

5 August 2015

Our Ref: J27035 / J31314
Your Ref: Email received 02 August 2011



GIBB
ENGINEERING & SCIENCE

Bonfoi 6
Zevendal
7580

Email: pieterlv@telkomsa.net

Dear Mr de Waal

Tshwane

Lynnwood Corporate Park
Block A, 1st Floor, East Wing
36 Alkantrant Road
Lynnwood 0081
PO Box 35007
Menlo Park 0102

Tel: +27 12 348 5880
Fax: +27 12 348 5878
Web: www.gibb.co.za

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

Comment 1:

Eskom has identified various possible sites for a nuclear plant during the late 1980's. Since then these possibilities were reduced to 3 (Thyspunt, Bantamsklip and Pearly Beach). What is important is that since the late 1980's the larger area around Thyspunt has experienced an unprecedented residential development – one can call it a residential “explosion”.

Taking this “residential explosion” around Thyspunt into account the following question arises:
Why does Eskom not reconsider any of the previously identified sites?

I am referring, inter alia, to the coastal stretch between Coega and to the west of Port Alfred (Algoa Bay) where there is already industrial development (more synergy!) as well as low residential activity.

When such a location is chosen, there will be far less negative impact on residential areas and the environment.

To summarise:

When Eskom investigated Thyspunt in the late 1980's, there was low residential development. If Thyspunt is now chosen, Eskom will put a nuclear plant in the centre of this densely populated area with huge negative impact on the residents, environment and the socio-economic structure.

Response 1:

Your comments regarding the site selection process are noted. The three sites are Thyspunt, Bantamsklip near Pearly Beach and Duynfontein.

Planning cycles for nuclear power stations are known to be long-term processes, due to the long time frames for construction and the long life spans of these power stations. Typically, the life cycle of a nuclear power station from start of planning to decommissioning can take up to 100 years. Early



GIBB Holdings Reg: 2002/019792/02
Directors: R. Vries (Chairman), Y. Frizlar, B Hendricks, H.A. Kavthankar, J.M.N. Ras
Arcus GIBB (Pty) Ltd, Reg: 1992/007139/07 is a wholly owned subsidiary of GIBB Holdings.
A list of divisional directors is available from the company secretary.



identification of potential sites for a nuclear power station is therefore an essential part of the planning process.

It should however be noted that the socio-economic realities today have not changed to such an extent that the major load centres in the Eastern and Western Cape (Port Elizabeth and the Cape Metropole) have changed, and the location of power station sites in each of these regions therefore remains as valid today as it was when the NSIP was undertaken. In fact recent developments, as the author so rightly points out, have placed even more pressure on power infrastructure in these centres.

In terms of considering Coega as a site alternative, when the Environmental Application for Nuclear-1 was submitted in 2007 GIBB was informed by the IDZ that there was no space available on the Coega site for the development of a Nuclear Power Station.

Furthermore the presence of the Coega fault, which runs across the southern part of the Algoa basin before extending into Algoa Bay near the Coega harbour, means that the Coega IDZ should be considered carefully before proceeding with geological investigations for nuclear siting. In terms of the NNR requirements it is necessary to develop a comprehensive geological data base for the Coega IDZ prior to considering the site for a nuclear power plant, these studies are estimated to take up to 5-6 years. The currently available geological data indicates that the Coega fault, which represents the easternmost component of a fault line with known Holocene (i.e. the last 11,700 years) reactivation, should be considered to pose a risk with regard to future seismicity. It would therefore be appropriate to include Coega IDZ into the next site screening process which will be initiated for future nuclear sites but for this EIA Coega cannot be regarded as a feasible and reasonable site.)

Comment 2:

(DIE BURGER 28-03-11. 'n Skrywe van my wat in Die Burger gepubliseer was in reaksie op 'n brief deur Ken Carter.)

("Die Burger" 28-03-11. My response to a letter from Ken Carter that was published in "Die Burger")

THYSPUNT AANLEG – PLEKVESTIGING VAN UITERSTE BELANG

Na aanleiding van Ken Carter se skrywe in Die Burger van Saterdag 26 Maart 2011 - besluit om kerkrug-aanleg op Thyspunt/Oesterbaai te bou - die volgende:

THYSPUNT FACILITY – LOCATION OF UTMOST IMPORTANCE

Following Ken Carter's letter in The Citizen on Saturday, March 26, 2011 - decision to build a Nuclear Plant at Thyspunt / Oyster Bay herewith the following:

Waarskynlik (alhoewel ons almal hernubare krag verkies) gaan Suid Afrika wel 'n tweede kernkrug-aanleg in die toekoms benodig.

Probably (though we all prefer renewable energy) South Africa will need a second Nuclear Power Plant in the future.

Die plekvestiging van so 'n aanleg is egter van uiterste belang.

The location of such a nuclear plant utmost importance.

Eskom het in die laat 1980's verskeie moontlike persele ge-identifiseer vir 'n nuwe kernkrug-aanleg. Hierdie moontlikhede is na 3 gereduseer naamlik Thyspunt, Bantamsklip en Pearly Beach.

Eskom identified a number of proposed sites in the late 1980's for a new nuclear power plant. These proposed sites were reduced to three namely Thyspunt, Bantamsklip and Pearly Beach.

Dit is baie belangrik om op te let dat die groter area om Thyspunt sedert die tagtiger jare byna ongekende residensiële ontwikkeling ondergaan het – Humandorp, Jeffreysbaai, Ashtonbaai, Paradysstrand, Kaap St Francis, St Francisbaai en Oesterbaai.

Since the eighties, it is important to note that the larger area surrounding Thyspunt undergone unprecedented residential development in Humansdorp, Jeffrey's Bay, Ashtonbaai, Paradise Beach, Cape St Francis, St Francis and Oyster Bay.

Dan het boerdery aktiwiteite in die omgewing asook die Tuinroete verder ontwikkel.

Furthermore, farming activities in the area as well as the Garden Route expanded in development.

Die heersende wind van daardie omgewing is suidweste winde of meer akkuraat suidweste storms. Soos Carter dit stel, sal Port Elizabeth wat windaf geleë is binne 2 ure ernstig ge-afekteer word in die geval van 'n krisis.

The prevailing wind in the area is the southwesterly wind or more accurately southwesterly storms. As Carter indicated, Port Elizabeth is located downwind and within two hours would be seriously affected in the event of a crisis.

Suid Afrika het 'n kuslyn van ongeveer 3000 km. lank waarvan sekere gedeeltes yl bevolk is! Met Japan se kernkrag krisis wat besig is om "te vererger tot 'n katestrofe" (D. B. 28 Maart 2011) word dit van 'n instansie soos Eskom verwag om aan te kondig dat die plekvestiging van 'n moontlike nuwe kernkrag-aanleg ernstig en verantwoordelik heroorweeg word!

South Africa has a coastline of about 3000 km in length of which certain parts are sparsely populate. In addition, Japan's nuclear crisis is "worsening to a catastrophe" (DB 28 March 2011) and therefore it is expected from an institution like Eskom, to announce that the site location of the proposed new Nuclear Power Plant be seriously and responsibly reconsidered!

Response 2:

We refer you to our above in terms of the site selection process for the Nuclear-1 Power Station.

With regards to the issue of wind direction and the impact on Port Elizabeth, it is important to consider the wind speed, atmospheric stability and release height together with the wind direction when qualitatively estimating the area of impact. Predicted ground level concentration patterns take into account a number of meteorological parameters in addition to wind speed and direction. Wind speed and direction alone do not provide adequate information on the behaviour of atmospheric dispersion. These concepts are discussed in Section 2.3.2 of the Air Quality Assessment (Appendix E10 of the Revised Draft EIR Version 1).

The assessment of the significance of impacts due to the proposed development of the Nuclear-1 Power Station, especially in the light of the sensitive nature of the project, has always been treated with the utmost seriousness by GIBB as the independent Environmental Impact Assessment Practitioner, the independent specialist team appointed by GIBB and Eskom as the applicant.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, consisting of a large, stylized 'S' shape with a small loop at the top left and a small dot above the main curve.

The Nuclear-1 EIA Team