



## MEDIA ENQUIRY

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### **RESPONSE TO ENQUIRY FROM FREELANCE MEDIA : ANGUS BEGG - PRIVATE GUIDE CONTRIBUTOR**

Please find NNR response to questions received via email;

#### **1. Please briefly describe the role of the NNR**

##### **1.1 NNR Response:**

The National Nuclear Regulator (NNR) is responsible for regulating nuclear activities to provide for the protection of persons, property and the environment against nuclear damage through the establishment of safety standards and regulatory practices. The NNR also fulfils South Africa's national obligations in respect of international legal instruments concerning nuclear safety.

The NNR develops regulatory requirements, grants nuclear authorisations, performs safety reviews; and conducts compliance assurance and enforcement activities in accordance with the National Nuclear Regulator Act, Act No. 47 of 1999 (NNRA). The authority of the NNR is enshrined in national legislation, which gives it the ability to authorise siting, design, construction, operation, manufacture of component parts, and decontamination, decommissioning and closure of nuclear installations. The NNRA empowers the NNR to exercise regulatory control over mining and processing of radioactive ores and minerals; and any action which is capable of causing nuclear damage subject to certain exclusions contained in section 2(2) of the NNRA. The NNR also considers applications for nuclear vessel licence in respect of vessels propelled by nuclear power or carrying radioactive material on-board. Without a nuclear authorisation issued by the NNR, it is illegal to engage in any of the mentioned actions.

#### **2. How relevant is this role / function in SA today?**

##### **2.1 NNR Response**

The Nuclear Energy Policy of the Republic of South Africa presents a framework within which prospecting, mining, milling and the use of nuclear materials, as well as the development and utilisation of nuclear energy for peaceful purposes by South Africa, shall take place. The Policy

covers amongst others the prospecting and mining of uranium ore and any other ores containing nuclear properties and materials.

The role of the NNR is highly relevant and vital in South Africa. The independent oversight of the NNR provides public assurance that authorised nuclear activities are conducted in a safe, secure and responsible manner and in accordance with regulatory requirements.

The NNR regulatory oversight provides a critical independent challenge to a nuclear authorisation holder's premises, assumptions, and positions and affects far more than the actual areas that the NNR reviews. In particular, the simple existence of regulatory oversight stops the NNR nuclear authorisation holder from internally accepting deficient safety cases or accepting too readily that their assumptions are right and that they have thought of everything. In other words, NNR regulatory oversight encourages the building and maintaining of an adequate nuclear safety and security culture for South Africa.

### **Nuclear Power Plants and Research Reactors**

The NNR oversight of the Koeberg nuclear power station encompasses most or all of the life cycle, including siting, design, construction, operation, manufacture of component parts, and decontamination, decommissioning and closure of nuclear installation. In addition, the management of used fuel is also regulated by the NNR.

The nuclear facilities regulated by the NNR on the South African Nuclear Energy Corporation (Necsa) Pelindaba Site are diverse and includes:

- The SAFARI-1 Research Reactor;
- Various fuel cycle facilities involved in the manufacture of nuclear fuel for the SAFARI-1 Research Reactor;
- Analytical laboratories;
- A liquid effluent treatment facility;
- A variety of radioactive waste treatment and storage facilities; and,
- An array of facilities in various stages of decommissioning.

### **Mining and processing of radioactive ores and minerals**

The NNR also regulates actions capable of causing nuclear damage associated with the mining and processing of radioactive ores and minerals involving Naturally Occurring Radioactive

Material (NORM) through the issuance of Certificate of Registration or Certificate of Exemption.

NNR nuclear authorisations currently granted for NORM include the following categories:

- Mining and mineral processing facilities
- Scrap smelters
- Fertiliser manufacturers
- Scrap processors
- Small users
- Service providers

The activities at these facilities include actions such as:

- Mining and processing of gold, copper, uranium, heavy minerals and phosphate rock.
- Recycling of scrap material (i.e. ferrous and non-ferrous metal, plastic, stainless steel, etc.) that is contaminated by NORM.
- Small users (i.e. laboratories) conducting tests of small quantities of NORM samples for verification of proposed and existing actions, including samples from prospecting activities. Service providers (i.e. storage warehouse), supplying clean-up services of radiologically contaminated sites.

### **Developmental work on the regulation of existing exposures to protect members of the public from elevated levels of Radon**

In South Africa, the members of the public may be exposed to radiation because the land they live on may be contaminated with radioactive mine residues or exposed due to natural occurrence of elevated levels of natural radionuclides. Furthermore, those who live on contaminated land are at risk of exposure to elevated levels of radon, especially indoors. The NNR is considering a proposal to expand its scope of regulatory control to include existing exposure conditions such as living on contaminated land and exposure to radon indoors. In pursuance of this objective, the NNR is investigating and developing a suitable regulatory framework for radon management inside dwellings and buildings.

### **Radioactive Waste Management**

In carrying out its regulatory mandate, the NNR ensures that policy guidelines and principles relating to radioactive waste management are supported for purposes of ensuring safety and the NNR monitors compliance by authorisation holders.

- 3. It has come to our attention that the NNR can or will not deal with the uraniferous waste from gold and uranium mines on the west rand outside Joburg - is this correct?**

**3.1 NNR Response:** No it is not correct.

- 4. Does the NNR have the capacity to fulfil its mandate, which is to protect SA's people, property and environment against nuclear damage?**

**4.1 NNR response:** Yes.

Details of the NNR regulated entities nuclear safety performance results are reported in the NNR's Annual Reports. This information is in the public domain. To date the NNR's Annual Reports reflect that the NNR has adequately fulfilled its mandate to protect people, property and the environment against nuclear damage.

- 5. Does the NNR have the funding to fulfil this mandate?**

**5.1 NNR Response:** Yes.

The NNR derives its revenue from authorisation fees, special projects, application fees and Government grants. Revenue arising from authorisation fees are published in the Gazette by the Minister on an annual basis.

- 6. Does the NNR feel that Eskom and SA's move towards renewable energy, in keeping with global trends, will remove the risk associated with nuclear waste?**

**6.1 NNR Response:**

The issue of renewable energy or the decision on the energy mix does not fall under the purview of the NNR. With regards to nuclear waste, South Africa is a contracting party to the International Atomic Energy Agency (IAEA) Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. The NNR co-ordinates and implements South Africa's Contracting Party obligations to the Convention on Nuclear Safety and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

In carrying out its regulatory mandate, the NNR ensures that the National Radioactive Waste Management policy guidelines and principles relating to radioactive waste management are supported for purposes of ensuring safety and the NNR monitors compliance by authorisation holders.

- 7. The department of Energy (headed by the Minister Tina Joematt-Peterson) told Cabinet in 2015 - when trying to push Jacob Zuma's preferred nuclear deal through, which involved firing then finance minister Nene - that nuclear waste was 'not a problem' because it "is stored deep underground". Would the NNR agree that this was a problematic statement - given that it remains radioactive for around four billions years?**

**7.1 NNR Response:** Refer to NNR response to Question 6.

- 8. Given the NNR's response to a letter from the Foundation for a Safe Environment (FSE), what will happen to the uranium and gold mining waste going forward?**

*NNR Disclaimer : The NNR clarified this incorrect reference to the Foundation for a Safe Environment with Angus Begg – The correct reference is the "NNR response to a PAIA request was provided to the Federation for Sustainable Environment and not to the Foundation for a Safe Environment."*

**8.1 NNR Response:**

The Radioactive Waste Management Policy and Strategy for the Republic of South Africa (2005) clearly outlines the responsibilities of the Government, Regulatory bodies and Generators and Operators. This policy provides a definition of radioactive waste for regulatory purposes and provides several disposal/management options for radioactive waste containing enhanced concentrations of NORM on the proviso that relevant regulatory safety requirements are addressed.

- 9. Are communities living in close proximity to the mines at risk?**

**9.1 NNR Response:** it is presumed the question relates to uranium and gold mines. The exposure pathways, distance from source and quantification of levels of exposure determine the level of risk. Without such information, the NNR cannot make a blanket statement whether or not people living close to such mines are at risk.

**10. How does the NNR propose regaining its funding and capacity ? (a description of what IS happening, rather than what is planned, that would be appreciated).**

**10.1 NNR Response:** Refer to NNR response to Question 5.

**11. How important is a regulatory authority**

**11.1 NNR Response:**

Refer to NNR Response to Question 2 for more details.

**12. Is the NNR in a position to fulfil its mandate going forward?**

**12.1 NNR Response:** Yes

For more information, please contact me.

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