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Dear R C H Garbett

**RE: ESKOM EIA CONCERNS FOR THE PROPOSED NUCLEAR POWER STATION AND ASSOCIATED INFRASTRUCTURE (DEA Ref. No: 12/12/20/944)**

**SUBMISSION ON NUCLEAR 1 REVISED DRAFT EIA**

- 1 NNR should not determine the suitability nor the radiological & safety impacts of Nuclear 1 nor has the EIA given the NNR the information required to conduct such investigations.**

The reliance on the NNR to provide DEAT with an assessment of the technical issues and risks that may arise from the operation of a nuclear plant of unidentified design, even if the design is within certain known parameters, creates the following problems for the valid outcome Nuclear 1 EIA

**Comment 1:**

- 1.1 The NNR does not have the capacity to address these matters and relies largely upon the nuclear industry to advise the NNR on technical issues.

**Response 1:**

The capacity of the National Nuclear Regulator (NNR) to deal effectively with its legal mandate is beyond the scope of this EIA process. It is not the purpose of this EIA process to provide the NNR with the information required for its decision. The information that the NNR requires for decision-making will be provided through the nuclear licensing process in terms of the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999).

**Response from Independent Nuclear Specialist:**

The NNR is an independent body established and mandated by an act of parliament. It does not rely on industry to advise it on technical issues - its decisions are based on technical data and supporting evidence provided by licence applicant and verified by it through various means including third party verifications.

**Comment 2:**

- 1.2 Public meetings with the NNR is not an adequate substitute for proposed nuclear activities being examined in the EIA process

**Response 2:**

Public meetings with the NNR are not meant to be a substitute for the meetings within the EIA process. The NNR's mandate is different in that it is focused on nuclear safety and therefore does not consider the broader environmental issues being assessed in the EIA process.

**Comment 3:**

1.3 The NNR is not an objective body to conduct such investigations.

**Response 3:**

Your comment is noted. Kindly refer to Response 1.

**Comment 4:**

1.4 The NNR does not act in the best interests of the public but serves the interests of the nuclear industry, in spite of its written mandate to the contrary. The NNR is paid by the nuclear industry.

**Response 4:**

Your comment is noted. Kindly refer to Response 1.

**Comment 5:**

1.5 We call upon DEAT to review their decision to use the services of the NNR to advise DEAT on the advisability of building and operating a nuclear plant. Other credible, objective advisors are available to DEAT.

1.6 We consider that the decision of DEAT and the NNR to enter into an agreement renders the EIA lacking in objectivity, credibility and flawed.

1.7 Certain nuclear plants may be technically preferable and/or may be safer than others, but without the EIA identifying the manufacturer, no in depth analysis or assessment is possible. Therefore the NNR are not in a position to advise DEAT in respect of this EIA even if the foregoing issues are disregarded, until such times as the EIA provides the full specifications of the PWR are disclosed.

1.8 The worst case nuclear accident scenario does not form part of this EIA which is in contravention of the laws governing this EIA.

**Response 5:**

The separation between the EIA process and the NNR licensing process is based on the legislative provisions of the relevant Acts, namely the National Environmental Management Act, 1998 and the National Nuclear Regulator Act, 1999, as well as the DEA / NNR co-operative agreement, which governs the consideration of radiological issues in EIA processes and the interaction between the DEA and the NNR in terms of their respective mandates for environmental and radiological safety (See Appendix B4 of the Revised Draft EIR). The agreement clearly stipulates that issues of radiological safety are within the mandate of the NNR. Furthermore, it is not within the mandate of the Environmental Assessment Practitioner to question the legal mandates of either of these statutory bodies or the validity of their agreement.

In this regard you are also referred to the then DEAT's approval of the Scoping Report, dated 19 November 2008, where the following is stated:

2.21 All radiological issues raised during the EIA process, which are not comprehensively addressed, must be explicitly referred to the NNR to be addressed as part of their process.

This response by the DEAT clearly acknowledges that there are some radiological issues that cannot be comprehensively addressed in the EIA process and can only be addressed in the NNR's nuclear licensing process.

However, in recognition of requirements in the NEMA, associated legislation such as the Promotion of Administrative Justice Act, 2000 (Act No. 3 of 2000) and other legal precedents that require the consideration of all relevant socio-economic factors in an EIA process, an assessment of radiological impacts of the proposed power station is included in the current version of the EIR. Although this approach of including an assessment of the radiological impacts of the proposed power station results in a risk of duplication between the EIA and the NNR licensing processes, the risk to the EIA in terms of possible appeals, based on the exclusion of substantive issues such as health issues from the EIA process, is regarded as greater than the risk of duplication. The current version of the EIR therefore departs substantially from the approach in the previous versions of the EIR in terms of the consideration of radiological impacts.

In this context, it must be mentioned that the approaches of the EIA process and the NNR licensing process differ substantially. The focus of the EIA process is to assess the potential impacts of radiological releases (including normal operational releases and upset conditions). However, the focus of the NNR licensing process is to demonstrate beyond reasonable doubt that defence-in-depth measures (multiple, redundant, and independent layers of safety systems) employed in the proposed power station design and operation are sufficient to reduce the probability of a failure leading to core meltdown or a failure of reactor containment to acceptable and highly-unlikely levels. Thus, the EIA process focuses on the consequences of radioactive releases. The NNR licensing process also focuses on consequences but is also designed to reduce the probability of such releases. Please refer to Appendix E32 of the RDEIR Version 2 for the Radiological Impact Assessment report.

As indicated in the EIR, the assessment of the impacts of the proposed power station is based on a Consistent Dataset (Appendix C of the Revised Draft EIR), which represents a worst case scenario of potential inputs and outputs from a number of different Generation III nuclear power stations operating under normal conditions. This dataset has been based on the commercially available nuclear power station designs currently available.

Planning for nuclear emergencies is within the scope of the NNR's nuclear licensing process and falls outside the scope of this EIA process.

**Comment 6:**

1.9 The NNR fails to demand that nuclear operators carry adequate liability insurance for existing nuclear installations at both Koeburg (sic) and Pelindaba. This lack of fiduciary duty towards the public is unacceptable and will once again place the burden of uninsurable risk against nuclear accidents due to failure of the nuclear plant for technical reasons or terrorist activities, upon the public.

**Response 6:**

Your comment is noted. Kindly refer to Response 1.

Section 29 of the National Nuclear Regulator Act, 1999 requires Eskom to make financial provision for insurance purposes. Regulations issued by the Minister of Energy stipulate how much financial provision must be made (Government Notice 581 of 2004). The current figure stipulated is approximately R3 billion. Eskom makes the financial provision through insurance obtained from the international nuclear insurance pools, which is in dollar denomination resulting in a financial provision in excess of R3 billion. Every year Eskom has to provide proof that the financial provision (insurance) has been obtained.

It is outside the mandate of this EIA process to question the regulations governing financial provision that have been defined by NNR legislation.

**Comment 7:**

1.10 Eskom are currently grossly underinsured for liability that the public would suffer should Koeberg suffer a catastrophic accident. In an event similar to Fukushima where 80 000 people were evacuated from their homes, Eskom clearly will not be able to compensate the victims, which could well involve the entire population of the city and suburbs of Cape Town.

**Response 7:**

Your comment is noted. Please refer to Response 6 above.

**Comment 8:**

1.11 Nuclear-1 if approved would therefore merely add to the currently untenable position of increasing the public's uninsured risks that are currently not covered by Eskom or the state, neither of which have the economic capacity to compensate victims at fair market value.

**Response 8:**

Your comment is noted. Please refer to Response 6 above.

**Comment 9:**

1.12 In the event that Nuclear 1 is authorised it is incumbent on DEAT to make maximum potentially liability cover a condition of the ROD.

**Response 9:**

Your comment is noted. The DEA has a wide mandate to specify conditions of authorisation. However, GIBB does believe, that this may be outside of the DEA's mandate.

**Comment 10:**

**2. EIA process fatally flawed due to lack of objectivity.**

The EIA has been designed to promote the case of Nuclear Power in the first instance, making this process fatally flawed due to patent lack of objectivity.

The use of clumsy ploys to manoeuvre the decision making process into a falsified weighting of the sites is unacceptable and is a further fatal flaw in this process. One example of inappropriate

logic is that the strong recommendations made by SAHRA, that Thyspunt should not be developed have been ignored in the site selection process.

Clearly this decision has been taken on the basis that **the cost of the proposed Nuclear 1 is paramount in this EIA, not the environment or any other public or national interest.** In particular what is clear is that the containment buildings and other structural safety requirements of Nuclear 1 will be lower in Thyspunt; the studies show the lowest level of seismic threat at that site, therefore the structures will be cheaper as less robust building designs are required.

There is no other significant and valid reason to prefer Thyspunt – the EIA manoeuvres facts to claim that more land will be formally conserved *because of the presence of a nuclear power station*. Formal conservation of areas near nuclear power plants is to avoid risks of accidents to populated areas, if these risks become reality the so called “conserved” areas are effectively destroyed.

What sort of convoluted reasoning is that? Certainly not reasoning that can readily pass the “red face test” of independence of the consultants as required by laws governing this EIA.

Clearly if the sites are not independently assessed in a clear and equitable manner, the process is fatally flawed.

### **Response 10:**

Your comments are noted.

This EIA process is neither for nor against nuclear power. However, the Nuclear-1 EIA process is focused on a single application for a nuclear power station and is not a high-level investigation of the pros or cons of nuclear power vs. other forms of power generation. The mix of power generation sources is determined on a strategic level by the Integrated Resource Plan, which has been adopted by Cabinet and is therefore government policy. The IRP II advocates a mixture of generation options, including 9600 MW of nuclear generation. No single generation technology will be sufficient to cater for the expected increase in electricity demand. The Department of Environmental Affairs, the decision-making authority for this application, has accepted the reasonable and feasible alternatives that were identified for further assessment at the end of the Scoping Phase. These alternatives exclude other forms of power generation.

The EIA team has taken note of SAHRA’s comments on the Thyspunt site. However, at the time that SAHRA commented on the Thyspunt site, no formal application had been submitted to SAHRA for the excavation of selected archaeological sites at Thyspunt. Furthermore, excavations had not yet been undertaken within the central portion of the proposed power station footprint to confirm the significance of potential impacts on heritage resources. These test excavations were undertaken in late 2011 and confirmed that there are very few sites (of low quality) within the recommended power station footprint. Cost is only one of a number of factors that was brought to bear on the choice of a recommended site. The difference between a “standard” Generation III nuclear power station at Thyspunt and a similar power station at another site like Duynefontein with a higher Peak Ground Acceleration (PGA) value, is that a power station at the latter site would need special measures such as a “seismic raft” to protect it against the risk of earthquakes. The risk of earthquakes is inherently significantly less at Thyspunt than at Bantamsklip and Duynefontein, which eliminates the need for a seismic raft at Thyspunt. This does not mean that the design of a nuclear power station at Thyspunt is less stringent than a design for either of the other two sites. A “standard” design nuclear power station designed for a PGA of 0.3g would still be able to withstand an earthquake of Magnitude 7 on the Richter Scale (*pers.comm.* David Nicholls, Eskom).

Your comment regarding a *de facto* conservation area around the power station refers. In this regard, all the terrestrial biophysical specialists recommended the creation of a conservation area around the power station to optimise on the restrictions on development. There are a number of biophysical

resources at all the sites that would benefit from a conservation area, but more so at Thyspunt and Bantamsklip than at Duynefontein, because there is an existing conservation area around Koeberg.

#### **Comment 11:**

#### **3. Desirability of Nuclear 1 compared to other options is not addressed**

South Africa is in dire need of sustainable job creation. Renewable power and subsequent creation of small local industries that supply, manufacture and/or install renewable forms of electricity generation to local consumers will create hundreds of thousands of jobs. The majority of employees will not require a high level of skills as a prerequisite for employment.

Nuclear power generates very few unskilled jobs after the construction phase. The EIA consultants argument that construction workers will move on to Nuclear 2 after the Nuclear 1 is finished is not valid as there is no Nuclear 2 on the table for consideration and the consultants make it plain that only potential negative impacts of Nuclear 1 can be considered. The so called "benefits" of Nuclear 2 are therefore spurious and only serve to demonstrate again the clear lack of objectivity of the consultants.

#### **Response 11:**

This EIA does not contest the value of power generation based on renewable sources. However, the environmental application for Nuclear-1 is for a single nuclear power station, as has been the case with other power stations such as the gas-fired power stations that have been constructed at Mossel Bay and Atlantis and the Medupi and Kusile coal-fired power stations. In all these previous instances, the scopes of the EIAs were restricted to a specific technology, , on a specific site or sites and within a defined geographical area. Furthermore, as stated in the Revised Draft EIR and in other responses to I&AP comments, Eskom is developing renewable generation technologies in parallel to nuclear generation and the different forms of generation cannot be seen as alternatives to one another. A mix of renewable and non-renewable technologies will be required to meet South Africa's energy needs in the next two decades.

It cannot reasonably be expected that each application for a power station must revisit strategic government decisions that have been taken on the mix of generation technologies. This is especially the case in the instance of the Nuclear-1 application. Government has, through a consultative process, taken a decision on the mix of generation technologies required to supply South Africa's electricity needs in the Integrated Resource Plan II (IRP). The conclusion of the IRP II process is that nuclear technology must form a part of the generation mix.

#### **Comment 12:**

#### **4. Affordability of Nuclear 1 is not adequately addressed. The costs of a variety of renewable power option are currently below the costs of nuclear power. Renewable can supply base load power when operated in concert contrary to some claims by nuclear proponents and must be considered in the nuclear no-go options.**

By 2020 and beyond, even if nuclear power costs do not escalate further, the capital costs of renewables are estimated to be less than 50% of the costs of nuclear power. Operational costs are higher, state subsidies are required for an indefinite period to deal with regulation and waste. **Decommissioning costs in South Africa are vastly underestimated leaving future generations to bear the burden.** Decommissioning costs equal capital costs according to current UK requirements and these costs do not allow for any future escalation in costs

### **Response 12:**

As indicated in Response 10, it is not the purpose of this EIA process to enter a debate regarding the pros and cons of different forms of electricity generation. However, for comparative purposes, Chapter 3 of the Revised Draft EIR has provided reference to two studies that have compared the financial costs of different forms of power generation, including nuclear and various other forms of renewables.

The IRP II decision is to commit to a fleet of nuclear power stations generating 9 600 MW. The IRP II, indicates that *“This should provide acceptable assurance of security of supply in the event of a peak oil-type increase in fuel prices and ensure that sufficient dispatchable base-load capacity is constructed to meet demand in peak hours each year”*. IRP (Summary, page 6) further concludes that a nuclear fleet of 9600 MW is necessary to account for the uncertainties associated with the costs of renewables and fuels. The IRP conclusion, in Section 8, is *“A commitment to the construction of the nuclear fleet is made based on government policy and reduced risk exposure to future fuel and renewable costs”*.

Decommissioning costs are evaluated on an ongoing basis during operation to ensure the correct provisions have been made.

### **Comment 13:**

#### **5. Safety.**

Reference 7.2.2 of the revised draft EIA

The EIA refers only to perceived risks which again lacks objectivity by disingenuously seeking to transform “real risks” into “perceived risks” and how to use taxpayers funds to further this myth that nuclear power is “inherently safe”

**The actual risk of a significant nuclear disaster during the lifetime of a nuclear power station is over 5.5%.**

This is calculated from the numbers of civilian accidents worldwide based on the criteria stipulated below, assuming that of the 442 civilian reactors that currently operate worldwide, plus 80 that have been decommissioned and/or destroyed, a total of 29 nuclear accidents occurred that involved the following serious criteria:

1. There must be well-attested and substantial health damage, property damage or contamination.
2. The damage must be related directly to radioactive material, not merely (for example) at a nuclear power plant.
3. To qualify as "civilian", the nuclear operation/material must be principally for non-military purposes.
4. The event should involve fissile material or a reactor.

**These numbers equate to a risk in excess of 5%, which is certainly not, as suggested in the EIA, a risk that is acceptable or capable of any mitigation.**

**On this basis alone Nuclear 1 should be rejected out of hand, when there are safe, less costly alternatives, that provide many thousands more sustainable jobs**

### **Response 13:**

Your comment is noted, Please refer to response 6 and 12.

**Comment 14:**

6. **The only significant fact we are given about the largest proposed purchase made by any SA government to date is that the reactor is a PWR design.**

Please comment on the following **flaws and dangers in the operation of PWR reactors:**

An advantage of the PWR is that it can passively scram the reactor in the event that offsite power is lost to immediately stop the primary nuclear reaction. The control rods are held by electromagnets and fall by gravity when current is lost; full insertion safely shuts down the primary nuclear reaction.

However, nuclear reactions of the fission products continue to generate decay heat at initially roughly 7% of full power level, **which requires 1 to 3 years of water pumped cooling. If cooling fails during this post-shutdown period, the reactor can still overheat and meltdown.**

Upon loss of coolant the decay heat can raise the rods above 2200 degrees Celsius, where upon the hot Zirconium alloy metal used for casing the nuclear fuel rods spontaneously explodes in contact with the cooling water or steam, which leads to the separation of water into its constituent elements (hydrogen and oxygen).

**In this event there is a high danger of hydrogen explosions, threatening structural damage and/or the exposure of highly radioactive stored fuel rods in the vicinity outside the plant in pools (approximately 15 tons of fuel is replenished each year to maintain normal PWR operation).**

The coolant water must be highly pressurized to remain liquid at high temperatures. This requires high strength piping and a heavy pressure vessel and hence increases construction costs. The higher pressure can increase the consequences of a **loss-of-coolant accident.** (Tong 1988, pp. 216–217) The reactor pressure vessel is manufactured from ductile steel but, as the plant is operated, neutron flux from the reactor causes this steel to become less ductile.

Eventually the **ductility of the steel will reach limits** determined by the applicable boiler and pressure vessel standards, and the pressure vessel must be repaired or replaced. This might not be practical or economic, and so determines the life of the plant.

Additional high pressure components such as reactor coolant pumps, pressurizer, steam generators, etc. are also needed. This also increases the capital cost and complexity of a PWR power plant.

1. **The high temperature water coolant with boric acid dissolved in it is corrosive to carbon steel (but not stainless steel); this can cause radioactive corrosion products to circulate in the primary coolant loop. This not only limits the lifetime of the reactor, but the systems that filter out the corrosion products and adjust the boric acid concentration add significantly to the overall cost of the reactor and to radiation exposure.** Occasionally, this has resulted in severe corrosion to control rod drive mechanisms when the boric acid solution leaked through the seal between the mechanism itself and the primary system. (References *"Davis-Besse: The Reactor with a Hole in its Head"* (PDF). UCS -- Aging Nuclear Plants. *Union of Concerned Scientists*. [http://www.ucsusa.org/assets/documents/nuclear\\_power/acfnx8tzc.pdf](http://www.ucsusa.org/assets/documents/nuclear_power/acfnx8tzc.pdf). Retrieved 2008-07-01.

Wald, Matthew (May 1, 2003). *"Extraordinary Reactor Leak Gets the Industry's Attention"*. *New York Times*. <http://www.nytimes.com/2003/05/01/us/extraordinary-reactor-leak-gets-the-industry-s-attention.html>. Retrieved 2009-09-10.)

Natural uranium is only 0.7% uranium-235, the isotope necessary for thermal reactors. This makes it necessary to enrich the uranium fuel, **which increases the costs of fuel production**. If **heavy water** is used, it is possible to operate the reactor with natural uranium, **but the production of heavy water requires large amounts of energy and is hence expensive**.

#### **Response 14:**

- Loss of off-site power and pumping – The Loss of Off-Site Power is an analysed event and is mitigated by the design and installation of the on-site diesel generators. These generators are aimed at ensuring that there is no loss of pumping power as this is needed to circulate cooling water. The primary water has neutron absorbers (like boron and control rods) that prevent the possibility of criticality. The plant is also designed with some passive water injection systems, like the accumulators. These can inject water without the need for pumping mechanisms. These mechanisms prevent the heating up of the fuel rods, and as such their integrity is maintained.
- Loss of Coolant Accident – The reactor vessels and piping is always designed to specific design codes. These allow for the system to be able to sustain the operating temperatures and pressures. Associated with the design codes are inspection and testing codes. These inspection codes allow for the monitoring of the vessel embrittlement from radiation through the plant life, as well as for the possible corrosion of the system components. The empirical results are also compared with the predicted vessel and pipe lives, and also is used to update the plant status. To date all the PWR plants in operation will run to the end of their predicted plant lives, and some are being extended due partly due to the vessel current and projected integrity. In conclusion, the design is robust due to the sound design, inspection and testing codes.
- Enrichment – PWRs use enrichment, and this cost is incorporated into the plant life-cycle costs. Current studies are not showing drastic differences between light and heavy reactors due to the fact that the fuel costs contribute a small amount to the overall plant life-cycle costs.

#### **Comment 15:**

7. Impacts on other industries and loss of forex earnings. The potential loss of tourism, direct & indirect losses to the fishing industry, both during and post construction and during operations is significant and will impact adversely on jobs.

#### **Response 15:**

The Marine Ecology Assessment, Tourism Impact Assessment and Economic Impact Assessment (respectively Appendices E15, E22 and E17 of the Revised Draft EIR) collectively assessed the economic impacts on existing industries, including the hospitality and fishing industries. The conclusion of these studies is that although tourism may be negatively impacted initially, the increase in business-related tourism during the construction and operational phases of the power station would compensate for an initial loss of tourism. This has been the experience both with Koeberg Nuclear Power Station and with the Medupi Power Station, which is currently under construction near Lephalale in Limpopo Province. The conclusion of the Marine Ecology Assessment, based on the marine condition at Thyspunt and on extensive monitoring that the marine specialist team has undertaken at Koeberg Nuclear Power Station, is that the potential negative impact of Nuclear-1 on the fishing industry would be insignificant.

While chokka squid at the Thyspunt site are expected to avoid water temperatures elevated above their thermal tolerance range, the area predicted to be affected represents less than one percent of the coastal spawning ground. It is predicted that adults will avoid an area of about 0.2 km<sup>2</sup> if cooling water is released nearshore. It is further been concluded that due to the temporal and spatial limitations of elevated turbidity associated with marine spoil disposal and the restricted area that will be covered by sediment, when taken within the context of the extensive area over which chokka squid species spawns, that while chokka will be locally affected, this impact will not be of high significance for the species as a whole. Additionally, the inshore jig fishery is unlikely to be greatly affected by the disposal of spoil, as only a small proportion of catches are taken in the area expected to be impacted.

**Comment 16:**

8. There are the following legal difficulties and failures with the EIA
- 8.1 Failure to assess socio-economic impacts of the proposed project violates NEMA and the EIA Regulations, read together with PAJA 6(2)(b).
- 8.2 Failure to assess worst-case scenario impacts violates NEMA and the EIA Regulations, read together with PAJA 6(2)(b).
- 8.3 Failure to assess all potential impacts of nuclear waste violates NEMA and the EIA Regulations, read together with PAJA 6(2)(b).
- 8.4 Failure to adequately assess project alternatives and a no-go option violates NEMA and the EIA Regulations, read together with PAJA 6(2)(b), and places false information in front of the decision maker in violation of PAJA 6(2)(e)(iii)
- 8.5 General failure to place relevant considerations in front of the decision maker violates PAJA 6(2)(e)(iii)
- 8.6 Approving the NPS [nuclear power station] in the absence of a long-term solution to the problem of high level nuclear waste is unlawful.
- 8.7 Approving the NPS in the absence of a final project design is unlawful
- 8.8 The Thyspunt site is not a viable one for the Nuclear-1 project

**Response 16:**

- 8.1 Social impacts are assessed in the Social Impact Assessment (Appendix E18 of the Revised Draft EIR). Economic impacts are assessed in the Economic Impact Assessment (Appendix E17 of the Revised Draft EIR).
- 8.2 "Worst case scenario" impacts of nuclear safety are outside the scope of the EIA as they are within the scope of nuclear emergency planning to be dealt within in terms of the NNR's nuclear licensing process.
- 8.3 The Revised Draft EIR includes a Waste Assessment (Appendix E 29), which assesses the impacts of nuclear waste management.
- 8.4 Your comment is noted. Please refer to Response 10 regarding the feasible and reasonable alternatives dealt with in the Nuclear-1 EIA process.
- 8.5 Your comment is noted. The EIA process has provided all information that has been requested by the Department of Environment Affairs for the purpose of the environmental decision-making. As with many different forms of development, construction is dependent on authorisations by

a number of different legal entities, including local, provincial and national authorities. Construction of such developments is reliant on all these authorisations being obtained from entities with vastly different legal mandates. Reporting requirements to satisfy all these authorisations vary hugely, and it cannot reasonably be expected that information relevant to all these authorisations should be contained in the EIR.

8.6 Your comment is noted. It is internationally accepted practice to deal with high-level nuclear waste through permanent storage. The internationally recognised method of disposing of high level nuclear waste is in a national deep repository, which would be placed in a geologically stable area of the country, and normally away from high population areas. It is not normal at the power station site, although in Finland they are putting their repository at one of their sites – with strong local support.

8.7 As indicated in Response 5 the assessment of the impacts of the proposed power station is based on a Consistent Dataset (Appendix C of the Revised Draft EIR), which represents a worst case scenario of potential inputs and outputs from a number of different Generation III nuclear power stations operating under normal conditions. This dataset has been based on the commercially available nuclear power station designs currently available. It is comment practice in many EIA processes for the assessment to be based on conceptual designs, but for detailed placement of infrastructure to be confirmed through a “walkdown assessment” after environmental authorisation.

8.8 Your opinion is noted.

**Comment 17:**

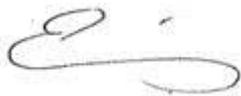
This submission is made on behalf of the following I&APS R C H Garbett

CANE (Coalition Against Nuclear Energy) in the following regions  
NWP  
Limpopo  
Gauteng  
Mpumalanga  
Free State  
Sylva Lilly Properties Pty Ltd

**Response 17:**

Comment noted.

Yours faithfully  
For GIBB (PTY) Ltd

A handwritten signature in black ink, appearing to be a stylized 'S' or similar character.

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Nuclear-1 EIA Team