

Our Ref: J27035

21 December 2010

Attention: Mr. J Oosthuizen  
St. Francis Bay Residents' Association  
On behalf of the Thyspunt Alliance

**Johannesburg**

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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) dated 26 June 2010 refers.

Arcus GIBB (Pty) Ltd (GIBB) acknowledges receipt of the above-mentioned letter. We thank you for your valuable comments and your participation in the Eskom Nuclear Power Station (Nuclear-1) 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)**

**Preamble:**

A careful review of the Agricultural Impact Assessment prepared by Golder Associates/ Imani Development (SA) (Pty) Ltd was done in order to evaluate whether the conclusions and recommendations made are valid. The composition of the report, its supporting tables and calculations were appraised in order to see whether the report as a whole was meaningful and as such accurate conclusions could be reached from this study. It must be remembered that according to the authors "The primary objective of their study was to measure the nature and magnitude of impacts on agriculture emanating from the increased production activities in the Eastern Cape and Western Cape due to the construction of a nuclear power station". Under the heading Methodology the authors' state that the report has three objectives namely:

- Describe the status quo in terms of the agricultural production in a 16 km radius of the proposed sites;
- Determine the potential impacts on agricultural production that would occur as a result of the construction and operation of a nuclear power station;
- Identify and recommend mitigation measures to reduce or offset perceived negative impacts.

The great significance of the Assessment however, is that its findings are used in the overall weightings when a site is selected.

**Response (1)**

Your comments are noted and acknowledged. It is important to note that not only the assessment of significance in terms of the potential impact on the agricultural environment is used for the overall site assessment. The findings of all of the specialist studies (Appendix E) commissioned are utilized for the

integrated assessment. The responses that follow relating directly to the technical aspects of the assessment were obtained from the agricultural specialist from Golder Associates.

**Your comment (2)**

**Content of the Agricultural Impact Assessment**

In terms of the three objectives of the report as listed above, the report fulfilled the first objective to a degree but was *lacking* when it addressed the potential impacts and mitigation measures.

While the Agricultural Impact Assessment focused heavily on the Theoretical effects of potential impacts of unintentional or accidental releases of radio active material, it lacked substance with regards to the true Agricultural Economic Potential of the three sites being analyzed. Almost half of the 52 page report consisted of pictures, and the impact on the environment should a nuclear disaster occur.

It should be noted that although rainfall, temperature and broad soil patterns were discussed, the relationship between these three elements was not spelt out when conclusions and recommendations were made. Despite these failings the Assessment did however acknowledge the fact that the Thyspunt area contributed twice as much to agricultural output that the next most productive agricultural environment namely Duynefontein. (See Table 2.9)

The interpretation of the assessment was further hampered by the fact that the tables supplied were in most instances incomplete, as key livestock figures were missing. See Appendix 1 from which one assumes Table 2.9 has been generated. One would have liked to have seen a more complete table listing the total head of livestock, hectares of produce and total annual turnover per site being analyzed.

**Response (2)**

The methodology used in the Agricultural Specialist report was to undertake a survey of every farm within a 16 km radius of the proposed site of a nuclear power station. Each farm was visited and information on the operations (type and extent of crops produced, number of livestock, etc.) of the farm was collected. Where, in a few cases, exact information was not available (e.g. number of livestock on a particular farm), an estimate was undertaken (e.g. given the average carrying capacity in the area an estimate of the number of livestock was made). Where possible the farm owners and/or the farm managers were interviewed. A summary of this information collected can be found in the Appendix of the report. The Agricultural Assessment specialists have copies of the original interviews undertaken, but as is standard practice in a project of this kind, the identities of the interviewees are kept confidential. In addition to the above, an audit was undertaken on all agricultural infrastructure within a 20km radius of the proposed sites. This included grain silos, dairies, etc. that support agricultural production in the area. The consultants believe that the above information provides enough detail to be able to accurately estimate the current and potential agricultural production in the affected areas.

As stated in the Agricultural Assessment (Appendix E 21 of the Draft EIR), the areas under consideration can be considered to be fully developed agricultural areas and therefore the current production in these areas gives the potential agricultural production of the region. Therefore, it was not considered necessary to undertake a detailed resource survey (including rainfall, soil, temperature, etc.) to establish the potential for the area, although the information on each resource is given.

There are a number of maps and figures in the report. However, this is the most efficient way of summarising and presenting the information that has been collected, rather than giving pages of descriptive text.

During the agricultural specialist study a number of stakeholders, including the farm owners and/ or managers and operators of other related agribusiness, such as the dairy factories, were consulted and information obtained from them.

### **Your comment (3)**

The report also fails to include any table or research that illustrates exactly how the authors arrived at one of the key assumptions of the Assessment namely with the advent of the construction of the nuclear power plant, Thyspunt farmers gross value of production would increase by 10 to 15%, Bantamsklip by <5% and that at Duynefontein there would be no significant impact. This could be regarded as a fatal flaw in the impact assessment.

### **Response (3)**

The 10-15% market increase is a potential positive impact that will be dependent on the decision of the farmers whether or not to take advantage of potential opportunities that may arise. These potential opportunities will be in the form of increased number of people in the region as a result of the construction of Nuclear-1 (which will lead to an increase in demand for food products), an increase in the economic activity in the region (as a result of the multiplier effects of the proposed development), and the improved infrastructure that will result as a consequence of the development.

Thyspunt is a relatively high agricultural production area, which is illustrated by the estimate of total agricultural revenue from the region. The dominant farming activity is currently dairy farming with farmers supplying large dairy factories who then distribute the milk locally and nationally. An increase in the demand for pasteurised milk and milk products locally will increase the demand for raw milk in the region. Dairy farmers have a number of options available to increase production other than expansion which include an improvement in management and an improvement in the nutrient value of planted pastures which will result in an increase in milk produced per milking cow. Other market opportunities potentially could open up, such as the selling of raw milk or maas directly to the consumer.

Alternatively farmers can also switch production as has been done in the past. The region has moved from a predominantly wheat growing area to a dairy region mainly as a result of market forces. For example, some farmers may switch to vegetable production if they believe this will be more profitable.

Given the above, it is estimated that the potential increase in the market for agricultural produce at Thyspunt could be 10-15%. The lower percentage potential increase at Bantamsklip is due to the scarcity of water in that region. No increase is predicted at Duynefontein due to the fact that this site is located in a large urban area and the opportunities for increased agriculture are very limited.

### **Your comment (4)**

#### **Conclusions and Concerns that need to be raised**

It is universally agreed that *the function of land use planning is to guide decisions on land use in such a way that the resources of the environment are put to the most beneficial use of humankind while at the same time conserving those resources for the future.* In line with this thinking:

- It appears inconceivable that the area with the most agricultural potential be allowed to be exposed to inappropriate industrial development in the area. The influx of workers and their families will necessitate urban and infrastructure development.
- It is very significant that this study is excluded from addressing and fails to emphasis (sic) that two major transmission lines will cut through prime dairy pastures which have the highest agricultural potential of any of the other sites being evaluated. Not only is this a security risk as a servitude would have to be awarded to Eskom but it would also pose an infection risk should there be an out break of any bovine disease.

#### **Response (4)**

The development of further power stations to satisfy South Africa's need to additional power is a given. It is a question of where to develop this. Any form of power generation will inevitably have impacts on land use and the land use character of an area. Even wind power has significant visual impacts, which completely transform an area's visual character, arguable to an even greater extent but definitely over a larger area than a nuclear power station.

Whilst the Agricultural Specialist recognises that the transmission lines could potentially have a negative impact on agriculture, the impact related to the transmission lines does not fall within the scope for the Nuclear-1 EIA process. ***However the transmission EIA preliminary findings are that there may be a limited impact on agricultural production / productivity due to the limited footprint of the transmission towers and due to the fact that most agricultural activities can continue to take place under the lines.***

#### **Your comment (5)**

- It is reckless that the study does not address the issue of stock theft where a farm with 6500 sheep on it falls within the Thyspunt area. Over and above this numerous other substantial sheep farms occur within a 30 km radius. Surely this should be listed as a potential negative impact?
- As a result of the increased influx of people during the construction period there may be an increase in stock theft and related crime.

#### **Response (5)**

The impact on criminal activities (including stock theft) is discussed in section 3.6 of the Social Impact Assessment (Appendix E of the Draft EIR).

#### **Your comment (6)**

It is unclear as to how the authors came to the conclusion made in the executive summary that Thyspunt farmers gross value of production would increase by 10 to 15%. With the exception of one small dairy farm, all milk produced in the area is sold to national distribution and processing companies. Dairy farms are running to full capacity. The local market growth would thus have no positive impact on production or sales.

#### **Response (6)**

Please refer to the response to comment 3.

#### **Your comment (7)**

**Finally** it is not possible to understand how the authors came to the conclusions reached in their final summary. The quantum leap taken to assign positive impacts on the various sites are not documented, major risks such as stock theft are not dealt with nor is the impact of human settlement in the area fully spelt out. It is thus extremely important that the Agricultural Impact Assessment is weighted correctly when a site selection is made.

**Response (7)**

Your comments are noted. The Agricultural Assessment is currently being reviewed and the revised report will be made available for review as part of the Revised Draft EIR. The Agricultural Assessment was not regarded as a key decision-making factor in the assessment of the preferred alternative in Chapter 9 of the Draft EIR. However, the economic impacts on the agricultural sector have been taken into account in the Economic Impact Assessment (Appendix E17 of the Draft EIR). This study was weighted and regarded as a key decision-making factor.

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

A handwritten signature in black ink that reads "JMBall". The signature is written in a cursive, flowing style.

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Jaana-Maria Ball  
Nuclear-1 EIA Manager