NAME & ORGANISATION	ISSUES/COMMENTS	RESPONSE
15. URANIUM SOURCE/ MINING		
Mr Mark Botha Botanical Society	▪ Long term security of fuel supply	Every 1000 MW of nuclear power capacity needs approximately 200 tonnes of natural uranium per annum. Thus, 4 000 MW of nuclear power operating for a 60 year period would require about 48 000 tonnes of natural uranium. South Africa's Reasonable Assured Resources (RAR) of uranium is estimated to be 521 000 tonnes, with a further 211 000 tonnes as inferred resources. [Reference: IAEA/NEA "Uranium 2005: Resources Production and Demand" – the "Red Book"]. Thus, South Africa has enough uranium resources to support a bigger than 20 000 MW nuclear programme for the envisaged 60 year lifetime of the modern nuclear power plants.
Dr Douglas Cole Council for Geosciences	▪ Mineral / mine potential must be investigated at the proposed 31 / hectare sites, as well as within the specified public exclusion zones should a nuclear power station be built. ▪ Note that diamond deposits are present onshore and offshore in Namaqualand, which will include the Brazil and Schulpfontein sites.	Comments noted. All existing mining permits as well as the presence of any mineral deposits will be identified during the EIA
Mr Jonathan Kingwill Bluepebble Independent Environmental Agency	▪ Please understand that I am not supporting or obstructing nuclear energy development. I am merely making the point that the process by which it is being done is not thorough. Where is the information and the thorough consideration that all can view and the transparent decision-making that all can participate in? For instance, prospecting for uranium has already begun in the country. What precautions have been taken to avoid radioactive pollution in these prospecting activities. I am fully aware that the current EIA Regulations allow the mining sector their own set of rules in terms of environmental control. Yet in the matter of mining radioactive material, surely it is not wise to play with the health of 100 future generations. What is this short-term urgency to suddenly boost the generation of power in the country? There seem to be a few people in this country that are directing nuclear power development at the moment, at the possible cost of every	Comments noted. This EIA is concerned with the development of a proposed nuclear power station. South Africa has been mining uranium for many decades. The National Nuclear Regulator has been and continues to regulate the exposure to radioactivity as a result of the mining operations, and has established requirements and regulatory limits. The Department of Minerals and Energy (through the Integrated Energy Planning process), and the National Energy Regulator of South Africa (through the National Integrated Resource Planning process) look at the long term (20 years) demand and supply for energy and electricity respectively.

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	person in this nation. The socio-economic, human development, long-term economic and ecological issues related to nuclear energy development and compared to alternative sources such as solar energy development and wave energy development need to be assessed thoroughly at a national level. ▪ Are these impacts the least significant relative to the development of other alternative energy sources? What is clear at this point is that uranium has a half life of approximately 80,000 years, after which time it is still extremely harmful to all humans and the entire ecological system.	Radioactivity and the associated radiation are natural phenomena. The amount of radiation emitted by each radioactivity element decreases with time. Consequently life has evolved over time in a universe that was naturally much more radioactivity than what it is today. The radioactivity of most of the isotopes produced during the nuclear fission process naturally decreases to below background radioactivity levels within relatively short (hundreds of years) periods of time, with the longer-lived isotopes taking thousands of years. Scientifically is has been shown that it is possible to dispose of the relatively small quantities of highly radioactive materials arising from nuclear power stations in a manner that is safe for humans and the environment.
Mr Lionel Phillips Matzikama Municipality	▪ The effect of nearby mining activities on the nuclear plant.	The impacts of existing activities on the proposed nuclear power station will be investigated as part of the EIA.
Mr J P (Wollie) Wolhuter Jeffreys Bay Ratepayers	▪ I am positive regarding the use of nuclear instead of coal in power generation (coal belongs with Sasol). ▪ In your presentation, the impression is created that uranium is as available as coal as primary energy source. ▪ The mines in South Africa produce uranium oxide (U308) and this “yellow butter” is processed outside of the country and enriched to uranium for use as energy source. Thus, uranium is a secondary energy source which is currently dependant on an external source which could be politically vulnerable. ▪ South Africa had Pelindaba which was available for the enrichment of uranium, but the current government did not persist with the venture. Maybe more attention should now be paid to it. ▪ Based on the above, the matter would probably be addressed in your report.	Comments noted to be addressed in the EIA

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Ms Maya Aberman Earthlife Africa	The following constitute the comments of Earthlife Africa Cape Town to the Background Document for the Eskom Nuclear Power Station and Associated Infrastructure and the Comment Sheet 1: Scoping Phase. ▪ It is likely that in the recent future (to 2020), given long lead times and problems experienced with new uranium mining capacity, coupled with the existing shortfall, it will be difficult to meet even ***current*** demand for uranium. It thus seems almost impossible that we will be able to fuel the hypothesized massive nuclear expansion programme planned by our cabinet and corporations around the world. A report by the Energy Watch Group (annexed here), a group of independent researchers and economic experts contends that; "The proved reserves (=reasonably assured below 40 $/kgU extraction cost) and stocks will be exhausted within the next 30 years at current annual demand. Likewise, possible resources – which contain all estimated discovered resources with extraction costs of up to 130 $/kg – will be exhausted within 70 years." ▪ These realities about uranium imply not only that we are rapidly approaching uranium peak, but also that nuclear plant life-cycles are shorter than we may have imagined and that the fuel cost for this energy generation technology is likely to be higher than Uranium vendors ever dreamed of.	All comments are noted and will be addressed in the EIA Every 1000 MW of nuclear power capacity needs approximately 200 tonnes of natural uranium per annum. Thus, 4 000 MW of nuclear power operating for a 60 year period would require about 48 000 tonnes of natural uranium. South Africa's Reasonable Assured Resources (RAR) of uranium is estimated to be 521 000 tonnes, with a further 211 000 tonnes as inferred resources. [Reference: IAEA/NEA "Uranium 2005: Resources Production and Demand" – the "Red Book"]. Thus, South Africa has enough uranium resources to support a bigger than 20 000 MW nuclear programme for the envisaged 60 year lifetime of the modern nuclear power plants.
Lianda Beyers Cronje Bantamsklip Anti-Nuclear Group (BANG)	▪ Apparently the $U^{2}35$ uranium deposit that is used in nuclear reactors will be mined out by 2050 - Why go to all this expense and creating a potential disaster site if it will only contribute power for the next 40 years if as many?	Every 1000 MW of nuclear power capacity needs approximately 200 tonnes of natural uranium per annum. Thus, 4 000 MW of nuclear power operating for a 60 year period would require about 48 000 tonnes of natural uranium. South Africa's Reasonable Assured Resources (RAR) of uranium is estimated to be 521 000 tonnes, with a further 211 000 tonnes as inferred resources. [Reference: IAEA/NEA "Uranium 2005: Resources Production and Demand" – the "Red Book"]. Thus, South Africa has enough uranium resources to support a bigger than 20 000 MW nuclear programme for the envisaged 60 year lifetime of the modern nuclear power plants.

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Mrs and Mr Helen / Lars Manson-Kullin	▪ Transportation of enriched uranium power rods to the power station – radioactive materials on public roads – impact on accidents.	Safety aspects in this regard will be addressed in the impact assessment phase of the EIA (Section 10.6 of the Scoping Report).
Ms Melinda Swift Cradle of Humankind World Heritage Site	▪ Source of enriched uranium. ▪ Route for transportation of uranium. Source of enriched uranium.	Currently South Africa obtains enrichment and fuel fabrication services from international suppliers on a competitive basis. The same procurement policy would apply if the proposed power station is authorized. The fuel elements would likely be transported by ship to South Africa from the international markets, and then by road transport to the power station. Note however, that the South African Government has stated its intention on investigating the re-establishment of such facilities again in South Africa. The transporting of nuclear fuel elements is in accordance with the International Atomic Energy Agency (IAEA) " Regulations for the Safe Transport of Radioactive Material" (ST-1 of 1996). The National Nuclear Regulator (NNR) applies these regulations in South Africa. This includes the approval of the containers or packages for the nuclear fuel. The packages are subject to strict integrity requirements for impact, fire, immersion, penetration etc.