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Thyspunt Alliance
St Francis Bay Resident's Association
St Francis Kromme Trust

Dear Mr Thorpe, Thyspunt Alliance and its members, the St Francis Bay Resident's Association and the St Francis Kromme Trust

RE: ESKOM EIA CONCERNS FOR THE PROPOSED NUCLEAR POWER STATION AND ASSOCIATED INFRASTRUCTURE (DEA Ref. No: 12/12/20/944)

**COMMENT ON THE AGRICULTURAL IMPACT ASSESSMENT
THYSPUNT NUCLEAR 1 -DRAFT ENVIRONMENTAL 2nd DRAFT IMPACT ASSESSMENT
REPORT**

Prepared by: Trudi Malan & Cliff Harrington on behalf of the Thyspunt Alliance.

Comment 1:

We would like to request a copy of the written review of the Agricultural Impact Assessment as we are of the opinion that the study is fatally flawed.

Response 1:

Your comments and request are noted. All initial specialist studies (in 2008/9) were indeed reviewed by peer reviewers, who are recognized specialists in their fields. The peer reviewer for the agricultural specialist study was Garry Paterson of the Agricultural Research Council, who has extensive experience of agricultural impact assessments. The methodology for agricultural assessment and Terms of Reference (ToR) were reviewed and deemed to be acceptable by the reviewer, at this stage of the EIA process. No additional peer reviews were conducted for the agricultural specialist study.

Consideration needs to be taken that there have been some changes to the agricultural specialist's original ToR during the study. The initial ToR for the agricultural specialist study emphasized the environmental impact on the actual site (footprint) of the proposed nuclear plant and on a land survey/audit of 16 km radius and an agricultural infrastructure audit in a 20 km radius. These aspects have been extensively detailed in the Agricultural Specialist Report (Appendix E21 of the Revised Draft EIR version 2). The regional impacts on agriculture have been covered in the economic impact report.

Comment 2:

We would like a scientific and factual explanation from the practitioner as to how he reaches the conclusion that there will be a 10% - 15% increase in production at the Thyspunt site. He states:

"This potential economic benefit is based on the potential of a region to increase its agricultural production as a result of the potential increased demand within the region."

To merely state that there will be more people therefore farmers will be able to sell more produce is not based on facts but rather on perception.

The AIA practitioner provides the following explanation for his startling conclusion:



“Dairy farmers have a number of options available to increase production other than expansion. These include an improvement in management and an improvement in the nutrient value of planted pastures, which would result in an increase in milk produced per milking cow. Other market opportunities potentially could open, including the selling of raw milk or maas directly to consumers.

Alternatively, farmers may 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). Therefore, 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 could be 10-15%.”

Considering the above explanation we have the following questions:

Please list the possible management improvements that can be implemented as well as the cost implications of implementing these improvements?

Response 2:

In regard to the conclusion that there is the potential for agricultural production to increase by between 10 – 15 % in the Thyspunt area the reader is directed to the results given in the regional macro-economic model (Economic Impact Report – Appendix E17 of the Revised Draft EIR Version-1) where the total impact on agricultural production for the region (Eastern Cape) is estimated. The results are summarised in the following Table.

Type of Farming	Total - Impact on Production per Annum			
	Direct impact	Indirect impact	Induced impact	Total impact
	(R millions)			
Citrus farming	R 0.0	R 0.7	R 8.6	R 9.3
Sub-tropical fruit farming	R 0.0	R 0.0	R 1.3	R 1.4
Livestock farming	R 0.0	R 0.8	R 29.5	R 30.3
Dairy farming	R 0.0	R 1.7	R 22.1	R 23.8
Game farming	R 0.0	R 0.0	R 1.4	R 1.4
Forestry (Plantations)	R 0.0	R 5.3	R 1.7	R 7.0
Other agriculture	R 0.0	R 3.9	R 36.7	R 40.6
Agriculture - Subsistence	R 0.0	R 0.2	R 4.5	R 4.8
TOTAL AGRICULTURE	R 0.0	R 12.7	R 105.8	R 118.5

From the above Table it can be seen that as a result of the proposed development of Nuclear-1 it is estimated that agricultural production in the region (Eastern Cape) will increase by R118.5 million in total. The breakdown of the increase in demand and hence the increase in agricultural production of the different types of farming have been given in the Table. Given the main agricultural activities in the Thyspunt area if only livestock farming, dairy farming and other agricultural production is taken into account, the total increase in production is R98 million. It is reasonable to assume that given the production potential (especially in respect to dairy) of the area around Thyspunt that a conservative estimate of 20% of this increase in production could be taken up by farms in the Thyspunt region as they would have a comparative advantage (e.g. in regard to location, as their transport costs would be lower). This would give an estimated potential increase in production of R18 million per annum. It has been estimated that the total agricultural production of the region around Thyspunt is R150 million per annum and therefore this potential increase is within the 10 – 15% estimated.

An example of better management practices would be better record keeping that would lead to better cow selection which will ultimately result in an increase in milk yields. It should be noted that it is

stated in the specialist report that there is the potential for a 10 - 15% increase in production and not a 10 - 15% increase in profit.

Comment 3:

Provide the methods to be used to improve the nutrient value of the planted pastures and the cost related to these improvements?

Response 3:

Like all other businesses, farmers are continually looking for improving their efficiency and profitability in production. There are many references that show that improved pasture nutrition could increase production. An example of a reference is Tainton NM (1988) Veld and Pasture Management in South Africa. University of Natal Press, Pietermaritzburg, South Africa.

It needs to be stressed that this is an estimated potential increase in production and it would be up to the farmers in the region whether they are willing and able to take advantage of this potential opportunity.

Comment 4:

Indicate which areas in the study area would be suitable for vegetable production and provide the costs for the change from a dairy farm to a vegetable farm? Indicate which vegetables would be suitable to grow.

Response 4:

The scope and budget of the study does not allow for a detailed soil survey. However given the generalized soil survey presented in the Agricultural Impact Assessment (Appendix E21 of the Revised Draft EIR), it is reasonable to assume that a relatively small area of land would be suitable for vegetable production if the farmer of that specific land that is suitable would want to switch to vegetable production. Intensive vegetable production requires relatively small areas of land.

Comment 5:

Please indicate how you reached a figure of 10% to 15% in increased production.

Response 5:

Kindly refer to the response 2 provided above.

Comment 6:

With reference to the selling of maas and raw milk (unpasteurised milk), please note that it is against the law to sell maas and raw (unpasteurised milk) to the public due to the health risk.

These products can spread brucellosis and some herds in the area are not brucellosis free.

Response 6:

It is correct to say that it is illegal to sell unpasteurised milk and the wording in the text should read maas and fresh milk. The essence of the statement in the report is that the farmers could sell their produce direct to the consumer (i.e. they could establish a small dairy factory and sell maas and pasteurised milk direct to the consumer). This is a trend throughout South Africa where individual farmers are grouping together and establishing a dairy factory and selling their milk directly to retail outlets and consumers.

Comment 7:

We have consulted with all the major dairy farmers in the area and they are of the opinion that the report is utter nonsense. The area is a dairy producing area; most of the milk produced in the area is purchased and distributed by major milk processors who sell into the national chain, the positive influence is thus not relevant.

Response 7:

The potential increase in demand (see response to comment 2) for dairy products will be a regional (Eastern Cape) impact for the farmers that could potentially supply to the local markets (St. Francis, Oyster Bay, Humansdorp and Jeffreys Bay). Therefore, it remains the agricultural and economic specialist's expert opinion, that the increase will filter down to the Thyspunt producers even if they supply a national dairy factory that produces pasteurised milk and sells nationally.

Comment 8:

Climate Data:

The prevailing wind direction as indicated in this report is wrong. (Please see Addendum 1). We find this mistake very disconcerting. As an Agricultural expert the specialist should understand that wind conditions could play a major role in the production of agricultural produce.

Response 8:

The information on the wind direction given in the agricultural impact report has been taken from the Air Quality Report. The wind direction, as used in the Draft EIR and described in the Air Quality and Climate Assessment Report (Appendix E10) is correct, and is consistent with the wind roses for the area. Wind direction data is explained in details in Issues and Response Report 82.

Comment 9:

Impact Assessment:

“(4) Possibility of Nuclear Incident

The actual risk of an accidental release of radionuclides over and above normal operations will need to be verified in the overall risk assessment report. Given that the probability of an incident happening is very low, the discussion below must be seen in this context.”

We are all in agreement that the risk of a nuclear accident is low but the precautionary principle would hold that placing a nuclear facility in an area that produces 25% of the national dairy supply is still a risk, no matter how low the risk of a nuclear incident, there is still a risk and the impacts should be discussed.

Response 9:

The emergency evacuation zone is given as 3 km radius from the plant site and therefore this will have a minimal effect on agricultural production. This will need to be re-evaluated if the emergency evacuation zone is increased.

Comment 10:

The AIA does acknowledge the following:

“Therefore, in the event of a nuclear disaster with consequent nuclear fallout, the main concern is that milk will immediately be contaminated and within 24 hours enter the human food chain. Beef cattle, sheep and game that feed on contaminated grazing”

The mitigation method suggested “in the event of an accident dairy cattle will have to be removed from the area immediately” would not be possible if the number of dairy producing cattle in the area is considered.

Response 10:

In event of an emergency warning been given the dairy cattle can walk out of the 3 km evacuation zone. It is an assumption of the EIR that the evacuation zone will be no larger than 3km. Again, if the 3 km radius evacuation zone is increased, then this will need to be reassessed.

Comment 11:

The AIA suggests that the possibility of stock theft should be discussed in the Social Impact Assessment. We disagree with this statement. Stock theft is an integral part of farm management and should be addressed as part of the AIA.

Response 11:

The potential for stock theft as a result of the proposed development is rather a social issue and not an agricultural issue. If it is agreed by the social specialist that there would potentially be an increase in stock theft then this needs to be mitigated against by increasing security in the local area.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, appearing to be a stylized 'E' or 'S' followed by a flourish.

The Nuclear-1 EIA Team