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Our Ref: J27035

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Attention: Mr. B Oberholzer

Dear Sir

ESKOM ENVIRONMENTAL IMPACT ASSESSMENT (EIA:12/12/20/944) FOR A PROPOSED NUCLEAR POWER STATION AND ASSOCIATED INFRASTRUCTURE: COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Your correspondence to Ms. Bongi Shinga of ACER (Africa) entitled "*Comment on Draft Environmental Impact Report and Review of Visual Impact Assessment (VIA) specifically*" refers.

Arcus GIBB (GIBB) acknowledges receipt of the above-mentioned letter. We thank you for your valuable comments and your participation in the Eskom Nuclear Power Station Environmental Impact Assessment (EIA) process to date. Your questions and comments concerning the Nuclear-1 have been noted.

Responses to your comments / questions are as follows:

Your comment (1)

Comment on the Bantamsklip Nuclear Facility has been provided at the request and on behalf of the Save Bantamsklip organization, and my comments are accordingly confined to the Bantamsklip site.

It should be stated at the outset that there is considerable confusion surrounding the selection of sites for the Eskom nuclear facility, and that accordingly the public participation process could be compromised.

For example, in an Executive Summary on the Draft EIR by Arcus Gibb (Version 1, Feb.2010, pg.11) the following is stated:

Although there are obvious differences between the significance of the impacts of the three alternative sites, all specialists agreed that there are no fatal flaws at any of the sites (provided appropriate mitigation is implemented) and that all three alternative sites are suitable for development of a nuclear power station in time, given sufficient mitigation of impacts. Although the current application is only for a single nuclear power station, the assessment confirmed that all sites are suitable for the construction of nuclear power stations.

My understanding from various notices received is that all 3 sites are being considered for nuclear power stations (NPS), while from the above statement, the public could be lulled into believing that only one site is being considered. The findings in the Visual Impact Assessment (VIA) do not necessarily indicate that all 3 sites are suitable for a Nuclear Power Station, as will be discussed in more detail.

The same Executive Summary by Arcus Gibb (pg. 11) further states the following:

The Bantamsklip alternative would be R 8 billion less cost effective than either of the other two sites. Despite the positive benefits that could potentially be realised through conservation of the northern portion of the site, bearing the cost and integration factors in mind, the Bantamsklip site was regarded as the least preferred site alternative and was removed from further consideration for this application.

This latter statement conflicts with the previous statement, and with the notices informing that all 3 sites are intended for nuclear facilities. It therefore needs to be made clear whether Bantamsklip is still a potential site. These conflicting statements tend to create smoke screens and confuse the public.

Response (1)

The original application[1] submitted to the then DEAT in May 2007, and the amended application dated July 2008, was an application to commence with an EIA process for the proposed construction, operation and decommissioning of a single power station, referred to as "Nuclear-1". During the Scoping Phase of the environmental authorisation process, five sites were assessed as alternative sites and were compared in order to identify a single preferred site for the location of Nuclear-1.

The Scoping Phase of the EIA highlighted that two alternative sites i.e. Brazil and Schulpfontein, would not constitute reasonable and / or feasible site alternatives for Nuclear-1 based on limited local demand and the lack of existing electricity transmission corridors associated with the these sites coupled with the severe time constraints associated with Nuclear-1's development. Eskom Transmission Planning Division performed high level studies of the integration into the South African electricity supply system of a large power station at each of the five coastal sites. These studies included an assessment of the contribution to the transmission network stability, the contribution of the electricity supply to and the distance from the major load centres, the transmission infrastructure that would be required and the time required for the integration at each of the respective sites.

Thus, Brazil and Schulpfontein have been excluded from further consideration during the detailed EIA Phase[2] of the EIA process. However, the Scoping Report explicitly stated that the exclusion of Brazil and Schulpfontein from the EIA Phase did not preclude Brazil and Schulpfontein from the development of power stations in future.

The comments of the Department of Environmental Affairs and Tourism (DEAT) (now the Department of Environmental Affairs) on the Final Scoping Report, received on 19 November 2008, approved of the recommendation to exclude Brazil and Schulpfontein from further assessment during the EIA Phase of the EIA.

It has always been Eskom Board's intention to construct more than one nuclear power station and this has been communicated from the project announcement public meetings. It was stated from the onset of the EIA process that all original five sites identified during the Nuclear Site Investigation Programme (NISP) will be considered for the development of power stations, as far as they are deemed feasible by the EIA process. This is part of the long-term power generation strategy for South Africa. Although the initial application, by Eskom Holdings Limited, was for only a single site, during 2009 Eskom announced its intention to amend the application in order to apply for authorisation of all three sites (Duynefontein, Bantamsklip and Thyspunt). The rationale for a combined application for all three sites was based on Eskom's decision to pursue its strategy to develop a fleet of nuclear power stations on the sites identified through the Nuclear Site Investigation Programme (NSIP) undertaken during the

[1] The submission of an application to the competent authority is the first step in the EIA process. The application is made in order to register the project with the competent authority and obtain permission to proceed with the EIA process.
[2] EIA Phase used interchangeably with EIA Phase throughout this document and Issues and Response Reports (IRRs).

1980s. The intention to submit a combined application was based on the probable amendment of the EIA Regulations[3]. These amendments (i.e. the EIA Regulations 2010) were promulgated and came into effect on 02 August 2010. Prior to this date Eskom announced that it would remain with the original application for a single nuclear power station.

This application is therefore progressing as per the original application for authorisation of a single nuclear power station at a single site. Should Eskom wish to develop a nuclear power station on another site, besides the one authorised through the current application, a separate application will need to be submitted to the DEA. Eskom has stated publicly that it intends to do so.

Bantamsklip, although not the preferred site for the Nuclear-1 EIA Application, is still considered a site suitable for the construction of a nuclear power station in future, as Eskom may decide to pursue this option.

Your comment (2)

The Visual Impact Assessment (VIA) for Bantamsklip

As the author of the "Guidelines for Involving Visual and Aesthetic Specialists in EIA Processes", prepared for the Provincial Government of the Western Cape, I found the VIA Report very difficult to follow. I also found it to be somewhat incomplete and inconclusive in its recommendations as explained below.

Incomplete Description

Areas of concern in the VIA include the perceived lack of knowledge of the area and its overall landscape significance and tourism importance. This is borne out in the sections dealing with the description of the receiving environment, (Pages 12 to 23).

For example, a fairly mechanical description of the topography, vegetation, landscape character and land use etc. is given for the Bantamsklip area. Nowhere does it mention any of the following:

- that the site has a "very high landscape significance" rating based on recent studies including a landscape character analysis in the Overstrand Heritage Survey (Baumann, N. 2009), a report which has been adopted by the Overstrand Municipality and is now with Heritage Western Cape;

- that besides the obvious vegetation types and Port Jackson, the area is recognized as a botanical hotspot in South Africa and the world, and in the words of Prof.Cowling, worthy of being proclaimed a World Heritage Site;

- that the site and surrounding area consists of a number of scenic routes, including awhale route, a shark route, a fynbos route, a wine route, a birding route and an art route;

- that the scenic mountains, coastline, estuaries, rolling countryside and vineyards, seen together, make the Overstrand a recognised 'garden route' and holiday destination;

- that the area includes a large number of nature and marine reserves, and abuts the Agulhas National Park to the east;

[3] Section 15(2) of the proposed amendments to the EIA regulations stated: "*If an applicant intends undertaking more than one activity of the same type at different locations within the area of jurisdiction of the competent authority, different applications in respect of the locations must be submitted, but the competent authority may, at the written request of the applicant, grant permission for the submission of a single application in respect of all those activities, whether or not the application is submitted on one or more applications forms*."

- that the psychological effect of having a nuclear facility in the vicinity would override the usual visibility indicators in relation to distances from the proposed Nuclear Power Station;

- that the tourism industry is the lifeblood of the area's economy and its largest employer, and that tourists are not likely to return to an area having an industrial type nuclear facility, with power lines draped across the landscape from pylons, nor that the altered landscape could conceivably result in the collapse of tourism in the local area;

- that the proposed Nuclear Power Station at Bantamsklip would have a disastrous effect on property values in the area, almost regardless of distance from the Nuclear Power Station, and that for many people these properties are their pension.

My understanding of visual impact assessments is that these considerations are supposed to be identified, as they would influence the visual significance ratings. Also, It would be appropriate in certain cases to attribute a "very high" rating, rather than just "high" to provide a more accurate distinction.

Response (2)

- It is noted that recent studies have found that the Bantamsklip area is “high in landscape significance”. Baumann’s paper was published in December 2009. The VIA report was completed in November 2009, prior to the report by Bauman being made available.

- The special characteristics of the landscape are known to the author and this is reflected in ratings given to the assessment criteria.

- The method of assessment of impacts was provided by the lead consultant for the reason that when comparisons were made of levels of impacts, this was made from a common baseline.

- The high value of significance of the visual impact by definition means that the visual impacts at this site are very important for decision-making.

- All of the characteristics of Bantamsklip are social, vegetation, tourism, property values and their significance are mentioned in specialist reports and conclusions have been made. To repeat in detail the characteristics in the VIA was not considered necessary. However mention will be made of them in the report.

- The comment on the effect of the nuclear power station on property values is not part of this report. However, at Duynefontein the property values have increased since the construction of the Koeberg Nuclear Power Station, primarily as a result of restrictions of densities around the power station for emergency planning purposes.

- The psychological effect of the nuclear power station’s presence – This was acknowledged in the VIA report. However, the distance of 5 km from Pearly Beach would reduce the visual impact and hence the psychological presence.

- The number of residents of the area that will see the nuclear power station in their view is small and almost all houses in Pearly Beach (5 - 10km from the nuclear power station) and Fransekraal (15km from the nuclear power station) face the sea. Thus, there is limited direct (“in the face”) views of the plant.

- Most of concern about the visual impact has to do with the power lines that radiate from the nuclear power station. The assessment of the visual impact of this component of the project is

not part of the scope of the study. The separate study on the visual impact of the transmission lines should be referred to.

Your comment (3)

The section on 'Climatic Effects on Visibility' (Pg. 22) has a number of inaccuracies for Bantamsklip (including wind directions). In addition, the implication that the Nuclear Power Station will be less visible during the winter months (April to October) is ludicrous, given the typical Mediterranean climate of the area.

The comment that the NPS will be less visible from the R43 because of the dense stands of Port Jackson shrubs (Pg. 50) is hardly relevant, as the stands could disappear overnight as a result of fire, and, as indicated, and would be removed over time through mechanical or biological methods. The conclusion that "the views of the Bantamsklip Nuclear Power Station are reduced by the screening effect of tall vegetation…" (Pg. 56) is not therefore not applicable (sic).

The ratings given for visibility in this section could be questioned, as any visibility of the Nuclear Power Station and power lines are likely to have significance, regardless of distance, because of the psychological effect of this visibility. This same argument applies to the ratings for visual intrusion on landscape character and sense of place (Pg. 55).

The under-statement of the landscape characteristics in the current VIA are accompanied by an under-statement of the actual visual consequences of the Nuclear Power Station and related infrastructure, the various electrical substations and pylons in particular. One only has to travel through Somerset West on the N2 to get an idea of what this wired landscape will look like. This should be documented in order to give the public a better understanding of what is likely to occur.

Response (3)

With respect to the climatic effects of visibility – the information presented in the report was taken from reports on the three sites that were prepared by consultants for Eskom and provided by Eskom. The more recent data presented in the Air Quality Study shows a variance in prevailing wind direction and does mention the occurrence of fog. This latest site specific data is only 20 months old. The VIA report will be updated to include the recent climatic data and included as Appendix E19 of the Revised Draft EIR.

The visibility of power lines does reduce significantly with the distance – the further the distance the less the visibility. The statement about the psychological effect of visibility is noted, but not agreed with. If an element of visually disturbing infrastructure is not visible, then the psychological presence of that infrastructure is experienced less intensely.

Your comment (4)

Conclusions and Recommendations:

Section 5: Conclusions and Recommendations (pages 119 to 122) state that "The assessment of the visual impact of the NPS indicates that the consequence and significance ratings for … Bantamsklip are high …" (in both instances). It is worth noting that high in EIA parlance usually means a fatal flaw.

In Table 8 (Pg. 57) Summary of Intensity and Significance of Visual Intrusion for the Bantamsklip NPS, the following note is given: "The significance will remain the same as without mitigation".

According to the Report, "Visibility from communities will be high, landscape character and sense of place will be irrevocably changed, visual intrusion will be significant, high quality scenic coastal views will be intruded upon, and the visual intrusion at night is considered to be high"… Importantly, the

report further states that "The large scale and prominent location of the NPS on the coastline allows little opportunity for effective visual mitigation".

The Report admits (rightly) that "The visual impact mitigation measures proposed for the NPS will therefore only reduce its visual intrusion marginally within a 5km radius". The mitigation proposals include setting the NPS 200m back from the coast, colour variation of the large structures, minimisation of light intensity and light spillage, and the construction of screening elements, berms, planting and fences. My own opinion is that these mitigations pale into insignificance given the nature and scale of the NPS and associated power lines, spoil heaps, access roads and high meteorological masts etc.

Notwithstanding all of the above findings, the Report fails to make a final conclusion or recommendation about the obvious fatal flaws resulting from the visual impacts, but merely states that the above mitigations be used to reduce visual impacts. **The VIA Report does not state that the site is suitable for the development of a nuclear power station, as claimed in the Executive Summary by Arcus Gibb above.**

Response (4)

The reports concluded that that visual impact of the Nuclear Power Station is high and the high significance and consequence rating requires a re-assessment of whether or not the plant should be constructed. This is clear from the definition provided for significance. The process followed had to be rigorous in order for the logic to be demonstrated.

The finding of the VIA study is aligned with the concerns received, being that the nuclear power station will have a high and significant visual impact on the local and regional setting.

Visual mitigation measures at any scale are effective to some degree and therefore it is worthwhile to implement them.

Your comment (5)

The VIA report tends to fall short in the following areas:

- It is unnecessarily long, and the structure and arguments are difficult to follow;
- It lacks proper understanding of the character and significance of the Overstrand landscape and its tourism importance;
- It inadequately describes the actual visual ramifications of a Nuclear facility with related infrastructure that can be expected on the ground;
- It completely overlooks the psychological effect of the proposed Nuclear Power Station, which will be felt much further afield than nearby communities such as Pearly Beach;
- It under-estimates the potential visual impacts resulting from the Nuclear Power Station, including those on tourism and property values;
- It fails to take into account all the previous and current spatial planning and guidelines for the area, and the incompatibility of the proposed Nuclear Power Station with these guidelines;
- It does not justify why significance ratings come down after mitigation, particularly when it is clear that these can only have a 'marginal' (or cosmetic) effect;
- It does not provide an adequately conclusive statement on the findings, except to say that the visual impacts will have 'high significance'.

It is recommended that the VIA Report be reviewed by an independent assessor with proper knowledge of the area, and that all the relevant information be included in the final version. The Report needs to be both more concise and decisive in order to make clear the magnitude of what is being

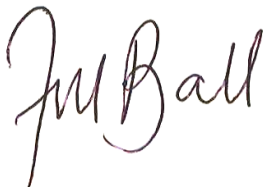
proposed, and the potentially devastating effect this will have on the landscape character (or sense of place) of the Overstrand area, on its residents and on the local economy.

Response (5)

Your comments are noted. The results of the VIA do concur with the concerns expressed despite the request for more detail. More detail on site characteristics will be added to the revised VIA.

Should you have any queries with respect to the above please do not hesitate to contact Arcus GIBB.

Yours faithfully
For Arcus GIBB (Pty) Ltd



Jaana-Maria Ball
Nuclear-1 EIA Manager