

THYSPUNT ALLIANCE

NUCLEAR 1

RESPONSE TO APP 24: HUMAN HEALTH RISK ASSESSMENT

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

General comment

One of our objections to this entire EIA process is the tendency to exclude important material negative factors which could influence the decision-making process. The most extreme is the exclusion of the NNR from the EIA, and with it the awkward question of the viability of the Thyspunt site in terms of emergency planning & evacuation. This is one of the major issues at the Thyspunt site. There is evidence of these exclusions in this report, and it is difficult not to conclude that there is a deliberate policy at high level to evade the implications of viability, and its potential impact on human health issues throughout the EIA. The report is entirely theoretical and pays no attention to the specific issues related to reach site.

Specific comment

Accidental releases

Attention is drawn to the total absence of any discussion on unscheduled/accidental releases, and their implications for human health and viability.

Generation 111 technology

The entire EIA is based on the assumption of use of Generation 111 technology. This is defined in Chapter 3, section 3.5, and has a number of good qualities. These include standardized design, simplifying the process; simple, rugged construction, reducing vulnerability; high availability and longer life; reduced possibility of core meltdown; minimal effect on environment; higher burn-up optimizing fuel use and reducing waste; and absorbers to extend fuel

life. All of these are significant potential improvements, but unfortunately the government has pronounced that Gen 111 is unaffordable!

Everything is expressed in relative terms, in comparison with Gen 11. There are no absolutes. Nobody has yet claimed an “inherently safe” technology (apart from the PBMR which was rejected). Even Gen 111 still requires EPZs, albeit claimed reduced ones.

“EURs”

The reduced EPZs are in terms of so-called “EURs” – European Utility Requirements (N.B **not** European Union Regulations, as might be expected from the acronym). These are a product of the European nuclear industry, to further its own agenda. There is extreme scepticism in the public mind regarding EURs, which have not been recognized by any national nuclear regulator anywhere in the world. Were South Africa to use EURs as their regulatory criteria, we would be the first country in the world to do so.

Fig 3.1, p.7

One of the strategies being employed by Eskom is to suggest that the prevailing wind in the area is from the north-west (for example in the Air Quality assessment). This is a complete fabrication, sucked out of their thumb by Eskom during the nineteen eighties, and not supported by any of the scientific evidence. The reality is that the prevailing wind is from the west to south-west, with a lesser frequency from the east. North-west is fairly rare in this area, and normally associated with a berg wind, which precedes the arrival of a cold front. This materially affects the potential impact on human health, since a north-westerly wind would blow any radio-nuclides released from the plant out to sea (bad news for the chokka industry!), whereas a westerly to south-westerly wind would blow them directly onto the Greater St Francis communities, all of which are within the internationally recognized 16 kilometre EPZ.

We therefore question the source material from which Fig 3.1. on p.7 is drawn. Whilst it does reflect the prevailing westerly and easterly winds, it also reflects

a surprisingly large bulge to the south, which would not normally be expected from a westerly or easterly wind. We request the DEA to require evidence of the source material used.

Page 8, para 3

Once again, the Greater St Francis area, which includes Rebelsrus, Mostert's Hoek, Cape St Francis, Sea Vista and St Francis, with an estimated holiday population in excess of 30000, is completely ignored. All of these communities fall within the current internationally recognized 16 km EPZ. The questions raised are why this is, and whether the omission derives from the specialist, or from editing of the report by the EAP. Either way, it is totally unacceptable, and reflects on the allegation contained under "General comment" above.

Page 11, section 4.1.2 "Initiating events"

Who in this world is able to predict whether an activity will occur once in 100, or a million years? As a yardstick, this area has had "one-in-200-year" floods four times in the last 15 years. The reality is that accidents do happen, sometimes as a result of human error, sometimes through over-optimistic service & replacement intervals and sometimes through an extreme natural event. In the past few years we have left a spanner in the turbine at Koeberg, have blown up a R3 billion generator at Duve Power Station, and have had an "inconceivable" tsunami at Fukushima. The three different categories of risk are desk-top exercises, exploring different theoretical categories. They have no practical application. The reality is that nuclear power generation remains a hazardous, and potentially catastrophic technology, which demands a strong application of the precautionary principle, especially in the light of Fukushima.

Assessment in terms of pure theory

The assessment is purely theoretical, as is the Social Impact Report. There are no specific impact assessments, no reference at all to the three sites under review, or to unscheduled releases, or to variations in local conditions. It is a

pure text-book exercise, and is worthless in terms of assessment of sites for Nuclear 1.