

**THYSPUNT ALLIANCE**

**NUCLEAR 1**

**RESPONSE TO SECOND DRAFT ENVIRONMENTAL IMPACT REPORT**

**APPENDIX E 10, Section 2.3.3, p.68 – 72**

**AIR QUALITY SPECIALIST REPORT**

Response compiled by H.Thorpe and submitted on behalf of the St Francis Bay Residents' Association, the St Francis Kromme Trust and the Thyspunt Alliance

1. Introduction

The direction and strength of the wind in the area around Thyspunt is one of the key factors in determining the viability or otherwise of the site. As such it should have been the subject of its own special report. The fact that it has been relegated to a mere four pages, in an obscure place in a report which is ostensibly on air quality, indicates how inadequately this issue has been addressed.

Whilst a decision on this is the responsibility of the National Nuclear Regulator, they will undoubtedly be influenced by the specialist reports which have been produced for the ROD in the EIA. It is therefore imperative that the Air Quality Report, which addresses these matters, is scrupulously accurate; is based on verifiable evidence; and draws the correct conclusions.

In the event, the quality of this section of the air quality report is so poor as to suggest that there is a deliberate conspiracy to camouflage what is in fact a threat to the whole project.

2. Wind direction & speed

Wind direction and speed are critical considerations. They affect the extent to which radio-nuclides released from the site, whether routinely or accidentally, travel overland or out to sea; the impact which this could have on the safety of persons and properties; and what the implications are in terms of viability of the site. It is a fundamental issue.

The Air Quality Report begins by repeating Eskom's confident assertion, based on a report from 1987, that "it is clear that the most dominant wind direction in this region is from the west northwest to northwest." No evidence is given for this view, which is pure fiction.

If it were correct, it would mean that most releases of radio-nuclides from Thyspunt, whether routine or accidental, would be blown out to sea.

The most conclusive evidence of the prevailing wind direction at Thyspunt is the by-pass headland dunefield (one of three in the area), from Thysbaai, next to Thyspunt. This runs overland from south west to north east, and directly to Sea Vista Township and St Francis Bay. This is clearly visible from aerial photographs of the area, and in figures published in the report, such as fig 10.1a of the Transportation Specialist Study. It reflects a high-energy prevailing wind which has blown for centuries, if not millennia, and has blown sand overland for 12 kilometres before re-joining the sea at St Francis Bay, to the east of the headland.

The region surrounding Thyspunt has one of the highest wind energy capacities in the country, hence the proliferation of applications for wind farms in the immediate vicinity.

The reality at Thyspunt is that the prevailing wind is from the west to southwest; that it is frequently experienced in the area; that it is a high-energy wind; and that it blows directly towards either Cape St Francis or Sea Vista township and St Francis Bay, which are between 11 & 12 kilometres away. The implication of this is that, in the event of an accidental nuclear release while the prevailing wind was blowing at the claimed average of 5.8 m/sec (21 kph), the communities of Rebelsrus, Mostert's Hoek, Cape St Francis, Sea Vista Township and St Francis Bay, stretching over 10 kilometres of coastline would have 30 minutes to evacuate, down one escape route, which would in any case be cut by the nuclear cloud. At times the wind speed is anything up to five times this average. The wind direction & strength have a direct bearing on the viability of the Thyspunt site.

It is inexplicable that there is no reference whatsoever to the by-pass headland dunefields in the Air Quality Report, which depends instead for its conclusions on evidence supplied by Eskom, and short-term measurements conducted in the area. This despite the fact that it has been raised as an issue in every submission and at every stakeholders' & public meeting held to-date. The fact that it has not been considered at all by the specialist indicates either negligence, in the form of failure to consider issues raised by I&APs, or a deliberate attempt to mislead the responsible authority.

It is, of course, in Eskom's interest to state that the prevailing wind is north westerly, as this would safeguard the viability of the site.

### 3. The Air Quality Report

This crucial issue is dealt with in some four pages of the Air Quality Report (Report E10, p. 68 – 72). We believe that it is deficient in a number of respects:

- i) It begins with an acknowledgement that measurements taken on site are not sufficient for any long-term analysis, and mentions an attempt from December, 1986 to September 1989, which led to limited data recovery due to vandalism of equipment. According to the report, the best data was taken from the period January to September, 1987. This excluded the period October to December, which is locally acknowledged to be the windiest period of the year. This is clearly far too short a period of time to draw any conclusions.
- ii) Eskom's claim that the prevailing wind is north westerly is contradicted by the evidence of the by-pass headland dunefield in the area, and by all the evidence supplied. None of the wind roses displayed in figs 2-25 – 2-27 or Table 2-23 support this conclusion. Indeed the report itself conceded that the 21 month survey at Thyspunt indicated westerly, rather than north-westerly winds at Thyspunt.
- iii) Despite this, the report does nothing to refute the confident assertion regarding the predominant north westerly direction of the wind.

### 4. Conclusion

This report is typical of this EIA, in which everything is presented in a way which favours a successful application for an ROD. It is sufficiently misleading to justify a formal complaint to the DEA and even prosecution, and undermines confidence in the entire EIA process.

The most reliable recent data comes from a wind mast placed east of Oyster Bay by the CSIR as part of the current S.A.Wind Generation Programme. This has only been in operation for some 9 months, but details are available from the CSIR website, [wasadata.csir.co.za](http://wasadata.csir.co.za). It is not known whether this is the information referred to in the Air Quality Report. It will clearly confirm that the prevailing wind is west to south west, and not west north west to north, as alleged by Eskom.

We request that this component of the Air Quality Report be rejected, and that the EAP be censured for allowing this inaccurate and fundamental information to remain in the report without being challenged.

We also demand an explanation from the EAP as to why the input from the local community has been completely ignored in this important component of the report.