of my submission that environmental groups have been quickly ridiculed and passed off as hysterical freaks by the very factions who wish to push forward with nuclear energy. You must know that the environmental groups are all non-profit organisations and do not stand to make any financial benefit from nuclear energy. Their primary concerns are a safe and healthy lifestyle for every South African as afforded to every citizen under Chapter 3 of the Constitution of South Africa. In light of this I sincerely hope you will take submissions from private citizens and environmental groups even more seriously than the propaganda and misinformation that ESKOM, NECSA, PBMR and DME have been distributing and will

continue to distribute to your portfolio committee, they are the ones who will profit out of this.

It is equally vital that you read a very lengthy study conducted by Storm van Leeuwen and Phillip Smith available at <http://www.stormsmith.nl>. These two men, one a nuclear physicist and the other a chemist and energy specialist conducted their own private study on the entire process of nuclear energy from the mining to the production of electricity. They bring to light the truth of this industry. Again you must note that these two men were not paid by the nuclear industry to conduct this study, they did it privately and they too do not stand to benefit financially from their study. But I can assure you that Dr Rob Adams, Dr Kelvin Kemm and the rest of the nuclear industry in South Africa will tell you otherwise, they sure like to create confusion and pass off anything other than their own words as nonsense.

Finally I invite you to peruse through over 200 articles, studies and reports (local and international) on nuclear issues available at <http://www.environment.co.za/nuclear/>, keeping in mind that this is a tiny percentage of the information available on the Internet.

## **1. Socio Economic Issues**

It is a known fact that nuclear reactors are often closely situated to vast water resources and this is why most of them worldwide end up being built on a coastline. It is also a known fact that reactors sited in such areas have increased cancer rates in the local populations swimming in those waters and eating fish from those waters because the water used to cool the reactors are simply pumped back into the sea. There are adequate documented cases on this and much of this has been presented to you already through other people's submissions that have been brought to my attention.

Tourism is one of South Africa's biggest industries. Is South Africa really willing to risk losing international visitors and investors who would avoid visiting an area or country if radioactivity may be a concern for them or their family? People living in first world countries are much wiser to issues of nuclear energy and radioactivity than what this government may know.

What about the citizens of South Africa? Property values near reactors will drop and in the case of accidents would become worthless. It certainly is unconstitutional towards any South African to place his hard earned property at risk of losing value due to a reactor being sited in their backyard. It is also unethical and uncalled for to just expect people of South Africa to suffer the loss and move elsewhere.

Prime agricultural lands are some of the areas in South Africa where much of the Uranium is situated that the Department of Minerals and Energy is now encouraging to be mined. Is South Africa really willing to lose agricultural lands so that a minority of mining companies with enough wealth already can further starve the masses of this country? What about other agricultural lands that are situated near to Uranium mining operations? They will stand the risk of radioactive dust from Uranium mining operations settling on their lands and contaminating their lands for years to come. How is this benefiting a country that is supposedly on a road to repair?

The pro nuclear factions, Eskom, NECSA, PBMR and DME are quick to use the draw card of creating jobs. Firstly we are not talking about enough jobs to satisfy the risk of putting the rest of the population at risk. Secondly the jobs they speak of are low-level, high-risk jobs while the CEO's and senior management of these companies (all state owned) will be the ones raking in the ludicrous, obscene and downright unjust salaries. Is South Africa really going to continue on this path of enriching a tiny minority while the masses are forced to do all the donkey work and suffer the health

consequences? Sounds to me like the South Africa under Apartheid that I grew up in.

The costs stated for building ONE conventional reactor by Eskom is R150 Billion. That is at today's price as per the media. Given that it is going to take a number of years, if an additional reactor is built at all, I can assure you that this cost will increase greatly over that time. Add to this the fact that NECSA and the PBMR company also wish to build 36 PBMR's all over South Africa at a stated cost of about R16 Billion each. We are talking of Hundreds of Billions of tax-payers money. Why must the South African taxpayer be expected to fit the bill for this? Why are our taxes not being allocated towards that which they are intended? The government cannot afford to settle a wage dispute with striking workers in this country because and I quote "We have no Money" ... really? Where on earth then can the government find several Hundred Billion Rand to build nuclear power stations when they cannot even pay educators, the lifeblood of this country, a decent salary? Priorities are severely disjointed.

## **2. Waste Management**

The issue of nuclear waste is an issue that plagues ever single country that ever installed a nuclear reactor. The high level nuclear waste which remains radioactive for 80,000 years or more tends to stay at the power station because there is nowhere to dispose of it. If First World countries are plagued by their own nuclear waste then what makes South Africa think that we will magically solve that problem? Is digging a hole in the ground and hiding it away really a solution? Seems very much to me like the way an Ostrich will bury his head in the sand and pretend his enemy does not exist.

To think of disposing of nuclear waste in this way is unethical, immature and certainly not safe. The nuclear industry say they will produce such a dumping site and the waste will be buried down in hard rock. Well no matter what hard rock they are referring to, water can pass through ALL types of rock and water will indeed pass through whatever underground rock they have in mind. What this means is that over many years gradual seepage of water that has passed through radioactive materials buried under the ground will eventually enter our water tables and the future generations of this country will drink contaminated water and will eat radioactive foods irrigated from underground water sources.

Sealing this radioactive waste in concrete is also not a viable alternative. Concrete is porous and seepage does and has already occurred at various radioactive waste sites all over the world even in South Africa. Currently this method is only used for low-level radioactive waste and all the high level waste like spent fuel rods still lie at Koeberg and Pelindaba.

We simply cannot go on as a human race by simply burying our mistakes deep underground and hoping they will disappear.

## **3. Security of Supply**

This is an ambiguous topic to discuss as it can be interpreted in many fashions. Security of this country? Security of Electricity Supply? Security of Uranium Supply?

Multiple nuclear reactors will pose a security risk to the State of South Africa and to every citizen of this country. South Africa is certainly not immune from terrorist attacks or sabotage. Already a court case is underway in South Africa relating to smuggling of Uranium from South Africa. At present we have limited areas of availability of enriched uranium. What will happen when we have 40+ reactors all over South Africa with Uranium being transported all over our national roads? Highly secure

armoured vehicles cannot escape the clutches of crime rings in South Africa, what makes the government think that it will be any different with their highly guarded vehicles transporting Uranium everywhere?

As far as security of Electricity supply goes. The media has painted a picture that we have a current shortage which is simply untrue. Eskom themselves stated in a media report just over a month ago that and I quote "there is enough on the system to meet the demand, even before we talk about Koeberg". This does not mean that this country should not be looking at securing future supplies of electricity but it does mean that the current frenzy, panic and emergency that Eskom, NECSA, PBMR and the DME are portraying is deceitful to the public of South Africa to say the least. There are many viable alternatives to energy but the nuclear lobby do not want to hear of them and quickly usher out any such ideas as foolish. They simply do not want anything else but nuclear energy and the buck stops there.

The last 2 years of major blackouts and power outages were and are not as a result of any shortage. The real reason is the fact that Eskom has not maintained the power grids supplying most of South Africa. Eskom relies on subcontractors to do most of their work and much of this work is unmonitored. Certain areas of South Africa have been experiencing massive growth in property development yet Eskom has not upgraded their grids adequately, instead they just push more power through lines that are not equipped to handle such loads. As a result transformers burn out and power lines fail. This type of information would be certified if an independent enquiry into Eskom is carried out.

South Africa is one country in the world where we have an abundance of Sunlight and Wind and vast tracks of open land. Solar technology is indeed viable and the technology has changed much in recent years that high Megawatt installations can easily be built in deserted areas of which this country has many such places. For instance in the Nevada Desert a solar trough station is nearing completion. This installation uses no more than 1 hectare of land to produce 1,000,000 Watts of Electricity. That is enough to power 1200 households. Investing in Solar technology would provide this country the means to power many thousands of South African households which in turn would reduce the strain on the national power grid. By reducing the strain in the power grid it would reduce the need to produce more electricity by conventional means. The same applies to wind generated electricity. Vast areas of this country have ample wind that could power households and even certain smaller towns which again would reduce the stress on the national power grid.

Now it is very important to note that the nuclear lobby will quickly try to pass off these ideas as foolish. They will claim that wind power is unreliable which is clearly not true. The United States produces around 7,300 Megawatts of Electricity through Wind Power, enough to power more than one city the size of Philadelphia. Many other countries have very successful wind power installations that power vast areas of their cities. So the false claims by the nuclear lobby are exactly that, false. The nuclear fraternity will also state silly things like "migrating birds could fly into wind turbines" while this may happen on a very rare occasion is it really worth putting the whole populations safety at risk for a few birds who might get harmed by a wind turbine?

As for Uranium supply. I for one am a landowner in Magaliesburg, an area rich in Uranium. Our community, just 15 km from the Cradle of Humankind, were notified in February this year that a private mining company wishes to conduct an EIA to prospect for Uranium on our properties. We are just one of many communities who would be affected by such developments by greedy mining companies. As far as I am concerned this is my only property, my life and my future and I have worked my entire life to get to this point and now someone wants to take it away. The DME has recently proposed amendments to the Minerals and Petroleum Act which would in effect give them

the right to confiscate properties from landowners. Not only do their proposed amendments violate virtually the entire Constitution of this country, they violate any sort of ethics.

The fact is Mr Zita, there ARE other very viable alternatives to South Africa's future power needs but only if we learn to start thinking differently and stop being driven by greed. This country certainly also does not need to dig up vast areas of valuable countryside just to satisfy their appetite for money because at the end of the day that's what all of this relates to.

#### **4. Human Resource Development**

The only human resources development that will be introduced by Nuclear Power Stations would be:

- Development in sick workers
- Development in Cancer in the population
- Development in contaminated lands and drinking water
- Development in low-level, high-risk jobs
- Development in insanity

When you look carefully at all the evidence and "Truth" about nuclear energy, the risks are quite simply not worth it.

#### **5. Science and Technology**

As it stands NECSA, PBMR and ESKOM already have to consider bringing atomic scientists out of retirement to work on a nuclear programme. Alternatively scientists would have to be employed from other countries which does not bode well for the creation of local employment. What happens when these elderly scientists finally resign and leave these plants in the hands on people not adequately qualified to do the job? Certainly the nuclear lobby has not made me feel very safe that they have the right people for the job.

As far as actual Science and Technology goes. If South Africa focused it's energy and finances on alternative energy sources that are truly clean and renewable we could quite easily become a world leader in clean energies. That is something that other countries would be interested in, that is a resource we can resell.

The PBMR company have produced much propaganda and misinformation regarding their PBMR reactors. They have also shown their true colours by green-washing environmentalists at every opportunity, by taking solid fact and truth about nuclear energy and twisting the truths to suit their goals, by invading public meetings and behaving like little children who cannot get their own way. I honestly have seen enough of these PBMR people to know that they do not and will not play fair and I cannot believe one word they spew out.

The PBMR company has spent vast amounts of taxpayers money already to produce all sorts of feasibility studies and to fund their operation. They make claims of how safe the PBMR is or would be but that is absolute nonsense. How can something that we have not built yet be declared safe? It's ludicrous and insane to just draw pretty pictures on pieces of paper and then say it's safe.

The entire nuclear lobby continually puts out this image that nuclear power is safe, clean and our answer to global warming. No it's not. It's certainly not safe and there are hundreds of reports by highly regarded scientists around the world that prove this beyond the shadow of a doubt. It's also not an answer to global warming either. Global Warming and Climate Change is merely a scapegoat for the nuclear industry. Ask Dr Kelvin Kemm who will no doubt participate at your hearing about

Global Warming. He for one does not believe in it so then you have to ask him: If he does not believe in Global Warming then WHY is he pushing so hard for nuclear energy as a clean and safe energy?

Nuclear Energy is also NOT renewable. Once we have burned up all the world's Uranium we will be left with thousands of tons of highly radioactive waste with nowhere to store it and the mining companies who made all their billions of Dollars out of it will be long gone living in places that are not contaminated.

South Africa will also be left with a very sick population riddled with cancers and all sorts of other strange and not so wonderful diseases. This will further plague our health system. Is this the kind of Human Resource Development that the government has in mind?

The very fact that the entire Nuclear Industry is shrouded in secrecy, mystery and mistruths is enough cause for grave concern.

## **Conclusion**

This hearing on nuclear energy should be a preliminary stage of the process as I do not believe that the future of every South African can be decided in one meeting. This is a matter that concerns every single South African and it should be a matter discussed on a national level with full involvement of all South Africans. Public workshops should be held in every major South African city spanning several days thereby allowing for full and fair participation. These workshops should be held by an independent body who will provide truthful information to the public showing BOTH sides of the story and not just the nuclear lobby side of the story. These workshops should then produce draft documents which can then be further discussed and hopefully after several months of this type of involvement we would have a fairer and more truthful look at the WHOLE picture. It could then be brought down to a referendum for the public, the taxpayer, to decide on the matter and not a hasty decision taken by cabinet.

Intensive sessions spanning almost 2 years and with full public participation were carried out in the Western Cape regarding Provincial Spatial Development and Guidelines on Golf courses and Polo Fields which ended up producing legislation that was sensible and represented the voice of the people. So why is an even more intensive procedure spanning 2-3 years not being carried out with the nuclear issue?

I trust your portfolio committee will do the right thing and take a big backward step and do a thorough and intensive investigation in this matter.

**The Constitution of this country is very clear and it must be defended and upheld at all costs.**

**This is certainly a matter that the people of South Africa have every right to have a say in.**

Thank you for your time.

Yours Faithfully

Mitchell Krog