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Attention: T. Naicker

RE: SPECIALIST EXTERNAL REVIEW OF THE TERRESTRIAL VERTEBRATE FAUNA IMPACT STUDY COMPILED AS PART OF THE ENVIRONMENTAL AUTHORISATION PROCESS FOR THE NUCLEAR 1 PROJECT, WESTERN CAPE

Scientific Aquatic Services was requested to undertake a specialist external review of the terrestrial vertebrate fauna impact study compiled as part of the environmental authorisation process for the Nuclear 1 project by JAH Environmental Consultancy undertaken by J.A. Harrison, M. Burger and S. Stoffberg, Dated January 2010. The objective of the review was focused on the following aspects:

- Assess the document/ report in terms of its fulfilment of the Terms of Reference set;
- Consider whether the report is entirely objective;
- Consider whether the report is technically, scientifically and professionally credible;
- Consider whether the method and the study approach is defensible;
- Identify whether there are any information gaps, omissions or errors;
- Consider whether the recommendations presented are sensible and present the best options;
- Consider whether there are alternative viewpoints around issues presented in the report and if these are clearly stated;
- Consider whether the style of the report is written so as to make it accessible to non-specialists, technical jargon is explained and impacts are described using comparative analogies where necessary; and
- Report on whether normal standards of professional practice and competence have been met.

The following points highlight the findings of the review

Less attention was paid to formatting and grammatical issues as these have no bearing on the scientific validity and independency of the work done, however where these issues were identified during the review process it was noted and are indicated in the bullets below:

1. Overall the report is extremely well written, logically compiled and well presented. The report provides detailed description of the alternatives assessed, with the authors displaying an in depth knowledge of the subject material;
2. Acronyms list needs to be updated with those used within the report;
3. Use of tables for displaying co-ordinates in method section would provide uniformity;
4. Some of the legends of figures are not clear, with some of the scale bars being cut off, possibly also cutting off sections of the maps as well;
5. Use of bold letter within the Duynefontein sensitivity section (pg29) highlighting medium impacts detracts from the higher level impacts mentioned before that point; and
6. Although not critical, the report would come across neater if all maps had borders, and common species names were placed within brackets following the scientific name.

Assess the document/ report in terms of its fulfilment of the Terms of Reference set and that the report is entirely objective. Consider whether the report is technically, scientifically and professionally credible.

It is the opinion of the reviewer that all aspects as stipulated within the Terms of Reference were adequately addressed. Findings, background research and recommendations are based on sound scientific reasoning and information in combination with specialist knowledge of each alternative and habitat assessed. The document can therefore be considered objective, concise and a true representation of the faunal ecological aspects pertaining to each site.

Consider whether the method and the study approach is defensible. Identify whether there are any information gaps, omissions or errors.

It is noted that the field assessments were carried out through the time period of 2007 to 2009, and subsequent report writing started in 2010. Consideration and caution need to be taken in this regard as five years have passed since the last field assessment. This time span is sufficient in length for considerable changes to have occurred in species abundance and/or diversity, and it is suggested that a follow up site assessment be conducted in order to verify the previous reports results. Species and/or habitat loss/ increase may have occurred in the interim time between the last assessment and the current date, which would alter results and may change the outcome of area sensitivities and infrastructure placement.

The methods used to assess vertebrate species are considered to be relevant and are considered best practice in terms of field surveys.

Consideration needs to be given where it is stated that *Panthera pardus* (Leopard), as noted to possibly occur in the Thyspunt project site, is considered to be Near Threatened by the IUCN, converse to the statement within the report that it is not threatened. *P. pardus* is a much persecuted species throughout South Africa. Continued persecution and habitat loss of this species will invariably result in a reclassification of its current near threatened status.

Suitable and varied trapping techniques were utilised in order to assess a large diversity of vertebrates within the respective sites.

By considering the above, it is the opinion of the reviewer that the report can be considered up to date with current endangered species criteria, and can be considered representative of the alternative sites. Furthermore, present results can be used as baseline information against which future monitoring results can be compared, providing a long term repeatable overview of impacts which would be defensible.

Consider whether the recommendations presented are sensible and present the best options.

The recommended vertebrate monitoring programmes, mitigation measures and associated sensitivity maps are considered to be concise and cover all aspects associated with the project, and are in line with accepted industry standards and best ecological practice.

Consider whether there are alternative viewpoints around issues presented in the report and if these are clearly stated.

The impact assessment allowed for in depth assessment of the different layouts of the Nuclear Power Stations and all the associated infrastructures as stipulated by the Terms of Reference.

The summary provided as part of the impact assessment also gives a clear description of negative and positive impacts that can be expected.

A summary table illustrating the impact assessment ratings may have been useful for comparative and quick reference purposes, where comparisons of the significance of similar impacts are presented next to each other. It is noted that for Thyspunt there are additional impacts and issues highlighted with regard to faunal habitat and species, with the possibility of subspecies occurring in the area. By presenting the significance of these additional impacts in relation to the other two sites, the sensitivity of the site will be highlighted.

Consider whether the style of the report is written so as to make it accessible to non-specialists, technical jargon is explained and impacts are described using comparative analogies where necessary.

The baseline information provides an in depth discussion on the findings and limitations associated with each site. Findings and interpretations are suitably represented and discussed in an understandable manner.

The acronyms list needs to be updated with those used within the report. However, overall the report is set out in a logical way, with findings and results being easy to interpret, self-explanatory and should be easy to understand by the general public.

Report on whether normal standards of professional practice and competence have been met.

Based on the findings of this review, it is the opinion of the independent reviewer that the information presented in this report is very accurate and the results are reliable. The impact assessment is considered accurate and covers all possibilities and likely outcomes related to construction and operational activities of such a project. Furthermore, mitigation measures are comprehensive and well explained, detailing actions that are necessary to manage all possible impact based outcomes.

All available and relevant background data was utilised in order to form a better understanding of each site and the faunal species and habitats therein.

Professional Registration Details

The terrestrial vertebrate fauna impact study compiled as part of the environmental authorisation process for the Nuclear 1 project by JAH Environmental Consultancy was reviewed by Mr. C. Hooton and Mr. S. van Staden, credentials presented below.

Mr. S. van Staden is a professional member of the Southern African Council for Natural Scientific Professions (SACNASP) (Reg. No. 400134/05) (registered Ecological Sciences). Mr. C. Hooton obtained his BTech degree in conservation biology, has acquired years of experience working for wildlife research projects, focusing on but not limited to large carnivore research, and is currently employed as a faunal ecologist at a specialist environmental consulting firm focusing on terrestrial faunal species.

Please don't hesitate to contact me should you require clarity about this review or have any other queries.

Yours Faithfully,

Digital Documentation Not Signed For Security Purposes

Chris Hooton