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**Re: SAFCEI & ELA-JHB – REPRESENTATIONS ON ESKOM NUCLEAR INSTALLATION SITE
LICENSE APPLICATION FOR THYSPUNT SITE**

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1. INTRODUCTION

These representations have been prepared for and are submitted on behalf of the Southern African Faith Communities' Environment Institute (SAFCEI) and Earthlife Africa – Johannesburg (ELA-JHB).

SAFCEI is a registered non-profit organisation that was established by multi-faith environmental and social justice advocates to, among other things, confront environmental and socio-economic injustices, and to support and encourage faith leaders and their communities in Southern Africa to take action on eco-justice, sustainable living and climate change issues. SAFCEI includes an Energy and Climate Justice Programme that focusses on climate change and energy.

ELA-JHB is a non-governmental non-profit voluntary association established by environmental and social justice advocates to mobilise civil society around environmental issues in relation to people, and includes a Sustainable Energy and Climate Change Project that works to promote local and global environmental and social justice on sustainable energy and climate change issues. ELA-JHB is an autonomous branch of Earthlife Africa.

The National Nuclear Regulator (NNR) has invited interested persons to submit written representations to it regarding an application initially lodged in 2016 by Eskom for a nuclear installation site license (NISL) for the Thyspunt site. To this end, a Public Information Document (PID)¹ prepared by Eskom was made available to the public.

SAFCEI and ELA's representations relating to the NISL application for Thyspunt are set out below.

2. NO NEED FOR A NUCLEAR INSTALLATION SITE LICENCE


SAFCEI and ELA-JHB submit that there is no need for a NISL for the Thyspunt site.

Recent social media reports indicate that on 30 July 2021, Eskom CEO Andre de Ruyter made

¹ Public Information Document in Support of the Eskom Nuclear Installation Site License Application for the Thyspunt Site (2 September 2019).

a presentation to the President's Climate Change Commission. A slide from this presentation indicates that Eskom is unable to build new nuclear power stations due to an inadequate balance sheet:

Eskom will consider technologies based on techno economic considerations



Technology	Capital cost LCOE ¹	Build time	Build	Own	Operate	Comment / Eskom position
PV	• 825 \$/kW • 4,1 US c/kWh	• 18-24 months	✓	✓	✓	• Identified potential sites to retrofit PV to capitalise on existing infrastructure and available resources
Wind	• 1 450 \$/kW • 5,4 US c/kWh	• 24-36 months	✓	✓	✓	• Leverage sites for wind, with environmental authorisations to capitalise on existing infrastructure and available resources
Gas	• 1 250 \$/kW ² • 7,3 US c/kWh	• 24-60 months	✓	✓	✓	• Intend to use gas as a means to enable renewables, thereby supporting the transition
Nuclear	• 12 500 \$/kW • 19,8 US c/kWh	• 12-15 years	✗	✗	✓	• Supports Government plans to roll out new nuclear, however, will be unable to build due to inadequate balance sheet
New coal	• 62 250 \$/kW • 15,9 US c/kWh	• 10-12 years	✗	✗	✗	• Will own and operate current coal fleet till end of life, with a focus on repurposing sites to be decommissioned with renewables. No new coal projects by Eskom

Note 1: Capital cost includes EPC cost, capital cost during construction, LCOE – levelized cost of energy; Source: Latest 2020 costs
Note 2: Assumed Lazard costs are pipeline gas costs (US\$ 1.5-2.3); LNG costs are US\$ 8-9; SA wind costs will be far more competitive

Source: Anton Eberhard @AntonEberhard

Given that Eskom has indicated that it is unable to build new nuclear power stations, and having regard to the fact that a nuclear authorisation is not transferrable,² Eskom's NISL application has been rendered academic and meaningless.

In addition, it is pointed out that the Integrated Resource Plan³ (IRP2019) makes no allocation of new nuclear electricity generating capacity in its 'emerging long term plan' for the period 2019 to 2030.⁴ Instead, the IRP2019 includes a policy decision to:

Commence preparations for a nuclear new build programme to the extent of 2 500 MW at a pace and scale the country can afford...⁵

² NNR Act, s25.

³ GN 1360 of 18 October 2019: Integrated Resource Plan (IRP2019).

⁴ IRP2019, para 5.2. See Table 5L IRP 2019.

⁵ It is relevant to note that different version of the IRP2019 was initially published in the *Gazette*. Among other things, this version referred to the 'decisions' as 'policy positions', with policy position 8 reading as follows: '**Policy Position 8:** immediately commence the nuclear build programme to the extent of 2 500MW because it is a no-regret option in the long term and in case the Inga project does not materialise'. It is understood that this version of the IRP2019 was not approved by Cabinet.

The IRP2019 indicates that such preparations should commence with ‘development of a clear road map for a future expansion programme’.⁶ To the knowledge of SAFCEI and ELA-JHB, no such road map has been developed as yet (or even published in draft form for public comment).

In June 2020, the Department of Mineral Resources and Energy (DMRE) issued a Request for Information (RFI) in respect of its proposed nuclear new build programme⁷ which, according to press reports, was issued to ‘assess market appetite for the development of small modular nuclear reactors and to enable the department to assess the pace and scale at which such a programme should proceed’.⁸ The RFI also reveals that ‘consideration will be given to the complete range of such options for any future South African nuclear build programme’⁹:

The Department of Mineral Resources and Energy is issuing this Request for Information (RFI) to the market to make an assessment of Nuclear Power Plant (NPP) technologies which could be considered under the South African Nuclear Power Programme... The purpose of this Request for Information (RFI) document is to provide an improved understanding of the experience of different Nuclear Power Plant vendors and obtain information from NPP vendors relating to the financial and technical aspects. These will include costing and financing of respective NPP technologies; plant design features, license ability of plant design in South Africa; feasibility for construction at sites in South Africa; and a detailed project management plan; as well as indicative contracting models (such as Engineering Procurement Contract (EPC), Engineering Procurement Contract Management (EPCM), Build Own and Operate (BOO), Build Own and Transfer (BOT) and Build Own Operate and Transfer (BOOT).¹⁰ (emphasis added)

The Thyspunt NISL application is limited to an assessment of the suitability of the site for nuclear reactors based on PWR technology,¹¹ and does not include an assessment of the suitability of the site for small modular nuclear reactors (SMRs).

In addition, while the Minister of Mineral Resources and Energy has published a draft determination under section 34 of the Electricity Regulation Act¹² (ERA), the National Energy

⁶ IRP2019, p47-48.

⁷ Request for Information in Respect of the Nuclear New Build Programme.

⁸ See: https://www.miningweekly.com/article/dmre-to-test-market-appetite-for-2-500-mw-of-small-nuclear-reactors-2020-05-07/rep_id:3650. See also: <https://www.polity.org.za/article/dmre-to-test-market-appetite-for-2-500-mw-of-small-nuclear-reactors-2020-05-07>.

⁹ RFI, at p13.

¹⁰ RFI, at p13.

¹¹ PID, p22.

¹² Act 4 of 2006.

Regulator of South Africa (NERSA) has not yet given its concurrence on this draft determination. As a consequence, there is no lawful determination that new nuclear capacity is needed or should be procured, and it is highly likely that the determination will be challenged in court on substantive and procedural fairness grounds should NERSA give its concurrence. It is also pointed out that the draft determination signed by the Minister states that the generator of the electricity 'will be either Eskom Holdings (SOC) Limited, or any other organ of state, or in partnership with any other juristic person'. This means that even if the draft s34 determination comes into force, it is uncertain that Eskom will be designated the generator of any new nuclear electricity capacity.

SAFCEI and ELA-JHB submit that it would be irregular for the NNR to grant a NISL in circumstances where Eskom's CEO has indicated that it is unable to build new nuclear power stations (due to its precarious financial position), where the IRP2019 indicates that preparations for a new nuclear build programme should commence with the development of a roadmap, where an RFI issued by the DMRE indicates that it is considering various nuclear reactor technologies (including SMRs), and where no nuclear s34 determination has been gazetted designating Eskom as the generator.

3. NO EIA AUTHORISATION FOR NEW NUCLEAR POWER STATION AT THYSPUNT

On 11 October 2017, and following a decade-long environmental impact assessment (EIA) process, the Department of Environmental Affairs (DEA) issued an environmental authorisation to Eskom authorising the construction and operation of a nuclear power station at Duynefontein in the Western Cape.

The EIA application included Thyspunt as a preferred option, but the authorisation of Duynefontein over Thyspunt means that the Thyspunt site was not authorised.

The DEA's Record of Decision (RoD) indicates that the Department took the view that the 'overall impacts associated with the Duynefontein site are...materially lower than those at Thyspunt',¹³ that the 'incremental environmental',¹³ impacts of the Duynefontein site are

¹³ DEA Environmental Authorisation: Duynefontein, para 3(c), p17.

generally less than the impacts associated with the development of a “greenfields” site at Thyspunt’,¹⁴ and that ‘the broader impacts of the proposed development including the indirect and cumulative impacts of the construction village, permanent accommodation and facilities, road and infrastructure upgrades, and transmission lines will stimulate the regional economy. These major changes in the broader region will be more pronounced at Thyspunt relative to the approved site’.¹⁵

It is also pointed out that in March 2018, SAFCEI and ELA-JHB lodged a substantive appeal against the authorisation of the Duynefontein site. Various other I&APs also lodged. At the date of finalising these representations, these appeals had not yet been decided-upon by the EIA appeal authority.

It is submitted that there is no justification to continue processing a NISL application for the Thyspunt site given that environmental authorisation for this site was refused by the DEA in October 2017.

In light of the above, SAFCEI and ELA-JHB submit that the NNR must refuse Thyspunt NISL application.

4. INADEQUATE INFORMATION PROVIDED FOR MEANINGFUL PARTICIPATION

It is submitted that inadequate information has been made available to enable SAFCEI and ELA-JHB (as well as other interested and affected parties (I&APs)) to participate meaningfully in the public consultation process.

It has long been recognised that a fair decision-making process requires (among other things) that a person ‘must be put in possession of such information as will render his [or her] right to make representations a real, and not an illusory one’.¹⁶ Hoexter points out that there is ‘a

¹⁴ DEA Environmental Authorisation: Duynefontein, para 3(e), p17.

¹⁵ DEA Environmental Authorisation: Duynefontein, para 3(g), p17.

¹⁶ *Heatherdale Farms v Deputy Minister of Agriculture* 1980 (3) SA 476 (T) (486F-G)

crucial link between the amount and type of information disclosed to an affected person and the quality of his or her opportunity to make representations'.¹⁷

The Thyspunt PID indicates that its purpose is to provide members of the public with information regarding the nature of the NISL for the Thyspunt site, and goes on to state that:

The document provides a broad overview of the project, a description of the hazards that could result from ionising radiation, high level detail on the technology type that could be located on the site, the site specific parameters considered in characterising the site, a description of the site and justification of its suitability, supporting safety case elements, an assessment of the feasibility of developing and implementing an emergency plan, information regarding waste management and decommissioning, a description of transport actions and provisions for safe transport of radioactive materials.¹⁸

However, none of the source documents or studies referred to in the PID, and which are relied upon to reach various conclusions regarding the suitability of the site, have been made available for public scrutiny and comment. As a consequence, SAFCEI and ELA-JHB (and other I&APs) are unable to analyse or comment on the underlying data, assumptions made or subjective judgments used (which is particularly important when probabilistic risk assessment and other methods are used for determining the acceptability of various levels of risk). In addition, SAFCEI and ELA-JHB are unable to seek independent expert advice to peer review any of these documents and studies, or to advise them (and the vulnerable and disadvantaged persons they in turn assist) on the adequacy of these documents and studies. The public are unreasonably expected to rely on Eskom's 'say so' regarding the various aspects dealt with and conclusions reached in the PID. As a consequence, the public participation process does not meet the requirements of s2(4)(f) of the National Environmental Management Act¹⁹ (NEMA), which requires that 'the participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured'.

¹⁷ Hoexter (2nd edition, 2018), *Administrative Law in South Africa*, at p371, referring to by the Constitutional Court in *Bengwenyama Minerals v Genorah Resources* 2011 (4) SA 113 (CC) paras 69-74.

¹⁸ PID, p16.

¹⁹ Act 107 of 1998.

Examples of some of the documents and studies which should have been made available for public comment include:

- The Thyspunt Site Safety Report (TSSR). Regulation 3(2)(a) of the Regulations on Licensing sites for new nuclear installations stipulates that an application must be supported by a Site Safety Report containing the information listed in Regulation 5. This critical document has not been made available for public scrutiny and comment.
- Reports from the '[d]etailed investigations performed to confirm the suitability of the Thyspunt site, taking into account all factors relevant to the site (i.e. natural and human-induced external events, potential radiological impact to the public and the environment, feasibility of developing and implementing an emergency plan as well as security arrangements required for the site)'.²⁰ These include (but are not necessarily limited to):
 - The results of Geotechnical investigations for the Thyspunt site. The PID indicates that:

Consistent with NNR guidance and international regulatory guidance and standards, the full range of methods and tools were applied and the investigations included the recommended increasing levels of specificity ranging from the site region, site vicinity, and the site area, to the site location. As is recommended in the existing regulatory guidance, the results of the investigations conducted for the site were integrated with studies conducted by a large number of investigators within the geological community and published in the professional literature.

These studies included input of geological investigations for more than 25 years, geological mapping, onshore and offshore geophysical studies, geochronological analysis, geomorphic studies, paleo seismic studies, and geotechnical evaluations. Where issues of concern are identified in the PID, Eskom simply indicates that these issues will be dealt with (and not how). For example: 'Slope instability will be catered for by civil engineering design requirements';²¹ while 'Liquification risks will be dealt with in the design of the installation, e.g. through founding the

²⁰ PID, p56.

²¹ PID, p58.

plant base mat on bedrock' (the PID indicates that 'unacceptably high liquification potential exists at sufficiently high peak ground acceleration').²²

- The Thyspunt probabilistic seismic hazard analysis;²³
- The reports resulting from the collection and critical analysis of '[a]ll pertinent data, including historical data, both meteorological and hydrological' relating to hydrological events to determine the potential for flooding due to one or more natural causes that could affect the safety of the nuclear installation. It is relevant to note that flooding from the sea was identified as a significant hazard that will need to be taken into account in the design of the nuclear reactor installation.²⁴ While the PID indicates that the potential effects of climate change were taken into account in order to evaluate possible extreme values for meteorological events (such as storm surges), no detail is provide regarding what information was considered, or how the potential effects of climate change were assessed.
- Assessments relied upon, and modelling conducted, to determine the potential for flooding due to one or more natural causes that could effect the safety of a nuclear installation at Thyspunt.²⁵ Regarding external flooding from other sources, the PID indicates that 'operational experience from existing nuclear installations provides evidence for external flood-induced events in which the functionality of safety related equipment has been impaired'. The PID states that 'the provisions for such events are mostly design related' but provides insufficient detail to facilitate meaningful public comment.²⁶
- A risk analysis study conducted in relation to the risk of the proposed nuclear power stations being impacted by a large commercial aircraft crashes.²⁷ While

²² PID, p59.

²³ PID, p60.

²⁴ PID, p70.

²⁵ PID, p70.

²⁶ PID, p71.

²⁷ PID, p73.

this study has not been made available for public comment, it is noted that the PID indicates that:

...aircraft crash is included as a standard event with specific load functions in the design basis of the reference nuclear installations (designs with known parameters used in analyses to assess compliance with regulatory requirements), irrespective of aircraft crash frequency considerations. Both the Westinghouse AP1000 and the Framatome EPR reactors, have designs that are certified as being able to withstand the impact of a large commercial aircraft...²⁸

It is unclear from the information provided in the PID whether it is only the Westinghouse AP1000 and the Framatome EPR reactors that have designs that are certified as being able to withstand the impact of a large commercial aircraft, or whether the other known PWR designs considered (namely the Dosam APR1400 and Rosatom VVER) also have designs so certified.²⁹ It also cannot be determined whether the deliberate crashing of a commercial aircraft into the proposed nuclear power station was considered in the risk analysis study.

- The documents and studies relied upon to make an assessment of the potential regional impacts of the proposed nuclear power station have not been made available for public comment.
- The assessment of operational radioactive discharges referred to in the PID has not been made available for public comment.
- Radiological dose assessments relied upon in the 'safety case elements' portion of the PID have not been made available for public comment.

In light of the above, SAFCEI and ELA-JHB submit that insufficient information has been made available to the public to facilitate meaningful, informed public participation. This renders the NISL public participation procedure procedurally unfair, and any NISL granted by the NNR will be vulnerable to being set aside on review.

²⁸ PID, p76.

²⁹ PID. P76.

5. FAILURE TO CONSIDER CONSEQUENCES OF A CATASTROPHIC BEYOND DESIGN RADIOLOGICAL RELEASE

SAFCEI and ELA-JHB submit that the Thyspunt NISL application fails to consider and assess the health, environmental and socio-economic consequences of a catastrophic, beyond-design accident of the proposed nuclear power station at the Thyspunt site.

The NNR's *Regulatory Guide: Interim Guidance for the Siting of Nuclear Facilities RG-0011* indicates the following regarding reference accidents for a NISL:

9.5 Reference Accident

- 1) For a nuclear license to site, all potential accidents should be identified and considered such as:
 - a) Events that could affect the facility or activity, including events of very low probability and events not considered in the design.
 - b) Events involving a combination of nuclear or radiological emergency with a conventional emergency, such as an earthquake, a volcanic eruption, a tropical cyclone, severe weather, a tsunami, an aircraft crash or civil disturbances that may affect wide areas and/or impair capabilities to provide support in the emergency response...
- 2) Similarly for a NSL the reference accident must be identified using PSA studies for the scope of facility designs for which the application is made.
- 3) For the purposes of the siting assessment, the consequences of a reference accident should be determined using enveloping assumptions. The reference accident selected should cover the set of actions that can reasonably be foreseen in the safety analysis.
- 4) In calculating the effective dose to a population arising from the reference accident, no allowance should be made for the aversion of individual doses by means of short-term countermeasures such as sheltering, administration of stable iodine and evacuation.
- 5) The population considered when determining the effective doses should be the projected population for the lifetime of the facility including the temporary population.
- 6) The assumptions regarding meteorological conditions used in the dispersion calculation should be demonstrated to be conservative with respect to the target parameter.

The consequences of this failure to consider and assess the consequences of a catastrophic, beyond-design accident of the proposed nuclear power station at the Thyspunt site are discussed below.

Consequences of Beyond Design Accident on Regional Water Use not assessed

The PID describes regional water use as follows:

About 1,2% of the region accommodates surface water resources. This water is used for irrigation and potable water supply within the site region. A large part thereof is transferred to the Nelson Mandela Bay metropole via the Algoa water supply system. Groundwater is an important water resource for the coastal towns and in the southern part of the region. Towns that rely on groundwater resources for potable water include Humansdorp, St. Francis Bay, Cape St. Francis, Oyster Bay, and Jeffreys Bay. The main aquifer tapped comprises fractured sandstone of the Table Mountain Group Aquifer.

Water used for irrigation in agricultural land is obtained from rivers in the region and three large dams, namely the Kouga, Churchill, and Impofu dams. Several smaller dams and groundwater extraction facilities are also used for irrigation.³⁰

However, the potential health, environmental and socio-economic impacts of a catastrophic nuclear incident (such as an uncontrolled beyond design accident) on these important regional water resources are not described or explained in the PID, nor is any justification for excluding such impacts provided.

Consequences of Beyond Design Accident on Adjacent Sea Use not assessed

The PID describes adjacent sea use as follows:

Marine species such as squid, south coast rock lobster, and fish are commercially harvested in the area. Recreational fishing is also popular and is practised from the accessible coastal sites and ski boats. The beach areas at Oyster Bay, St. Francis Bay, and Cape St. Francis are popular tourist destinations. The area stretching from Jeffreys Bay to Cape St. Francis represents one of the prime surfing destinations in the world.³¹

The potential health, environmental and socio-economic impacts of a catastrophic nuclear incident (such as an uncontrolled beyond design accident) on these adjacent sea uses are not described or explained in the PID, nor is any justification for excluding such impacts provided. No mention is made of potential impacts of such an incident on small-scale fishers who rely on the sea to make a living, nor is any information (or modelling) provided on the potential widespread dispersion of radioactive water in the ocean.

Radiological Impact of a Beyond Design Accident not assessed

The PID indicates that an assessment of operational radioactive discharges from the nuclear installations envisaged for the site and the resulting potential radiological impact on the public and the environment was conducted.

The purpose was to demonstrate that the constraint on annual effective dose defined for the public by the national safety standards can be met. Apart from the safety assessment for humans, a screening assessment of the potential radiological impact on non-human species was also conducted.

A range of potential annual dose values for members of the public was determined. The doses to subcritical groups at ten different localities close to the site were investigated. All

³⁰ PID, p86.

³¹

age groups were considered in respect of exposure pathways resulting from the following exposure types:

- Normal and routine airborne and liquid discharges;
- Short-term contingency discharges; and
- Direct external gamma radiation.³²

In its conclusion on the adequacy of site investigations, the PID states as follows regarding radiological impacts:

In the evaluation of the site to determine its potential radiological impact on the region for normal operational states and **accident conditions that could warrant emergency response actions**, appropriate estimates of expected or potential releases of radioactive material were derived, with account taken of the enveloping characteristics of proposed facilities to be constructed on the site and its safety features.

The direct and indirect pathways by which radioactive material could potentially reach and affect people and the environment were investigated and evaluated, taking into account specific regional and site characteristics.³³

On the face of it the accident evaluation was limited the assessment of accident conditions that could warrant emergency response actions. The evaluation of the consequences of a beyond design radiological release (such as would occur in a catastrophic nuclear incident such as a reactor core meltdown and containment failure) is not included in the PID, which in turn does not meet the NNR's requirement that all potential accidents should be identified and considered, including events of very low probability and events not considered in the design.³⁴

Consequences of Beyond Design Accident not addressed in Safety Case Elements

The PID states that a radiological dose assessment has shown that:

...the **annual dose** for any age group lies between an upper value representing adult dose and a lower value representing the 1-year old age group dose. The estimated annual dose to the critical group is less than 72 $\mu\text{Sv/a}$. Hence, the annual dose to the public is well below the regulatory dose constraint requirement of 250 $\mu\text{Sv/a}$.³⁵

This 'annual dose' is a reference to the dose constraints contained in section 4.5.2 of the NNR *Regulations on Safety Standards and Regulatory Practices*,³⁶ and do not

³² PID, p87.

³³ PID, p88.

³⁴ Regulatory Guide: Interim Guidance for the Siting of Nuclear Facilities RG-0011, s9.5(1).

³⁵ PID, p89.

³⁶ GNR388 of 28 April 2006.

address the issue a catastrophic beyond-design nuclear incident (such as a core meltdown and loss of containment).

No information is provided in the 'Safety Case Elements' portion of the NISL application relating to nuclear accidents (and in particular catastrophic beyond-design nuclear accidents such as a core meltdown and loss of containment), and no risk assessment³⁷ is provided for the public to comment on.

Instead, the PID simply goes on to describe the safety and quality management system applied to the consultants conducting site investigations and assessments, as well as engineering activities performed in the different stages of the site evaluation. It also briefly describes the operating system 'to be implemented'³⁸ (and which 'may only be completed once the technology or vendor has been selected as this may affect the systems, structures, and components of the plant and their functionality'³⁹). The PID then goes on to describe the regulatory framework, listing some relevant provisions of the NNR Act, and simply naming other regulatory instruments applicable to siting of nuclear installations, as well as various international guides, codes and standards. The PID states that results from the siting investigation were assessed against compliance with the national nuclear regulatory requirements, and bullet-points some of these requirements. The basis upon which compliance is claimed is not clearly set out, contextualised or explained.⁴⁰

It is evident from the above that the consequences of a beyond design radiological release (such as would occur in a catastrophic nuclear incident such as a reactor core meltdown and containment failure) are not addressed in the safety case elements portion of the PID.

³⁷ GNR388 of 28 April 2006, Section 3.3 states that 'measures to control the **risk of nuclear damage** to individuals must be determined on the basis of a **prior safety assessment** which is suitable and sufficient to identify all significant **radiation** hazards and to evaluate the nature and expected magnitude of the associated risks, with due regard to the **dose** and **risk** limits in Annexures 2 and 3'.

³⁸ PID, p90.

³⁹ PID, p91.

⁴⁰ PID, p91.

Consequences of Beyond Design Accident not addressed in Emergency and Preparedness and Response

The PID indicates that the primary objectives of a nuclear and radiological emergency plant are to prevent deterministic health effects (death or injury) by (among other things) taking action before or shortly after a major (core damage) release or exposure from a reactor incident.

The radiological emergency and planning section is focussed on preventing and responding to emergency situations.

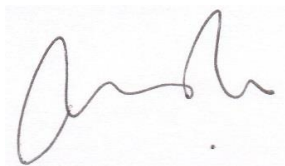
However, this section of the PID also does not address the consequences of a beyond design radiological release (such as would occur in a catastrophic nuclear incident such as a reactor core meltdown and containment failure).

SAFCEI and ELA-JHB submit that all potential accidents should have been identified and considered, including (but not limited to) events with a very low probability and events not considered in the design. It is submitted further that this should have included an assessment of the significant health, environmental and socio-economic impacts of catastrophic beyond-design nuclear accidents such as a reactor core meltdown and loss of containment. The PID does not adequately address this issue (if at all), and any underlying risk assessment that may speak to these issues has not been made available to the public for comment (as a consequence of, among other things, the assumptions used and subjective decisions made in any probabilistic risk assessment could not be evaluated by I&APs or their experts).

6. CONCLUSION

For the reasons set out in these representations above, SAFCEI and ELA-JHB submit that the NNR should refuse to issue a NISL for the Thyspunt site to Eskom.

Signed at Assagay this 31st day of July 2021

A handwritten signature in black ink, appearing to read 'Adrian Pole', written on a light-colored, textured background.

Adrian Leonard Pole