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Attention: Mr. Tom Daines
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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. Bongji Shinga of Acer (Africa) dated 07 June 2010 refers.

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

The document that was given to me by Mr Rob Andrews to comment on did not impress me. There was a good literature review with respect to what happened at Chernobyl and how the environment was affected by the radio activity that was released in the area and how it influenced agriculture. Basically if a nuclear power plant accident occurs agriculture is badly affected. It was interesting to see that all ruminants eating grass had to be removed from the area. Crops could not be produced because of contamination but pigs and chicken farming operations could continue. Then the classic statement that these animal enterprises could not be run as the operators could not stay in the area due to the radio activity.

The description of the area's climate, soils and present production was well covered but the keys to the various maps were unreadable so that data presented in diagrammatic form could not be assessed. Summary of agricultural production presented was interesting and emphasised the importance of agriculture to the economy of the 16 and 20 km area surrounding the proposed nuclear development at Thyspunt. Figures presented in Table 2 – 9 (page 33) have been calculated from an agriculture survey conducted in the area by the consultants confirmed that agriculture not only generates an estimated income to the Kougha area of R150 million from sheep, beef and dairy production but it implies that agriculture is a major employer of labour in the area. This last factor is very important because of the high unemployment rate in the area.

According to the consultants a nuclear power station development would benefit the farmers during the construction phase as the labour force employed on site would increase the market for agricultural products. The problem is can agriculture production be increased in this zone surrounding Thyspunt? It is my opinion that only limited production can occur in the zone because:

- (1) Area is already overstocked

- (2) Lack of available water for increased irrigation
- (3) Variable markets for agricultural production
- (4) Uneconomic value of agricultural ground
- (5) Competition from other agricultural areas

Response (1)

Your comments are noted. The quality of maps will be revised in order to make the keys to various maps readable so that data presented in diagrammatic form can be assessed. The agricultural impact assessment identifies a number of ways in which agricultural productivity can be improved.

Your comment (2)

Consultants never investigated if there was potential for increased production by determining if natural resources were still underutilized. Extra workers would require extra food but local farmers would also have to compete against the importation of products from outside areas. The Gamtoos is renowned for its vegetables and fruit. Meat is already being imported to the area from other farming areas of the Eastern Cape and milk is exported to other areas.

Response (2)

Your comment is noted.

Your comment (3)

It is my opinion that the report does not justify the statements that farmers would have a temporary economic benefit if the power station is constructed at Thyspunt. The farmers would definitely benefit with improved infrastructure, especially with roads that are a constant problem with moving of agricultural products. As pointed out by the consultants the improved road system would cut down dust but at the same time complicate the transport of produce due to increased daily traffic on the new roads and the movement of heavy equipment and supplies needed for the construction of the new power station. However, once the construction was completed the local residents of the area would gain by having better roads.

I disagree with the consultants about the labour question. It is a well known fact that when factories and construction move into an area all the younger educated members of the farming area move to the development to earn more money and have better prospects.

We have made this point in the Agricultural report however the Social report states that it is not going to be an issue.

The result is that the older less educated members remain behind causing major problems. As a result farm wages and conditions of employment have to be improved as trained members are required in agriculture to work with the sophisticated equipment. When labour becomes a major factor smaller farms can no longer compete and very often they close their operations and put more workers on the unemployment roll.

I definitely rate the influence of the new development as being counter productive in the farming area.

My final comment is that nowhere do the consultants mention whether this development will be a standard nuclear plant or a pebble bed nuclear unit but base their findings on the standard nuclear power plant and its influence on the environment. Can we accept that there will be no difference between the two methods of power generation on the environment?

NOTE

It was reported on the radio that the pebble plant development has been cancelled and that the team of 800 will be made redundant. This means that any development at Thyspunt will be based on the standard nuclear plant as erected in the Cape.

Response (3)

We consider the Agricultural Impact Assessment and Social Impact Assessment to be based on the appropriate data and local knowledge and therefore have confidence in their predictions. Any apparent differences between the agricultural impacts assessments with respect to the movement of farm workers out of agriculture is because the Agricultural Assessment considers farming from a technical perspective, whilst the social impact assessment considers the impacts from a social perspective. The introduction of opportunities to develop people that have previously been limited to general work and or agriculture is very positive from a social perspective, such changes may stimulate changes in the agriculture sector which could be positive or negative depending on how land owners respond to the changes.

Generation III Pressurised Water Reactor (PWR) technology, which uses water as a coolant and moderator, was chosen by Eskom for Nuclear-1. PWRs are the most commonly used nuclear reactors internationally. Eskom is familiar with this technology from a health and safety, as well as an operational perspective, having used it for the past 25 years at the Koeberg Nuclear Power Station. A nuclear power station of standard Generation III design is favoured by Eskom due to the operational simplicity and rugged design, availability, reduced possibility of core melt accidents, minimal effect on the environment, optimal fuel use and minimal waste output.

Detailed descriptions of the proposed nuclear plant are not available, as a preferred supplier has not been selected. The approach used in this EIA process has been to specify enveloping environmental and other relevant requirements, to which the power station design and placement on site must comply. The enveloping criteria have been developed to ensure that they represent the most conservative parameters associated with the various plant alternatives within the PWR technologies.

It is correct that the PBMR plant has been shelved. The intention was never to utilise PBMR technology for Nuclear-1. The PBMR application was for a demonstration plant only at Koeberg.

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



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Nuclear-1 EIA Manager