

**PROPOSED ESKOM NUCLEAR POWER STATION
AND ASSOCIATED INFRASTRUCTURE**

ENVIRONMENTAL IMPACT ASSESSMENT (EIA: 12/12/20/944)

**COMMENTS ON
DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

(Volume 01: 09 May 2011)

Issues have been received from the following stakeholders:

| No | Name | Organisation |
|----------------|--------------------------------|--|
| 1 | Eleanor Welsh | Save Bantamskip |
| 2 | Pam Andrews | Pam Andrews VentureWeb – Outsourced Marketing Solutions |
| 3 | J.F. van der Merwe | Interested and Affected Party |
| 4 | Byron Andrews | Pam Golding Cape St. Francis |
| 5 | Sally Andrew and Bowen Boshier | Interested and Affected Party |
| 6, 7 and 11 | Eric Mair | African Alternative Technologies – Research and Development Director |
| 8 | Judith Taylor | Earthlife Africa Johannesburg – Branch Co-ordinator |
| 9 | Tarryn Paquet | Stellenbosch University - PHD Candidate |
| 10 | Various | The Bomb Surf |
| 12 | Len Handler | Neuro-Radiologist Retd |
| 13 | Kobus Reichert | Gamtkwa Khoisan Council – Heritage Representative |
| 14 | Sally Andrew & Bowen Boshier | Interested and Affected Party |
| 15 | Trevor Moodley | Eskom Koeberg Nuclear Power Station QC Inspector |
| 16 | Jacques van den Berg | Bergen International Chairman /CEO |
| 17 | Melissa Saayman Krige | Platbos: Africa's Southernmost Forest |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|---|---|--|--|
| 1 | 06 May 2011 12:45 Telephonic conversation | Eleanor Welsh Save Bantamsklip | <p>Request to send Executive Summary etc to new email address: skyflyer@live.co.uk.</p> <p>Ms Welsh cannot understand why there is no Public meeting being held in Hermanus when it is densely populated and almost acting as capital in the area.</p> <p>Furthermore, it is far away from Gansbaai.</p> <p>The request is for revision and to book a venue in Hermanus. The more people that know about it the better. The request for a meeting in Hermanus is not to substitute the Gansbaai meeting.</p> | <p>Thank you for your comment. GIBB suggested via phone to Ms Welsh that she send her comments in writing to the GIBB Public Participation Office, which she has done.</p> <p>The findings of the Draft EIR Version 1 have been previously presented in Hermanus. This round of public meetings are only to discuss changes made in the Revised Draft EIR. The majority of the changes are relevant to the Thyspunt site. Further as the recommended site in the Revised Draft EIR Version 1 is Thyspunt, the most effort (and thus most meetings around the proposed site) is being invested in the area around the Thyspunt site. Thus, only one meeting each has been scheduled for the Bantamsklip and Duynefontein sites to discuss the key changes to the Draft EIR. The closest suitable venues to the alternative sites have been selected for these meetings to accommodate the parties that are potentially impacted the most.</p> |
| 2 | 28 May 2011 21:49 Email | Pam Andrews Pam Andrews VentureWeb – Outsourced Marketing Solutions | I have read through your documentation and stand firmly by my objection to the nuclear plant at Thyspunt. | Thank you, your comment is noted. |
| 3 | 29 April 2011 10:28 Email | J.F. van der Merwe | <p>Good news for No Nuke campaign « Jeffreys Bay News</p> <p>----- Original Message ----- From: Forensic Auditor To: Forensic Audit Sent: Wednesday, April 27, 2011 6:31 PM Subject: Emailing: Good news for No Nuke campaign</p> | <p>Thank you for your comment. The GIBB EIA team is aware of the ruling.</p> <p>Issues relating to wetlands, the chokka industry as well as archaeology of the Thyspunt site have been investigated by recognised, experienced and independent specialists in these fields and their findings</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|--|--|
| | | | <p>« Jeffreys Bay News</p> <p>Jeffreys Bay News Good news for No Nuke campaign</p> <p>A Pretoria regional court's finding that an environmental consultant was guilty of providing incorrect or misleading information to the Department of Environmental Affairs in an Environmental Impact Assessment was a landmark ruling, according to University of Cape Town environmental law expert Jan Glazewski.</p> <p>The faulty assessment led to the halting of construction on the Pan African Parliament buildings in Johannesburg when it was found it jeopardised a wetland.</p> <p>"It is a landmark, I have never heard of anyone brought to book for this type of thing," said Prof Glazewski, a member of the Cape Bar.</p> <p>Prof Glazewski said environmental assessment, a profession only 20 years old in SA, had until recently been poorly regulated.</p> <p>Magistrate EK Patterson found the consultant had shown "wilful disregard of the required standard of conduct" in that he had not appointed a wetland specialist to determine whether there was a wetland on the parliament's building site.</p> <p>The proposed site for a nuclear power station at Thyspunt is also situated on a wetland and is an important archaeological heritage site with ancient fish traps along the coast line.</p> <p>Jeffreys Bay Tourism is planning day trips with a</p> | <p>are described in the Freshwater Ecology, Marine Ecology and Heritage Assessments (respectively Appendices E12, E15 and E20 of the Revised Draft EIR Version 1). These issues are further discussed in Chapters 9 and 10 of the Revised Draft EIR Version 1.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-------------------------------------|---|--|---|
| | | | <p>qualified guide to explore what is known as the cradle of modern mankind along the stretch of coast from Oyster Bay to Jeffrey's Bay.</p> <p>Elza Van Lingen from the DA welcomed the court's decision and said that the DA supported transparency. "Thyspunt is a sensitive issue and can have a lasting impact on the communities of St. Francis Bay as well as Jeffrey's Bay.</p> <p>Due processes must be followed and experts in wetlands, the chokka industry as well as archaeological experts must have input into the Environmental Impact Studies", said Van Lingen.</p> | |
| 4 | 29 April 2011 11:23 Email | Byron Andrews Pam Golding Cape St. Francis | <p>Thank you for the update. My comment is as follows:</p> <p>FUKUSHIMA?</p> <p>By now Eskom must have realized that Thyspunt is absolutely the wrong place to try and build a nuclear power station. The site being positioned within 16 km of South Africa's most popular holiday destination. Work out how much revenue comes in from property rates in this area. We definitely won't be paying once we have evacuated the area. In the middle of the Eastern Cape's dairy farming region.</p> <p>Within 16 km of Port Elizabeth's water supply, the Churchill dam. Take into account the distance for powerlines to the far side of Port Elizabeth, crossing the Kromme river, Gamtoos river and the Van Stadens river gorge. Then upgrading all of these bridges to be able to transport the reactor to site.</p> <p>The site, on the wildest stretch of coastline in Southern Africa, on a geographical fault line, in a system of shifting dune sands. So just pump all the sand out to sea to get down to bed rock, below sea</p> | <p>Thank you for your comment.</p> <p>The Fukushima (Japan) incident resulted from a series of natural disasters. The nuclear industry is reviewing the detailed information, as it emerges, of the behaviour of the Fukushima power plants to the natural disasters to determine what further improvements are required. Independent of the nuclear industry, the Regulatory Authorities around the world are evaluating the accident to determine what improvements must be implemented. In South Africa, the National Nuclear Regulator (NNR) regularly tests the Koeberg Nuclear Emergency Plan, the most recent exercise having taken place June 2012. The findings from these tests illustrated that South Africa's nuclear installations are able to withstand all external events considered in the original design. External events include seismic activity, tsunamis, flooding, fire, aircraft crashes, tornados, loss of offsite power as well as station blackouts. There were no findings to warrant curtailing operations or to question</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|--|---|
| | | | <p>level. All this sand pumped into the spawning area of South Africa's chokka fishing grounds. When the nation finds out that their electricity costs will double to pay for this ridiculous venture, the people will take to the streets and the revolution will be bloody, as we witnessed in North Africa.</p> | <p>the design margins of these facilities. The NNR is also examining the Fukushima accident to determine whether improvements to Koeberg and to the Nuclear Emergency Plan are required.</p> <p>Please refer to the beyond design accident report in Appendix E33 for further information on the Fukushima incident. The report further outlines why Generation 3 technology (technology considered for the Nuclear-1 power station) is inherently safer.</p> <p>The Revised Draft EIR Version 1 and its associated specialist studies have considered issues raised during the comment period of the Draft EIR related to:</p> <ul style="list-style-type: none"> • Upgrading of transport infrastructure; • Geological suitability of the site; • Dune geomorphology; • Spoil disposal; and • Marine ecology. <p>The Transport specialist study which has been revised and will be made available for public comment and review acknowledges that the Thyspunt site requires significant transport infrastructure upgrades. The R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|-----------------|--|
| | | | | <p>to be surfaced to provide improved east-west connectivity. Bypass roads to the east and west of Humansdorp are also now proposed to be constructed to reduce the traffic impact on central Humansdorp.</p> <p>The report further recommends the following:</p> <ul style="list-style-type: none"> • Overhead bridges – Transport vehicles can make use of the on / off ramps at interchanges to avoid overhead bridges. Temporary ramps or detour routes will need to be constructed should there be no existing on / off ramps. • Under bridges – Propping will be required at most under bridges to ensure stability during the transportation. Strengthening and bracing will be required at the Van Staden’s gorge arch bridge. • Turning intersections / roundabouts – Temporary upgrades will be required at the roundabouts and intersections where turning of the abnormal vehicles is involved. Examples of upgrades are upgrading of bell-mouths, removal of street furniture and road widening. • Overhead cables – Overhead cables will be lifted or temporarily removed along the route should it interfere with the abnormal loads. <p>From a seismic point of view, Thyspunt is the most suitable of all the sites as it has the lowest seismic risk of all the alternative sites. There are two contact zones (<u>not</u> faults) at the Thyspunt site and it is recommended that</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|-----------------|---|
| | | | | <p>the foundation of critical structures should not cross these contact zones (e.g. the contact zone between the Goudini and Skurweberg Formations). However, other infrastructure could to be constructed over these contact zones.</p> <p>The importance of the mobile dune field is recognised in the EIR. It is for this reason that the footprint of the power station has been placed well to the south of the mobile dunefield and why the initially proposed Northern Access Road and a proposed conveyor belt across this dunefield have been rejected as alternatives.</p> <p>The Marine Impact Assessment (Appendix E15 of the Revised Draft EIR Version 1) concludes that the disposal of spoil at Thyspunt will have limited impact on the overall chokka squid stock, when considered within the context of the extensive area over which this species spawns.</p> <p>Keeping the above in mind, specialists agree that there are no fatal flaws at the Thyspunt site in terms of upgrading of transport infrastructure, geological suitability of the site, dune geomorphology, spoil disposal and marine ecology. However, extensive mitigation measures, which are discussed in Chapter 9 of the Revised Draft EIR, summarised in Chapter 10 and included in the Environmental Management Plan (Appendix F of the Revised Draft EIR), are proposed to mitigate the potential impacts.</p> <p>Lastly electricity tariffs are regulated by the National Electricity Regulator of South Africa (NERSA) who presents the national interest</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-------------------------------------|--|--|---|
| | | | | of the South African consumers when it comes to the review of tariffs. |
| 5 | 29 April 2011 10:16 Email | Sally Andrew & Bowen Boshier | Thanks. All our objections as stated in previous emails still stand with reference to your proposals and report. Please do not proceed. | Your comment is noted. |
| 6 | 29 April 2011 15:28 Email | Eric Mair African Alternative Technologies – Research and Development Director | <p>You should be ashamed of yourselves! How can a professional organisation such as Arcus GIBB publish things like this:</p> <p>"As far as power generation technologies are concerned, nuclear generation and coal-fired power generation are the only proven base-load technologies."</p> <p>"Renewable energy sources such as solar and wind energy do not provide the guaranteed base-load generation capacity that is required."</p> <p>Here are some facts (http://www.nexteraenergyresources.com/):</p> <p>Solar Thermal technology certainly has the capacity to provide base load power given that it can so easily be co-fired with either biomass or biogas. With modern advances such as gas cooled fresnel collectors (no, you haven't heard of them yet) and thermal storage techniques, these CSP technologies are certainly able to take their place alongside coal and nuclear as baseload providers without any of the risks associated with nuclear power. And they are competitive financially too!</p> <p>AATec will very soon now be piloting a storage technology in South Africa (www.gravitypower.net)</p> | <p>Thank you for your comment.</p> <p>Only a few energy sources capable of providing a sustained power supply are available in sufficient quantities suitable for base-load power supply. In South Africa, coal and nuclear power are used for base load electricity generation, while the Open Cycle Gas Turbines (OCGTs) (which use liquid fuel such as diesel), two hydroelectric power stations on the Orange River and pumped storage schemes are used for peaking and emergency electricity generation. At present, renewable forms of energy (e.g. wind and solar), are unable to provide viable large scale base load power, or ease of integration into the existing power network in South Africa due to the intermittent supply and lower load factors of these renewable technologies. See for instance, EPRI (2010) referred to in Chapter 5 of the Revised Draft EIR. However, all technologies are required to meet future energy needs, \ as reflected in the approved IRP2010.</p> <p>Internationally, natural gas and hydro power are also used for base-load electricity supply. However, South Africa does not have</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|---|---|
| | | | <p>which will enable the dispatchability of both wind and solar PV at utility scale, so your statement that nuclear and coal are the only sources of base load power is inaccurate and potentially embarrassing for your company.</p> <p>I also find it sad and extremely worrying that it has been seen fit, in specifying the parameters of this study, to ignore:</p> <p>The environmental impact of the mining, transportation and processing of the fuel required to power this facility.</p> <p>The security which surrounds anything nuclear must, surely, have an impact on our environment? And, inevitably, the problem of nuclear waste. How can this very real problem possibly skate past a conscientious ENVIRONMENTAL impact assessment?</p> | <p>sufficient quantities of indigenous natural gas and does not have the large rivers required for base load hydro-electric power stations.</p> <p>In light of the above, coal-fired and nuclear power stations are currently the only feasible options in South Africa for base load electricity generation.</p> <p>This application for Environmental Authorisation considers the suitability of the Duynefontein, Bantamsklip and Thyspunt sites in terms of the construction, operation and decommissioning of a nuclear power station and in terms of the listed activities contained within Government Notice numbers R 386 and 387 of 2006. Whilst it does consider cumulative impacts (as per Government Notice R 385) it does not, as a project-specific and activity-specific tool, consider the mining, transportation and processing of fuel for the power stations. These issues will fall under separate applications for authorisations and permits, e.g. the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) and the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999).</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>In addition to what has been said - the issue of competing technologies and preferred energy mix scenarios in the context of demand side and economic growth trajectories are clearly in the ambit of the IRP. IRP 2010 remains the formal IRP adopted by government. The regulatory</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-------------------------------------|---|---|--|
| | | | | <p>regime is as stated and nuclear facilities are in general required to consider a range of "design basis security threats" as part of the design assessment process - however the exact nature of these threats and the preventative or mitigative provisions which may be put in place are for obvious reasons restricted in accordance with a "need to know" principle.</p> |
| 7 | 29 April 2011 15:47 Email | Eric Mair African Alternative Technologies – Research & Development Director | <p>Please provide me with the reference for your statement</p> <p>"The life-cycle environmental impacts of coal-fired power generation are much greater than nuclear-fuelled power generation."</p> <p>I'm not at all sure you have one though.</p> | <p>Thank you for your comment.</p> <p>The statement is based on published research by Dones <i>et al</i>, which has been included in the Nuclear-1 Revised EIR Reference list (Chapter 11 of the Revised Draft EIR). This is referenced in Section 4.2 of the Revised Draft EIR Version 1.</p> <p>Please note that the statement relates to the life cycle greenhouse gas emissions of nuclear power generation versus other forms of power generation.</p> |
| 8 | 02 May 2011 13:53 Email | Judith Taylor Earthlife Africa Johannesburg – Branch Co-ordinator | <p>My input here is as follows:</p> <p>1. In the face of the disaster at Fukushima and the recently published figures on the impact (continuing) of Chernobyl, this project should not proceed until the IAEA has substantially revised its requirements around radiation dose exposure and the safety aspects of nuclear power plants.</p> | <p>Thank you for your comment.</p> <p>1. The nuclear industry will definitely learn from this accident and implement further measures for the current and future reactors. The nuclear-1 project is in its feasibility stage and this EIA is part of the preparatory work required for decision making. The project is subject to Government approval before execution can begin.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|--|--|
| | | | <p>2.If the plant is located at Thyspunt, it will destroy a calamari industry which provides over 20 000 jobs and generates considerable export income. As such a plant is incapable of replacing those jobs, its economic viability is suspect.</p> | <p>In addition to the given response it must be noted that IAEA requirements are informed by an extensive Body of Knowledge and where necessary derived from extensive scientific discourse and expert opinion from a variety of sources a range of complementary scientific publications and international Standards, Requirements and Best Practices which are evolutionary in nature and informed by international experience. It is therefore natural to expect standards to evelove over time -and it is unwise to be absolutist in these matters however any practices at any particular time must be based on the prevailing standards noting that the fundamental safety objective of the IAEA enshrines a common purpose that any designer operator or regulator is ultimately bound by and where necessary and guided by principles such as ALARP additional measures are considered for adoption.</p> <p>2. The Marine Impact Assessment (Appendix E15 of the Revised Draft EIR Version 1) concludes that the disposal of spoil at Thyspunt will have limited impact on the overall chokka squid stock, when considered within the context of the extensive area over which this species spawns.</p> <p>The area predicted to be affected by the release of warm water used for cooling purposes is also less than one percent of the coastal spawning ground of chokka. The Economic Impact Assessment lastly concludes that the negative impact on the fishing industry will be slight.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|--|---|
| | | | 3. Caesium emissions from nuclear power plants are proven and cause cancers in the surrounding communities | 3. Please provide a peer reviewed reference for this statement. We cannot assess impacts based on unsubstantiated claims. <u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u> Epidemiological studies do indicate a statistical link between high level radiation exposure and the risk of excess "cancers" within a study population. Indeed the ongoing studies of survivors of the second world war Japanese atomic weapons continue to inform the basis of radiation protection risk factors and associated exposure limits based on the assumption of the existence of "the linear no threshold" relationship between exposure and risk. However at low exposures associated with occupational and environmental exposure to sources originating from man-made radioactivity this relationship is unproven and remains the subject of intense scientific debate and in particular no direct causality between specific elements such as caesium or their isotopes has been established. However the Radiation Protection community continues to adopt a conservative approach in assuming the linear no threshold model applies in these situations. There have been a number of epidemiological studies undertaken around various industrial facilities including for example studies undertaken around nuclear fuel reprocessing sites which historically had enhanced Cs discharges and also around non-nuclear facilities and which have in some instances indicated statistical "clusters" of excess "cancers" however in general the results and causality remain inconclusive and |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|--|---|
| | | | <p>4.South Africa and indeed the world has no proven safe means of disposing of radioactive waste.</p> | <p>various theories have been proposed including those relating to the migratory nature of the workforce and genetic interaction with other non-radiological environmental stressors.</p> <p>4. Radioactive waste management practices envisaged for the Nuclear-1 Power Stations are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal, and consistent with the South African National Radioactive Waste Management Policy. They will also have to comply with the requirements of the National Nuclear Regulator. The Nuclear-1 Power Station will minimise production of all solid, liquid and gaseous radioactive waste, both in terms of volume and activity content, as required for new reactor designs. The containers into which the radioactive waste will be placed are consistent with the requirements for the disposal of solid waste at the low and intermediate level radioactive waste disposal facility at Vaalputs. The used nuclear fuel will be stored safely on the Nuclear-1 site under the regulatory control of the National Nuclear Regulator until an authorised facility is available in South Africa. With the implementation of appropriate mitigation measures all potential impacts related to nuclear waste management are expected to be of low significance.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>The proposed arrangements are in line with international best practice. Liquid and</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|---|---|
| | | | <p>5.Regulation in South Africa of such plants is next to non-existent.</p> <p>6.Based on recent incidents at Koeberg and Pelindaba, worker health and safety is ignored and the Health and Safety Act is flaunted.</p> | <p>gaseous effluents will be controlled within defined and regulated limits as per license conditions and as assessed through the plant safety case. The arrangements for solid waste management are also in accordance with international best practice. i.e. either storage and disposal at Vaalputs for low and intermediate wastes or on site wet or dry storage for spent fuel pending provision of a centralised or dispersed long term storage facility are all in accordance with internationally accepted practices. It must be understood that the social discourse on radioactive waste disposal has become largely a socio-political one rather than a rigorous debate on the technical merits of particular options.</p> <p>5. Regulation in South Africa in terms of nuclear power plants fall within the ambit of the National Nuclear Regulator, which exercises strict control over all aspects of nuclear power generation.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>This is not the case - Regulation of nuclear facilities in South Africa is in line with International Best Practice and in some instances are more stringent than those adopted elsewhere.</p> <p>6. Kindly provide more details surrounding the recent incidents at Koeberg referred to in your comment as we are unsure as to which incidents you are referring to.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|---|--|
| | | | <p>7. The cost of the plant is way beyond South Africa's ability to pay, as it cannot be quoted accurately and the total cost from inception to decommissioning is and has never been defined in any nuclear power plant anywhere in the world.</p> <p>8.The cost of the production of nuclear fuel to the communities and the environment is ignored in the costing of the plant. Africa is increasingly being deprived of water as a result of the pollution of water sources by uranium mining and the communities around these mines are suffering from the effects of continuous low dose radiation. South Africa, with the best environmental law in Africa, should not be using this source of highly dangerous and toxic metal to degrade the lives of her neighbours.</p> <p>9.Base load is a fiction when solar is being extensively used in Europe and China without base load being affected in those countries. Localised plants are more than capable of powering whole towns successfully.</p> | <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>Without details of the specific incidents to which these assertions relate or which specific aspects of the various health and safety legislation it is not possible to comment. However it is also difficult to relate assertions in respect of practices at 2 other sites to the siting of a third.</p> <p>7. The costs of the proposed nuclear power station have been estimated in the Economic Impact Assessment (Appendix E 17 of the Revised Draft EIR Version 1).</p> <p>8. Your comment is noted. However, this application for Environmental Authorisation considers the suitability of the Duynefontein, Bantamsklip and Thyspunt sites in terms of the construction, operation and decommissioning of a nuclear power station and as a project specific tool does not consider the mining and processing of fuel for the power stations. These issues fall under separate applications for authorisations and permits e.g. the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) and the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999).</p> <p>9. Only a few energy sources capable of providing a sustained power supply are available in sufficient quantities suitable for base-load power supply in SA?. In South</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|---|--|
| | | | <p>10. Nuclear power advocates are lazy thinkers who do not bother to look beyond their out dated technology, because it is all they know and are prepared to handle.</p> | <p>Africa, coal and nuclear power are used for base load electricity generation, while the Open Cycle Gas Turbines (OCGTs) (which use liquid fuel such as diesel), two hydroelectric power stations on the Orange River and pumped storage schemes are used for peaking and emergency electricity generation. At present, renewable forms of energy (e.g. wind and solar), are unable to provide viable large scale base load power , or ease of integration into the existing power network in South Africa due to the intermittent supply and lower load factors of these renewable technologies. See for instance, EPRI (2010) referred to in Chapter 5 of the Revised Draft EIR.</p> <p>Internationally, natural gas and hydro power are also used for base-load electricity supply. However, South Africa does not have sufficient quantities of indigenous natural gas and does not have the large rivers required for base load hydro-electric power stations.</p> <p>In light of the above, coal-fired and nuclear power stations are currently the only feasible options in South Africa for base load electricity generation. We therefore need all generation sources/forms of energy including that of renewable energy and Nuclear to make up the mix of energy sources for electricity generation as required in the approved IRP2010.</p> <p>10 and 11. Your comment is noted. The social impact assessment (Appendix) confirms that there will be a potential loss in employment opportunities after construction. However these employment opportunities will</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|---|--|---|---|
| | | | <p>11.South Africa cannot afford more pollution nor to lose more jobs. Sustainable clean energy provides ten times the jobs offered by nuclear power and is, in consequence, the logical route for SA to proceed along.</p> <p>I know that others will come with very similar objections. I strongly recommend that GIBB weighs them up carefully and realises that nuclear power is not an option.</p> | <p>only created due to the construction of the actual Nuclear-1 power plant (as with any large infrastructure project). It should however be noted that nuclear energy is not being developed as an alternative to renewable energy, but that nuclear and renewable technologies need to be developed in parallel. The approved IRP includes 9 600 MW of nuclear power and a range of renewable technologies.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>In addition the government has made it clear that the development of Nuclear Energy in South Africa would form part of an overall "industrialisation" process. Although the details have not yet been promulgated it is clear that the Governments objectives will be as far as reasonably practicable ensure the realisation of it's localisation ambitions with the objectives of increasing jobs not exporting jobs. In this regard it shares the same broad objectives as the renewables programme.</p> |
| 9 | 03 May 2011 (Forwarded by Ms Bongji Shinga, ACER Africa. Email sent to ACER on 29 April 2011) 15:49 12:06 Email | Tarryn Paquet PhD Candidate University of Stellenbosch | <p>I have heard that the Pearly Beach site is no longer an option for the nuclear reactor project. Please would you confirm this for me as it would have an impact on research that I am currently doing on municipal planning in Overstrand.</p> <p>Please excuse the informal email address, our webmail is down at the moment.</p> | <p>Thank you for your comment. Although the Bantamsklip site is not the preferred site in terms of the findings of the Revised Draft EIR for Nuclear-1, this does not exclude the site for consideration in terms of Nuclear-2 or Nuclear-3.</p> <p>New separate applications would have to be submitted by Eskom for Nuclear-2 and -3 and alternative sites, in addition to the Bantamsklip site, would need to be assessed in terms of the National Environmental Management Act and its associated EIA</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|--|---|--|--|
| | | | | Regulations. In other words a full EIA process, including Public Participation would need to undertaken. |
| 10 | 26 April 2011 09:45 29 April 2011 07:14 27 April 2011 07:02 29 April 2011 17:02 24 April 2011 19:10 Email | Geraldine Mouton Coral Grobler Janet Roberts Sabine Bittle Elena Belikova | The "Petition against Eskom's proposed nuclear plant in Thyspunt" form has been submitted from your site on the 4/5/2011 9:45:43 AM I object to Thyspunt being chosen as the location of Nuclear-1 because: 1. The EIA itself acknowledges that Thyspunt would experience environmental impacts of higher significance (particularly biophysical impacts) than the other shortlisted site, Duynefontein. 2. The negative impact on local flora, wetlands, dunes, ocean and tourism during construction and operation and the danger to local communities in the event of a radioactive incident. 3. One of the EIAs main arguments in favour of choosing Thyspunt being that it would be beneficial to the conservation of the area is completely devoid of logic. | Thank you for comment and your input and participation in the Environmental Impact Assessment process. Please see our response to your comments below. 1 - 3. The impact assessment at Thyspunt as a result of the construction and operation of the Nuclear Power Station did indeed identify significant potential impacts (negative and positive) on the flora, dune, wetland, tourism and marine environments amongst others. There are also some impacts of potentially higher significance at Duynefontein, for example the impact on the Atlantis Mobile Dunefield (from a botanical point of view). Please refer to Appendix E32 and E33 for a discussion on radiological impacts and potential beyond design accidents for a nuclear power station. In terms of the radiological assessment it has been found that the background radiation levels due to the operation phase of the Nuclear-1 power station, is well below the international standards for nuclear power stations. The report further states that the likelihood of beyond design conditions occurring is mitigated by the defence in depth principles and enhanced safety features of the generation 3 technology design for the Nuclear-1 power station (as per Appendix E33). Development of the Thyspunt site in terms of |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|-----------------|---|
| | | | | <p>the wetlands present will, in the absence of mitigation measures, impact significantly on the wetland system. However, the proposed footprint of the plant is situated to avoid the wetlands. The cumulative impacts of the proposed development of a single Nuclear Power Station at the Thyspunt site without implementation of mitigation measures have been assessed as of high negative significance. However, offset mitigation is possible and would involve conservation of areas that include both the Eastern Valley Bottom wetlands and the Oyster Bay dunefield itself, as far as the impacted area at the upstream boundary of The Links golf estate.</p> <p>Oceanographic impacts related to the construction phase are considered to be of low significance.</p> <p>As a result a number of mitigation measures have been suggested and included in a draft Environmental Management Plan in order to mitigate the impact of the Nuclear Power Station on the Environment.</p> <p>Therefore although it is acknowledged that Thyspunt would experience environmental impacts of high significance especially in terms of the Cultural Landscape, we still maintain that the conservation of the remainder of the site through access control and responsible long-term conservation management are significant positive impacts associated with this site. This has been confirmed by the Botany and Dune Ecology Assessments, which conclude that a key positive impact would be the creation of a</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|----------------------|----------------------------|---|--|
| | | | <p>4. Why develop a Nuclear Power Station in one of SA's windiest regions, when a wind farm could be easily constructed there instead. A quicker, cheaper option that would give clean, safe, renewable energy.</p> | <p>conservation area for the non-developed portion of the site, thus improving conservation of sensitive habitats. In the event that full mitigation as well as offset measures were implemented, the net impact to wetlands on the Thyspunt site is also likely to be one of positive significance, and a preferable scenario to the "no-go" alternative.</p> <p>4. You are referred to the Integrated Resource Plan 2010 which determined that both nuclear and renewable technology is an important component of South Africa's future energy mix however the levelised cost of renewable technology is higher than that of nuclear.</p> <p>The assessment of nuclear safety risks are outside the scope of the EIA process and will be considered in the National Nuclear Regulator's licensing process. Please refer in this regard to the Co-operative Governance Agreement included in Appendix B4 of the Revised Draft EIR Version 1.</p> <p>As indicated in the EIR and in the above response, nuclear power is not being considered as an alternative to renewable power such as wind power. No single source of power can provide in South Africa's need for an additional 20 000 MW of additional capacity by 2020 and a mixture of sources, including wind power and nuclear power, has been recommended in the approved Integrated Resource Plan 2010.</p> |
| 11 | 03 May 2011 18:17 | Eric Mair Environmental | COMMENTS ON THE REVISED DRAFT ENVIRONMENTAL IMPACT REPORT | Please refer to our response to your submission dated 29 April 2011. |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-------|----------------------|---|----------|
| | Email | Compliance – Manager | <p><i>(Please refer to page numbers where possible)</i></p> <p>The assertion that “As far as power generation technologies are concerned, nuclear generation and coal-fired power generation are the only proven base-load technologies.”</p> <p>“Renewable energy sources such as solar and wind energy do not provide the guaranteed base-load generation capacity that is required.” is entirely in accurate. Renewable technology, particularly in the solar thermal field has advanced now to the point where it is capable of providing dispatchable or baseload power. CSP is also capable of co-firing with natural gas or even biomass for additional back-up to the integrated thermal storage systems.</p> <p>Also, our company is about to construct a power storage demonstration plant which will enable the same dispatchability to wind and PV.</p> <p>It is simply no longer true to say that renewables cannot deliver baseload power.</p> <p>Secondly, I find it sad and extremely worrying that it has been seen fit, in specifying the parameters of this study, to ignore:</p> <ul style="list-style-type: none"> <input type="checkbox"/> The environmental impact of the mining, transportation and processing of the fuel required to power this facility, <input type="checkbox"/> The security operation which surrounds anything nuclear, which must surely have an impact on our environment? <input type="checkbox"/> And, inevitably, the problem of nuclear waste. <p>How can this very real problem possibly skate past a conscientious ENVIRONMENTAL impact assessment</p> | |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|---|--|--|
| | | | of a nuclear power station? | |
| 12 | 03 May 2011 20:40 Email | Len Handler Neuro-Radiologist Retd | <p>Picked this up in the weekend edit of the NY Times. It's nothing new and is standard medical dogma and an article of faith for radiologists and radiotherapists. You may well find some ammunition in it.</p> <p>At a public EIA meeting beyond Milnerton on a golf estate I was unable to coax the experts to explain how they would evacuate the citizenry of CPT in the event of an accident at Koeberg.</p> <p>The N7, N1 and N7 are all downwind should a Westerly or N'Wester be blowing.</p> | <p>Thank you for your comments. Site safety issues are considered in the Emergency Response and Site Control Reports (Appendix E26 and E27 of the Revised Draft EIR Version 1) and will also be dealt with in the NNR licensing process.</p> <p>Predominant wind directions have been considered in the emergency plans for the Koeberg Nuclear Power Station.</p> <p>It depends on the wind direction on the day of an accident. The City of Cape Town (CoCT) has an agreement (Memorandum of Agreement) with the West Coast District Municipality and the Cape Winelands District Municipality for the allocation of Mass Care Centre for evacuees. According to the Legislation the onus is on CoCT Disaster Risk Management to evacuate the public in consultation with Eskom.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>Agreed - whilst the responsibility of emergency planning rests with the licence of the facility (i.e. identification of potential accidents and the assessment of potential consequences) - the responsibility for disaster management (i.e. emergency responses outside of the licenced site) lies with the relevant local authority</p> |
| 13 | 04 May 2011 01:37 | Kobus Reichert Gamtkwa Khoisan Council – Heritage | Thank you for the response. Please indicate the names of the author and co- authors of the document next to each individual response to our comments. I | Thank you for you comments. The responses to your submission on the Draft EIR have been prepared by the EIA consultant team in |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|--|--|---|
| | Email | Representative | will also appreciate it if you can indicate if the responses are the official view of Eskom, Arcus Gibb or both. | conjunction with the applicant and the Heritage Specialist, Dr. T Hart. |
| 14 | 04 May 2011 18:42 Email | Sally Andrew and Bowen Boshier Interested Party | <p>Please see all points raised in our previous emails and add emphasis of the obvious problems illustrated by Japan disasters.</p> <p>Also cost factors need to be realistic taking into account actual costs at all stages, from mining to decommissioning, to millennia of waste and disaster management.</p> | <p>Thank you for your comments.</p> <p>The Fukushima (Japan) incident resulted from a series of natural disasters. The nuclear industry is reviewing the detailed information, as it emerges, of the behaviour of the Fukushima power plants to the natural disasters to determine what further improvements are required. Independent of the nuclear industry, the Regulatory Authorities around the world are evaluating the accident to determine what improvements must be implemented. In South Africa, the National Nuclear Regulator (NNR) regularly tests the Koeberg Nuclear Emergency Plan, the most recent exercise having taken place June 2012. The findings from these tests illustrated that South Africa's nuclear installations are able to withstand all external events considered in the original design. External events include seismic activity, tsunamis, flooding, fire, aircraft crashes, tornados, loss of offsite power as well as station blackouts. There were no findings to warrant curtailing operations or to question the design margins of these facilities. The NNR is also examining the Fukushima accident to determine whether improvements to Koeberg and to the Nuclear Emergency Plan are required.</p> <p>Please refer to the beyond design accident report in Appendix E33 for further information on the Fukushima incident. The report further</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|--|---|--|
| | | | | <p>outlines why Generation 3 technology (technology considered for the Nuclear-1 power station) is inherently safer.</p> <p>Please note that the cost relating to mining and waste and disaster management does not fall within the ambit of this EIA, since this application for Environmental Application deals with the suitability of the Duynefontein, Bantamsklip and Thyspunt sites for the construction, operation and decommissioning of a nuclear power station.</p> |
| 15 | 05 May 2011 00:47 Email | Trevor Moodley Eskom Koeberg Nuclear Power Station QC Inspector | When do we start building? We cannot discuss forever (starting to sound like our President/government). | Thank you, your comment is noted. In the event that the proposed project is authorised, it is anticipated that the construction of the proposed Nuclear-1 power station could commence from the end of 2017. The commencement of construction depends on various Government and Eskom procurement processes and is therefore uncertain at this point in time. |
| 16 | 05 May 2011 06:46 Email | Jacques van den Berg Bergen International Chairman / CEO | There are far more advanced energy systems under development; so the risks involved in nuclear plants simply are not worth the trouble. | Thank you, your comment is noted. |
| 17 | 05 May 2011 06:52 Email | Melissa Saayman Krige Platbos: Africa's Southernmost Forest | Please can you explain why we in the Bantamsklip area are being asked to comment on the Thyspunt Nuclear Plant? | Thank you for your comment. The Bantamsklip site is one of the alternative sites that were considered for the application for Nuclear-1 and as such Interested and Affected Parties in this area are included in the public participation process as legislated by the National Environmental Management Act. It is important to note that the competent authority (DEA) may authorise either one of the feasible site alternatives identified as part of the assessment. |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|-----------|-------------|------------------------------------|------------------------|---|
| | | | | Whilst the Thyspunt site has been identified as the preferred site in the Revised Draft EIR Version 1, it does not preclude the Bantamsklip site being included in a separate application for Environmental Authorisation for Nuclear-2 or Nuclear-3. |

**PROPOSED ESKOM NUCLEAR POWER STATION
AND ASSOCIATED INFRASTRUCTURE**

ENVIRONMENTAL IMPACT ASSESSMENT (EIA: 12/12/20/944)

**COMMENTS ON
DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

(Volume RDEIR IRR 2 – 10 May 2011)

Issues have been received from the following stakeholders:

| No | Name | Organisation |
|-----------|------------------------|---|
| 1 | Mike Kantey | Coalition Against Nuclear – National Chairperson |
| 2 | Lorraine Bredenhaan | Interested and Affected Party |
| 3 | Brenda Walters | Dyer Island Conservation Trust - Operations Manager |
| 4 | Jan van der Velden | Greater Hermanus Association for Commerce and Tourism |
| 5 | Dr. Pieter E. Claassen | Town and Regional Planner – Senior Director |
| 6 | JP Wolhuter | Jeffery's Bay Residents and Rate Payers Association |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|--|---|---|--|
| 1 | 05 May 2011 09:39 Email | Mike Kantey Coalition Against Nuclear National Chairperson | <p>I have read the responses and have found nothing whatsoever that challenges or negates my original submission. I would therefore respectfully request that my identical, original and unblemished submission is placed on record -- without comment or amendment - - with the Final Report to the Minister.</p> <p>Failure to do so will necessarily constitute disrespect to my participation in this exercise and my rights are therefore reserved under the Constitution with regard to further objections and appeals which may lead from what *prima facie* evidence suggests is a flawed public participation process.</p> | <p>Thank you for your comment. Your original response on the Draft EIR as well as the version with the GIBB responses integrated within your submission (as is included in Appendix D8 of the Revised Draft EIR) will be included within the Final EIR. The Minister of Environmental Affairs will not personally review the EIR. The Department of Environmental Affairs with the support of a peer review team will review and assess the contents of the EIR and based on this make a decision.</p> |
| 2 | 10 May 2011 14:20 Telephone call | Lorraine Bredenhaan | <p>Ms Bredenhaan works for FNB in Jeffreys Bay and her Manager informed her that Eskom scheduled meetings in the area and he recommended that she calls to find out about work for one of her family members. She asked who she can call about employment.</p> | <p>The GIBB Nuclear-1 Public Participation Office informed Ms. Bredenhaan that the meetings have been scheduled for the public to attend in order to give them an opportunity to comment on the Revised Draft EIR. She was informed that GIBB is not involved in recruitment and she was advised to contact Eskom directly.</p> <p>Eskom response: Eskom will only begin the recruitment process for this project once various authorisations are in place. Eskom will work with the local authorities and department of labour as well as establish local community forums, to ensure that the recruitment process is well communicated. Recruitment options are currently being developed to ensure maximum local recruitment.</p> |
| 3 | 05 May 2011 11:56 Email | Brenda Walters Dyer Island Conservation Trust Operations Manager | <p>Please advise when the new draft EIA for Bantamsklip will be available?</p> | <p>Thank you for your comment. Please note that as per Chapter 5 of the Nuclear-1 EIR, the Bantamsklip site is no longer considered as a feasible site for the Nuclear-1 power station development. This however does not exclude the site for consideration in terms of Nuclear-2 or Nuclear-3.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|---|---|---|
| | | | | If you are referring to the EIA and EMP for the Nuclear-1 Bantamsklip Transmission lines please contact NMA Effective Social Strategists, the Public Consultation Consultants for this EIA, at 011 447 9737 or JulianD@nma.org.za . This EIA is currently on hold. |
| 4 | 05 May 2011 18:57 Email | Jan van der Velden Greater Hermanus Association for Commerce and Tourism | Isn't it, from an engineering point of view, a bit problematic to have the OCGT far away from the HV yard? Like out of earshot? OCGT generally do not perform well with exhaust silencers. Thought you would have thought of that in the first place. Will read the full report in due time, if I get to it. | The OCGT plant will be located at the HV Yard at the Thyspunt site. In this regard, please refer to the Erratum contained in the email notification distributed on 4 May 2011. This states the following: <i>"The section dealing with noise impacts (pages 16 and 17) states incorrectly that the Open Cycle Gas Turbine (OCGT) plant will not be located in the High Voltage Yard (HV Yard) at the Thyspunt site. Please note that the OCGT plant will in fact be located in the HV Yard and that potentially significant (medium) impacts on farm residences in proximity to the HV Yard could result when the OCGT plant operates for short periods of time. The latter is reflected in the Noise Impact Assessment (Appendix E23 of the Revised Draft EIR) and in Chapter 9 of the Revised Draft EIR."</i> |
| 5 | 06 May 2011 10:27 Email | Dr Piet Claassen Town and Regional Planner Senior Director | I find the impact assessment well balanced and of a high professional standard. I agree that construction of the nuclear power station should be proceeded with on the conditions specified in the report. Nuclear power is essential to reduce the output of global warming gasses. Renewable energy must also be promoted, but it can only supply a small percentage of electricity demand. | Thank you, your comment is noted. In terms of alternative energy solutions, only a few energy sources capable of providing a sustained power supply are available in sufficient quantities suitable for base-load power supply. In South Africa, coal, nuclear power and imported hydro power are used for base load electricity generation, while the Open Cycle Gas Turbines (OCGTs) (which use liquid fuel such as diesel), two hydroelectric power stations on the Orange River and pumped storage schemes are used for peaking and emergency electricity generation. At present, renewable forms of energy (e.g. wind and solar), are unable to provide viable large scale base load power due to the intermittent nature of their operation and hence the lower load factors of these renewable technologies. See for instance, EPRI (2010) referred to in Chapter 5 of the Revised Draft EIR. |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|--|---|---|
| 6 | 06 May 2011 12:59 Email | JP Wolhuter Jeffreys Bay Residents and Ratepayers Association | <p>Baie dankie vir die twee e-posse.</p> <p>Graag verneem ek of u 'n kaart of skets aan my kan stuur wat die ligging aantoon wat die verby-pad sal volg om die hoofstraat van Humansdorp te vermy.</p> <p>Die groot indaba oor Koi nalatenskappe is oordrewe. Nou skielik is daar belangstelling en die afgelope 200 jaar het niemand iets daaraan gedoen nie. Indien iets met die uitgrawings gevind word kan dit bewaar word. Dit is die Koi stigting se probleem om dit bymekaar te maak .</p> <p>Ek is positief oor die oprigting van Nuclear-1 by Thyspunt maar besorg oor hoe die werksmag gewerf gaan word. Ek het 'n paar idees wat mag van hulp wees.</p> <p><u>Translation.</u></p> <p>Thank you for the two e-mails.</p> <p>I enquire as to whether a map could be sent to me which illustrates the alignment of the route (detour) in order to avoid the main road of Humansdorp.</p> <p>The great indaba about Khoi heritage has been hyped. Now suddenly there is interest after nobody has done anything about it in the last 200 years. In the event that something is found during the excavations it can be conserved. It is the Khoi Foundation's problem to collect it all.</p> <p>I am positive about the construction of Nuclear-1 at Thyspunt but am concerned</p> | <p>Dankie vir u kommentaar. 'n Kaart sal so spoedig moontlik aan u gestuur word. Die kaart vorm ook deel van deel twee van die Vervoer Studie (Figuur 10.1d in Volume 2 van Aangangsel 25 van die Hersiene Konsep-omgewingsimpakstudie). Die figuur is op 13 Mei 2011 aan Mnr Wolhuter gestuur per e-pos gestuur.</p> <p>Let asseblief daarop dat die Vervoer Studie verder hersien is en dat die hersiende verslag aan die publiek beskikbaar gestel sal word vir hul oorweging.</p> <p>Dit word in the Hersiene Konsep- omgewingsimpakstudieverslag aanbeveel dat die werksmag gewerf word by twee kantore - een in Jeffreysbaai en die ander in Humansdorp. Geen werwing sal by die ingang tot die konstuksieterrein toegelaat word nie. Versoeke vir 'n werwingskantoor in St. Francis word ook oorweeg.</p> <p><u>Translation</u></p> <p>Thank you for your comment. The map is attached as Figure 10.1d of the Transportation Assessment appended to the Revised Draft EIR Version 1 (Figure 10.1d of Volume 2 of Appendix 25 of the Revised Draft EIR). The figure was also sent to Mr Wolhuter via email on 13 May 2011.</p> <p>Please note that the Transportation Assessment has been revised and that the revised report will be made to the public for their consideration as part of the Revised Draft EIR Version 2.</p> <p>It has been recommended in the Revised Draft EIR that the workforce must be recruited in two recruitment offices – one in Jeffrey's Bay and the other in Humansdorp. No recruitment will be allowed to take place at the entrance to the construction site. Request for a recruitment office in St. Francis will also be considered by Eskom.</p> |

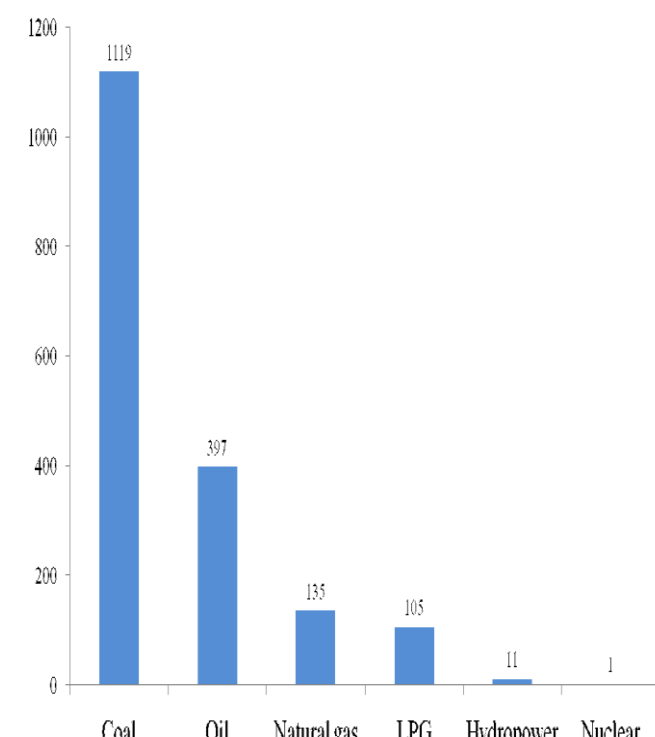
| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|--|----------|
| | | | about how the workforce will be recruited. I have a couple of ideas. | |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|---|------------------------------------|---|---|
| 1 | 11 May 2011 13:40 Telephone Call | Yushanta Kandasmy SASKEN | Ms. Kandasmy called on behalf of her client who received the email regarding the Revised Environmental Impact Report (EIR) from a registered Interested and Affected Party on the GIBB I&AP register. She did not want to disclose the I&AP nor her client's name. However, she did mention that it is a Chinese company. She also asked about if there is a fee involved to register, who can register and how to go about registering. | The GIBB Nuclear-1 Public Participation Office informed Ms. Kandasmy that anybody can register to be on the I&AP register and attend the public meetings. She was further informed that all I&APs are invited to complete the comment sheet and forward it to the GIBB Public Participation Office by mail, fax or email. She confirmed that she will speak to her client and they may then make contact directly with the GIBB Nuclear-1 EIA Public Participation Office. |
| 2 | 11 May 2011 14:25 Telephone Call | Pierre Joubert Interested Party | Mr. Joubert requested a map reflecting the new access road/s from Humansdorp to the site. | The GIBB Nuclear-1 Public Participation Office emailed a map to Mr Joubert on 18 May 2011 |
| 3 | 10 May 2011 08:52 Email | Eleanor Welsh | <p>Herewith wish to confirm our telephonic communication on Friday, 6th May 2011.</p> <p>As related to the public meetings schedule for Revised Draft EIR for proposed Nuclear Power Station and Associated Infrastructure as published in the Hermanus Times on 5th May 2011.</p> <p>I draw your attention to the fact that no meeting has been scheduled for Hermanus, which is after all the "capital" of the Overstrand and by far the most densely populated town in the area. We</p> | <p>Thank you for your comment. In view of the recommended site in the Revised Draft EIR being Thyspunt, the most effort (and thus most meetings around the proposed site) is being invested in the area around Thyspunt. Thus, only one meeting each has been scheduled for the Bantamsklip and Duynefontein sites in order to give the broader public, especially around the Thyspunt site, the opportunity to participate in the EIA process.</p> <p>However, your request for an additional meeting in Hermanus is noted and will be considered.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|---|---|---|
| | | | <p>are baffled by the absence of inclusion in the Public Meeting schedule as a lively meeting was held at the Municipal Auditorium in March 2010.</p> <p>In view of the "events in Japan at "FUKUSHIMA" public awareness of the potential dangers of this source of energy has grown and I believe it is incumbent upon ESKOM and their assessors (yourselves) that the broader Public are afforded the opportunity to participate in this process. I trust that this oversight will be rectified and look forward to seeing you in Hermanus.</p> | |
| 4 | 12 May 2011 08:30 Email | Benjamin Walton Cape Nature Scientist: Land Use Advice Samantha Ralston Cape Nature Land Use Advice: Scientific Services | <p>Please register this office as a public I&AP as Organ of State.</p> <p>Please submit a physical (hard) copy of the revised draft Environmental Impact Report and with all specialist reports for consideration, as well as a digital copy for record keeping purposes.</p> <p>Please register this office as a public I&AP as Organ of State.</p> <p>Apologies for any confusion. Please send the hard copy to this office as per the last round of commenting. Land Use Advice: Scientific Services, P/Bag</p> | <p>GIBB Nuclear-1 Public Participation Office: Cape Nature is registered as an I&AP. An email was sent on 12 May 2011 to request one contact person for Cape Nature. We confirm that Cape Nature has requested the following:</p> <p><u>Send to Stellenbosch office:</u></p> <ul style="list-style-type: none"> • Hard copy of Draft Revised Environmental Impact Report (Main Report) • Specialist Bio-Physical Reports (Botanical; Zoological; Freshwater and Marine) • One digital copy <p><u>Send to George office:</u></p> <ul style="list-style-type: none"> • One digital copy for record keeping purposes. |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|-------------------------------------|---|---|
| | | | X5014, Stellenbosch, 7599. | <p>GIBB will forward digital copies of the report to the Cape Nature George and Stellenbosch offices as requested. A hard copy of the report is available for review at the GIBB Pretoria and Cape Town offices. Please refer below for the physical addresses for each of the GIBB offices:</p> <p>GIBB Pretoria Office –36 Alkantrant Road, Pretoria GIBB Cape Town Office - 14 Kloof Street, Cape Town</p> <p>The report will also be made available on the GIBB project website at the link provided below:</p> <p>http://projects.gibb.co.za/en-us/projects/eskomnuclear1revisedrafterversion2</p> <p>Hardcopies of the report are available at cost of reproduction and associated administrative time due to the extensive volume of the reports (25 lever arch files, including all appendices). The costs are R25, 000 for a colour copy or R8,000 for a black and white copy.</p> |
| 5 | 10 May 2011 06:15 Email | Rodney Anderson Save Bantamsklip | <p>We confirm that we have received the documentation with regard to the above matter.</p> <p>Your official response has been much delayed and we feel that the return date for our response is too short.</p> <p>You are aware that it is our view that the public participation process is already flawed and that the 45 day time frame is unrealistic and unfair.</p> | <p>Thank you for your comment. Your request for an extension to the review period is noted. The request was considered and the comment period will be extended to 07 August 2011.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|---|--|--|--|
| | | | <p>We place on record our formal request for an extension to the response period to total 90 days so that we may have the time to be diligent with our comment.</p> | |
| 6 | <p>11 May 2011 14:52 Email</p> | <p>Simon Grier R. Grier & A Grier Trust Blue Ridge Farm, Stanford and Villiera Wines</p> | <p>No insurance companies will insure an Atomic power station or give public liability insurance. If we as the public are not protected there is no way such installations should precede.</p> <p>Three of the leading atomic power producers and technological leaders in the world have had serious problems, which they could not control. These disasters in America, Russia and Japan could not be prevented, nor did the countries have too much idea on how to control the damage. There is no way South Africa has the ability to deal with a disaster of this magnitude.</p> <p>South Africa has already had the incident with the bolt at Koeberg and more recently the blowing up of one of</p> | <p>GIBB Nuclear-1 Public Participation Office: Received comment on comment sheet and then on email. Mr. Grier was contacted via telephone on 12 May 2011 and he confirmed that the faxed copy could be disregarded. The Public Participation office also confirmed with him by email on 12 May 2011 that only the email comments are valid.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>This is factually correct and the NNR is responsible to make the determination of the required provision.</p> <p>Thank you for your comments. With respect to Civil Liability for Nuclear Damage, the NNR Act section 29 requires Eskom to make financial provision for possible damages. Eskom makes the financial provision through insurance obtained from the international nuclear insurance pools).</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>In addition to what has been said it is not clear which incidents are being referred to - the assumption is they are TMI, Chernobyl and Fukushima.</p> <p>To put this into context, accidents or incidence do happen across all industries and manufacturing sectors. The following graph shows the number of accidents from various energy</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE | | | | | | | | | | | | | | |
|---------------|---------------------|---------------------|---|---|---------------|---------------------|------|------|-----|-----|-------------|-----|-----|-----|------------|----|---------|---|
| | | | Eskom's generators. In both cases Human error led to the problem. The more atomic power stations the greater the risk | <p>sources. Hence, like any organisation or property owner, Eskom is obliged to obtained insurance over its assets to cover any potential incident of damage.</p> <div> <p style="text-align: center;">Number of Accidents with at least 5 Deaths in Full Energy Chain 1969 to 2000</p> <p style="text-align: center;"><small>Comparing Nuclear Accident Risks with Those from Other Energy Sources. OECD 2010 ISBN 978-92-64-99122-4</small></p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Data for Number of Accidents with at least 5 Deaths in Full Energy Chain (1969 to 2000)</caption> <thead> <tr> <th>Energy Source</th> <th>Number of Accidents</th> </tr> </thead> <tbody> <tr> <td>Coal</td> <td>1119</td> </tr> <tr> <td>Oil</td> <td>397</td> </tr> <tr> <td>Natural gas</td> <td>135</td> </tr> <tr> <td>LPG</td> <td>105</td> </tr> <tr> <td>Hydropower</td> <td>11</td> </tr> <tr> <td>Nuclear</td> <td>1</td> </tr> </tbody> </table> </div> <p>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</p> | Energy Source | Number of Accidents | Coal | 1119 | Oil | 397 | Natural gas | 135 | LPG | 105 | Hydropower | 11 | Nuclear | 1 |
| Energy Source | Number of Accidents | | | | | | | | | | | | | | | | | |
| Coal | 1119 | | | | | | | | | | | | | | | | | |
| Oil | 397 | | | | | | | | | | | | | | | | | |
| Natural gas | 135 | | | | | | | | | | | | | | | | | |
| LPG | 105 | | | | | | | | | | | | | | | | | |
| Hydropower | 11 | | | | | | | | | | | | | | | | | |
| Nuclear | 1 | | | | | | | | | | | | | | | | | |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|---|---|
| | | | <p>Radioactive waste is a problem at present and we do not have a solution. The problem will just become greater.</p> | <p>In terms of each of the above; TMI whilst causing some reactor core damage had only minor actual radiological consequences. However significant lessons have been learned from the event. Similarly Chernobyl whilst having significant off site impact occurred due to a unique combination of reactor design (of a type no longer considered for commercial application) and a particular combination of operational circumstances underpinned by a poor safety culture. Apart from the proposed technology for any reactors in South Africa being not capable of exhibiting the sort of reactor kinetic behaviour, displayed at Chernobyl, the industry as a whole has learned significant lessons from the event - particularly in terms of Safety Culture which has since become an embedded characteristic of nuclear operators world wide. With respect to Fukushima this was due to a unique combination of external events and a reactor design neither of which would specifically feature in the South African context - not withstanding this industry has undertaken stress tests of all facilities against the type of challenges a Fukushima type event would pose and where necessary and as far as reasonably practicable implemented necessary changes. Over and above this reactor operators are required to make appropriate provisions in terms of mitigating beyond design base events and to provide the necessary decision making tools to assist even in the remote event of such occurrences in the form of for example severe accident management guides.</p> <p>Radioactive waste management practices envisaged for the Nuclear-1 Power Stations are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal. The Nuclear-1 Power Station will further strive to minimise production of all solid, liquid and gaseous radioactive waste,</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|--|--|
| | | | <p>We do now have green energy solutions. If there is the will from Eskom we will find the way to find the solutions without coal or nuclear.</p> <p>There are still huge potential savings to be made by consumers. Consider this route.</p> <p>At present power production is a mess. Public transport, service delivery, roads, schools, hospitals etc. If these basic things cannot be managed how can we embark on something so potentially dangerous? Being told we will not have a problem is no consolation if we know there is no way of dealing with the problem if arises. In addition we will lose everything with no compensation.</p> <p>Break this huge problem down into</p> | <p>both in terms of volume and activity content, as required for new reactor designs. Systems are lastly designed to store solid radioactive waste for a period of up to three years within the facility. The storage containers are consistent with the requirements for the disposal of solid waste at the radioactive waste disposal facility at Vaalputs. The High-level waste unsuitable for disposal at Vaalputs will be stored safely on site until a suitable facility is available in South Africa. With the implementation of appropriate mitigation measures all potential impacts are expected to be of low significance.</p> <p>In terms of alternative energy solutions, only a few energy sources capable of providing a sustained power supply are available in sufficient quantities suitable for base-load power supply. Globally , coal and nuclear power are used for base load electricity generation, while in South Africa, the Open Cycle Gas Turbines (OCGTs) (which use liquid fuel such as diesel), two hydroelectric power stations on the Orange River and pumped storage schemes are used for peaking and emergency electricity generation. At present, renewable forms of energy (e.g. wind and solar), are unable to provide viable large scale base load power , or ease of integration into the existing power network in South Africa due to the intermittent supply and lower load factors of these renewable technologies. See for instance, EPRI (2010) referred to in Chapter 5 of the Revised Draft EIR.</p> <p>In some countries, Internationally, natural gas and hydro power are also used for base-load electricity supply. However, South Africa does not have sufficient quantities of indigenous natural gas and does not have the large rivers required for base load hydro-electric power stations.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|---------------------------------------|--|---|--|
| | | | <p>thousands of small green solutions that ordinary South Africans can handle and will provide our citizens with work.</p> | <p>In light of the above, coal-fired and nuclear power stations are currently the only feasible options in South Africa for base load electricity generation.</p> <p>In terms of the management of a nuclear facility, Eskom has a proven track record of effectively managing the Koeberg Nuclear Power Station for more than two decades without any major incident.</p> |
| 7 | 11 May 2011 07:37 Email | Keith Gordon | <p>I would be most grateful to you if you could let me know what the current status of the nuclear facility that Eskom wishes to erect in the Pearly Beach area.</p> <p>I am looking to buy property in Pearly Beach but am reticent insofar as the plant is concerned - especially after the incident in Japan recently.</p> <p>Is there any further discussion on the matter and if so has a resolution been taken?</p> <p>Will the plant be built in this region or not?</p> | <p>Thank you for your comment. Although the Bantamsklip site is not the preferred site in terms of the findings of the Revised Draft EIR for Nuclear-1, this does not exclude the site for consideration in terms of Nuclear-2 or Nuclear-3, or any other proposed plants thereafter.</p> <p>Since the application for Nuclear-1 is for a single power station, new environmental applications would have to be submitted for Nuclear-2 and -3. Alternative sites, in addition to the Bantamsklip site, would need to be assessed in terms of the National Environmental Management Act and its associated EIA Regulations. In other words a full EIA process, including public participation would need to be undertaken.</p> |
| 8 | 12 May 2011 09:42 Email | Trudi Malan Thyspunt Alliance Project Coordinator | <p>Request for Extension of Time Period and Focus Group Meetings</p> <p>We would hereby like to request that the time-period for comments on the Revised Draft Environmental Impact</p> | <p>Thank you for your comment. Your request for an extension to the review period and additional focus group meetings is noted. The request for an extension to the review period was considered and the comment period was extended to 07 August 2011.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|--|--|
| | | | <p>Assessment for Nuclear 1 be extended to 90 days. We believe that the period of 45 days is too short to allow for adequate and meaningful public participation.</p> <p>As this is a Revised Draft, we need to be able to engage with the Project Team in order for us to clarify some of the findings in the Revised Draft. We therefore request that the following Key Focus Group Meetings be arranged before 45 days and that another 45 days for final comments be allowed after these meetings:</p> <ul style="list-style-type: none"> • A focus group meeting with the Gamtkwa Khoisan Council. • A focus group meeting with SASMIA and the Scientific Squid Working Group. • A focus group meeting where the role players can directly engage with the specialists to get a better understanding of some of their findings. It would be meaningful if the following specialists can attend this meeting: Marine Specialists Freshwater Specialist Agricultural Specialist | <p>A request for additional engagement with the Squid Scientific Working Group was also received from Mr Greg Christy (of the South African Squid Management Industrial Association [SASMIA]) on 13 May 2011. The meeting was scheduled and attended by representatives of SASMIA, the Squid Scientific Working Group, Eskom, Arcus GIBB and the Nuclear-1 Marine Ecology Specialists (Prof. Griffiths and Dr. Robinson). The meetings took place on 20 June, 8 July and 2 August 2011.</p> <p>Lastly, your request for meetings with the Gamtkwa Khoisan Council as well as selected Nuclear-1 specialist are also noted. GIBB held such a meeting with the Gamtkwa Khoisan Council during November 2014,</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|---|----------|
| | | | <p>Economic Specialist Heritage Specialist Social Specialist Transport Specialist Dune Geomorphology Hydrological Specialist Emergency Planning Specialist</p> <p>Although we fully understand the scope of work involved in this project, we believe that it would only be fair to allow all interested and affected parties the opportunity to engage fully with the information presented in the Revised Draft. We have been waiting patiently since July 2010 for both the responses to our comments as well as the revised document.</p> | |

**PROPOSED ESKOM NUCLEAR POWER STATION
AND ASSOCIATED INFRASTRUCTURE**

ENVIRONMENTAL IMPACT ASSESSMENT (EIA: 12/12/20/944)

**COMMENTS ON
DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

(Volume RDEIR IRR 4 – 16 May 2011)

Issues have been received from the following stakeholders:

| No | Name | Organisation |
|-----------|------------------|---|
| 1 | Peter Becker | Koeberg Alert Alliance |
| 2 | Piet Liebenberg | Our Times |
| 3 | Tanja Liebenberg | Supertubes Surfing Foundation |
| 4 | Greg Christy | SASMIA |
| 5 | Tristen Taylor | Earthlife Africa JHB – Project Co-Ordinator |
| 6 | Jan Wassenaar | Interested Party |
| | | |
| | | |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|---|---|--|
| 1 | 13 May 2011 09:55 Email | Peter Becker Koeberg Alert Alliance | <p>We have noted with consternation that the public meeting schedule excludes a session in the Southern suburbs which has previously occurred at the Vineyard hotel.</p> <p>During the previous session at this venue many substantive issues were raised, and it seems appropriate that the same (or a close by) venue is used to allow the same public to question the responses to their submissions.</p> <p>We therefore request that as a matter of urgency, the schedule is revised to include another public session in this area, and that this schedule is communicated to I&APs as soon as possible to allow time to plan to attend.</p> <p>Please could you acknowledge receipt of this email?</p> | <p>The GIBB Nuclear-1 Public Participation Office acknowledges receipt of Mr. Becker's mail dated 13 May 2011 and as such sent an email on 13 May 2011 at 10:34 confirming receipt of the email.</p> <p>The choice of venues for the current public meetings was based on proximity to the alternative sites and the most potentially affected parties, as well as accessibility for the Interested and Affected Parties (I&APs) from surrounding areas. The changes made to the Draft Environmental Impact Report Version 1 predominantly relate to issues specific to the Thyspunt site. The Duynefontein and Bantamsklip sites are not recommended as the preferred site. It is therefore considered that the Public Open Houses and Meetings advertised were sufficient to allow Interested and Affected Parties (I&APs) reasonable opportunity to comment on the key changes to the Revised Draft EIR Version 1.</p> <p>This is the reason that Melkbosstrand was chosen as the public meeting venue for the area around the Duynefontein site and the area is easily accessible for residents.</p> <p>It must be noted that I&APs have been afforded the opportunity to comment in other ways to the GIBB Public Participation Office on the Revised Draft Environmental Impact Report Version 1, namely by means of: fax, telephone call and written letter. The public comment period was also further extended by a further 45 days and closed on 07 August 2011.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|---|--------------------------------------|--|--|
| | | | | <p>I&APs will also be afforded the opportunity to comment on the Revised Draft EIR Version 2 and the Final EIR.</p> |
| 2 | <p>13 May 2011 12:04</p> <p>Email</p> | <p>Piet Liebenberg Our Times</p> | <p>Could you please tell me which document I need to study to determine the proposed road link with the N2?</p> <p>It is mentioned that Humansdorp be by-passed.</p> | <p>Thank you for your comment. This information was discussed in the Transport Assessment Volume 1 & 2 (Appendix E25 of the Revised Draft EIR Version 1). However due to concerns raised from the public around Humansdorp the Transport Specialist study was revised. The revised report recommends that the main street through Humansdorp and Saffrey Street be bypassed. New transport roads for abnormal load vehicles were therefore considered and three alternate bypasses were investigated. All three alternatives are proposed new roads that run along existing land boundaries between farmland.</p> <p>The preferred alternative directly links between Voortrekker Road (MR389) and Park Street (MR381) and is 850m in length. The beginning of the preferred alternative crosses the Boskloof Valley and the rest of the route will be constructed on Municipality land. It is considered as the most viable option as it is the shortest and most economical route to construct, and it has a good alignment for the transportation of abnormal loads. Once the route is constructed, it will also alleviate the traffic congestion in Humansdorp.</p> <p>The revised Transport specialist study further acknowledges that the Thyspunt site requires significant transport infrastructure upgrades. The R330</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|---|--|---|--|
| | | | | <p>is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed to be surfaced to provide improved east-west connectivity.</p> |
| 3 | <p>13 May 2011 15:08 Email</p> | <p>Tanja Lategan Supertubes Surfing Foundation</p> | <p>According to recent publications, a series of public participation meetings are to be held in the St Francis area, Oyster Bay, Humansdorp and Port Elizabeth. We strongly object to the fact that no meeting has been scheduled for Jeffrey's Bay.</p> <p>As you are aware, many Interested and Affected Parties live in Jeffrey's Bay - a fact you acknowledged by, according to Jaana-Maria Ball, having public meetings during the scoping phase of the first EIA.</p> <p>The fact that these were, according to Ms. Ball, relatively poorly attended, does not mean that it is not necessary to bother - in our opinion it points to the fact that they were not widely advertised.</p> <p>At an organized march in July 2010 to protest against the proposed NPS, more than</p> | <p>Thank you for your comment. Your request for an additional meeting in Jeffrey's Bay is noted. In view of the recommended site in the Revised Draft EIR Version 1 being Thyspunt, the most effort (and thus most meetings around the proposed site) is being invested in those areas closest to Thyspunt in order to give not only the broader public, but especially Interested and Affected Parties closest to the Thyspunt site, the opportunity to participate in the EIA process.</p> <p>The choice of venues for the public meetings is thus based on proximity to the site and the most potentially directly affected parties, as well as accessibility from surrounding areas. This is the reason that Oyster Bay, St. Francis Bay, Sea Vista and Humansdorp were chosen as the public meeting venues for the Thyspunt site. The towns are easily accessible for Jeffrey's Bay residents. It must be noted that I&APs can comment in other ways to the GIBB Public Participation Office on the report, namely by means of fax, telephone call, post and email.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|---|--------------------------------|---|---|
| | | | <p>2,000 people attended - this on a Saturday morning during the Billabong Pro surfing event and a Springbok rugby test match.</p> <p>In addition, we would appreciate the requested meeting being held after 5pm, when more members of the public are able to attend.</p> | <p>I&APs will also be afforded the opportunity to comment on the Revised Draft EIR Version 2 and the Final EIR.</p> |
| 4 | <p>13 May 2011 12:18</p> <p>Email</p> | <p>Greg Christy SASMIA</p> | <p>We hereby request that the deadline for submissions be extended to enable us to properly assess the Draft Environmental Impact Assessment (<i>Revised Draft EIR Revision 1</i>) for Nucleur-1. We feel that the time limit as set down of 45 days is too short and inadequate. We feel that a more realistic time period if one is aiming for adequate and meaningful public participation, would be 90 days.</p> <p>Notwithstanding that this is a revised Draft, we feel that we would need proper engagement with all of the authors which make up the Arcus Gibb report to ensure that we understand fully the findings contained in the revised draft.</p> <p>We therefore request that meaningful Key Focus Group meetings be held before 45 days and that another 45 days be allocated for all to assess the comments and outcomes which will flow from these meetings.</p> <p>We as the South African Squid Industrial</p> | <p>Thank you for your comment. The SASMIA's request for an extension to the review period is noted. Various other Interested and Affected Parties also requested an extension of the review period.</p> <p>After due consideration of these requests, it was decided that the comment period be extended by an additional 45 days. The closing date for comment thus changed to 07 August 2011 (i.e. a 90 day comment period).</p> <p>Meetings with the Squid Scientific Working Group concurrently took place in June and July 2011, at which the SASMIA was a participant. A full list of participants at the meetings were as follows:</p> <p>SWG Members: Dr H. Verheye (DEA Oceans and Coasts, Chair), Dr D. Durholtz (DAFF Resources Research), Dr M. Lipinski (DAFF Resources Research), Ms J. Glazer (DAFF Resources Research rapporteur), Prof. D. Butterworth (MARAM, University of Cape Town), Prof. W. Sauer (Rhodes University), Ms N. Downey (DEA Oceans and Coasts)</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|---|---|
| | | | <p>Association are the key group which is to be affected by any potential disruptions on the Marine Ecology by the building on the proposed Thyspunt site.</p> <p>Closely coupled to the Ecology aspect would be the Economic Aspects of any impacts on the fishery as a result of the disruption of the Marine Environment.</p> <p>In the light of the above we request a Key Focus Group meeting that must include :</p> <ul style="list-style-type: none"> • Sasmia (South African Squid Management Working Group • Authors of the Marine Ecology Report • Authors of the Economic Report • Squid Scientific Working Group <p>This above mentioned focus group meeting would serve to enable role players to engage directly with the specialists to get a better understanding of some of their findings.</p> <p>This document has been a long time coming and we would find it procedurally lacking if Arcus Gibb did not allow adequate time frames and correct forum formats to fully exhaust all of the Interested and Affected Stakeholders engagements</p> | <p>Observers: Dr M. Roberts (DEA Oceans and Coasts), Mr J. van der Westhuizen (DAFF Resources Research), Dr M. Bergh (OLRAC), Mr G. Christy (SASMIA), Mr E. van Niekerk (SASMIA), Mr D. Jeannes (ESKOM), Mr/Ms D. Herbst (ESKOM), Prof. C. Griffiths (UCT), Ms K. Humby (SASMIA), Ms/Dr J-M. Ball (Arcus GIBB), Dr T. Robinson (UCT), Mr J. van Zyl (DAFF).</p> <p>The Marine Impact Assessment has been revised as a result in accordance with the outcome of these meetings and will be made available for public comment and review as part of the Revised Draft Version 2.</p> <p>For further responses in terms of this discussion we refer the author to:</p> <ul style="list-style-type: none"> • IRR 19 of the Revised Draft EIR Version 1 received from Mr Greg Christy on 04 July 2011; • IRR 33 of the Revised Draft EIR Version 1 received from Mr Greg Christy on 22 July 2011; • Dawson, Edwards and Associates • IRR 74 of the Revised Draft EIR Version 1 received from Dawson, Edwards and Associates on 10 August 2011; and • IRR 136 of the Revised Draft EIR Version 1 received from Dr K Prochazka of the Department of Agriculture, Forestry and Fisheries and Dr Hans Verheye from Department of Environmental Affairs on 11 |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|--|---|---|---|
| | | | | May 2012 |
| 5 | 16 May 2011 10:59 Email and Telephone call | Tristen Taylor Earthlife Africa JHN Project Co-Ordinator | <p>Would you please respond to the below issue regarding speaking with a researcher involved in the EIA?</p> <p>I am seriously disappointed not to have received a response from you, in what is arguably a Freedom of Speech issue. Surely, Arcus GIBB will, at least, respond to such a request?</p> <p>I have copied our legal representative (Ms. Andrews) and freedom of expression expert (Mr. Delaney) to this mail as a sign of how seriously I regard this issue and the public's right to engage substantially in a public process.</p> <p>“On Thu, 2011-05-12 at 15:30 +0200, Tristen Taylor wrote:</p> <p>Dear Ms. Ball,</p> <p>I attempt to speak to Mr. Hunt at UCT today regarding his work done on the Nuclear-1 EIA.</p> <p>He told me that he would only be able to speak to me if he had permission from Arcus GIBB and, in particular, yourself due to confidentiality issues.</p> <p>Would please grant Mr. Hunt with permission to speak to me regarding his Work.”</p> | <p>Thank you for your comments. GIBB acknowledges your request to liaise directly with Dr. Hart in terms of the Nuclear-1 Revised Draft Environmental Impact Report (EIR). As communicated telephonically by the GIBB Public Participation Office (Ms. J-M Ball) to Mr. Taylor on 16 May 2011, GIBB has a responsibility to keep the EIA and Public Participation Process transparent and to maintain accurate records of issues raised. As the Environmental Impact Assessment Practitioner managing the Environmental Impact Assessment (EIA) process, it is our legislated responsibility to capture all comments on the Revised Draft EIR Version 1 and its associated specialist studies in order to present the competent authority with all relevant information for decision-making purposes.</p> <p>GIBB therefore requests (as was requested from Mr. Taylor), in line with best practice principles that Earthlife Africa provide GIBB with a list of questions/ issues for Dr. Hart to respond to. This will ensure that GIBB can accurately capture all comments raised by you and the response from the specialist on these comments.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-------------------------------------|---------------------|--|--|
| 6 | 20 March 2011 10:41 Email | Jan Wassenaar | Please can you inform me where I can get an electronic copy of the Thyspunt EIA and HIA ¹ ? I had previously been receiving the documentation but have moved and my address changed. | Thank you for your comment. The report will also be made available on the GIBB project website at the link provided below: http://projects.gibb.co.za/en-us/projects/eskomnuclear1reviseddrafteirversion2 The Heritage Impact Assessment is available on these websites as Appendix E20 of the Revised Draft EIR Version 1. |

¹ Heritage Impact Assessment

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|-------------------------------------|---|---|
| 1 | 17 May 2011 11:53 Email | Kayla Wolfaardt Interested Party | <p>Extension of Comments Period for Revised Draft Environmental Impact Assessment Report for the Eskom Nuclear Power Station and Associated Infrastructure (Nuclear-1)</p> <p>In the wake of the International Nuclear disaster, are you really certain that you want this on your conscience?</p> <p>This letter formally applies to you to for an extension of a further 45 days, and in reality asks you to do everything in your human power to stall this project indefinitely. At a time when Germany is closing down its nuclear plants, we should be running from projects like this as fast as we can, not charging towards them. The future can only be a place where the safety and health of the planet and its inhabitants is our primary consideration.</p> | <p>Thank you for your comment. As you are aware, an opportunity to review the Revised Draft Environmental Impact Report (EIR) Report commenced on 09 May 2011 with a closing date of 23 June 2011. Various Interested and Affected Parties, including yourselves, have requested an extension of the review period.</p> <p>After due consideration of these requests, it was decided that the comment period will be extended by an additional 45 days. The closing date for comment thus changed to 07 August 2011 (i.e. a 90 day comment period).</p> <p>The precautionary approach has, since the inception of this application for environmental authorisation, been applied in terms of Nuclear-1. As such the EIA team has ensured that the assessment of impacts and the methodology applied in terms of this assessment is scientifically sound, in line with best practice principles. The assessment report has been peer reviewed, not only by members of the public, but by three independent, experienced peer reviewers, who have confirmed that the EIA process have been undertaken as per the legal requirements. Furthermore, the BBC (http://www.bbc.co.uk/news/world-europe-13592208) reports that Germany's decision to close down its nuclear power stations will most probably lead to an increase in the import of nuclear energy from France. Phasing out nuclear power will also result in increased dependence on fossil fuels, which result in proportionately larger releases of greenhouse gases into the atmosphere than nuclear power, which has a greenhouse gas footprint similar to some renewable technologies (see Section 4.2.2 of the Revised Draft EIR). There is a further risk that Germany will not manage to quickly halt its dependency on fossil fuels, especially coal-based energy, which creates unintended negative environmental impacts of its own.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|---|---|---|---|
| | | | <p>Will you live near to such a plant, or condemn others to do so?</p> <p>Act wisely today, the alternative is too horrific to contemplate.</p> | <p>It should be noted that the EIA Regulations require the EAP to be independent of the agenda of both the applicant and the I&AP. More importantly it is the responsibility of the EAP to be objective. Therefore, to provide a personal opinion in this regard is not appropriate.</p> |
| 2 | <p>18 May 2011 12:18</p> <p>Email</p> | <p>Liziwe McDaid Green Connection</p> | <p>During the scoping phase of the Nuclear-1 EIA, we attended a public meeting at the Vineyard hotel, on the 19th April 2010. The meeting was well attended and a number of organisations that subsequently made submissions attended the meeting at that venue, presumably because it was convenient.</p> <p>However, in the details of the public meetings, no meeting is scheduled for the Vineyard Hotel in Newlands, nor is there any other venue in a nearby area. I find this astonishing and assume that there must be some error. It would certainly undermine public participation if there were to be no public meeting within an area which had showed so much interest in the project!</p> <p>We would therefore like to request that you confirm that there will be a public meeting in Newlands or close by and</p> | <p>Your comment is noted. The choice of venues for the current public meetings was based on proximity to the alternative sites and the most potentially affected parties, as well as accessibility for the Interested and Affected Parties (I&APs) from surrounding areas. The changes made to the Draft Environmental Impact Report predominantly relate to issues specific to the Thyspunt site. The Duynefontein and Bantamsklip sites are not recommended as the preferred site. It is therefore considered that the Public Open Houses and Meetings advertised were sufficient to allow Interested and Affected Parties (I&APs) reasonable opportunity to comment on the key changes to the Revised Draft EIR Version 1.</p> <p>This is the reason that Melkbosstrand was chosen as the public meeting venue for the area around the Duynefontein site and the area is easily accessible for residents.</p> <p>It must be noted that I&APs have been afforded the opportunity to comment in other ways to the GIBB Public Participation Office on the Revised Draft Environmental Impact Report, namely by means of: fax, telephone call and written letter. The public comment period was also further extended by a further 45 days and closed on 07 August 2011.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|---|---|---|
| | | | ask for details of the venue etc to be forwarded as soon as possible. | |
| 3 | 18 May 2011 13:45 Email | David Le Page Southern African Faith Communities Environment Institute Assistant Director | <p>Please schedule a Public Meeting on the Nuclear EIA in central Cape Town</p> <p>During the scoping phase of the Nuclear 1 EIA, we attended a public meeting at the Vineyard hotel, on the 19th April 2010. The meeting was well attended and a number of organisations that subsequently made submissions attended the meeting at that venue, presumably because it was convenient.</p> <p>However, in the details of the public meetings now listed for the process ahead, no meeting is scheduled for the Vineyard Hotel in Newlands, nor is there any other venue in a nearby area. This will undermine public participation if there were to be no public meeting within an area which had showed so much interest in the project!</p> <p>We would therefore like to request that you confirm that there will be a public meeting in Newlands or close by and ask for details of the venue etc to be forwarded as soon as possible.</p> | <p>Your comment is noted. The choice of venues for the current public meetings was based on proximity to the alternative sites and the most potentially affected parties, as well as accessibility for the Interested and Affected Parties (I&APs) from surrounding areas. The changes made to the Draft Environmental Impact Report predominantly relate to issues specific to the Thyspunt site. The Duynefontein and Bantamsklip sites are not recommended as the preferred site. It is therefore considered that the Public Open Houses and Meetings advertised were sufficient to allow Interested and Affected Parties (I&APs) reasonable opportunity to comment on the key changes to the Revised Draft EIR Version 1.</p> <p>This is the reason that Melkbosstrand was chosen as the public meeting venue for the area around the Duynefontein site and the area is easily accessible for residents.</p> <p>It must be noted that I&APs have been afforded the opportunity to comment in other ways to the GIBB Public Participation Office on the Revised Draft Environmental Impact Report, namely by means of: fax, telephone call and written letter. The public comment period was also further extended by a further 45 days and closed on 07 August 2011.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|--|---|---|
| 4 | 18 May 2011 08:54 Email | Marilyn Aitken Women's Leadership and Training Programme and The Grail Earth Network Representative | We request an extension of the time for comment from 45 to 90 days. | <p>Thank you for your comment. As you are aware, an opportunity to review the Revised Draft Environmental Impact Report (EIR) Report commenced on 09 May 2011 with a closing date of 23 June 2011. Various Interested and Affected Parties, including yourselves, have requested an extension of the review period.</p> <p>After due consideration of these requests, it was decided that the comment period will be extended by an additional 45 days. The closing date for comment thus changed to 07 August 2011 (i.e. a 90 day comment period).</p> |
| 5 | 18 May 2011 11:49 Email | Byron Andrews Pam Golding Properties Gold Club Agent | <p>I have read your heavily biased EIA regarding the location of Nuclear 1 at Thyspunt.</p> <p>It is clear that the report is trying to present information in way that makes Thyspunt look like a favourable site. These lies will be exposed in time to come, and Eskom can expect a long and costly battle. At the end taxpayers and consumers, throughout the country will not allow this ridiculous project to continue.</p> <p>There is no financial sense in building a nuke, within 20km of a premier coastal holiday destination (whose rates and taxes account for most of the income generated by the Kouga municipality). Who will continue to pay rates when they have to evacuate the</p> | <p>Thank you for your comments. Please note that all sites were equally assessed within this EIA. However, we would appreciate receiving any additional information supporting your claim of bias in the Revised Draft EIR Version 1.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|---|--|
| | | | <p>area?</p> <p>In the middle of the Eastern Cape's dairy producing region (benefits to agriculture include radioactive milk?)</p> <p>Pumping sand into the chokka spawning ground, because Thyspunt is in the middle of shifting sand dunes.</p> | <p>Please refer to Appendix E10 (Air Quality Assessment), E15 (Marine Impact Assessment), E21 (Agriculture Assessment), E22 (Tourism Assessment) and E25 (Transportation Assessment) of the Revised Draft EIR Version 1.</p> <p>The Agricultural Assessment has found that there will be short-term negative impact on agriculture in terms of dust during the construction phase only. However, there is potential for a positive impact on production by increasing the size of the local market for fresh produce as a result of the influx of population (Nuclear-1 employees, their families and construction workers) to the area. The Air Quality Assessment furthermore finds that, based on the predicted impacts of both non-radioactive and radionuclide air pollution, that the air pollution impacts will be insignificant at all the three alternative sites. Please also refer to the radiological assessment (Appendix E32) for further information on the potential impacts that may be experienced on the receiving environment. From the assessment it was found that the radiation levels that may be generated by the Nuclear-1 power station will fall well below the background radiation levels. Therefore, the potential for the power station to contaminate the surrounding resources throughout the area is considered to be highly unlikely.</p> <p>The Marine Impact Assessment (Appendix E15 of the Revised Draft EIR Version 1) concludes that the disposal of spoil at Thyspunt will have limited impact on the overall chokka squid stock, when considered within the context of the extensive area over which this species spawns. The affected area is less than one percent of the total spawning ground of chokka squid.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|--|--|
| | | | <p>The costs of constructing power lines for over 100km spanning the Kromme river, Gamtoos and Van Stadens gorge.</p> <p>What about rebuilding the Van Stadens, Gamtoos and Kromme bridges to carry the weight of the nuclear reactor when they deliver to site?</p> <p>They claim to have a road that does not go through Humansdorp, but what about St Francis and Cape St Francis who will have hundreds of trucks on their roads everyday?</p> | <p>The costs of construction of transmission lines are dealt with in the Environmental Impact Assessment for the transmission lines. These are separate EIAs to that of the power station. In this regard, please refer to the EIR documents to be made available by SiVest on www.sivest.co.za/Download.aspx</p> <p>The recommended routes to the Thyspunt site in the previous version of the Report were revised as a result of public input and recommendations received between 29 May 2011 and 2 June 2011. Based on the feedback received, the R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, and heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road, is now proposed to be surfaced to provide improved east-west connectivity. Bypass roads to the east and west of Humansdorp are also now proposed to be constructed to reduce the traffic impact on central Humansdorp. The revised specialist assessment will be made available for public comment and review as part of the Revised Draft EIR Version 2.</p> <p>In terms of the upgrades to public transport and access during the construction phases at Thyspunt, upgrades of existing road infrastructure will be required as stated in the revised Transport Specialist Study. The report confirms that the Thyspunt site requires significant transport upgrades with regard to public transport, access and emergency evacuation, during the construction phases. The report further states that propping will be required at most under bridges to ensure stability during the</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|---|--|
| | | | <p>No impact on tourism? Who are you kidding?</p> | <p>transportation with strengthening and bracing being required at the Van Staden's gorge arch bridge.</p> <p>The Tourism Impact Assessment concludes that as a result of the established premium tourism product offered in the Greater St Francis area, a nuclear power station will have a significant impact on the perceived attractiveness of the area. However, it is only from Seal Point at Cape St Francis and Oyster Bay that the Thyspunt site is visible (from a distance of more than 10km). The duration of the negative impact is reduced by the fact that perception is a time-based phenomenon and, with the passing of time, tourism agents and stakeholders will adjust their businesses to maximise their exploitation of the natural tourism product as experienced at each site. This is based on the experience with the Koeberg Nuclear Power Station. The overall impact at worst would be a short-term reduction in the tourism market, most notably due to a drop in the premium product image that the area currently enjoys. However, this short-term negative impact on current sense of place (premium holiday destination) could well be neutralised by business tourism, while the long-term impact would be likely to be positive.</p> <p>Keeping the above in mind, specialists agree that there are no fatal flaws at the Thyspunt site in terms of upgrading of transport infrastructure, impact on agriculture, air quality and tourism as well as spoil disposal and marine ecology. However, extensive mitigation measures, which are discussed in Chapter 9 of the Revised Draft EIR, summarised in Chapter 10 and included in the Environmental Management Plan (Appendix F of the Revised Draft EIR Version 1), are proposed to mitigate the potential negative impacts.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|--|--|---|
| 6 | 19 May 2011 08:45 Email | Gary Pienaar Political Information and Monitoring Service (PIMS) and Economic Governance Programme (EGP) Idasa, an African democracy Institute Senior Researcher: Governance and Ethics | <p>During the scoping phase of the Nuclear- 1 EIA, it is our understanding that a public meeting at the Vineyard Hotel on 19 April 2010 was well attended and a number of organisations that subsequently made submissions attended the meeting at that venue, presumably because it was convenient.</p> <p>However, there appear to be no plans for a follow-up public meeting during the EIA phase at this venue, or at any other venue nearby.</p> <p>Any such final decision is likely to undermine the value of public participation in an area that has apparently shown significant interest in the project. It would seem to me to be a logical instance of fair process that there should be continuity where significant interest is shown in a particular area, provided that a further and additional meeting at a venue close to the mooted project location would also appear to be justified.</p> <p>It is therefore requested that you confirm that there will be a public meeting in Newlands or close by, and that details of the venue, date and time</p> | <p>Your comment is noted. The choice of venues for the current public meetings was based on proximity to the alternative sites and the most potentially affected parties, as well as accessibility for the Interested and Affected Parties (I&APs) from surrounding areas. The changes made to the Draft Environmental Impact Report predominantly relate to issues specific to the Thyspunt site. The Duynefontein and Bantamsklip sites are not recommended as the preferred site. It is therefore considered that the Public Open Houses and Meetings advertised are sufficient to allow Interested and Affected Parties (I&APs) reasonable opportunity to comment on the key changes to the Revised Draft EIR Version 1 in this type of forum.</p> <p>This is the reason that Melkbosstrand was chosen as the public meeting venue for the area around the Duynefontein site and the area is easily accessible for residents.</p> <p>It must be noted that I&APs have been afforded the opportunity to comment in other ways to the GIBB Public Participation Office on the Revised Draft Environmental Impact Report, namely by means of: fax, telephone call and written letter. The public comment period was also further extended by a further 45 days and closed on 07 August 2011.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|--|---|---|
| | | | are announced as soon as possible. | |
| 7 | 19 May 2011 09:28 Email | Candice Pelser Project 90 By 2030 | <p>Last year's public participation process included a meeting at the Vineyard Hotel on the 19th of April. We notice that the next round of public meetings do not include this venue, nor one nearby.</p> <p>In the interests of continuity and a fair public participation process, we hereby request that a public meeting for this area be added to the programme.</p> | <p>Your comment is noted. The choice of venues for the current public meetings was based on proximity to the alternative sites and the most potentially affected parties, as well as accessibility for the Interested and Affected Parties (I&APs) from surrounding areas. The changes made to the Draft Environmental Impact Report predominantly relate to issues specific to the Thyspunt site. The Duynefontein and Bantamsklip sites are not recommended as the preferred site. It is therefore considered that the Public Open Houses and Meetings advertised are sufficient to allow Interested and Affected Parties (I&APs) reasonable opportunity to comment on the key changes to the Draft EIR in this type of forum.</p> <p>This is the reason that Melkbosstrand was chosen as the public meeting venue for the area around the Duynefontein site and the area is easily accessible for residents.</p> <p>It must be noted that I&APs have been afforded the opportunity to comment in other ways to the GIBB Public Participation Office on the Revised Draft Environmental Impact Report, namely by means of: fax, telephone call and written letter. The public comment period was also further extended by a further 45 days and closed on 07 August 2011.</p> |
| 8 | 19 May 2011 11:37 Email | Jesse Burton Energy Research Centre PhD Candidate, UCT | Last year, during the public consultation process for the Nuclear1 EIA, a public meeting was held at the Vineyard Hotel in Newlands, Cape Town. | Your comment is noted. The choice of venues for the current public meetings was based on proximity to the alternative sites and the most potentially affected parties, as well as accessibility for the Interested and Affected Parties (I&APs) from surrounding areas. The changes made to the Draft Environmental Impact |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|---|---|--|
| | | | <p>I believe that this year the only scheduled meeting is to be held in Melkbosstrand, despite the high levels of public interest in the Newlands area.</p> <p>This seems to be a serious omission on the part of the organisers, and I would like to request that a public consultation be scheduled either in the Newlands area or in an area nearby.</p> <p>I would appreciate if you could forward the details of such a meeting to me as soon as possible.</p> | <p>Report predominantly relate to issues specific to the Thyspunt site. The Duynfontein and Bantamsklip sites are not recommended as the preferred site. It is therefore considered that the Public Open Houses and Meetings advertised are sufficient to allow Interested and Affected Parties (I&APs) reasonable opportunity to comment on the key changes to the Draft EIR in this type of forum.</p> <p>This is the reason that Melkbosstrand was chosen as the public meeting venue for the area around the Duynfontein site and the area is easily accessible for residents.</p> <p>It must be noted that I&APs have been afforded the opportunity to comment in other ways to the GIBB Public Participation Office on the Revised Draft Environmental Impact Report, namely by means of: fax, telephone call and written letter. The public comment period was also further extended by a further 45 days and closed on 07 August 2011.</p> |
| 9 | 19 May 2011 11:48 Email | Julia van Biljon-Heidemann The Mineral Corporation Senior Adviser | <p>Thank you for the opportunity to comment.</p> <p>Please see attached e-mail sent some months back to the Environmental Officer on site (also discussed telephonically with him about a year ago).</p> <p>My point is simple – to urge that Tsunami risks be taken fully into account with proper scientific oversight, especially given the</p> | <p>Thank you for your comment. The risks related to the possible occurrence of Tsunamis have been assessed in the Hydrological Assessment (of the Revised Draft EIR Version 1), the report on the position of the 1:100 year floodline (Appendix E9 of the Revised Draft EIR Version 1) and the Oceanography Report (respectively Appendices E6, E9 and E18 of the Revised Draft EIR Version 1). It is concluded that the potential exists for water levels to exceed the proposed elevation of the nuclear power station (10m above sea level) at all three sites should a tsunami coincide with extreme meteorological conditions (a meteo-tsunami event). The maximum calculated sea level for the life of the nuclear power station (including the effects of climate change) is 14.8 m above sea level. The occurrence of a tsunami</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|---|---|
| | | | <p>evidence at the site of such events in fairly recent geological time. Recent experience at Fukushima should prompt this step.</p> <p>(Email attachment pasted hereunder.)</p> <p>From: Julia van Biljon - Heidemann [mailto:jvb.umcebo@netactive.co.za] Sent: Friday, March 18, 2011 11:51 AM To: Henni.dBeer@eskom.co.za Cc: 'Hutchinson'; 'Daniel Reinecke' Subject: Tsunamis</p> <p>Hi Henni</p> <p>A am a niece of Marta Hutchinson, she introduced us briefly a few years ago when there was a talk by a retired nuclear scientist about nuclear energy at The Links.</p> <p>I spoke to you on the phone some time ago about the possibility of Tsunamis at Thyspunt, as a geologist I am interested in these phenomena, which are rare but nevertheless should be properly taken into account. With the recent events in Japan, I was wondering if there are specialists on the Thyspunt Eskom team who are</p> | <p>is, however, improbable given the low risk of seismic activity in the surrounding ocean.</p> <p>The experience of the Fukushima nuclear incident has indicated that the earthquake itself is unlikely to affect the structural integrity of the nuclear power station, but that the resulting tsunami may affect power supply to the nuclear power station. In this respect, the height above sea level of the backup generators for the plant is critical. If the generators are too low above sea level, they may also be affected by a tsunami and may fail to provide power to the power station. In the case of Fukushima, the backup generators were also flooded by the tsunami, which prevented them from providing power to the power station to allow for safe shutdown.</p> <p>At Thyspunt, the backup OCGT (Open Cycle Gas Turbine) plant is proposed to be located for the north of the power station at a height over 50m above sea level.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|---|---|---|
| | | | <p>adequately quantifying this risk for the particular site envisaged.</p> <p>I also just wanted to remind you about the rock the Reinecke family has known about for years (we call it the "monolith") which an experienced geologist in the family has indicated points to a Tsunami event in the recent geological past.</p> <p>It is situated very near the Thyspunt point, I am sure members of the family could point it out to you.</p> <p>Please do let us know should you be interested.</p> | |
| 10 | 19 May 2011 15:03 Email | Tristan Taylor Earthlife Africa Jhb Project Co- Ordinator | <p>Please see attached letter requesting an extension of an additional 45 days for comments on the nuclear-1 EIA from the following organisations:</p> <p>COSATU, South African Municipal Workers Union, Timberwatch, Greenpeace Africa, South Durban Community Environmental Alliance, GroundWork, Earthlife Africa Cape Town, Earthlife Africa Johannesburg, Noordhoek Environmental Action Group, Alternative Information Development Centre, Green</p> | <p>Thank you for your comment. As you are aware, an opportunity to review the Revised Draft Environmental Impact Report (EIR) Report commenced on 09 May 2011 with a closing date of 23 June 2011. Various Interested and Affected Parties, including yourselves, have requested an extension of the review period.</p> <p>After due consideration of these requests, it was decided that the comment period will be extended by an additional 45 days. The closing date for comment thus changed to 07 August 2011 (i.e. a 90 day comment period).</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|---|----------|
| | | | <p>Connection, Southern African Faith Communities Environment Institute, Renewable Energy Centre, Transition Centre.</p> <p>Thanking you in advance for a speedy response.</p> <p>(Refer to attachment pasted hereunder.)</p> <p>Extension of Comments Period for Revised Draft Environmental Impact Assessment Report for the Eskom Nuclear Power Station and Associated Infrastructure (Nuclear-1)</p> <p>Dear Sir/Madam,</p> <p>On the 9th of May 2011, Arcus GIBB released the Revised Draft Environmental Impact Assessment Report for the Eskom Nuclear Power Station and Associated Infrastructure (Nuclear-1) and indicated a comment period of 45 days until the 23rd of June 2011.</p> <p>This is insufficient time to deal with the mass of data in the Revised Draft Environmental Impact Assessment Report for the Eskom Nuclear Power</p> | |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-------------------------------|---|---|----------|
| | 20 May 2011 15:29 Email | Tristan Taylor Earthlife Africa Jhb Project Co- Ordinator | <p>Station and Associated Infrastructure (Nuclear-1). The data available on your website amounted to over 700mb, and runs over two thousand printed pages.</p> <p>Just reading the entire report will take a significant amount of time, let alone considered thought and then in-depth comments. As many of the issues in the report have highly technical components, expert opinions will be need to be consulted.</p> <p>Therefore, 45 days is insufficient for meaningful and substantial comment.</p> <p>Therefore, we the undersigned, request a minimum extension of an additional 45 days (i.e. 90 in total) in order to prepare comments on this important EIA.</p> <p>Looking forward to your swift response and thanking you in advance for such.</p> <p>*****</p> <p>I have yet to hear from you, in writing, regarding the below issue.</p> <p>On Mon, 2011-05-16 at 10:59 +0200,</p> | |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|--|---|
| | | | <p>Tristen Taylor wrote: Dear Arcus GIBB and Ms. Ball,</p> <p>Would you please respond to the below issue regarding speaking with a researcher involved in the EIA? I am seriously disappointed not to have received a response from you, in what is arguably a Freedom of Speech issue. Surely, Arcus GIBB will, at least, respond to such a request?</p> <p>I have copied our legal representative (Ms. Andrews) and freedom of expression expert (Mr. Delaney) to this mail as I sign of how seriously I regard this issue and the public's right to engage substantially in a public process.</p> | <p>GIBB acknowledges your request to liaise directly with Dr. Hart in terms of the Nuclear-1 Revised Draft Environmental Impact Report (EIR). However, as the Environmental Impact Assessment Practitioner managing the Environmental Impact Assessment (EIA) process, it is our legislated responsibility (among others) to capture all comments raised on the Revised Draft EIR Version 1 and its associated specialist studies, in order to present the competent authority with all relevant information for decision making purposes.</p> <p>In this regard, it must be pointed out that Regulation 58 of Government Notice R 385 of 2006 (in terms of which this application was lodged, and is pending) stipulates the requirements for EIA public participation procedures, and indicates that it is the responsibility of Interested and Affected Parties to submit comments to the Environmental Assessment Practitioner (EAP).</p> <p>Your attention is drawn in this regard, to two specific provisions in the EIA regulations:</p> <ul style="list-style-type: none"> • Regulation 58(4), which states that “any written comments received by the EAP from a registered interested and affected party must accompany the report when the report is submitted to the competent authority”. • Regulations 59, which states that “The EAP managing an application for environmental authorisation must ensure that the comments of interested and affected parties are recorded in reports submitted to the |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|-----------------------------------|--|--|
| | | | | <p>competent authority in terms of these Regulations.</p> <p>As EAP for this EIA process, GIBB would not be able to discharge its legislated duties unless we are aware of and involved in any discussions between an I&AP and one of the specialists on our team.</p> <p>GIBB therefore requests that you provide us with a list of questions/ issues for Dr. Hart's response. This will ensure that GIBB can accurately capture all comments raised by yourselves and the response from the specialist on these comments and reflect these comments and responses in the submissions to the competent authority.</p> |
| 11 | 20 May 2011 16:29 Email | Eleanor Welsh Interested Party | Have you reconsidered re having meeting in Hermanus? | <p>Your comment is noted. The choice of venues for the current public meetings was based on proximity to the alternative sites and the most potentially affected parties, as well as accessibility for the Interested and Affected Parties (I&APs) from surrounding areas. The changes made to the Draft Environmental Impact Report predominantly relate to issues specific to the Thyspunt site. The Duynefontein and Bantamsklip sites are not recommended as the preferred site. It is therefore considered that the Public Open Houses and Meetings advertised are sufficient to allow Interested and Affected Parties (I&APs) reasonable opportunity to comment on the key changes to the Draft EIR in this type of forum.</p> <p>This is the reason that Gansbaai was chosen as the public meeting venue for the area around the Bantamsklip site and the area is easily accessible for residents. Additional meetings will be considered but at this point there is no certainty that an additional meeting will take place.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|---|--|--|---|
| | | | | <p>It must be noted that I&APs have been afforded the opportunity to comment in other ways to the GIBB Public Participation Office on the Revised Draft Environmental Impact Report, namely by means of: fax, telephone call and written letter. The public comment period was also further extended by a further 45 days and closed on 07 August 2011.</p> |
| 12 | <p>19 May 2011 15:29 Email</p> | <p>Antony and Mary Yoell Permanent Resident of St. Francis Bay</p> | <p>Many thanks for advising us of the availability of a revised draft EIR for the proposed Nuclear power station at Thyspunt.</p> <p>Whilst not objecting to nuclear power in principle, we would like to register our concern that certain issues have not been adequately addressed in the report which will have a substantial negative impact on the residential/tourist towns of St Francis Bay/Cape St Francis.</p> <p>We are most concerned about the use of the R330 between Humansdorp and Cape St Francis as the main routing for construction vehicles over 7 years. No tourist (or resident) will want to sit behind lines of construction vehicles on a winding road for 15 kilometres and similarly will certainly not enjoy the</p> | <p>Thank you for your comments. Please refer to Appendices E10 (Air Quality Assessment), E15 (Marine Impact Assessment), E21 (Agriculture Assessment), E22 (Tourism Assessment) and E25 (Transportation Assessment) of the Revised Draft EIR Version 1.</p> <p>The Tourism Impact Assessment also concluded that as a result of the established premium tourism product offered in the Greater St Francis area, a nuclear power station will have a significant impact on the perceived attractiveness of the area. However, it is only from Seal Point at Cape St Francis and Oyster Bay that Thyspunt is visible (from a distance of more than 10 km). The duration of the negative impact is reduced by the fact that perception is a time-based phenomenon and, with the passing of time, tourism agents and stakeholders will adjust their businesses to maximise their exploitation of the natural tourism product as experienced at each site.</p> <p>With regard to the impact of traffic, the Transportation Specialist Assessment has been revised in order to minimise the traffic on the St Francis Bay to limited heavy loads. The majority of traffic will travel on the Humansdorp- Oyster Bay road which will be upgraded. During the peak December holiday period construction will be very limited.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|---|---|
| | | | <p>resultant noise and air pollution. This will result in tourists finding other more peaceful holiday destinations and many tourist based businesses will die, resulting in unemployment and an increase in crime in the area.</p> <p>We are also concerned about the impact on the squid industry. We cannot follow the argument that pumping 6,3 million cubic meters of sand into South Africa's prime squid breeding ground will not have a huge effect and will in all likelihood spell the end of the St Francis squid industry, also resulting in further unemployment.</p> <p>We are also concerned that an important Khoisan heritage site will be adversely affected and await the judgement of SAHRA with interest.</p> <p>We look forward to hearing these issues addressed at the Public Meeting on 31 May.</p> | <p>The Marine Impact Assessment (Appendix E15 of the Revised Draft EIR Version 1) concludes that the disposal of spoil at Thyspunt will have limited impact on the overall chokka squid stock, when considered within the context of the extensive area over which this species spawns. The pumping of sand/spoil will be for a very short period of time 4 – 6 weeks. The modelling completed on the movement of the spoil where the chokka spawn has indicated an additional layer of less than 1 cm of sand.</p> <p>Your comment is noted. The recommended position of the power station is such that the greatest concentration of archaeological sites on the Eskom property will not be directly affected by the power station. The largest concentration of sites is within 200 m of the coast, which will be left undeveloped, as per the revised Heritage Impact Report. The central portion of the site within the vegetated dunes has been found, through test excavations that were permitted by SAHRA, to be free of significant heritage sites. A revised Heritage Impact Assessment, which includes the findings of the test excavations, will be provided for public comment and review comments together with the Revised Draft EIR Version 2.</p> |

| | | | | |
|----|-------------------------------------|--|---|---|
| 13 | Comment Sheet Completed Mail | Carola Steinberg Earth Life Member | <p>P8-9 Maintaining that “NoGo” cannot be considered an alternative because it is “imperative” for South Africa to “develop its power generation ability” is a totally facile statement in the face of the Chernobyl meltdown, the Fukushima accident. There are large spaces for generating wind and solar energy in the Karoo and West Coast and the reality that it would be cheaper to import power than build another nuclear power station.</p> <p>P17 Claiming that Nuclear Waste holds “no significant risk” if it is “contained according to management practices” approved by the “NNRU” (<u>GIBB</u></p> | <p>Thank you for your comments. Please see our response below:</p> <p>P8-9 The EIA process is a project specific tool and therefore considers the impacts of the proposed development, as per the application for environmental authorisation, on the environment. This EIA therefore does not comment on government policy in terms of future energy planning. It is however important to note that the Integrated Resource Plan 2010 which has been ratified by Cabinet states that:” In addition to all existing and committed power plants (including 10 GW committed coal), the plan includes 9,6 GW of nuclear; 6,3 GW of coal; 17,8 GW of renewables; and 8,9 GW of other generation sources”</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>In addition to what has been said - the issue of competing technologies and preferred energy mix scenarios in the context of demand side and economic growth trajectories are clearly in the ambit of the IRP. IRP 2010 remains the formal IRP adopted by government. The regulatory regime is as stated and nuclear facilities are in general required to consider a range of "design basis security threats" as part of the design assessment process - however the exact nature of these threats and the preventative or mitigative provisions which may be put in place are for obvious reasons restricted in accordance with a "need to know" principle.</p> <p>P17 Radioactive waste management practices envisaged for the Nuclear-1 Power Stations are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal. The</p> |
|----|-------------------------------------|--|---|---|

| | | | | |
|--|--|--|--|--|
| | | | <p><u>Nuclear-1 Public Participation Office:</u> <u>to confirm if this is correct with Ms Steinberg)</u> is a lie in the face of the reality that nuclear waste remains dangerous to human health for 20000 years.</p> <p>P15 It is an illusion to think that Eskom and its construction contractors will follow any “lengthy and complex mitigation” process to mitigate the environmental and heritage impact of their work.</p> | <p>Nuclear-1 Power Station will further strive to minimise production of all solid, liquid and gaseous radioactive waste, both in terms of volume and activity content, as required for new reactor designs. Systems are lastly designed to store processed solid radioactive waste for a period of up to three years within the facility, thereafter they are transported to Vaalputs. The storage containers are consistent with the requirements for the disposal of solid waste at the radioactive waste disposal facility at Vaalputs. The High-level waste unsuitable for disposal at Vaalputs will be stored safely on site until a suitable facility is available in South Africa. Responsibility for high level radioactive waste storage is with The National Radioactive Waste Disposal Institute Act (NRWDIA). With the implementation of appropriate mitigation measures all potential impacts are expected to be of low significance.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>In addition it must be noted that the EIA process and Nuclear Licensing process for any off site waste storage facilities will be the subject of separate applications and are outside the scope of this submission. It must be noted that on site storage of spent fuel in ponds, vaults, or casks is a widely practiced and demonstrated technology which has been used to store fuels for many decades.</p> <p>P15 It is one of the key recommendations of the Revised Draft EIR Version 1 that a comprehensive heritage mitigation programme must be implemented prior to the commencement of any construction activities. No construction may commence prior to the completion of heritage mitigation measures. The effective implementation of this mitigation measure, and other mitigation measures, will be monitored by a team of independent</p> |
|--|--|--|--|--|

| | | | | |
|--|--|--|--|---|
| | | | | <p>Environmental Control Officers, who will report to an Environmental Monitoring Committee, including representatives of local communities, SAHRA, other authorities and other relevant specialists.</p> <p>Also note that Environmental pre-mitigation measures are part of our environmental laws' requirements and shall be conducted for all construction sites before construction commences. Pre-construction mitigation measures have been conducted at all Eskom's construction site and this is taken seriously all the time. Just to give an example, at Ingula heritage mitigations were conducted before and during construction. An archaeologist was appointed to survey the site before construction to ensure that all heritage structures were identified, recovered and protected, including graves (which were removed in consultation with the families and in accordance to the Heritage Act).</p> <p>During construction work was stopped every time an artefact was found on site. Ingula has recovered a lot of historical artefacts and remains found on site and have been sent to a national museum in Bloemfontein until such time when the site's visitors' centre is operational.</p> <p>Search and rescues are also conducted before construction to ensure that all animals and protected plants are rescued from any harm. Animals are normally sent to the nearest reserves and plants kept in the nursery for replanting later after construction.</p> <p>Wetlands are also demarcated before construction for protection by fencing them in or anything that would protect them from being driven over etc</p> |
|--|--|--|--|---|

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|---|--|---|
| 1 | 03 May 2011 18:18 Email | Eric Mair African Alternative Technologies Research and Development Director | <p>COMMENTS ON THE REVISED DRAFT ENVIRONMENTAL IMPACT REPORT</p> <p><i>(Please refer to page numbers where possible.)</i></p> <p>The assertion that “As far as power generation technologies are concerned, nuclear generation and coal-fired power generation are the only proven base-load technologies.” “Renewable energy sources such as solar and wind energy do not provide the guaranteed base-load generation capacity that is required.” is entirely inaccurate.</p> <p>Renewable technology, particularly in the solar thermal field has advanced now to the point where it is capable of providing dispatchable or base load power. CSP is also capable of co-firing with natural gas or even biomass for additional back-up to the integrated thermal storage systems.</p> <p>Also, our company is about to construct a power storage demonstration plant which will enable the same dispatchability to wind and PV.</p> <p>It is simply no longer true to say that renewables cannot deliver base load</p> | <p>Thank you for your comment.</p> <p>Whilst progress has been made with regard to CSP with storage, this technology is still in demonstration phase and has only been implemented on a small scale when compared with coal and nuclear units of 800 – 1600 MW. Quality of supply is very important to South Africa when considering the reliability that all commercial activities require in order to run their businesses efficiently and effectively. You are also referred to EPRI (2010) referred to in Chapter 5 of the Revised Draft EIR Version 1. CSP does indeed hold potential for base load generation in future, but this has not yet been proven on a large scale comparable to the capacity of a 4 000 MW base load power station.</p> <p>In light of the above, coal-fired and nuclear power stations are currently still considered to be the only feasible options globally for base load electricity generation.</p> <p>Wind generation is limited by the erratic availability of wind. Wind power, as indicated in Chapter 5 of the EIR Verdition1 (based on research undertaken for the Integrated Resource Plan) to have a capacity factor of 29.1 % to 40.6 % (EPRI 2010) – meaning that wind is available at this percentage of the time. Wind power therefore cannot guarantee a sustained source of power Photovoltaic (PV) electricity generation is limited to daytime hours and currently large scale overnight storage of electricity for base load power is not viable with current technology.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|---|--|
| | | | <p>power.</p> <p>Secondly, I find it sad and extremely worrying that it has been seen fit, in specifying the parameters of this study, to ignore:</p> <ul style="list-style-type: none"> • The environmental impact of the mining, transportation and processing of the fuel required to power this facility. • The security operation which surrounds anything nuclear, which must surely have an impact on our environment? | <p>This application for Environmental Authorisation considers the suitability of the Duynefontein, Bantamsklip and Thyspunt sites for the construction, operation and decommissioning of a single nuclear power station and in terms of the listed activities contained within Government Notice numbers R 386 and 387 of 2006. Whilst the Revised Draft EIR Version 1 discusses fuel required to power the facility in Chapter 3 of the report it does not, as a project-specific and activity-specific tool, consider the mining, transportation and processing of fuel for the power station. These issues will fall under separate applications for authorisations and permits, e.g. the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) and the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999), once it is known if the project will proceed and at which site.</p> <p>The information provided to GIBB by the Applicant confirms that Emergency Planning Zones (EPZs) of 800 m and 3 km will be applicable to the proposed Nuclear-1 power station. No private development will be allowed within the 800 m EPZ and development restrictions would apply within the 3 km EPZ.</p> <p>Furthermore, a security exclusion zone would also apply to Nuclear-1, as is the case with all power stations in South Africa, as they are regarded as Key Points under the National Key Points Act, 1980 (Act No. 102 of 1980). It is likely that a security exclusion zone of 1 to 2 km from the coast will be</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|--|---|
| | | | <ul style="list-style-type: none"> Inevitably, the problem of nuclear waste. How can this very real problem possibly skate past a conscientious ENVIRONMENTAL impact assessment of a nuclear power station? | <p>applied to Nuclear-1, although a final decision in this regard will be made by the National Intelligence Agency. No public access will be allowed within this security exclusion zone. However, as is the case currently at the Koeberg Nuclear Power Station, the nature reserve around the power station will be accessible to the public.</p> <p>Radioactive waste management practices envisaged for the Nuclear-1 Power Station is consistent with the International Atomic Energy Association (IAEA) guidelines for a Radioactive Waste Management Programme for nuclear power stations as is described in Chapter 3 of the Revised Draft EIR Version 1. The Nuclear-1 Power Station will further strive to minimise production of all solid, liquid and gaseous radioactive waste, both in terms of volume and activity content, as required for new reactor designs. Systems are lastly designed to store processed solid radioactive waste for a period of up to three years within the facility. The storage containers are consistent with the requirements for the disposal of solid waste at the radioactive waste disposal facility at Vaalputs. The High-level waste unsuitable for disposal at Vaalputs will be stored safely on site until a suitable facility is available in South Africa. With the implementation of appropriate mitigation measures all potential impacts are expected to be of low significance.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>In addition to what has been said see also responses to IRR 1 issue 6 above and IRR 5 issue 13 - it must also be noted that the primary responsibility for off site emergency planning lies with the relevant local authorities and not with the applicant.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|-----------------------------------|---|--|---|
| 2 | 22 May 2011 08:34 Email | Len Handler Neuro-Radiologist Retired | <p>The article, "Unsafe at any Dose" from the Opinion Pages had been opened and I have again copied what I found on the bottom of your reply to me Len Handler</p> <p>Subject: Fw: NYT1-5-11:Radiation Damage</p> <p>Hello Len and Mike, Picked this up in the weekend edit of the NY Times. It's nothing new and is standard medical dogma and an article of faith for radiologists and radiotherapists.</p> <p>You may well find some ammunition in it. At a public EIA meeting beyond Milnerton on a golf estate I was unable to coax the experts to explain how they would evacuate the citizenry of CPT in the event of an accident at Koeberg.</p> <p>The N7, N1 and N7 are all downwind should a Westerly or North-Wester be blowing</p> | <p>The GIBB Nuclear-1 Public Participation confirms that the attachment in Mr Handler's email received on 03 May 2011 was not in a compatible format to open. Therefore, Mr Handler re-sent the email and pasted the attachment (article in New York Times) in the body of his latest reply.</p> <p>Thank you for your comments. Issues related to the impact on human health are discussed in the Human Health Risk Assessment (Appendix E24 of the Revised Draft EIR Version 1) but will also be dealt with in detail as part of NNR licensing process.</p> <p>Koeberg has been safely operating for the past 27 years and as per legislation Koeberg is required to have an Emergency preparedness and response plan. This is submitted to the NNR for approval and the regulator conducts emergency preparedness drills/excises every 18 months to ensure that the emergency plan is executed effectively and efficiently.</p> <p>Furthermore the Koeberg emergency planning team consisting of members from Eskom, the Local Authorities and other support organisations are available around the clock to handle any emergency at the power station. In the unlikely event of an emergency at Koeberg, Eskom will notify the City of Cape Town Disaster Risk Management immediately. Eskom will recommend appropriate protective actions as per the requirements of the NNR to the relevant authorities. Representatives of National, Provincial and Local Government</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|---|--|
| | | | <p><u>Article: New York Times on 1-5-11</u> SIX weeks ago, when I first heard about the reactor damage at the Fukushima Daiichi plant in Japan, I knew the prognosis: If any of the containment vessels or fuel pools exploded, it would mean millions of new cases of <u>cancer</u> in the Northern Hemisphere.</p> | <p>will authorized the appropriate protective actions to be implemented. Emergency response personnel and resources from all spheres of government will carry out these actions.</p> <p>An emergency calendar is also sent to the area surrounding Koeberg every year. This calendar gives details of the emergency plan for those people living closest to the station.</p> <p>Lastly the NNR requires evacuation of the 5km precautionary Action Zone (PAZ) within 4 hours, and the downwind affected sector of the Urgent Protective Action Planning Zone (UPZ) between 5km and 16km to be evacuated within 16 hours. The City of Cape Town Disaster Risk Management would utilise the My Citi Busses as well as other public transport resources to evacuate people in the relevant emergency planning zone who do not have their own transport.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>The comment makes little sense except for the implied question in the penultimate paragraph re evacuation. Which has been answered - please also refer to the response to IRR 6 issue 1 relating to the responsibilities for emergency planning.</p> <p>On 18 Jan 2012 (NucNet) News reported; “About 30 workers at the Fukushima-Daiichi nuclear power plant in Japan received between 100 millisieverts (mSv) and 250 mSv of radiation exposure, which would have increased their chances of cancer by about one percent to 2.5 percent, a parliamentary committee in the UK was told. Her Majesty’s chief inspector of nuclear installations, Mike Weightman, told the House of Commons Energy and Climate Change Committee that in terms of the</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|---------------------|---|--|
| | | | <p>Many advocates of nuclear power would deny this. During the 25th anniversary last week of the Chernobyl disaster, some commentators asserted that few people died in the aftermath, and that there have been relatively few genetic abnormalities in survivors' offspring. It's an easy leap from there to arguments about the safety of <u>nuclear energy</u> compared to alternatives like coal, and optimistic predictions about the health of the people living near Fukushima.</p> <p>But this is dangerously ill informed and short-sighted; if anyone knows better, it's doctors like me. There's great debate about the number of fatalities following Chernobyl; the <u>International Atomic Energy Agency</u> has predicted that there will be only about 4,000 deaths from cancer, but a <u>2009 report published by the New York Academy of Sciences</u> says that almost one million people have already perished from cancer and other diseases. The high doses of radiation caused so many <u>miscarriages</u> that we will never know the number of genetically damaged foetuses that did not come to term. (And both Belarus and Ukraine have group homes full of deformed children.)</p> | <p>workers, "there don't appear to be any acute radiation effects".</p> <p>He said 30 of them have had "a significant dose", but it is not in the sense of an immediate life-threatening dose. In a declared nuclear emergency, the recommended limit is 100 mSv. The International Commission on Radiation Protection is mandated to sanction a maximum accumulated dose of 250 mSv in extraordinary circumstances. Mr Weightman said public evacuation was well-organised and exposure countermeasures for the public have been "effective so far", and there will be a longer-term health monitoring programme."</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>In addition to what is said regarding the specific impact of the Fukushima event- the article focusses on various countervailing views of the science of radiation protection as was also discussed in the response to IRR 1 above. The international community of Radiation Protection practitioners base the basic fundamentals of radiation protection on the observed science and adopt a conservative approach in the setting of standards practices and limits - the ICRP is the principle independent international body responsible for the assessment of scientific evidence and associated recommendations which are ultimately adopted and promulgated via the IAEA in regulatory guides which are then incorporated in national legislation and regulations - this system has proved itself robust in its ability to protect both workers, the environment and public in the face of contrarian views but has always been able to countenance such possibilities and adapt as new information has emerged.</p> |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|--|----------|
| | | | <p>Nuclear accidents never cease. We're decades if not generations away from seeing the full effects of the radioactive emissions from Chernobyl.</p> <p>As we know from Hiroshima and Nagasaki, it takes years to get cancer. <u>Leukaemia</u> takes only 5 to 10 years to emerge, but solid cancers take 15 to 60. Furthermore, most radiation-induced mutations are recessive; it can take many generations for two recessive genes to combine to form a child with a particular disease, like my specialty, <u>cystic fibrosis</u>. We can't possibly imagine how many cancers and other diseases will be caused in the far future by the radioactive isotopes emitted by Chernobyl and Fukushima.</p> <p>Doctors understand these dangers. We work hard to try to save the life of a child dying of leukaemia. We work hard to try to save the life of a woman dying of metastatic <u>breast cancer</u>. And yet the medical dictum says that for incurable diseases, the only recourse is prevention. There's no group better prepared than doctors to stand up to the physicists of the nuclear industry.</p> | |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|---|----------|
| | | | <p>Still, physicists talk convincingly about “permissible doses” of radiation. They consistently ignore internal emitters — radioactive elements from nuclear power plants or weapons tests that are ingested or inhaled into the body, giving very high doses to small volumes of cells. They focus instead on generally less harmful external radiation from sources outside the body, whether from isotopes emitted from nuclear power plants, medical X-rays, cosmic radiation or background radiation that is naturally present in our environment.</p> <p>However, doctors know that there is no such thing as a safe dose of radiation, and that radiation is cumulative. The mutations caused in cells by this radiation are generally deleterious. We all carry several hundred genes for disease: cystic fibrosis, <u>diabetes</u>, <u>phenylketonuria</u>, <u>muscular dystrophy</u>. There are now more than 2,600 genetic diseases on record, any one of which may be caused by a radiation-induced mutation, and many of which we’re bound to see more of, because we are artificially increasing background levels of radiation.</p> <p>For many years now, physicists</p> | |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|--|----------|
| | | | <p>employed by the nuclear industry have been outperforming doctors, at least in politics and the news media. Since the Manhattan Project in the 1940s, physicists have had easy access to Congress. They had harnessed the energy inside the centre of the sun, and later physicists, whether lobbying for nuclear weapons or nuclear energy had the same power. They walk into Congress and Congress virtually prostrates itself. Their technological advancements are there for all to see; the harm will become apparent only decades later.</p> <p>Doctors, by contrast, have fewer dates with Congress and much less access on nuclear issues. We don't typically go around discussing the latent period of carcinogenesis and the amazing advances made in understanding radiobiology. But as a result, we do an inadequate job of explaining the long-term dangers of radiation to policymakers and the public.</p> <p>When patients come to us with cancer, we deem it rude to inquire if they lived downwind of Three Mile Island in the 1980s or might have eaten Hershey's chocolate made with milk from cows that</p> | |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|---|----------|
| | | | <p>grazed in irradiated pastures nearby. We tend to treat the disaster after the fact, instead of fighting to stop it from happening in the first place. Doctors need to confront the nuclear industry.</p> <p>Nuclear power is neither clean, nor sustainable, nor an alternative to fossil fuels — in fact, it adds substantially to <u>global warming</u>. Solar, wind and <u>geothermal</u> energy, along with conservation, can meet our energy needs.</p> <p>At the beginning, we had no sense that radiation induced cancer. Marie Curie and her daughter didn't know that the radioactive materials they handled would kill them. But it didn't take long for the early nuclear physicists in the Manhattan Project to recognize the toxicity of radioactive elements. I knew many of them quite well. They had hoped that peaceful nuclear energy would absolve their guilt over Hiroshima and Nagasaki, but it has only extended it.</p> <p>Physicists had the knowledge to begin the nuclear age. Physicians have the knowledge, credibility and legitimacy to end it.</p> | |

| No | Date | NAME & ORGANISATION | ISSUES/COMMENTS | RESPONSE |
|----|------|------------------------|---|----------|
| | | | <p>Helen Caldicott, a founder of Physicians for Social Responsibility, is the author of "Nuclear Power Is Not the Answer." A version of this piece appeared in print on May 1, 2011, on page WK10 of the New York edition with the headline: Unsafe At Any Dose.</p> | |

Project Ref: J31314
5 August 2015

People • Expertise • Excellence

Cape Town

14 Kloof Street
Cape Town 8001
PO Box 3965
Cape Town 8000

Tel: +27 21 469 9100
Fax: +27 21 424 5571
Web: www.gibb.co.za

Mr. Mike Longden-Thurgood, BSc, MSRP
5 Nerina Street
Milnerton 7441

Tel. No: 021-552-6634

Cell: 072-345-6507

Submission by email on 23 May 2011

Email: mike.thurgood@imagnet.co.za

Dear Mr Longden-Thurgood

ESKOM REVISED 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

GIBB acknowledges receipt of the submission received from Mr R. Mike Longden-Thurgood discussing the above report.

We thank you for your valuable comments and your participation in the Eskom Nuclear Power Station (NPS) Revised Environmental Impact Assessment (EIA) process to date. Your questions and comments concerning the Nuclear-1 have been noted.

YOUR COMMENT 1

1. Appendix E4 Seismic Risk Assessment.

Last paragraph on document p.19, quoting: "Based on current knowledge, the three localities under review [*i.e. Duynefontein, Bantamsklip and Thyspunt*] are considered suitable locations for Nuclear Power Stations following the extensive *NSIP*. To date no geological evidence has been found that would halt the development of a Nuclear Power Station at any of these sites. However, a definitive statement regarding the hazard from surface fault rupture cannot be made until the foundations are excavated at the site [*sic*]".

Two questions arise:

- i) With evidence gleaned from excavations at the three sites on surface fault rupture, what specific indications would be likely to determine that a site was not suitable for a nuclear power station?
- ii) Posing a hypothetical situation, if such an adverse indicator was to be found at Duynefontein, how would it be envisaged that it could be appropriately interpreted, retrospectively, in terms of the seismic safety of the existing Koeberg nuclear power station?

RESPONSE 1

- i) Please note that the seismic assessment (Appendix E4) conducted concluded that all three sites were seismically suitable to construct a nuclear power station. Furthermore, please note that a detailed site safety case will have to be presented to the NNR as part of the nuclear licence application.
- ii) The seismic hazard at the Koeberg NPS is reviewed as new information comes to light and the Site Safety Report updated accordingly. The integrity of the nuclear safety related Structures, Systems and Components (SSC) are then checked accordingly. The safety of the KNPS has recently been checked following the events at the Fukushima nuclear power plant. These checks included beyond design basis seismic ground motion and flooding as the initiating events. The evaluation by the NNR on the safety assessment done by Eskom concluded that KNPS is able to withstand these events.

COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:

The response is saying that the site specific seismic hazard for the sites has yet to be determined and this will inform the seismic risk and the subsequent external events element of the facility safety case - however as yet this has not been done for the proposed sites. For KNPS the case is made that it has recently been subject to a beyond design basis stress test and no concerns were identified.

YOUR COMMENT 2

1. Appendix E4 Seismic Risk Assessment.

b) Section (d) *Duration* at the top of page 21, quoting: "*The duration of any impact [sic] the vibratory ground motion resulting from tectonic fault movement, will vary depending on a host of secondary environmental impacts, which falls outside the scope of this study. - - - - if it is considered that vibratory ground motion has the potential to cause damage to the Nuclear Power Station facility, the impact duration should be considered to be high. However, the impact and hence duration of impact will be decreased significantly by the appropriate engineering mitigation*".

On what basis would a professional structural civil engineer agree with the comment in the last sentence of this quote? Although the assurance sounds good at its face value, it needs to be substantiated by adding a comment from a professional structural civil engineer in order to authenticate the minimal impact significance indicated in this sentence.

A similar comment can be applied to the last sentence of Section (e) *Intensity / Severity*

RESPONSE 2

It was not the intention in this paragraph to refer to specific engineering mitigation steps. Instead it merely tries to establish the principle that any risk that the seismic hazard poses to a nuclear facility, and by implication also the environment, can be mitigated (at least to some degree) by following the appropriate engineering mitigation steps.

From a professional structural engineering perspective the seismic hazard at the site would be determined at the underside of the structural foundation. The design basis seismic motion is defined in terms of ground motion response spectra in the horizontal and vertical directions at 5% damping. Acceleration time histories would also be developed in accordance with current international standards. These typically use recorded earthquake data which suit the earthquake events anticipated at the site of interest. A suite of design basis acceleration time histories will be developed to compliment the ground motion response spectra. The NPP is designed to resist the design basis seismic motions and at the same time it must be demonstrated that the seismic margin between essentially elastic response (design basis) and the first onset of inelastic structural behaviour (beyond design basis) is in line with current international licensing requirements.

COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:

I am not able to comment on the specific engineering mitigation measures that could be engineered - however the response correctly states the methodology that would typically be followed to demonstrate the robustness of the design including in the beyond design basis region to examine the potential for so called "cliff edge" phenomena- this would be expected to be part of the external events assessment component of the plant safety case.

YOUR COMMENT 3

c) In each of Sections 4.1.1, 4.1.2 and 4.1.3 is an identically worded sub-Section b), quote: "*(b) Extent - The vibratory earthquake ground motion will be felt over a large area, but the most severe direct negative impact will be restricted to the footprint areas. However, it may also have a negative impact on supporting infrastructure within the site area (ie within an 8 km radius). Hence a medium rating is given to this risk factor*".

It is not clear what is meant by the phrase "*- the most severe direct negative impact will be restricted to the footprint areas*". Is this intended to indicate that only the ~8 km radius area would be expected to have any structures in it other than those associated with the nuclear power plants? What is the justification for this assumption? The phrase is almost tantamount to saying that earthquake epicentres are most likely to be associated exclusively within the 8 km radius area, which I am sure is not how it is intended to be interpreted. Nor is it in any way a practical situation.

Ground vibratory intensities associated with earthquakes can presumably vary very considerably over relatively short distances, receding as the distance from the epicentre increases. (Take as an example the May 14 low intensity ground vibrations felt from George to Plettenberg Bay, but apparently not further away).

I propose that some rewording of the above quote would be helpful in order to eliminate the present ambiguity in meaning.

RESPONSE 3

It is correct to say this sub-section does not set-out to predict where earthquake and earthquake damage will occur. The focus of the work presented here is to determine the impact a nuclear facility

may have on the environment, because of the occurrence of an earthquake, and not on the direct impact of an earthquake on the environment. In such a scenario any potential secondary environmental impact will most likely be centred on the facility and normally diminish the further away you are from the site.

However, we acknowledge that the sub-sections are confusing in its current format and propose that they be reworded as follows:

"Vibratory earthquake ground motion may be felt over a large area, but the only impact assessed in this report focused on the footprint areas. There may also be a negative impact on the supporting infrastructure and environment within the site surroundings and local region. Hence a medium rating is given to this risk factor".

COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:

It must also be stated that the qualitative analysis presented in no way predicated the necessary site safety report, external events assessment, safety assessment and quantitative radiological impact assessment and associated design compliance demonstration that will form a necessary part of the safety case for the facility and successful demonstration of this is required as part of the NNRs licencing process.

YOUR COMMENT 4

2. Appendix E3 Geological Hazard Assessment

The technical term "capable" needs to be added to the Glossary of Terms with respect to faults.

RESPONSE 4

Thank you for your comment. Your suggestion is noted.

A capable fault is defined as a geological feature which, because of its present tectonic setting, can undergo movement from time to time in the immediate geologic future. A fault, which has moved during the recent geologic past (Quaternary) and, thus, may move again would be defined as a capable fault.

In terms of the US NRC licensing guidelines, a geological fault is judged capable of producing macro-earthquakes if it exhibits one or more of the following characteristics:

- (1) Evidence of seismo-tectonic movement at or near the ground surface at least once within the past 35,000 years or movement of a recurring nature within the past 500,000 years.
- (2) Macro-seismic activity instrumentally determined with records of sufficient precision to demonstrate a direct relationship with the [fault](#).
- (3) A structural relationship to a predefined capable fault such that movement on one [fault](#) could be reasonably expected to cause movement on the other.
- (4) Established patterns of micro-seismicity that define a fault, with historic macro-seismicity that can reasonably be associated with that fault.

YOUR COMMENT 5

2. Appendix E3 Geological Hazard Assessment

Quoting from the 2nd paragraph on document page 8: "*At present there are no specific South African regulations for seismic and geographical issues related to the licensing of nuclear power plant sites, and thus Eskom decided to follow the US Regulations for Seismic Hazard Analysis (SHA) and associated geological work*".

The impact of the March 11 magnitude 9 earthquake north of Tokyo, Japan, and the effect of the resulting very high tsunami on the Fukushima Daiichi nuclear power station has reverberated around the world where nuclear power stations are concerned, especially those that have been constructed on seaboards (i.e. coastal regions). Although the additional design features which will need to be looked at as a result of this earthquake and tsunami are not a part of this EIA process *per se*, none-the-less the matter of safeguarding against the destruction of all electrical supplies by very high waves and tsunamis initiated by earthquakes will need to be dealt with. (See comments below on the oceanography report).

This EIA process can, therefore, be used to let our government know of our concerns on there being no regulations or recommendations with respect to seismic, oceanographic and tsunami events.

RESPONSE 5

Thank you for your comment.

As you correctly pointed out, the safety assessment of these events is not part of the EIA process but is regulated by the NNR (National Nuclear Regulator of SA) within the current regulatory regimes in the RSA. This will be addressed as such through the NNR process. However, nonetheless, the (NNR) requires in their licensing requirements documents that external hazards including seismic and tsunami up to a probability of exceedance of 1E-6 per annum be considered in the design of a NPP. This licensing requirement is applied by Eskom. The EIA is stating that there are no detailed processes in South Africa which must be followed for the assessment of such extreme events and hence, US NRC regulations and methodologies are used as these are generally accepted in most countries around the world having nuclear power generation capabilities.

COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:

Whilst the proposed facility is not yet the subject of a specific licence application and the exact safety case requirements that may be set by the NNR are not yet determined the NNR does currently require assessment of external events as stated and as such any assessment methodology can only at this stage be based upon international best practice and as stated in general the NRC requirements are widely used in this regard elsewhere - as such our nuclear safety process is not prescriptive and requires the applicant to demonstrate the safety of the proposed facility - part of the safety case will inevitably entail and adequate demonstration of the robustness of the methodology in the context of international best practice.

YOUR COMMENT 6

3 Appendix E5 Geotechnical Suitability Assessment

The word *unconformable* needs to be added to the Glossary of Terms

In geology “unconformable” normally refers to a contact between two adjacent deposits that represents a hiatus (which can be either a period of non-deposition or erosion). In this case the units do not represent continuous deposition and normally have very different ages

RESPONSE 6

Thank you for your comment. Your suggestion is noted.

YOUR COMMENT 7

3 Appendix E5 Geotechnical Suitability Assessment

There is an inconsistency in the caption to Table 2.2, the sentence "**Error! Reference source not found**" not being relatable to anything.

RESPONSE 7

Thank you for your comment. This error will be rectified.

YOUR COMMENT 8

3 Appendix E5 Geotechnical Suitability Assessment

The last paragraph on document p.13 and to the top of the next page discusses the Goudini and Skurweberg formations, with different founding conditions, which I assume relates to the different load carrying capability of these two formations. In view of the importance of this differential effect, I would suggest that the second sentence at the top of document p.14 be reworded to: "**From a geotechnical engineering perspective any spanning integral construction and engineering works must be avoided**". i.e. one has to be absolutely definite about it whereas the present wording would indicate that some relaxation could be permitted. I don't personally believe that it could be permitted.

RESPONSE 8

Thank you for your comment. Your suggestion is noted.

This restriction however, only applies to nuclear safety related structures which are founded on bedrock. Many of the auxiliary buildings will be founded on the terraces some 15m above bedrock and the foundations of these buildings will not be restricted as stated above.

Furthermore, the contact between these 2 geological formations must be physically located and the strike and dip of the contact zone measured.

YOUR COMMENT 9

4 Appendix E4 Oceanographic Impact Assessment

Although tsunamis are oceanographic phenomena, they are caused by seismic events. Prior to the near disaster at Fukushima-Daiichi on March 11, 2011 (when a huge tsunami eliminated all power supplies to the nuclear plants, leading to a series of hydrogen explosions and fuel meltdowns as core cooling in reactors 1, 2, 3 and no.4 spent fuel pool failed, accompanied by subsequent leakages of radioactivity into the sea), I wouldn't have given a second thought to the comments about tsunamis as they have been dealt with in this report. But, in hindsight, it is my considered opinion that the section dealing with tsunamis has to be redrafted in considerably more detail, which will necessarily include advice and comments from the seismology specialist.

For example, I would have expected to see comments about the basic differences between the expanding Atlantic Ocean and the contracting Pacific Ocean, where the latter has an almost continuous sub-ducting seaboard. Common seismological sub-ducting events are responsible for the greater frequency of tsunamis around the Pacific seaboard than occur around the Atlantic seaboard, which are caused by different seismological events.

If this subject isn't given considerably more in-depth consideration, now, there is a very strong possibility that the EIA process will be held up whilst the situation is being remedied. I suggest that no time should be wasted in dealing with the matter.

In view of the time that has elapsed since the Japanese tsunami on March 11th, I am very surprised that, at the very least, a rider hasn't been added to this report that attention is being urgently given to the matter of upgrading this part of the report.

RESPONSE 9

Thank you for your comment. The risks related to the possible occurrence of tsunamis have been assessed in the Hydrological Assessment (Appendix E6 of the Revised Draft EIR), the position of the 1:100 year floodline report (Appendix E9 of the Revised Draft EIR) and the Oceanography Report (Appendix E18 of the Revised Draft EIR). It is concluded that there is the potential for water levels to exceed the proposed elevation of the nuclear power station at all three sites should a tsunami coincide with extreme meteorological conditions (a meteo-tsunami event). The occurrence of a tsunami is, however, improbable given the low risk of seismic activity in the surrounding ocean.

As we have pointed out in response 5, as part of the NNR licensing process, Tsunami related events corresponding with submarine large magnitude earthquakes, meteo tsunamis, offshore slumps and other marine related hazards will be included in the oceanographic section of the SSR (Site Safety Report). Continual updates of these sections should be planned to incorporate new information on hazards which have the potential to generate tsunamis. Of importance is the identification of palaeo-tsunamis which have occurred along the coastline in the region around the Thyspunt site.

The SSR hydrological section will deal with onshore generated tsunamis off which there are none identified to date.

YOUR COMMENT 10

5. General observations

The international nuclear power community, and international nuclear representative organisations, are looking at what recommendations they will be formulating to be implemented to ensure the guaranteed safety of nuclear plants at all nuclear power stations around the world. As at the time of my preparing this brief report, Dr Mike Weightman of the Health & Safety Executive's *Office for Nuclear Regulation* - ONR - in Britain would appear to have been the first to prepare an *interim* report. (See UK HSE's ONR website url: <http://www.hse.gov.uk/nuclear/fukushima/interim-report.htm>).

RESPONSE 10

Your comment is noted.

YOUR COMMENT 11

5. General observations

b) Dr Weightman has made it clear in this interim report that it is the nuclear industry in Britain which is expected to take the initiative to introduce whatever additional safety measures are necessary and essential, not for the industry to wait for the ONR to pass instructions on to them.

RESPONSE 11

Your comment is noted. Eskom will, in line with standards and practises accepted by the National Nuclear Regulator and in terms of the Environmental Management Plan, adhere with and comply to internationally accepted best practise safety measures in terms on the construction and operation of Nuclear-1.

COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:

It should be noted that a fundamental principle of the nuclear and radiological safety is that over and above meeting specific limits the licence applicant demonstrate the incorporation of ALARA principles and this reinforces that existing approach.

YOUR COMMENT 12

5. General observations

c) Nuclear reactors work on strict fundamental principles of reactor physics, which are totally independent of language, religion, race and culture. Once the international nuclear community, through the major international nuclear organisations, has agreed on what measures need to be

implemented, the necessary actions must be carried out on a worldwide scale. The nuclear industry retains the primary initiative to ensure that the recommendations are implemented, with national nuclear regulatory authorities overseeing that the objectives have been properly and effectively achieved.

RESPONSE 12

Your comment is noted. Please see our response 11 above.

YOUR COMMENT 13

5. General observations

What has become very clear from the March 11 magnitude 9 earthquake in northern Japan, and the near-disaster caused at the Fukushima Daiichi nuclear power station by the loss of all power supplies through the action of the subsequent tsunami, is that an additional report needs to be added to this draft EIR dealing with tectonic events which could result in the formation of huge waves, and possibly tsunamis in the Atlantic Ocean, which could reach South African shores.

RESPONSE 13

Your comment is noted however please see our response 9 above.

We thank you for providing us the opportunity to respond to these comments. Please do not hesitate to contact us should you require any additional information regarding this proposed project.

Yours faithfully,



For and on behalf of GIBB (Pty) Ltd
The Nuclear-1 EIA Team

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|-------------------------------|---|---|---|
| 1 | 22 May 2011 12:36 Fax | Michel Hucenko Interested and Affected Party | It is still my firm conviction that nuclear is the solution for our need of electricity supply. There will not be a Chernobyl or Fukushima in our country as we are neither Russian nor Japanese. Furthermore, I wonder how many South Africans have to die in the dark for the sake of a few butterflies or for some obscure political agenda. By the way I am living near Koeberg for 27 years and I still don't glow in the dark! | Thank you for your comments and participation in the EIA process. Please continue raising these comments at the Nuclear-1 public forums. |
| 2 | 23 May 2011 12:48 Email | Walter Smith Project Gapwedge Properties 63 (Pty) LTD Project Manager | <p><u>Gapwedge Marine Aquaculture Land Based Finfish Project, Pearly Beach on portion 1 of the farm no. 385, Pearly Beach.</u></p> <p>As an interested and affected party (I&AP), Gapwedge fish farm <u>strongly appeals</u> against the proposed nuclear development on Bantamsklip.</p> <p>The Gapwedge fish farm has been busy for several years investing into a project to secure sustainable food resource. Our project complies with all legislation required locally, national and internationally. The Gapwedge marine finfish farm will be in approximate 15km radius of the proposed Bantamsklip nuclear site.</p> | <p>Thank you for your comments. The impact of the proposed Nuclear Power Station on agricultural and marine resources has been assessed in both the Agriculture and Marine Biology Assessment reports (Appendices E16 and E15, respectively of the Revised Draft EIR Version 1).</p> <p>A agricultural survey undertaken within a 16 km radius of the Bantamsklip site found that the major impacts of a nuclear power station on agriculture (including food safety) would have a short term negative impact on agricultural production with regard to dust during the construction phase.</p> <p>The Marine Assessment confirms that in terms of the unintentional release of radiation emissions, technical design of the cooling system has minimised this risk, so that this impact on Marine resources is rated as having low consequence and low significance.</p> <p>Lastly In terms of safety there are extensive mitigation measures built into reactor design for safety and there are multiple precautionary defences against the consequences of</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|------------------------|---|---|
| | | | <p>Gapwedge are currently in the process to secure export markets and the proposed Bantamsklip nuclear development has a direct negative impact on these negotiations. Strategies for food safety and quality are at this stage of main concern.</p> <p>Gapwedge complies with the allocation of a right/exemption to engage in marine aquaculture activities, in terms of section 18 of the marine living resources act, 1998 (act no. 18 of 1998) ("THE ACT") Gapwedge was granted Environmental Authorization by the Department of Environmental Affairs & Development Planning for the project and all relevant role players were involved in all aspects.</p> <p>Please advise us on food safety, security and direct impacts on our project relating to your project. The proposed nuclear development on Bantamsklip is of great concern for Gapwedge and should there be any impact due to your proposed project, Gapwedge would then hold the applicant "Bantamsklip nuclear development" wholly liable.</p> <p>Gapwedge appeals against the</p> | <p>failures in materials, equipment and human error.</p> <p>For purposes of this EIA, it is further acknowledged that the NNR will issue a license for the construction of a nuclear power station at any particular site only if the design is in full compliance with the radiological dose limits and dose requirements laid down by the National Nuclear Regulator.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>As discussed the facility will be subject to a licence application to the NNR - as has been discussed comprehensively above this will require a safety case which will examine the radiological impact from all initiating events which have the potential for an offsite impact including via marine pathways and from any routine releases in accordance with standards and practices in line with international best practice.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|-------------------------------|--|---|--|
| | | | <u>proposed nuclear development on Bantamsklip!</u> | |
| 3 | 19 May 2011 14:42 Email | Matthys C Horak ATNS, ATM Planning Department ATM Specialist | <p>From documentation previously provided and located on your web site it appears that a study is currently in place regarding this nuclear facility.</p> <p>In view of the fact that ATNS is an Interested and possibly an affected party you are respectfully requested to provide ATNS with as much information on this proposed facility – Exact location (Geographical position Degrees, Minutes, Seconds and decimals of a second in WGS-84 format) etc.</p> <p>The establishment of such a facility normally goes hand in hand with the establishment of a Restricted area as is the case with the “Koeberg Nuclear Power Station” – FAR36 GND/2,000 FT AGL See SA Aeronautical Information publication (SA AIP) ENR 5-11.</p> | <p>Thank you for your comments. The information requested is as follows and contained within the Final Scoping Report:</p> <p>"The Duynefontein site is located adjacent to the existing Koeberg NPS, which is situated approximately 30 km north of Cape Town. The Duynefontein site is situated within the Western Cape Province Municipality and has the following co-ordinates: 33°40'36.00"S and 18°25'54.88"E.</p> <p>The Bantamsklip site is located approximately 5 km east of Pearly Beach and approximately 50 km northwest of Cape Agulhas. The site is situated on the Southern Cape coast, falls within the jurisdiction of the Overberg District Municipality and has the following co-ordinates: 34°42'28.95"S and 19°33'12.17"E.</p> <p>The Thyspunt site is located on the Couga Coast of the Eastern Cape Province, approximately 80 km west of Port Elizabeth. The site has the following co-ordinates: 34°11'22.51"S and 24°02'54.63"E."</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------------------|---|--|---|
| 4 | 24 May 2011 18:06 Email | Rob Small Interested and Affected Party | <p>I agree to nuclear provided that :</p> <ol style="list-style-type: none"> 1. all the decision makers (including the ministers and business people) and other proponents of the 'nuclear energy solution' (scientists and technicians et al) agree to live permanently right on, or next door to, nuclear reactor sites , or on top of the places where spent fuel is stored, in perpetuity. 2. that these same decision makers and proponents agree to put their full private wealth (property, shares, savings, everything) at the disposal of the country should any problems arise with contamination from their 'nuclear energy solution' <p>If the decision makers and proponents can't do this, then I prefer to live with candles.</p> | <p>Thank you for your comments and participation in the EIA process. It must be borne in mind that the Environmental Impact Assessment process is charged with assessing the significance of the construction of a Nuclear Power Station on three very specific sites and to make a recommendation in terms of the outcomes of the investigation. Therefore, although your comments are noted and will be included as part of the information presented to the Competent Authority for decision-making, it is not within the scope of the EIA to address comments of this nature.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------------------|---|--|--|
| 5 | 24 May 2011 08:54 Email | Peter Becker Koeberg Alert Alliance | <p>Thank you for your response.</p> <p>Please note we find this response unacceptable. If you analyse your attendance registers, you will find that excluding people from Arcus Gibb and Eskom, there were about 40 members of the public who signed the register in Newlands. For Melkbosstrand, the corresponding figure is about 9 members of the public.</p> <p>In the light of this, it is nonsensical to claim that the public participation process is best served by excluding Newlands in favour of Melkbosstrand. In fact, there were about twice the number of members of the public at Newlands than at the other two meetings combined.</p> <p>Please note that in our view this exclusion violates the requirement of a meaningful public participation, and that Arcus Gibb are avoiding the area where there is likely to be the most vigorous public participation. If you fail to arrange a meeting in Newlands, and provide reasonable notice of this, including advertising publicly, we intend to challenge the EIA process via any legal</p> | <p>The GIBB Nuclear-1 Public Participation Office replied via email on 25 May 2011 at 10:39.</p> <p>It is not GIBB's intention to exclude Newlands from the public participation process. GIBB has reviewed the requests for additional public meetings after the round of public participation for the Revised Draft EIR Version 1. The programme for public participation for the Revised Draft EIR Version 2 has, however, not been finalised. Any additional meetings, which require advertising, will be included in a single advert that will be placed in local and regional newspapers. Registered I&APs will also be notified of any additional meetings via post and e-mail.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------------------|---|--|---|
| | | | means at our disposal. | |
| 6 | 25 May 2011 11:05 Fax | Hubert Cronje Melkbosstrand Ratepayers Association | <p>For a number of years Melkbosstrand residents have tried to get information from ESKOM regarding insurance coverage for neighbouring communities in case of a disaster.</p> <p>This information has now become urgent and critical. It is ESKOM/NNR responsibility to make it available and it is out right to have this information.</p> | <p>Thank you for your comment. In terms of the National Nuclear Regulatory Act, the operator of a nuclear facility is obliged to take out insurance. The amount that is stipulated by the NNR is R 3 billion (the insurance is in US\$ denomination and the Rand value therefore differs from time to time). The NNR is, however, currently reviewing the amount of insurance that the nuclear power operator has to have. The current information can be obtained in Government Gazette No. 26327, Notice No. 581 dated 2004.05.07.</p> |
| 7 | 25 May 2011 12:29 Email | Anthea Torr The Ascension Time | <p>I would like to request that a public meeting be held in the Southern Suburbs as well as in the North, as there are MANY, MANY people very concerned about any proposed nuclear expansion of any kind and the discussion regarding Nuclear-1 EIR needs to be attended by as many concerned citizens as possible.</p> <p>Please advise as soon as possible the</p> | <p>Your comment is noted. The choice of venues for the last round of public meetings were based on proximity to the alternative sites and the most potentially affected parties, as well as accessibility for the Interested and Affected Parties (I&APs) from surrounding areas. The changes made to the Draft Environmental Impact Report Version 1 predominantly related to issues specific to the Thyspunt site. The Duynefontein and Bantamsklip sites were not recommended as preferred sites. It was therefore considered that the public open houses and meetings advertised were sufficient to allow I&APs a reasonable opportunity to comment on the key</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------------------|---|--|---|
| | | | <p>plan to host a meeting in the Southern suburbs - the Vineyard Hotel - Newlands, was a good place - why not has it there again?</p> | <p>changes to the Draft EIR in this type of forum.</p> <p>However, GIBB has reviewed the requests for additional public meetings after the recent round of public participation for the Revised Draft EIR Version 1 but the programme for public participation for the Revised Draft EIR Version 2 has not been finalised. Any additional meetings, which require advertising, will be included in a single advert that will be placed in local and regional newspapers. Registered I&APs will also be notified of any additional meetings via post and e-mail.</p> |
| 8 | 25 May 2011 12:31 Email | David Robert Lewis Interested and Affected Party | <p>Today's public meeting in Melkbosstrand regarding the Nuclear 1 EIA refers.</p> <p>I understand, this meeting is for interested and affected parties in the Melkbosstrand/Blouberg/Tableview area.</p> <p>Please could you organise a meeting for residents of Cape Town, in particular the Southern Suburbs.</p> <p>I am a resident of Woodstock in Cape Town, I will not be able to attend tonight's meeting.</p> | <p>Your comment is noted. The choice of venues for the last round of public meetings were based on proximity to the alternative sites and the most potentially affected parties, as well as accessibility for the Interested and Affected Parties (I&APs) from surrounding areas. The changes made to the Draft Environmental Impact Report Version 1 predominantly related to issues specific to the Thyspunt site. The Duynfontein and Bantamsklip sites were not recommended as the preferred sites. It was therefore considered that the public open houses and meetings advertised were sufficient to allow I&APs reasonable opportunity to comment on the key changes to the Draft EIR in this type of forum.</p> <p>However, GIBB has reviewed the requests for additional public meetings after the recent round of Public Participation for the Revised Draft EIR Version 1 but the programme for public participation for the Revised Draft EIR Version 2 has not been finalised. Any additional meetings, which require advertising, will be included in a single advert that will be placed in local and regional newspapers. Registered I&APs will also be notified of any additional meetings via post and e-mail.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|--|---|---|--|
| 9 | 25 May 2011 12:34 Email 25 May 2011 13:41 Email | Samantha Jenner Interested and Affected Party | <p>I am most disappointed that there is no meeting arranged in a more accessible location. The previous meeting at The Vineyard Hotel was well attended and indicates an interest and demand for future meetings at central or accessible locations.</p> <p>The limited transport options available for tonight's meeting excludes a large portion of the community geographically. This is not acceptable.</p> <p>You are accountable for facilitating public participation and, if anything, additional meeting times and facilities available, especially given the additional interest that nuclear plants have been given in the last couple of months.</p> <p>I look forward to hearing your suggestions to remedy this failure.</p> <p>Thank you for your letter, however it does NOT an adequate reason. I&APs are not limited to those living in the immediate vicinity of the proposal site!</p> <p>The location of the meeting may be near the site but it is NOT easily accessible to others. Also, given that the meeting at the Vineyard was full and there has been</p> | <p>Thank you for your comment. We agree that I&APs are not limited to those living in the immediate vicinity of the preferred (Thyspunt) site and it for this reason that meetings were held near the Duynefontein and Bantamsklip sites in addition to those at Thyspunt. Also please note that all registered I&APs were notified of the availability of the Revised Draft EIR Version 1 at public venues and on the GIBB and Eskom websites and have been afforded the opportunity to comment in the documents via letter, fax and e-mail during a comment period extended until 07 August 2011 (90 days).</p> <p>The choice of venues for the last round of public meetings were also based on proximity to the alternative sites and the most potentially affected parties, as well as accessibility for the Interested and Affected Parties (I&APs) from surrounding areas. The changes made to the Draft Environmental Impact Report Version 1 predominantly related to issues specific to the Thyspunt site. The Duynefontein and Bantamsklip sites were not recommended as the preferred sites. It was therefore considered that the public open houses and meetings advertised were sufficient to allow I&APs reasonable opportunity to comment on the key changes to the Draft EIR in this type of forum.</p> <p>However, GIBB has reviewed the requests for additional public meetings after the recent round of Public Participation for the Revised Draft EIR Version 1 but the programme for Public Participation for the Revised Draft EIR Version 2 has not been finalised. Any additional meetings, which require advertising, will be included in a single advert that will be placed in local and regional newspapers. Registered I&APs will also be notified of any additional meetings via post and e-mail.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------------------|--|--|---|
| | | | <p>an increase in public interest sparked by the Fukushima Daiichi incident the option of additional meetings should be provided for. For instance, the area affected in any emergency would extend far beyond the area catered for in this meeting.</p> <p>Please reply with a reasoned response.</p> | |
| 10 | 25 May 2011 13:00 Email | Neil Goodwin Interested and Affected Party | <p>I understand that Eskom intends to hold a public consultation meeting about its draft Environmental Impact Report (EIR) for Nuclear-1 only in Melkbosstrand (where no doubt only a few people can attend). Why is this? Surely such an important issue, especially post Fukushima should be aired in as many locations as possible to truly gauge the public mood on nuclear power?</p> <p>I would like you to consider holding one in Cape Town as soon as possible. Failure to consult as widely as possible on this major issue can only serve to invalidate your credibility and throw the veil of secrecy and despotism over correct legal procedure.</p> <p>I wait for your response.</p> | <p>Your comment is noted. The choice of venues for the last round of public meetings were based on proximity to the alternative sites and the most potentially affected parties, as well as accessibility for the Interested and Affected Parties (I&APs) from surrounding areas. The changes made to the Draft Environmental Impact Report Version 1 predominantly related to issues specific to the Thyspunt site. The Duynefontein and Bantamsklip sites were not recommended as the preferred site. It was therefore considered that the public open houses and meetings advertised were sufficient to allow I&APs reasonable opportunity to comment on the key changes to the Draft EIR in this type of forum.</p> <p>We agree that this is a sensitive issue that should be aired in as many locations as possible and it for this reason that meetings were held near the Duynefontein and Bantamsklip sites in addition to those at Thyspunt. Also please note that all registered I&APs were notified of the availability of the Revised Draft EIR at public venues and on the GIBB and Eskom websites and have been afforded the opportunity to comment in the documents via letter, fax and e-mail during a comment period extended until 07 August 2011 (90 days).</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------------------|--|---|---|
| | | | | <p>However, GIBB has reviewed the requests for additional public meetings after the recent round of public participation for the Revised Draft EIR Version 1 but the programme for Public Participation for the Revised Draft EIR Version 2 has not been finalised. Any additional meetings, which require advertising, will be included in a single advert that will be placed in local and regional newspapers. Registered I&APs will also be notified of any additional meetings via post and e-mail.</p> |
| 11 | 25 May 2011 13:11 Email | Alex Smuts Interested and Affected Party | <p>I am interested in the affects that Nuclear-1 EIR has on the environment, and I find it malicious that you should hold such important meetings in such small suburbs as Melkbosstrand.</p> <p>I request -- along with many others I'm sure -- that more meetings be held in more central areas such as the CBD, where there are organisations and peoples who want to voice their opinions.</p> <p>Please make the information that you are giving out more easily accessible to the public by holding more meetings in less conspicuous places.</p> | <p>Your comment is noted. The choice of venues for the last round of public meetings were based on proximity to the alternative sites and the most potentially affected parties, as well as accessibility for the Interested and Affected Parties (I&APs) from surrounding areas. The changes made to the Draft Environmental Impact Report Version 1 predominantly related to issues specific to the Thyspunt site. The Duynefontein and Bantamsklip sites were not recommended as the preferred site. It was therefore considered that the public open houses and meetings advertised were sufficient to allow I&APs reasonable opportunity to comment on the key changes to the Draft EIR in this type of forum.</p> <p>However, GIBB has reviewed the requests for additional public meetings after the recent round of public participation for the Revised Draft EIR Version 1 but the programme for public participation for the Revised Draft EIR Version 2 has not been finalised. Any additional meetings, which require advertising, will be included in a single advert that will be placed in local and regional newspapers. Registered I&APs will also be notified of any additional meetings via post and e-mail.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------------------|--|---|---|
| 1 | 25 May 2011 16:44 Email | Richard Arderne Pam Golding Properties, St. Francis Bay Franchisee | <p>The question below has been asked many times, in the press, at public meeting etc, but I don't think we have ever had a full and comprehensive answer:</p> <p>"Why not build the nuclear power station at Coega?"</p> <p>If St. Francis Bay locals understood the answer to this question, I think a lot of unhappiness about the Thyspunt option would dissipate.</p> | <p>Thank you for your comments and your participation in the Environmental Impact Assessment process. Please see our response to your comments below.</p> <p>The site selection process and the assessment of alternative sites do not include the consideration of Coega as an alternative site and does not fall within the scope of the current EIA process. 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.</p> <p>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.</p> |
| 2 | 25 May 2011 16:51 Email | R Mike Longden- Thurgood Interested and Affected Party | <p>I would have liked to have attended the meeting tonight, but in my 84th year I am sorry that I wasn't particularly enthusiastic to be driving back later - nor would my wife be happy about it, either, as she has indicated to me. I trust that you understand. Any daytime meeting would be a different matter.</p> <p>I haven't read through all the revised Draft EIR yet, but certainly through those parts which are especially relevant in view of the near disaster at Fukushima - my comments have already been e-mailed through to you.</p> <p>In view of previous meetings I have attended,</p> | <p>Thank you for your comments. The GIBB Nuclear-1 Public Participation office confirms that a copy of the minutes were sent via e-mail on (06 July 2011</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---------------------|---|--|
| | | | <p>I can't really believe that there's anything dramatically new about the situation, now, other than that the nuclear opponents may try and have another go to derail the whole project!</p> <p>I presume that minutes of tonight's meeting will be prepared, which I would obviously be anxious to receive, hopefully with an option to respond, if it's necessary to do so. A timescale for any such response from me can be made as short as a week - even shorter if it's terribly urgent.</p> <p>What I await with particular interest is what reactor Eskom finally decides to select. A decision cannot be delayed for much longer. The signs are a strong preference for the Areva EPR, not the Westinghouse AP-1000, about which I note that the US NRC are still questioning points it, especially the strength of the containment structure, which is going to be a double steel cylindrical shell filled with concrete - I assume with many steel internal cross-links between the two cylindrical shells, substituting for steel concrete reinforcing bars.</p> <p>As I mentioned in my earlier e-mail, the matter of any design "strengthening" requirements, for example such as would be intended to ensure 100% continuity of electrical supplies otherwise being threatened by tsunami events (which are far less likely to occur in the <i>expanding</i> Atlantic Ocean rather than in the <i>contracting</i> Pacific Ocean with a surrounding seaboard of subduction zones), is not a part of the EIA process, although I have no doubt that questions about it are likely to be raised.</p> | <p>The vendor, and hence the specific design of PWR has not yet been decided. This is underway and is led by Government and as previously stated Eskom has identified an "envelope" that defines the full range of different technologies, in terms of their footprints and the emissions to air, land and water that they may cause.</p> <p>Although not part of the scope of the EIA the likelihood of a tsunami event occurring is discussed in the Oceanographic Assessment (Appendix E16 of the Revised Draft EIR).</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------------------|--|---|--|
| 3 | 27 May 2011 10:17 Email | David Le Page Southern African Faith Communities Environment Institute Assistant Director | <p>Thank you for your reply, which is completely unsatisfactory. Recent events in Japan make it clear, if it were not already, that the area that will potentially be affected by any incident at Duynefontein could extend far further than Melkbosstrand.</p> <p>Am I to understand that you will be concluding your EIA, for a nuclear power station at Duynefontein, on the basis of a single public meeting?</p> <p>I would appreciate it if you could please send me a timeline outlining the process for the approval of the site.</p> <p>Since I was unable to make the meeting in Melkbosstrand, I would appreciate it if you could also please send me a transcript of those proceedings.</p> | <p>Your comment is noted. The choice of venues for the current public meetings was based on proximity to the alternative sites and the most potentially affected parties, as well as accessibility for the Interested and Affected Parties (I&APs) from surrounding areas. The changes made to the Draft Environmental Impact Report predominantly relate to issues specific to the Thyspunt site. Although the current application assessed the Duynefontein, Bantamsklip and Thyspunt sites, the Duynefontein and Bantamsklip sites are not recommended as the preferred sites. It is therefore considered that the Public Open Houses and Meetings advertised are sufficient to allow Interested and Affected Parties (I&APs) reasonable opportunity to comment on the key changes to the Draft EIR in this type of forum.</p> <p>This is the reason that Melkbosstrand was chosen as the public meeting venue for the area around the Duynefontein site and the area is easily accessible for residents. Additional meetings will be considered but at this point there is no certainty that an additional meeting will take place. Please also note that public meetings were also held as part of the Scoping Phase and the review period in terms of the Draft EIR.</p> <p>In terms of the timeline going forward the Revised Draft EIR will be available for public review until 07 August 2011. If any substantive changes are made to report after this period the report will be made available for public review and comment again after which the final report will be submitted to the Department of Environmental Affairs as per the process described on page 7-2 of the Revised Draft EIR.</p> <p>The GIBB Nuclear-1 Public Participation office confirms that a copy of the minutes were sent via e-mail on 23 June 2011</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------------------|--|--|---|
| 4 | 27 May 2011 14:02 Email | David Lipschitz Software Development and Renewable Energy | <p>I have numbers which show that renewable energy will be cheaper than nuclear energy within the next 3 years.</p> <p>So what is the point of building a power station using dirty, old, 20th century, technology.</p> <p>If you'd like me to send you my presentation, please let me know.</p> | <p>Thank you for your comment. The EIA process is a project specific tool and therefore considers the impacts of the proposed development, as per the application for environmental authorisation, on the environment. This EIA therefore does not comment on government policy in terms of future energy planning. It is however important to note that the Integrated Resource Plan 2010 which has been ratified by Cabinet states that:” In addition to all existing and committed power plants (including 10 GW committed coal), the plan includes 9,6 GW of nuclear; 6,3 GW of coal; 17,8 GW of renewables; and 8,9 GW of other generation sources”</p> <p>Also In terms of alternative energy solutions, only a few energy sources capable of providing a sustained power supply are available in sufficient quantities suitable for base-load power supply. In South Africa, coal, nuclear power and imported hydro power are used for base load electricity generation, while the Open Cycle Gas Turbines (OCGTs) (which use liquid fuel such as diesel), two hydroelectric power stations on the Orange River and pumped storage schemes are used for peaking and emergency electricity generation. At present, renewable forms of energy (e.g. wind and solar), are unable to provide viable large scale base load power due to the intermittent nature of their operation and hence the lower load factors of these renewable technologies. See for instance, EPRI (2010) referred to in Chapter 5 of the Revised Draft EIR.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|-------------------------------|--|---|---|
| 1 | 30 May 2011 13:08 Email | Olivia Andrews Project 90 X 2030 Operations Manager | At the public meeting last week you mentioned that there have been international studies done on the carbon emissions of the entire nuclear fuel cycle, would you be able to send them to me/point me in the direction of where to find them please? | The GIBB Nuclear-1 Public Participation Office sent the reference to Ms Andrews on 08 June 2011. . The reference, as quoted in Chapter 4 of the Revised Draft EIR, is: Dones, R, Heck, T & Hirschberg, S. <u>Greenhouse Gas Emissions from Energy Systems: Comparison and Review</u> . In Paul Scherrer Institut 2003 Annual Report. Paul Scherrer Institut: Villigen, Switzerland. |
| 2 | 29 May 2011 08:15 Email | Carmen Spilsbury The Bomb Surf Petition | The "Petition against Eskom's proposed nuclear plant in Thyspunt" form has been submitted from your site on the 4/5/2011 9:45:43 AM I object to Thyspunt being chosen as the location of Nuclear-1 because: 1. The EIA itself acknowledges that Thyspunt would experience environmental impacts of higher significance (particularly biophysical impacts) than the other shortlisted site, Duynefontein. 2. The negative impact on local flora, wetlands, dunes, ocean and tourism during construction and operation and the danger to local communities in the event of a radioactive incident. 3. One of the EIA's main arguments in favour of choosing Thyspunt being that it would be beneficial to the conservation of the area is completely devoid of logic. | Thank you for comment and your input and participation in the Environmental Impact Assessment process. Please see our response to your comments below. 1 - 3. The impact assessment at Thyspunt as a result of the construction and operation of the Nuclear Power Station did indeed identify significant potential impacts (negative and positive) on the flora, dune, wetland, tourism and marine environments amongst others. There are also some impacts of potentially higher significance at Duynefontein, for example the impact on the Atlantis Mobile Dunefield (from a botanical point of view). Development of the Thyspunt site in terms of the wetlands present may, in the absence of mitigation measures, impact significantly on the wetland system. However, the proposed footprint of the plant is situated to avoid the wetlands. The cumulative impacts of the proposed development of a single Nuclear Power Station at the Thyspunt site without implementation of mitigation measures have been assessed to be of high negative significance. However, offset mitigation is possible and would involve conservation of areas that include both the Eastern Valley Bottom wetlands and the |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|------------------------|---|--|
| | | | <p>4. Why develop a Nuclear Power Station in one of SA's windiest regions, when a wind farm could be easily constructed there instead. A quicker, cheaper option that would give clean, safe, renewable energy.</p> | <p>Oyster Bay dunefield itself, as far as the impacted area at the upstream boundary of The Links golf estate.</p> <p>Oceanographic impacts related to the construction phase are considered to be of low significance.</p> <p>As a result a number of mitigation measures have been suggested and included in a draft Environmental Management Plan in order to mitigate the impact of the nuclear power station on the environment.</p> <p>Therefore although it is acknowledged that Thyspunt would experience potential environmental impacts of high significance, especially in terms of the cultural landscape, we maintain that the conservation of the remainder of the site through access control and responsible long-term conservation management are significant positive impacts associated with this site. This is confirmed by the Botany and Dune Ecology Assessments, which conclude that a key positive impact would be the creation of a nature reserve for the non-developed portion of the site, thus improving conservation of sensitive habitats. In the event that full mitigation as well as offset measures were implemented, the net impact to wetlands on the Thyspunt site is also likely to be one of positive significance, and a preferable scenario to the "no-go" alternative.</p> <p>4. As determined in the IRP 2010, nuclear and renewable technology are both important components of South Africa's future energy mix. You are referred to the Integrated Resource Plan 2010, which indicates that the levelised cost of electricity (LCOE) for renewable technology is higher than</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------------------|------------------------|---|--|
| | | | | <p>that of nuclear. Two significant international comparisons of LCOEs of different generation technologies come to the same conclusion that nuclear technology's LCOE is competitive with other technologies, including renewables.</p> <p>As indicated in the EIR, nuclear power is not being considered as an alternative to renewable power such as wind power. No single source of power can provide in South Africa's need for an additional 40,000 MW of additional capacity by 2030. A mixture of sources, including wind power and nuclear power, has been recommended in the approved Integrated Resource Plan 2010. Therefore nuclear and renewable power options need to be pursued in parallel.</p> |
| 3 | 3 June 2011 16:10 Email | Johan Smith | <p>Please read my short letter very carefully.</p> <p>I want to give you SERIOUS ADVICE on how to handle the general public in Jeffrey's Bay/Humansdorp area on the objections to the nuclear station</p> <p>1] Trudie Malan, who is steering the opposition, is against every type of development and objects to anything. She is the one that "wat almal opwerk en stook". What you should do is to simply ask her if she has electricity in her house, where does it come from, has she a road to her house etc/etc what about that so called environmental damage.</p> <p>2] Then also a very important point that is</p> | <p>Thank you. Your comments have been noted. Please continue raising these comments at the public forums. The economic and tourism specialist studies are relevant to your statements.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|------------------------|---|----------|
| | | | <p>never mentioned</p> <ul style="list-style-type: none"> a]what happened at Koeberg b]the fishing in area b]waste removal c]farming etc. <p>If as the objectors cry foul, why did all these negatives not happen at Koeberg? Remember the general public does not think that far, all they hear is the negatives. The most important thing to raise to the general public is to be fully behind the Nuclear Station is money – money – money.</p> <p>Most of them only have the one property that they stay in. If at any stage it is mentioned that house prices will greatly increase and also rentals, I guarantee you 90% will be behind you.</p> <p>The problem is they don't think that far, you must make it clear.</p> | |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|--|---------------------|--|---|
| 4 | 03 June 2011 17:39 Email | Fanie | <p>Graag will ek nie kommentaar lewer nie, maar saam gesels.</p> <p>Die persone wat so heftige teenkating bied is niks anders as selfsugtig nie want hulle eerlik is sal hulle erken dat die “plant” eerder by iemand anders se voorstoep gebou kan word!</p> <p>Die kommer vir huise kan as voorwaarde wees dat huise in plekke waar plakkersgebied is, gebou word op hulle koste en na projek klaar moet die huise aan die gemeenskap oorhandig word. Sodoende baat die gemeenskap daarby. Die selfde kan in Jeffrey’s Baai en Humansdorp gedoen word.</p> <p>Kommer oor warm water in die see. Hoe moeilik is dit om warmwater koud te maak? Pop water in reeks oorloop damme en oornag is dit yskoud.</p> <p><i>Translation:</i> <i>The persons who are so heavily opposed are nothing more than selfish because if they are honest they will admit that plant can rather be built on somebody else’s doorstep.</i></p> | <p>Dankie. Ons neem kennis van u kommentaar and waardeer dat u by publieke vegaderings u opinie sal gee. . Verskeie opsies word oorweeg ten opsigte van behuising maar dit sal onderhewig wees aan ‘n onafhanklike omgewings-impakstudie.</p> <p><i>Translation</i> <i>Thank you. We take note of your comments. Various options are being considered in terms of construction and operational housing but this will be subject to a separate EIA process.</i></p> <p>In terme van die kommer oor die vrylating van warm water in die see, sorg die tunnel ontwerp van die ystellings sisteem dat enige negatiewe impakte verminder kan word omdat meer as een vrylatingspunt en ‘n vinnige vloeitempo daartoe bydra dat die oortollige hitte vinnig verminder word om vermenging met orliggende koeler water te maksimaliseer.</p> <p><i>Translation</i> <i>In terms of the release of warm water used for cooling purposes, a tunnelled design of the release system mitigates potential negative impacts, through multiple points of release to aid dissipation of excess heat, by releasing cooling water above the sea bottom to minimise effects on the benthic environment and by utilising a very high flow rate at the point</i></p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|--------------------------------|--|---|---|
| | | | <p><i>The worry about houses can be made a prerequisite i.e. houses can be built in informal settlement areas at the cost of the project and can later be handed back to the community. In this way the community benefits from the project. The same can be done in Jeffrey's Bay and Humansdorp.</i></p> <p><i>Concern about warm water in the sea – how difficult is it to make warm water cold? Pop water into a series of overflow dams and it will be ice cold overnight.</i></p> | <p><i>of release to maximise mixing with cool surrounding water.</i></p> |
| 5 | 03 June 2011 09:06 Email | Juline Prinsloo Kouga Local Tourism Organisation Chairperson | We have attended your session last evening in Humansdorp. Please note that I have mentioned that you must please consult with us as we are the Umbrella body for Tourism in the Kouga. Our Head Office is stationed in Humansdorp at the Cultural Centre. | Thank you for your comment. The GIBB EIA Team consulted with Ms. Prinsloo on 14 July 2011. |
| 6 | 11 June 2011 09:26 Fax | Romney Tilson Brooks Interested Affected Party | <p>The proposed western access road to the Nuclear Power Station at Thyspunt will be within 20 m from my property at Erf 355, Oysterbay. Not only will this completely devalue my property, but it is going through a pristine wetland.</p> <p>I object in the strongest possible terms to this as an access road.</p> <p>If an alternate route is not found, I will take</p> | Thank you for your comments. The alternatives in terms of the western access routes to the Thyspunt site are currently under review. Substantive alternatives are being considered. These will be shared with the public in the release of the Revised Draft EIR Version 2. |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|--|---|---|---|
| | | | <p>this matter further, even if this needs to be addressed in a Court of Law.</p> <p>I am not against the building Nuclear-1 at Thyspunt, but am of the opinion that the money would be much better spent on renewables.</p> | |
| 7 | 07 June 2011 11:50 Email | Len Handler Interested and Affected Party | <p>“6. The Revised Draft EIR comprises a Main Report (Volumes 1 to 2) and Appendices (Volumes 3 – 24 including Site Photographs, Authority Correspondence, Public Participation Documentation, Technical Criteria, Specialist <i>Curricula Vitae</i> and Reports, Draft Environmental Management Plan, EIA Legislative Requirements Checklist and a Peer Review Report).”</p> <p>My question is: Where in the 24 volumes do I find answers to my questions regarding evacuation of CPT population in the event of an accident at Duynefontein?</p> <p>I told you that previously I was unable to find answers and feared I had missed the relevant chapter. Are you able to find someone who can give me the volume and page no.?</p> | <p>Thank you for your comment. Emergency evacuation is dealt with in the Emergency Response Report (Appendix E26 of the Revised Draft EIR). This will however be dealt with in more detail as part of the National Nuclear Regulator (NNR) licensing process.</p> <p>The Koeberg emergency plan team consisting of members from Eskom, the Local Authorities and other support organisations are available around the clock to handle any emergency at the power station. In the unlikely event of an emergency at Koeberg, Eskom will notify the City of Cape Town Disaster Risk Management immediately. Eskom will recommend appropriate protective actions as per the requirements of the NNR to the relevant authorities. Representatives of National, Provincial and Local Government will authorize the appropriate protective actions to be implemented. Emergency response personnel and resources from all spheres of government will carry out these actions.</p> <p>An emergency calendar is also sent to the area surrounding Koeberg every year. This calendar gives details of the emergency plan for those people living closest to the station.</p> <p>The NNR requires evacuation of the 5km precautionary</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|------------------------|-------------------|---|
| | | | | <p>Action Zone (PAZ) within 4 hours, and the downwind affected sector of the Urgent Protective Action Planning Zone (UPZ) between 5km and 16km to be evacuated within 16 hours. The City of Cape Town Disaster Risk Management would utilise the My Citi Buses as well as other public transport resources to evacuate people in the relevant emergency planning zone who do not have their own transport.</p> <p>Every two years the NNR tests preparedness of the various organisations involved in the Koeberg emergency plan.</p> |

5 August 2015

Our Ref: J31314
Your Ref: GC WEBB/jl

Attorneys Hutton and Cook and Mascador (Pty) Ltd
Erf 80
1333 / 30 Voortrekker Road (cnr. Voortrekker and Saffrey Street)
Humansdorp
6300

Cape Town

14 Kloof Street
Cape Town 8001
PO Box 3965
Cape Town 8000

Tel: +27 21 469 9100
Fax: +27 21 424 5571
Web: www.gibb.co.za

Dear Mr Webb

RESPONSE TO MR GC WEBB, ATTORNEYS HUTTON & COOK, MASCADOR (PTY) LTD.

YOUR REF: COMMENTS ON REVISED DRAFT ENVIRONMENTAL IMPACT REPORT AS COMPLETED BY ATTORNEYS HUTTON & COOK, MASCADOR (PTY) LTD

Comment 1:

The directors of Mascador are partners in firm of Attorneys Hutton and Cook whose Humansdorp offices are established at the said property. As such, the revised draft EIR identifying Saffrey Street as the route for heavy vehicles through Humansdorp results in our company, partnership and its individual partners being directly affected thereby.

Response 1:

Similar concerns from the public around Humansdorp area up to St Francis have been raised and acknowledged. It is for these reasons why the Transport Assessment is being revised to consider other alternative routes. The current report recommends that the main street through Humansdorp and Saffrey street be bypassed. The recommendation is to tap off from Voortrekker road (R102) from Humansdorp enroute to Jeffreysbay between Nico Malan street and the Boskloof suburb. Any substantive changes to the Transportation Assessment and the Revised Draft EIR will be made available for public review and comments. A further bypass of Humansdorp for traffic from the N2 is proposed to link the R330 north of Humansdorp with Old Cape Road (the R102) west of Humansdorp (between Humansdorp and Kruisfontein). This bypass would extend north and west of the Humansdorp industrial area.

Comment 2:

To suggest Saffrey Street as a viable alternative to the Humansdorp Main Street is nothing short of ludicrous.

Response 2:

Your comment is noted and has been passed on to the traffic and transportation specialist for consideration in their revised report.

Comment 3:

Saffrey Street does not constitute an access route “around Humansdorp” as suggested by the Environmental consultants. The proposed alternative route through Humansdorp still entails vehicles travelling through the centre of Humansdorp simply via a different route.

The fact is that the said route via Saffrey Street passes through commercial and residential area bisecting the town from East to West and basically still the centre of the town just not the main street!

No consideration at all has been given to the fact that the said route passes in close proximity to a hospital, ambulance yard and two schools (one on either side of Saffrey Street).

No consideration whatsoever has been given to the negative impact such route would have on businesses and residents established in Voortrekker Road and Saffrey Street, Humansdorp.

No consideration has been given to the amount of pedestrians crossing the said route from the two school and from Kwa Nomzama Township whose resident cross the proposed route in two areas (Saffrey Street and the R330) - this being their only access route into Humansdorp.

I record that my company’s property (Erf 80, Humansdorp) has a driveway onto Saffrey Street and during peak traffic there is already massive congestion with vehicles having stopped to enter Voortrekker Road blocking the driveway of our property as also those below in Saffrey Street so preventing exit from our property. The proposed route with increased traffic flow would make it virtually impossible for us, the business and residents of Saffrey Street to exit or enter our properties.

No regard has been had whatsoever for the rights of the residents and businesses in Saffrey Street considering that heavy vehicles would upon entering Saffrey Street be travelling down a very steep gradient hereby certainly increasing noise levels significantly. Clearly an inspection of Saffrey Street, Humansdorp would show the very poor surface conditions and a serious upgrade of the road would be necessary to include widening of the road and removal of existing established trees to the detriment of all.

Clearly the increased traffic flow, noise levels and construction will negatively impact upon our use and enjoyment and business conducted from Erf 80, Humansdorp. We object strongly to the proposed route.

At a public meeting held on 31 of May 2011 at St. Francis Bay a proposal was made by Mr. Hilton Thorpe to the effect that any access road to Thyspunt should bypass any town completely by at least 1 kilometre. We support such proposal.

Response 3:

Your comments and concerns are noted. Please note the options in terms of the access of the Thyspunt site to bypass the town of Humansdorp are currently underway, as per response 2 above. Any substantive changes to the Transportation Assessment and the Revised Draft EIR Version 2 will be made available for public review and comments.

Comment 4:

Insofar as further comment is invited the following is recorded. I, the undersigned (Garth Cameron Webb) practice as an attorney from Erf 80, Humansdorp and reside at 5 Rivertide, St. Francis Bay. I travel the R330 from Rivertide (approximately 1 kilometre from the Krommeriver Bridge) to Humansdorp and back on a daily basis.

Rivertide comprises of 69 residential units of which of the majority are holiday homes. The entrance from the R330 to Rivertide is already extremely dangerous with taxis stopping to load and off load passengers. Severe traffic congestion occurs during peak periods which have already resulted in a number of traffic accidents. I have personally addressed numerous correspondences to the South African National Roads Agency and in fact met with officials of the said agency at the intersection pertaining to the dangers at the intersection. This has not been adequately addressed and the same applies at numerous other intersections to developments off the R330.

Response 4:

Your comment is noted. Kindly refer to Response 3 provided above.

Comment 5:

Having attended at the public participation meeting at St. Francis Bay on the 31st of May it is noted that the consultant's mandate in preparing the revised draft EIR report appears to be *inter alia* to make a recommendation on which site of a possible three, being Duynfontein, Thyspunt or Bantamsklip should be the preferred site for the establishment of Nuclear-1. The one common factor of the three proposed sites is that Eskom own the land.

It is however abundantly clear that none of the three sites are ideal for the establishment of a nuclear facility. In formulating a comparative assessment of the three alternative sites and giving consideration to the admitted 259 impacts filtered to 16, the exercise was clearly restricted to a comparative assessment between three alternative sites identified by Eskom as the owners of the property in question. Each of the sites showed negative impacts in more than one category. On their own admission the consultant embarked on a weighted numerical comparison of the alternative sites in an attempt to identify the most suitable site for Nuclear-1. **With respect, the environmental impact assessment should have at its focus the suitability of a particular site for the establishment of a Nuclear reactor and not focus on a comparison of three particular sites; ownership of which vests in Eskom so as to be established which of the three is most suitable. The simple procurement of a site by Eskom does not establish viability!** It is, for the above

reasons, respectfully submitted that the revised EIA is fatally flawed. Thyspunt according to the consultants may **in their opinion** be the preferred site of the three – this does not mean that it is a suitable site for a Nuclear Power Station! This is clearly apparent from their own report.

Response 5:

Your comments are noted and the current application for environmental authorisation is indeed an evaluation of the significance of the impacts related to the construction and operation of a nuclear power station on three very specific sites. The methodology for assessment was approved by the Department of Environmental Affairs during the Scoping Phase. However, it should be borne in mind that the choice of the original five and later three sites are based on the Nuclear Site Investigation Programme (NSIP) study undertaken by independent consultants during the 1980s., This was commissioned by Eskom and aimed at identifying the most suitable sites for location of nuclear power stations in South Africa. The NSIP included a wide range of specialist studies, such as engineering, social science, geology, ecology and town planning.

The primary objective of the NSIP was to identify sites along the coastline of South Africa, suitable for the construction and operation of future nuclear power stations. The NSIP comprised of three phases: Phases 1 and 2 involved desktop studies, which assessed the general suitability of regions located along the coast. Subsequent to this, specific sites within the identified regions were earmarked for further detailed investigations. Phase 3 involved field investigations of those sites, identified during the preceding phases, by various specialists. Field investigations were undertaken in order to determine the suitability and sensitivity of the sites identified and culminated in the identification of five feasible and suitable sites.

GIBB, as the independent environmental consultant, reviewed the NSIP process. Within the context of the EIA process, GIBB's responsibility is to determine whether the proposed alternatives are reasonable and feasible sites. All three sites were considered reasonable and feasible at the time that the Revised Draft EIR was provided for public comment.

Therefore despite these sites being owned by Eskom, the EIA process has confirmed that they fulfil requirements in terms of technical suitability and position in relation to current and future electricity demand.

Yours faithfully



For GIBB (Pty) Ltd
The Nuclear-1 EIA Team

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|--|---|---|--|
| 1 | 31 May 2011 18:00 Letter received at the St. Francis Links Public Meeting. | Peter Bosman Interested and Affected Party | <p>As I understand the position relating to transport, two possible routes from Humansdorp to the NPS site were considered for the transport of materials and equipment for the construction of the NPS.</p> <p>They are indentified in the report as the Western route, which runs from Humansdorp on the existing Oyster Bay road and links up with the NPS from that road on a new road to be constructed, and the Eastern route which follows the R303 from Humansdorp through St. Francis Bay after which it links up with the NPS on a new road to be constructed.</p> <p>It seems that the Eastern route is, at the present time, the preferred route largely because of the disturbance to the ecology that would result from the construction of the Western route. I have difficulty understanding this as I understand that the Western route is to be constructed in any case.</p> <p>The traffic to traverse the route is estimated to be some 900 vehicles a day for 8 to 10 years during the construction phase, diminishing thereafter.</p> | <p>Thank you for your comments. Please note that the alternatives in terms of the western access route to the Thyspunt site is currently under review to minimise the impacts to Humansdorp, Sea Vista, St. Francis Bay and Cape St. Francis, and in particular the areas around schools. The results of the additional investigations will be made available for public comment and review as part of the Revised Draft EIR Version 2</p> <p>The Transport Specialist study was also revised to consider other alternative routes access. The revised report recommends that the main street through Humansdorp and Saffrey Street be bypassed. New transport roads for abnormal load vehicles were therefore considered and three alternate bypasses were investigated. The preferred alternative directly links between Voortrekker Road (MR389) and Park Street (MR381) and is 850m in length. It is considered as the most viable option as it is the shortest and most economical route to construct, and it has a good alignment for the transportation of abnormal loads. Once the route is constructed, it will also alleviate the traffic congestion in Humansdorp.</p> <p>The revised Transport specialist study additionally acknowledges that the Thyspunt site requires significant transport infrastructure upgrades. The R330 is now proposed to be used for light vehicle traffic and abnormal load</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|------------------------|---|---|
| | | | <p>The R330 road run alongside a populated residential areas for three to four km and the continuous noise, particularly of heavier vehicles, will be substantial and significant. It is unavoidable that the value of these properties will diminish as a result. In one area it runs between the residences and the primary school. In this area it will also present a serious danger to the small children who cross the road a number of times each day. The huge traffic flow will also be an inconvenience and a danger to the people living or working along the route, many of whom use the road daily.</p> <p>When Man increases his footprint on the Earth the ecology usually suffers. This is regrettable but inevitable. In this case I believe that the interests of the people who live along and near the R330 should come before the ecology of the dune system West of the NPS. In any event that ecology will be compromised by a new road and steps can be taken to mitigate the impact.</p> <p>No consideration is given in the report to the massive impact the use of the R303 will have on the people living along or near the road. Nor is there any proposal for mitigating that impact.</p> | <p>transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed to be surfaced to provide improved east-west connectivity.</p> <p>The author is further referred to the Social and Noise Assessments (Appendix 18 and 23 of the Revised Draft EIR Version 2 respectively) which recommends a number of mitigation measures aimed to lower the significance of impacts on the social and noise environments.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|--|---|--|---|
| | | | <p>There only one way it can be mitigated and that is by not using it.</p> <p>My request is, therefore, that the recommendations of the EIA on transport be reconsidered and the Western route be identified as the only access road for transport during the construction phase of the NPS.</p> | |
| 2 | 03 June 2011 12:00 Comment Sheet hand delivered. | Lunga Zantsi Interested and Affected Party | I think this Nuclear Power Station can carry on as long as it is safe and hoping that its advantages outweigh its disadvantages. Finally, I wish it could create jobs as our province has a high rate of unemployment. | Thank you. Your comments are noted. |
| 3 | 01 June 2011 18:00 Comment Sheet | Zanovuyo Ndeni Interested and Affected Party | <p>I want this project to continue.</p> <p>We want work.</p> | Thank you. Your comments are noted. Approximately 7 700 jobs will be created at the peak of construction (i.e. year 6). This includes all jobs, including manual labour and technical jobs. GIBB's recommendation is that at least 25% of these jobs must be for locals. Eskom will also have to do training for the local people like has been done at other new build projects. |
| 4 | 01 June 2011 18:00 Comment Sheet | Sinethemba Sikwana Interested and Affected Party | <p>This Nuclear Power is bringing danger.</p> <p>We want work.</p> | Thank you. Your comments are noted. Approximately 7 700 jobs will be created at the peak of construction (i.e. year 6). This includes all jobs, including manual labour and technical jobs. GIBB's recommendation is that at least 25% of these jobs must be for locals. Eskom will also have to do training for the local people like has been done at other new build |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---|---|--|--|
| | | | | projects. |
| 5 | 29 May 2011 14:00 Comment Sheet | Zwelivumile Bongna Interested and Affected Party | My questions have been answered. | Thank you. Your comments are noted. |
| 6 | 29 May 2011 14:00 Comment Sheet | David Kive Interested and Affected Party | Al my vrae is beantwoord. Ek het geen klagtes nie. My vraag oor hoe dit die swanger vrouens gaan affekteer is ook beantwoord. <i>Translation</i> All my questions have been answered. I don't have any complaints. My questions about how pregnant women will be affected have also been answered. | Dankie. Ons neem ag van u kommentaar. <i>Translation</i> Thank you. Your comments are noted. |
| 7 | 01 June 2011 18:00 Comment Sheet received at St. Francis Links Public Meeting | Marsha Haupt Chas Event | Thyspunt is a brilliant idea and a great concept for our area. Excellent for businesses, job creation and upliftment of the community. | Thank you. Your comments are noted. |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|--|---|---|-------------------------------------|
| 8 | 02 June 2011 18:00 Comment Sheet received at Humansdorp Public Meeting | Francis Searle Interested and Affected Party | Well conducted meeting. | Thank you. Your comments are noted. |
| 9 | 22 May 2011 12:35 Comment Sheet received by fax | Michel Hucenko Interested and Affected Party | <p>It is still my firm conviction that nuclear is the solution for our need for electricity supply.</p> <p>There will not be a Chernobyl or Fukushima in our country as we are neither Russian nor Japanese.</p> <p>I wonder how many South Africans have to die in the dark for the sake of a few butterflies or for some obscure political agenda.</p> <p>By the way, I am living near Koeberg for 27 years and I still don't glow in the dark!</p> | Thank you. Your comments are noted. |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---|---|--|--|
| 10 | 25 May 2011 11:05 Comment Sheet received by fax | Hubert Cronje Melkbosstrand Ratepayers Association | For a number of years Melkbosstrand resident have tried to get information from ESKOM regarding insurance coverage for neighbouring communities in case of a disaster. This information has now become urgent and critical. It is ESKOM / NNR responsibility to make it available and it our right to have this information. | <p>Thank you for your comment. In terms of the National Nuclear Regulatory Act, the operator of a nuclear facility is obliged to take out insurance. The current financial security required to be provided by Eskom for Koeberg Nuclear power station is R 2.4 billion. Should the total amount of claims exceed amount of the security provided then Eskom will inform the Minister of Energy and additional funds may be requested from Parliament. The NNR is however currently reviewing the amount of insurance that the nuclear power operator has to take out.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>In addition in terms of Chapter 4 of the NNR Act the Minister is required to Gazette the proposed level of financial security and the manner in which it is to be provided.</p> |
| 11 | 08 June 2011 By Mail | Gert Albertus Theron Interested and Affected Party | <p>I was unable to attend the meeting at Gansbaai on 23 May 2011 but comment etc. herewith:</p> <p>In total agreement that Thyspunt will be the ideal position and also the preferred area (site) with the least impact environmentally.</p> <p>Fully support your recommendation that the DEA authorise the Thyspunt site for the Eskom Nuclear-1 Power Station.</p> <p>Naturally the sooner the better in the interest of the country financially and otherwise.</p> | Thank you. Your comments are noted. |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|-----------|----------------------------|--|---|-------------------------------------|
| 12 | 17 May 2011 By Mail | Municipal Manager Swartland Municipality Department Development Services | Your email dated 29 April 2011 regarding the subject refers. This Municipality has no comment on the Draft Environmental Impact Assessment report. | Thank you. Your comments are noted. |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------|--|---|--|
| 1 | 04 June 2011 Email | Mike Kantey Coalition Against Nuclear | <p style="text-align: center;">Nuclear plant workers suffer internal radiation exposure after visiting Fukushima</p> <p style="text-align: center;"><i>The Mainichi Daily News, May 24 2011</i></p> <p style="text-align: center;">http://mdn.mainichi.jp/mdnnews/news/20110521p2a00m0na021000c.html</p> <p>The government has discovered thousands of cases of workers at nuclear power plants outside Fukushima Prefecture suffering from internal exposure to radiation after they visited the prefecture, the head of the Nuclear and Industrial Safety Agency said.</p> <p>Most of the workers who had internal exposure to radiation visited Fukushima after the nuclear crisis broke out following the March 11 quake and tsunami, and apparently inhaled radioactive substances scattered by hydrogen explosions at the Fukushima No. 1 Nuclear Power Plant.</p> <p>The revelation has prompted local municipalities in Fukushima to consider checking residents' internal exposure to radiation.</p> <p>Nobuaki Terasaka, head of the Nuclear and Industrial Safety Agency, told the House of Representatives Budget Committee on May</p> | <p>Thank you for your comment. The incident at Fukushima as a result of a natural disaster has highlighted many important safety factors in terms of the future of nuclear energy. The industry is underway to adapt these safety factors into new designs and existing plants.</p> <p>Furthermore on the 18th Jan 2012 (NucNet) News reported; About 30 workers at the Fukushima-Daiichi nuclear power plant in Japan received between 100 millisieverts (mSv) and 250 mSv of radiation exposure, which would have increased their chances of cancer by about one percent to 2.5 percent, a parliamentary committee in the UK was told. Her Majesty's chief inspector of nuclear installations, Mike Weightman, told the House of Commons Energy and Climate Change Committee that in terms of the workers, "there don't appear to be any acute radiation effects".</p> <p>He said 30 of them have had "a significant dose", but it is not in the sense of an immediate life-threatening dose. In a declared nuclear emergency, the recommended limit is 100 mSv. The International Commission on Radiation Protection is mandated to sanction a maximum accumulated dose of 250 mSv in extraordinary circumstances. Mr Weightman said public evacuation was well-organised and exposure countermeasures for the public have been "effective so far", and there will be a longer-term health monitoring programme."</p> <p>Lastly please keep in mind that the assessment of nuclear safety risks are however outside the scope of the EIA process and will be considered in the National Nuclear Regulator's licensing process. Please refer in this regard to</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---------------------|---|--|
| | | | <p>16 that there were a total of 4,956 cases of workers suffering from internal exposure to radiation at nuclear power plants in the country excluding the Fukushima No. 1 Nuclear Power Plant, and 4,766 of them involved workers originally from Fukushima who had visited the prefecture after the nuclear crisis. Terasaka revealed the data in his response to a question from Mito Kakizawa, a lawmaker from Your Party.</p> <p>The Nuclear and Industrial Safety Agency said it received the data from power companies across the country that measured the workers' internal exposure to radiation with "whole-body counters" and recorded levels of 1,500 counts per minute (cpm) or higher. In 1,193 cases, workers had internal exposure to radiation of more than 10,000 cpm. Those workers had apparently returned to their homes near the Fukushima No. 1 Nuclear Power Plant or had moved to other nuclear power plants from the Fukushima No. 1 and 2 nuclear power plants.</p> <p>According to Kakizawa, one worker at the Shika Nuclear Power Plant operated by Hokuriku Electric Power Co. in Ishikawa Prefecture returned to his home in Kawauchi, Fukushima Prefecture, on March 13 and stayed there for several hours. He</p> | <p>the Co-operative Governance Agreement included in Appendix B4 of the Revised Draft EIR Version 1.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---------------------|--|----------|
| | | | <p>then stayed in Koriyama in the prefecture with his family for one night before moving out of Fukushima. On March 23, he underwent a test at the Shika Nuclear Power Plant that showed his internal exposure to radiation had reached 5,000 cpm. He was thus instructed by the company to remain on standby. The radiation reading dropped below 1,500 cpm two days later, and then he returned to work.</p> <p>Another male worker in his 40s told the Mainichi that he had waited at his home, about 30 kilometres from the crippled nuclear plant, following a hydrogen explosion at one of the troubled reactors. He later went through a test which showed his internal exposure to radiation had reached 2,500 cpm. "I think most of the radiation derives from iodine (which has a short half-life), and therefore the radiation reading is expected to drop. But I am worried," the man said.</p> <p>The local government in Nihonmatsu, Fukushima Prefecture, has received inquiries about internal exposure to radiation from its citizens. In response, it is considering selecting infants and people working mainly outdoors and measuring their internal radiation exposure levels using</p> | |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---------------------|---|----------|
| | | | <p>whole-body counters, officials said.</p> <p>Internal exposure to radiation lasts longer and carries more risks than external exposure. People are deemed to have had internal exposure if whole-body counters detect over 1,500 cpm of radiation from them. If more than 100,000 cpm of radiation is detected from body surfaces, decontamination is said to be necessary.</p> <p>A special earthquake-resistant building that serves as a base for emergency workers at the Fukushima No. 1 Nuclear Power Plant had its doors strained by hydrogen explosions at the No. 1 and 3 reactors in March, making it easier for radioactive substances to come in. "We had meals there, so I think radioactive substances came into our bodies," a male worker in his 40s said. "We just drink beer and wash them down," he added.</p> <p>A 34-year-old male worker, who entered the nuclear complex earlier in May, voiced concerns over the lack of a sufficient system to check internal exposure to radiation. "Most of the workers around me have not undergone check-ups at all. Those in their 20s are particularly worried," he said.</p> <p>Tokyo Electric Power Co. (TEPCO), the</p> | |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------|--|---|---|
| | | | <p>operator of the crippled Fukushima No. 1 Nuclear Power Plant, is to check workers' internal exposure to radiation whenever deemed necessary, in addition to regular checks conducted every three months. But as of May 16, only about 1,400 workers have gone through check-ups -- roughly 20 percent of the total number of workers. And only 40 of the workers have had their test results confirmed. The highest level of radiation to which a worker has been exposed so far is 240.8 millisieverts, and 39 millisieverts of radiation was from internal exposure.</p> | |
| 2 | 10 June 2011 Email | Mathias Matysik Interested and Affected Party | <p>I wish to submit the following comment on the proposed Nuclear Power Plant known as Nuclear 1.</p> <p>After the recent tragedy in Japan and the Meltdown of one of its Nuclear power stations countries such as Italy and Germany have now declared a halt to all Nuclear power and have started closing down such facilities.</p> <p>This in the direct wake of the disaster in Japan. This alone should stand to reason that the Environmental impact in case of such a disaster is incalculable in human, animal, marine and the vegetation of the whole of the eastern cape. The position of this structure is of such a risk in so many ways that it should not continue.</p> | <p>Thank you for your comment. The incident at Fukushima as a result of a natural disaster has highlighted many important safety factors in terms of the future of nuclear energy.</p> <p>The assessment of nuclear safety risks are outside the scope of the EIA process and will be considered in the National Nuclear Regulator's licensing process. Please refer in this regard to the Co-operative Governance Agreement included in Appendix B4 of the Revised Draft EIR Version 1.</p> <p>The BBC (http://www.bbc.co.uk/news/world-europe-13592208) reports that Germany's decision to close down its nuclear power stations will most probably lead to an increase the import of nuclear energy from France and there is a risk they will not manage as quickly to halt the dependency on fossil fuels, especially coal-based energy making the decision not as clear cut as it seems. The Washington Post (02 June 2011 -</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|-----------------------|---|---|--|
| | | | <p>Nuclear power is an out of date form of energy and will only cost this country more that it will ever return.</p> | <p>http://www.washingtonpost.com/opinions/germanysnuclear-energy-blunder/2011/05/31/AGjjGkGH_story.html) reports that the International Energy Agency announced that global energy-related carbon emissions last year were the highest ever, and that the world is far off track if it wants to keep temperatures from rising more than 2 degrees Celsius, after which the results could be very dangerous. But the Breakthrough Institute, a think tank, points out that renewables would have to generate an incredible 42.4 percent of the country's electricity in 2020 to displace nuclear. The government could bring that number down some with very aggressive reductions in energy use. But, even then, all that will merely hold the German power industry to its current carbon footprint.</p> <p>This notwithstanding nuclear power is not being considered as an alternative to renewable power such as wind power in South Africa in terms of the Integrated Resource Plan (IRP). The IRP sets out the electricity demand over the next 20 years for an additional 56 000 MW capacity by 2030 and a mixture of sources, including wind power and nuclear power, has been completed in the approved Integrated Resource Plan 2010.</p> |
| 3 | 10 June 2011 Email | Sally Andrew Bowen Boshier Interested and Affected Parties | <p>We still object for all the reasons laid out by us in numerous previous emails. None of these basic concerns have been adequately addressed.</p> <p>(And In the light on on-going nuclear disasters, it is amazing you persist with these irresponsible, expensive and</p> | <p>Thank you for your comment. Your previous comments have been recorded and will be included, as with all other comments received, in the Final EIR which will be placed before the Competent Authority for decision making purposes.</p> <p>The recent incident at Fukushima as a result of a natural disaster has highlighted many important safety factors in</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------|--|--|--|
| | | | dangerous proposals.) | <p>terms of the future of nuclear energy.</p> <p>The assessment of nuclear safety risks are however outside the scope of the EIA process and will be considered in the National Nuclear Regulator's licensing process. Please refer in this regard to the Co-operative Governance Agreement included in Appendix B4 of the Revised Draft EIR Version 1.</p> |
| 4 | 10 June 2011 Email | Dr Toon Overstijns Interested and Affected Party | <p>My concern is that when nations like Germany decided to exit nuclear power generation by 2022, and other EU member states are considering the same measures, will this be a real viable long term option to generate electricity?</p> <p>In other words by the time the plant is completed we may be forced to abandon the project.</p> <p>The Japanese government is reconsidering as well and stops all constructions of new plants.</p> <p>My objection is that we need to evaluate the reports of Germany, Japan and other global players before we can really assess the safety for our community. Any decision before would be premature and potentially a financial waste.</p> | <p>Thank you for your comment.</p> <p>The BBC (http://www.bbc.co.uk/news/world-europe-13592208) reports that Germany's decision to close down its nuclear power stations will most probably lead to an increase the import of nuclear energy from France and there is a risk they will not manage as quickly to halt the dependency on fossil fuels, especially coal-based energy making the decision not as clear cut as it seems.</p> <p>The Washington Post (02 June 2011 - http://www.washingtonpost.com/opinions/germanys-nuclear-energy-blunder/2011/05/31/AGjjGkGH_story.html) reports that the International Energy Agency announced that global energy-related carbon emissions last year were the highest ever, and that the world is far off track if it wants to keep temperatures from rising more than 2 degrees Celsius, after which the results could be very dangerous. But the Breakthrough Institute, a think tank, points out that renewables would have to generate 42.4 percent of the country's electricity in 2020 to displace nuclear. The government could bring that number down some with very aggressive reductions in energy use. But, even then, all that will merely hold the German power industry to its current</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---------------------|--|---|
| | | | <p>My request is therefore to postpone the decision by 12 months to take these new elements into consideration by the local community.</p> | <p>carbon footprint. Also South Africa is located on a significantly more stable tectonic environment than Japan which being located so near to a major subduction zone has made it historically vulnerable to seismic events.</p> <p>This notwithstanding nuclear power is not being considered as an alternative to renewable power such as wind power in South Africa in terms of the Integrated Resource Plan (IRP). The IRP sets out the electricity demand over the next 20 years for an additional 56 000 MW capacity by 2030 and a mixture of sources, including wind power and nuclear power, has been completed in the approved Integrated Resource Plan 2010.</p> <p>Lastly it is acknowledged that the incident at Fukushima as a result of a natural disaster has highlighted many important safety factors in terms of the future of nuclear energy.</p> <p>The assessment of nuclear safety risks are however outside the scope of the EIA process and will be considered in the National Nuclear Regulator's licensing process. Please refer in this regard to the Co-operative Governance Agreement included in Appendix B4 of the Revised Draft EIR Version 1.</p> <p><u>Furthermore, the safety of the KNPS has recently been checked following the events at the Fukushima nuclear power plant. The evaluation by the NNR on the safety assessment done by Eskom concluded that KNPS is able to withstand these events.</u></p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------|---|--|---|
| 5 | 11 June 2011 Email | Diane Salters Interested and Affected Party | <p>I refer you and the decision makers involved in this process to the recent decision by the Japanese government, following the nuclear disaster there, to completely re-assess the risk factors involved in nuclear energy production and the safety standards required.</p> <p>This, together with the decision of the German government to phase out nuclear power entirely, raises further questions and cause for alarm.</p> <p>The need for a commitment to renewable and safe energy resources becomes even more crucial.</p> <p>Why should a developing country like SA not learn from the mistakes of the developed world and take a different path?</p> | <p>Thank you for your comment.</p> <p>The BBC (http://www.bbc.co.uk/news/world-europe-13592208) reports that Germany's decision to close down its nuclear power stations will most probably lead to an increase the import of nuclear energy from France and there is a risk they will not manage as quickly to halt the dependency on fossil fuels, especially coal-based energy making the decision not as clear cut as it seems.</p> <p>The Washington Post (02 June 2011 - http://www.washingtonpost.com/opinions/germanys-nuclear-energy-blunder/2011/05/31/AGjjGkGH_story.html) reports that the International Energy Agency announced that global energy-related carbon emissions last year were the highest ever, and that the world is far off track if it wants to keep temperatures from rising more than 2 degrees Celsius, after which the results could be very dangerous. But the Breakthrough Institute, a think tank, points out that renewables would have to generate an incredible 42.4 percent of the country's electricity in 2020 to displace nuclear. The government could bring that number down some with very aggressive reductions in energy use. But, even then, all that will merely hold the German power industry to its current carbon footprint. Also South Africa is located on a significantly more stable tectonic environment than Japan which being located so near to a major subduction zone has made it historically vulnerable to seismic events.</p> <p>This notwithstanding nuclear power is not being considered as an alternative to renewable power such as wind power in</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|-----------------------|---|---|--|
| | | | | <p>South Africa in terms of the Integrated Resource Plan (IRP). The IRP sets out the electricity demand over the next 20 years for an additional 56 000 MW capacity by 2030 and a mixture of sources, including wind power and nuclear power, has been completed in the approved Integrated Resource Plan 2010.</p> <p>Lastly it is acknowledged that the incident at Fukushima as a result of a natural disaster has highlighted many important safety factors in terms of the future of nuclear energy.</p> <p>The assessment of nuclear safety risks are however outside the scope of the EIA process and will be considered in the National Nuclear Regulator's licensing process. Please refer in this regard to the Co-operative Governance Agreement included in Appendix B4 of the Revised Draft EIR Version 1</p> |
| 6 | 13 June 2011 Email | Byron Andrews Pam Golding Properties St. Francis Bay | <p>The residents of St Francis bay will continue to contest the flawed EIA that Arcus Gibb submits.</p> <p>The people of South Africa need to know that this is not a localized problem, but a national one.</p> <p>Every taxpayer in South Africa will end up paying double on their electricity bills to fund this financially unfeasible venture.</p> <p>Thyspunt is geographically incorrect for a nuclear power station. No trumped up EIA can change this fact.</p> | <p>Thank you. Your comments are noted. In 2007, when the EIA process for the Nuclear-1 application commenced there was no space available at the Coega site. Although space has now become available for a nuclear power station at Coega IDZ, due to other limitations (such as the need for micro-seismic monitoring), Coega cannot in terms of this EIA process for the proposed Nuclear-1 be considered reasonable and feasible alternative as there is currently a lack of information regarding its seismic suitability. It would take another five years to generate the same level of information as is available for Thyspunt, Duynefontein and Bantamsklip site alternatives.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------|--|---|---|
| | | | <p>Building a nuclear power station at Coega, right where the power is needed, and where the infrastructure and labor are already there, would halve the cost to the taxpayers.</p> <p>Make the change now.</p> | |
| 7 | 14 June 2011 Email | Bryce Hendricks The Bomb Surf Petition | <p>Petition against Eskom's proposed nuclear plant in Thyspunt:</p> <p>I object to Thyspunt being chosen as the location of Nuclear1 because:</p> <ol style="list-style-type: none"> 1. The EIA itself acknowledges that Thyspunt would experience environmental impacts of higher significance (particularly biophysical impacts) than the other shortlisted site, Duynefontein. 2. The negative impact on local flora, wetlands, dunes, ocean and tourism during construction and operation and the danger to local communities in the event of a radioactive incident. 3. One of the EIA's main arguments in favour of choosing Thyspunt being that it would be beneficial to the conservation of the area is completely devoid of logic. 4. Why develop a Nuclear Power | <p>Thank you for comment and your input and participation in the Environmental Impact Assessment process. Please see our response to your comments below.</p> <p>Thank you for comment and your input and participation in the Environmental Impact Assessment process. Please see our response to your comments below.</p> <p>1 - 3. The impact assessment at Thyspunt as a result of the construction and operation of the Nuclear Power Station did indeed identify significant potential impacts (negative and positive) on the flora, dune, wetland, tourism and marine environments amongst others. There are also some impacts of potentially higher significance at Duynefontein, for example the impact on the Atlantis Mobile Dunefield (from a botanical point of view).</p> <p>Development of the Thyspunt site in terms of the wetlands present will, in the absence of mitigation measures, impact significantly on the wetland system. However, the proposed footprint of the plant is situated to avoid the wetlands. The cumulative impacts of the proposed development of a NPS at the Thyspunt site without implementation of mitigation</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|------------------------|--|---|
| | | | <p>Station in one of SA's windiest regions, when a wind farm could be easily constructed there instead. A quicker, cheaper option that would give clean, safe, renewable energy.</p> | <p>measures have been assessed as of high negative significance. However, offset mitigation is possible and would involve conservation of areas that include both the Eastern Valley Bottom wetlands and the Oyster Bay dune field itself, as far as the impacted area at the upstream boundary of The Links golf estate.</p> <p>Oceanographic impacts related to the construction phase are considered to be of low significance.</p> <p>As a result a number of mitigation measures have been suggested and included in a draft Environmental Management Plan in order to mitigate the impact of the Nuclear Power Station on the Environment.</p> <p>Therefore the above confirms that although Thyspunt would experience environmental impacts it is still maintained that the conservation of the remainder of the site through access control and responsible long-term conservation management are significant positive impacts associated with this site.</p> <p>4. As determined in the approved Integrated Resource Plan (IRP) 2010, nuclear and renewable technology is an important component of South Africa's future energy mix. The assessment of nuclear safety risks are outside the scope of the EIA process and will be considered in the National Nuclear Regulator's licensing process. However the safety aspects have been discussed in various specialist studies and the NNR process has also been included for public information. You are also referred to the Co-operative Governance Agreement included in Appendix B4 of the Revised Draft EIR Version 1.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---------------------|--|--|
| | | | <p>Own comments:</p> <p>1. The Eastern Cape is a windy place, the Drakensberg extends down into the region, chuck some windmills up!</p> | <p>4. As indicated in the EIR and in the above response, nuclear power is not being considered as an alternative to renewable power such as wind power. No single source of power can provide in South Africa's need for an additional 20 000 MW of additional capacity by 2020 and a mixture of sources, including wind power and nuclear power, has been recommended in the approved Integrated Resource Plan 2010.</p> <p>Own comments:</p> <p>1. In terms of alternative energy solutions, only a few energy sources capable of providing a sustained power supply are available in sufficient quantities suitable for base-load power supply. In South Africa, coal, nuclear power and imported hydro power are used for base load electricity generation, while the Open Cycle Gas Turbines (OCGTs) (which use liquid fuel such as diesel), two hydroelectric power stations on the Orange River and pumped storage schemes are used for peaking and emergency electricity generation.</p> <p>A high level assessment of the implications of a wind farm as an alternative to a 4 000 MW nuclear power station has been included in Chapter 5 of the Revised Draft EIR. This analysis indicates an area of between 273 000 ha and 345 600 ha¹ will be required for 13 333 MW of installed capacity (depending on the rotor diameter). Due to the fact that wind is not available at all times, a capacity factor² of 30% is assumed and the effective power produced will be</p> |

¹ For comparative purposes, Addo National Park is 164 000 ha (SANParks website) and Baviaanskloof Mega-Reserve is approximately 500 000 ha.

² The percentage of time that the installation can produce its full output

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|------------------------|-------------------|---|
| | | | | <p>4 000 MW.</p> <p>Due to the variable availability of wind, it is not a simple solution to replace base load power generation such as nuclear with wind generation. In the case of wind turbines the output is a direct function of the local wind speed, and cannot be dispatched on request. This results in a requirement to have alternative means to supply the demand when there is too little or too much wind.</p> <p>A recent example of this was in September 2010 in Spain where the national wind turbines dropped to below 3 000 MW on Thursday from 4 600 MW on Wednesday, compared with peaks of more than 10 000 MW on Tuesday. This swing of 8 000 MW was equal to 20% of the national demand and is very difficult to sensibly manage without investing in base load options such as coal and nuclear and installing additional wind turbines for contingencies.</p> <p>In light of this the option to use wind power to provide stable, dependable base load supply to the grid is extremely challenging. Wind power therefore does need to be supplemented by more reliable base load generation.</p> <p>The cost of a large percentage of renewable technologies increases the cost of electricity significantly and is considered in some detail in the recently published Draft Integrated Resource Plan. It was for this reason that a balanced scenario was proposed. Finding a balance between the different options and the economic impact of unaffordable electricity.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---------------------|---|---|
| | | | <p>2. Yes, the operation will create thousands of jobs, but there aren't thousands of people there, they'll have to spend their precious money to build housing and roads and all the works, and that is just going to ruin the beautiful nature Reserve with this "low cost" housing, which will eventually just turn into a squatter camp like any one this country has put up... and did the incident in Japan teach these people nothing?</p> <p>3. Keep nuclear power stations away from the ocean! It will just get rid of natural beauty and destroy waves and fisheries, and not to mention pollute the fresh air! The Thyspunt area is the most beautiful and diverse area in SA, putting this power up will ruin it...if a simple South African citizen can see this, why can't the very rich and successful (yet not very useful) ESKOM see this! Come on!</p> | <p>2. The areas where accommodation will be required for the labour force will be integrated as far as possible with areas dedicated for housing in the existing planning processes of the local authorities within which the power station is proposed to be located. Where possible, employees (especially operational employees) will obtain accommodation in existing settlements. If new urban development has already been approved in the area of the nearby human settlements, it would be Eskom's preference to make use of the opportunities provided by this rather than create a new for residential development which would then require an EIA.</p> <p>Eskom has completed initial investigations into housing around all three sites. Apart from Bantamsklip, the current development around Humansdorp, Jeffreys Bay and in the greater Cape Town would accommodate housing needs and therefore would be highly unlikely to require an EIA.</p> <p>3. Impacts on the ocean and marine resources have been assessed in specialist studies such as the Oceanographic Assessment and associated Surf Breaks Addendum as well as the Marine Ecology Assessment (Appendix E16 and E15 of the Revised Draft EIR Version 1) and have found no fatal flaws in terms of these aspects. The Marine Impact Assessment has also been updated and this information will be made available for public comment and review.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|-----------------------|---|--|---|
| 8 | 19 June 2011 Email | Tai Krige Interested and Affected Party | This is totally ridiculous – please stop killing us. | Thank you. Your comment is noted. |
| 9 | 20 June 2011 Email | JC Vermaak Interested and Affected Party | South Africa and especially the Eastern Cape need electricity, not impact studies. | Thank you. Your comment is noted. |
| 10 | 22 June 2011 Email | Anna-Marie Groenewald Interested and Affected Party | <p>We as South Africans should stand together to object to the building of Nuclear Power Plants in our beautiful country.</p> <p>Not only is it against the rules of nature, the devastation is horrific if something goes wrong.</p> <p>We all know of the recent tragedy due to an earthquake and for this reason Germany as a country now (June 2011) placed a total ban on any Nuclear Plants in their country and all their plants are going to be phased out gradually and closed down.</p> <p>If Germany, probably the country with the best and most modern technology in the world, decided against it, how can we, as a third world country even contemplate it?</p> | <p>Thank you for your comment. The BBC (http://www.bbc.co.uk/news/world-europe-13592208) reports that Germany's decision to close down its nuclear power stations will most probably lead to an increase the import of nuclear energy from France and there is a risk they will not manage as quickly to halt the dependency on fossil fuels, especially coal-based energy making the decision not as clear cut as it seems.</p> <p>The Washington Post (02 June 2011 - http://www.washingtonpost.com/opinions/germanys-nuclear-energy-blunder/2011/05/31/AGjjGkGH_story.html) reports that the International Energy Agency announced that global energy-related carbon emissions last year were the highest ever, and that the world is far off track if it wants to keep temperatures from rising more than 2 degrees Celsius, after which the results could be very dangerous. But the Breakthrough Institute, a think tank, points out that renewables would have to generate an incredible 42.4 percent of the country's electricity in 2020 to displace nuclear. The government could bring that number down some with very aggressive reductions in energy use. But, even then, all that will merely hold the German power industry to its current carbon footprint.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---------------------|--|--|
| | | | <p>We have sunshine in access – let's make use of it. We have wind (at least in the Western Cape – we do) Let's use it!</p> <p>We have water (the sea is a mighty force. Let's use it!</p> <p>Nothing is perfect, but the tragedy of a Nuclear Plant going wrong surpasses all by far.</p> <p>Use the millions of Rands a Nuclear Plant costs to give house solar heating systems instead, water tanks for each for each home etc. Go Green!</p> | <p>This notwithstanding nuclear power is not being considered as an alternative to renewable power such as wind power in South Africa in terms of the Integrated Resource Plan (IRP). The IRP sets out the electricity demand over the next 20 years for an additional 56 000 MW capacity by 2030 and a mixture of sources, including wind power and nuclear power, has been completed in the approved Integrated Resource Plan 2010.</p> <p>Although in terms of alternative energy solutions, only a few energy sources capable of providing a sustained power supply are available in sufficient quantities suitable for base-load power supply. In South Africa, coal, nuclear power and imported hydro power are used for base load electricity generation, while the Open Cycle Gas Turbines (OCGTs) (which use liquid fuel such as diesel), two hydroelectric power stations on the Orange River and pumped storage schemes are used for peaking and emergency electricity generation.</p> <p>Lastly it is acknowledged that the incident at Fukushima as a result of a natural disaster has highlighted many important safety factors in terms of the future of nuclear energy.</p> <p>The assessment of nuclear safety risks are however outside the scope of the EIA process and will be considered in the National Nuclear Regulator's licensing process. Please refer in this regard to the Co-operative Governance Agreement included in Appendix B4 of the Revised Draft EIR</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|-----------------------|--|--|---|
| 11 | 22 June 2011 Email | Cheron Kraak Country Feeling | Trudy, I think it's time for the heavy guns.....what do you think? Let's get mean, and whip the hell out of them | Please note that this is a transparent process which requires professionalism from all parties. Making such threat is a very serious matter. We ask that you refrain from such threats and participate in an effective and peaceful manner. |
| 12 | 24 June 2011 Email | Clive Rabie Interested and Affected Party | <p>As a resident of St Francis Bay I would just like to let you know that the sentiment in our village is changing to accept the eventual decision to build the Atomic Reactor at Thyspunt.</p> <p>But, the residents are going to fight tooth & nail not to have the access road through our village & that the contractor's village rather be built in Humansdorp.</p> | <p>Thank you. Your comments are noted. The alternatives in terms of the western access routes to the Thyspunt site are currently under review. Changes to the alternatives will be made available for public comment and review.</p> <p>The Transport specialist study was also revised and additionally acknowledges that the Thyspunt site requires significant transport infrastructure upgrades. The R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed to be surfaced to provide improved east-west connectivity.</p> <p>With respect to the construction village and accommodation for staff there is a recommendation that this be located in towns like Jeffrey's Bay and Humansdorp. The construction village is not considered in this EIA. However, Eskom is in discussions with local authorities who are helping them identify the best sites.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------|---|---|---|
| 13 | 26 June 2011 Email | Len Handler Interested and Affected Party | <p>Thank you for helping me with some of the voluminous paperwork of the EIA for the Nuclear Power Station.</p> <p>I'm pleased current thinking is to locate it outside the Western Cape.</p> <p>However, the good citizens of Jeffrey's Bay and Humansdorp may well be faced with the same conundrum that I feared here in Cape Town of how to escape in the event of a nuclear emission leak.</p> <p>I do not have much knowledge of the population density of the region, nor the quality of the roads, nor the strength and direction of prevailing winds to venture an opinion.</p> <p>I presume the Eskom planners have considered these factors and the various distances of their preferred location at Oyster Bay to Humansdorp (±20km), Jeffreys Bay (±30km) and Port Elizabeth (±90km).</p> <p>Overall the decision not to put all the nuclear eggs in one basket is wise especially if safety concerns have been addressed.</p> | <p>Thank you for your comment. Emergency evacuation is dealt with in the Emergency Response Report (Appendix E26 of the Revised Draft EIR). This will however be dealt with in more detail as part of the National Nuclear Regulator licensing process.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|---------------------------|---|---|---|
| 14 | 26 June 2011 Email | Robyn Williams The Bomb Surf Petition | Petition against Eskom's proposed nuclear plant in Thyspunt: 4. Why develop a Nuclear Power Station in one of SA's windiest regions, when a wind farm could be easily constructed there instead. A quicker, cheaper option that would give clean, safe, renewable energy | The GIBB Nuclear-1 Public Participation Office confirms that only point 4 (four) of "The Bomb Surf Petition" reflects in this Mr Williams' email. As indicated in the EIR, nuclear power is not being considered as an alternative to renewable power such as wind power. No single source of power can provide in South Africa's need for an additional 56 000 MW of additional capacity by 2030, and a mixture of sources, including wind power and nuclear power, has been completed in the approved Integrated Resource Plan 2010. |

5 August 2015

Our Ref: J27035 / J31314
Your Ref: Email 12 June 2011

5 Peter Road
St. Francis Bay
6312

Email: guy@snaptech.co.za



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

Dear Mr Eastoe

RESPONSE TO MR GUY EASTOE – INTERESTED AND AFFECTED PARTY

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

I have many concerns about the “Proposed Nuclear Power Station and Associated Infrastructure, DEA Ref. No.: 12/12/20/944”.

Comment 1:

The new Draft EIA ignores the salient input from Prof Fred Ellery; an expert in this field, stating that “there is no evidence of debris flows at the site or those conditions exists for debris flow” does not constitute a response.

Response 1:

Thank you for your comment. The Revised Draft EIR Version 1 has not ignored the comment from Professor Fred Ellery or any other comments received as part of the Public Participation Process. Input and comment from Professor Ellery has been addressed in IRR 41 Appendix D8 of the Revised Draft EIR Version 1 and a report compiled by Dr. Werner Illenberer entitled Addendum to Dune Geomorphology Impact Assessment: debris flows in the Sand River and potential for flood damage to the R330 attached as Appendix E30 of the Revised Draft EIR Version 1. We refer you to these documents for reference. Professor Ellery and other technical experts attended a Technical Key Focus Group Meeting held on 29 July 2011 with the aim of discussing issues around the potential impact of the proposed Nuclear Power Station (Nuclear-1) on the dune geomorphology, geohydrology and debris flows at the Thyspunt site. The minutes of this meeting will be included in the Revised Draft EIR Version 2.

Comment 2:

The report ignores the study made by Dr Johan Binneman, a leading archaeologist. The report does not deal with the subject of archaeology of the site in spite of the matter being repeatedly raised in comments on the first Draft EIA. The site happens to be of major archaeological importance, covering time spans of millennia. The site is of major importance in terms of the cultural heritage of the Khoisan people. The South African Heritage Resources Agency (SAHRA) has refused to approve the relevant Heritage Impact Scoping Report. Last year the minister of Arts and Culture stated that the NPS would not be built at Thyspunt for this very reason. The ESKOM consultants have ignored this matter by stating that an application has been made to SAHRA for a permit to perform test excavations.

Response 2:

The archaeology of the site is dealt with in detail by the Heritage Assessment and Heritage Mitigation Reports as well as Chapter 9 of the Revised Draft EIR. It is recognised that Dr. Binneman is an expert on the Thyspunt area by both Mr. Hart, the heritage specialist for the EIA and Dr. Halkett from the UCT Archaeological Contracts Office who both know Dr. Binneman and his work. They have referenced his research material in their specialist report. Dr. Binneman, previously of the Albany Museum, spent an evening with the Heritage Impact Assessment (HIA) team during their fieldwork at the Thyspunt site, at the invitation of the HIA team and shared information with the team.

Mr. Hart, GIBB and Eskom had a key focus group meeting with the Gamtkwa Khoisan Council. Minutes of this meeting were included in the Revised Draft EIR Version 1. The Council members raised the issue of the archaeology and the cultural landscape, which was not addressed in the previous version of the heritage report. GIBB has also had a meeting with the South African Heritage Resources Agency (SAHRA) regarding the potential of this site to be considered for an UNESCO site, as well as discussing the findings of the Revised EIR Version 1 and the permit application for the excavations in the central portion of the site. The excavation permit was granted by the SAHRA and the finding of these test excavations (which will be released with the next revision of the EIR) is that the recommended location of the power station (within the vegetated dunes) has a much lower concentration of heritage sites than initially suspected, that large scale excavation of heritage sites would not be required and that heritage excavations could be completed with existing resources.

Comment 3:

The report ignores the huge impact on the squid industry, and covers it in a minimal way by saying that there will be a minor impact, in spite of the fact that experts appointed by the South African Squid Management Association (SASMIA) have stated the contrary. Pumping 6 million cubic meters of sand into South Africa's prime squid breeding ground will have a huge effect and will in all likelihood spell the end of the St Francis squid industry and the harbour as a going concern, with all related jobs.

The report concedes that the surf break at Cape St Francis may be adversely affected by the above spoil pumped into the sea at the building site. If this is accepted, then it must also be accepted that the ocean floor will be covered by un-natural (ex-land based) sand which therefore MUST affect the squid, and the surfing, therefore the reduction in tourism. No tourist wants to spend time close to a nuclear power station anyway.

Response 3:

The Marine Impact Assessment undertaken by Dr. T. Robinson and Prof. C. Griffiths (Appendix E15 of the Revised Draft EIR Version 1) concluded that temporal and spatial limitations of the impacts associated with the disposal of spoil on chokka squid at Thyspunt will have limited impact on the overall squid stock, when taken within the context of the extensive area over which this species spawns. Dr. T. Robinson and Prof. C. Griffiths have had subsequent follow-up meetings with the Department of Agriculture, Forestry and Fisheries (attended by the SASMIA, GIBB and Eskom as observers). Preliminary discussions by the Squid Working Group indicated that the impact ratings of the Revised Draft EIR Version 1 were unlikely to change. We further refer the author to IRR 136 compiled by Dr K Prochazka of the Department of Agriculture, Forestry and Fisheries and Dr Hans Verheye of the Department of Environmental Affairs further elaborating on comments received from the Scientific Squid Working Group.

Lastly the coastline along Thyspunt consists of both rocky and sandy shores. The optimal site for soil disposal was determined to be 5 km off the coast, which will have minimal impact on sedimentation and wave break activity at the nearby surf breaks used by the surfing community. The tourism assessment for Nuclear-1 acknowledged that the highest potential negative impact on tourism could occur at the Thyspunt site. The impact on tourism has been quantified in bed nights and the negative or positive impacts of the proposed power station have been predicted during construction and operation. However it has been the experience at other power stations such as the Medupi Power Station that local business-based tourism can increase substantially as a result of the influx of Eskom employees and contractors.

Comment 4:

The report does not deal with the fact that the R330 (Humansdorp – Cape St Francis road) will be used as the main transport road to the site during the 8 odd years of construction. During peak traffic times a heavy vehicle will pass any given point every 24 seconds. There will also be times when extra heavy vehicles will stop all normal traffic on this road for many hours.

Response 4:

Transportation matters are dealt with in particular in the Transportation Assessment (Appendix E25 of the Revised Draft EIR Version 1) and Chapter 9 of the Revised Draft EIR Version 1. As such the Transport specialist study has been revised. This report will be made available for public comment and review as part of the Revised Draft EIR Version 2.

The R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. It should be noted that there is relatively few of these loads and the transportation will be spaced over a period of three years. It is also proposed that the vehicle will travel at night when traffic is at its least so that there would be minimal disruption on the traffic moving through the town.

The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed to be surfaced to provide improved east-west connectivity.

Comment 5:

The report incorrectly states that agriculture will be positively affected by the NPS project, how can this be true.

Response 5:

The Revised Draft EIR Version 1 reflects the findings of the Agriculture Impact Assessment (Appendix E21 of the Revised Draft EIR Version 1) which states that Thyspunt will experience a short term negative impact on agriculture in terms of dust during the construction phase. However, there is potential for a positive impact on production by increasing the size of the local market for fresh produce as a result of the influx of population (Nuclear-1 employees and their families as well as construction workers) to the area. The specialist did review his findings and the above was the extent of his response.

Comment 6:

Little attention is paid to the fact that the project will employ some 8000 people during construction, and the effects of this influx. Also little attention is paid to what happens to the workforce after completion of the project.

Response 6:

The Social Impact Assessment (Appendix E 18 of the Revised Draft EIR Version 1) assessed the impact of the influx of job seekers of the areas surrounding Thyspunt. The Social Impact Assessment reports that provision for future residential development has been made in the Kouga Spatial Development Plan (2009), in and around Sea Vista, Cape St. Francis, Oyster Bay and Humansdorp. Unsuccessful job seekers from outside the area could explore possibilities in neighbouring towns such as Humansdorp and Jeffreys Bay. Accommodation opportunities near the proposed Nuclear Power Station are limited and expansion of the existing informal settlements is not a feasible or desirable option.

The following mitigation measures are therefore proposed:

- A proactive, broad-based information campaign (including site notices) to clarify the number of job opportunities that will be available. The objective is to dispel rumours and unrealistic expectations and thereby seek to curtail the inflow/settlement of job seekers
- Proactive engagement by the appointed contractor(s) with local authorities/ SAPS/ CPFs to ensure that job seekers do not settle in the vicinity of Staff Villages or the construction site.
- Following a transparent public participation process with role-players and interested and affected parties;
- Make use of local labour and local suppliers of material for the construction as far as possible;
- Monitor the situation after the occupation of the Staff Village and housing projects, and involve the relevant role-players in such process.

Comment 7:

Arcus Gibb states that they have found a route for their heavy vehicles to by-pass Humansdorp during the construction phase. The “new” route uses Saffery Road, which runs through a residential area and is already used extensively by traffic avoiding the Humansdorp main road, en route to SFB and CSF.

Response 7:

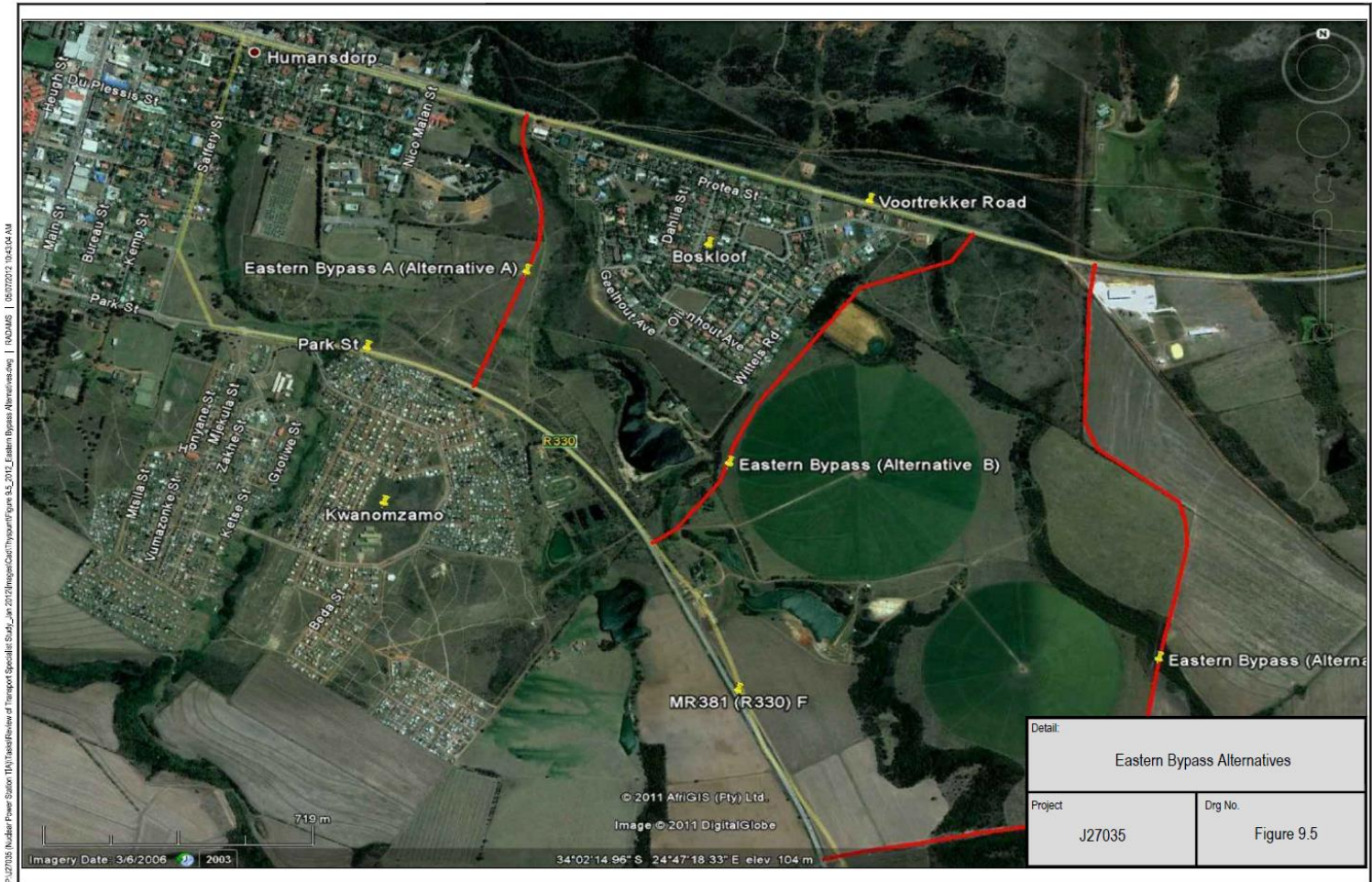
Your comments are noted. Similar concerns from the public around Humansdorp area up to St Francis have been raised and acknowledged regarding the use of Saffery Road. As such the Transport Specialist study was revised to consider other alternative routes (see figure below). The revised report recommends that the main street through Humansdorp and Saffrey Street be bypassed. New transport roads for abnormal load vehicles were therefore considered and three alternate bypasses were investigated, as shown in the figure attached. All three alternatives are proposed new roads that run along existing land boundaries between farmland.

Alternative A directly links between Voortrekker Road (MR389) and Park Street (MR381) and is 850m in length. The beginning of Alternative A crosses the Boskloof Valley and the rest of the route will be constructed on Municipality land.

Alternative B is connects between Voortrekker Road (MR389) and Park Street (MR381) along the east of the Boskloof area, and crosses privately owned farmlands and is 1.3km in length. The topography of Alternative B is considered acceptable, except for the section of the route where it crosses the Boskloof Stream at a deep vertical alignment. Additional cost will be required for the construction of a bridge to cross the stream at an acceptable grade.

Alternative C is located the furthest east from Humansdorp and is the longest of all three alternatives (2.7 km). This route also crosses privately owned farmlands. Similar to Alternative B, Alternative C crosses two relatively deep valleys, which will require additional cost for the construction of bridge structures to achieve acceptable grade crossings.

Alternative A is therefore considered as the most viable option as it is the shortest and most economical route to construct, and it has a good alignment for the transportation of abnormal loads. Once the route is constructed, it will also alleviate the traffic congestion in Humansdorp.



P:\J27035 - Nuclear Power Station 116\TransReview of Transport Specialist Study\Jan 2012\Images\Cityscape\Figure 9.5_2012_Eastern Bypass Alternatives.dwg | R:\DAMS | 05/07/2012 10:43:04 AM

Comment 8:

The technology to be used has not been finalised, so many conclusions drawn in the report are therefore premature.

Response 8:

As indicated in the Revised Draft EIR Version 1, the assessment of the impacts of the proposed power station is based on a Consistent Dataset (Appendix C of the Revised Draft EIR Version 1), which represents a worst case scenario of potential inputs and outputs from a Generation III nuclear power station operating under normal conditions. This dataset has been based on the commercially available nuclear power station designs currently on the market.

It may be appropriate to explain the envelope of criteria in colloquial terms, as has been done in public meetings during the Nuclear-1 EIA process. If the envelope of criteria is compared to the specifications for buying a vehicle, this envelope may contain requirements with respect to top speed, fuel efficiency, type of tyres and wheels, fuel tank size, CO₂ emission limits, cruise control, numbers and positions of airbags and a number of other safety systems such as ABS and EBD. The only thing that isn't specified is the brand of vehicle. Providing such a list of criteria would ensure that only a luxury vehicle with certain characteristics could qualify, but that a base model (entry-level vehicle) would not qualify. Similarly, if a vendor proposes a power station design that fails to comply with the criteria established in the Consistent Dataset, that design would not qualify for consideration.

Comment 9:

The main report states that the predominant wind is "West-Northwest to Northwest". This is incorrect and makes a huge difference to disaster management planning. The correct predominant wind direction is South West, which places Cape St. Francis and St. Francis Bay right in the path of any possible nuclear contamination in case of a disaster. (Arcus Gibb's/Eskom's above claimed wind direction has the opposite effect. They have stuck to this incorrect wind direction in spite of the Thyspunt Alliance repeatedly pointing out the mistake).

Response 9:

Wind roses for Thyspunt site and St. Francis (Air Quality Assessment – Appendix E10 of the Revised Draft EIR Version 1) show the dominant direction to be west to north-west with more of a north-westerly wind in winter.

Comment 10:

Arcus Gibb will get huge contracts from this construction if it goes ahead, and should not be doing the EIA. How can they be objective?

Response 10:

GIBB has been appointed as independent Environmental Impact Assessment Practitioners in terms of the National Environmental Management Act. Furthermore no contracts in terms of Nuclear-1 have been appointed. These are very serious accusations and are incorrect. Please provide the basis to such accusations when making them.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, consisting of a large, stylized 'S' shape with a small dot above it.

The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314
Your Ref: Email 03 June 2011

PO Box 1000
Humansdorp
6300
Cultural Centre
Voortrekker Road
Humansdorp
6300

Email: julineprinsloo@gmail.com

Dear Ms Prinsloo

**RESPONSE TO MS JULINE PRINSLOO – KOUGA LOCAL TOURISM ORGANISATION –
CHAIRPERSON, HUMANSDORP TOURISM**

YOUR REF: TOURISM COMMENTS – THYSPUNT NUCLEAR POWER STATION

Comment 1:

The above named organization is the umbrella body for all tourism offices in the Kouga Municipal area. During your consultative meeting in Humansdorp I stressed the fact that no consultation by your tourism consultant has taken place. I had a call from Mr. Scott who referred me to Mr. Reuben Heydenrych.

Response 1:

Your comment is noted. As mentioned above a teleconference call was scheduled between yourself and Mr David Scott and took place on 15 June 2011. The nature and content of the conversation was communicated to Mr. Heydenrych as part of the Nuclear-1 EIA team.

Comment 2:

The affected parties according to your EIA include Humansdorp, St. Francis Bay, Cape St. Francis and Oyster Bay. We support development and economic growth of the area but it is important that we reach a common goal in terms of the proposed development and tourism. We need to work as a unit on this matter.

Tourism has just spent R450 000.00 on a route development study and a business plan to implement the routes. New Cycling and Mountain biking routes has been established that forms part of the annual Country festival that take place in December. We want to discuss these matters with



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



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.



yourselves and Eskom. Tourism is trying to market the Kouga as a preferred destination on the Garden route and we do not want to destroy our efforts.

Humansdorp is the capital town of the Kouga and are situated on the Culture and Heritage Route of the Kouga. The town itself has reached the age of 161 years and has become an historic town of the Kouga. We do have a few guest houses and boasting with a 3 star Boutique Hotel plus a conference centre. Humansdorp is also the capital for dairy farming and sit with the giant namely Woodlands dairy. Humansdorp is also the town where calamari and fish are packed and stored before it leaves for the overseas market. This is the only town in the Kouga that have all the major motor dealers and Supermarkets. The Hospital is also situated in Humansdorp. We have also established new cycling and mountain biking routes. The Humansdorp is a great source of 1800 history including shipwrecks on the coast including Thyspunt and other general historic data and artefacts.

An urgent meeting should take place towards Eskom and the Kouga Local Tourism Executive Directors.

Response 2:

Your comments and support in terms of development is noted. The strategic nature of Humansdorp in terms of the proposed development, if authorisation is received from the Department of Environmental Affairs, is well recognised within the Draft and Revised Draft EIR reports and their associated specialist studies. As previously stated the tourism specialist has had a telephonic conversation with yourself and your concerns and suggestions were noted during this conversation and communicated to the Nuclear-1 EIA team.

The reports further recommend discussions between Eskom and the local authorities if and when the project is approved in order to clarify the partnership with local authorities to enhance/expand the infrastructure requirements Eskom has indicated their availability to discuss current initiatives with yourselves.

Comment 3:

The proposed access road from Port Elizabeth harbour should be on the N2 to the Humansdorp Off ramp and then right into the Industrial Area leading you on a gravel road and then left at Swartbos all the way down to the R102 and crossing towards the Oyster bay Road to your right and straight on to St. Francis Bay.

Response 3:

Your comments are noted. The Transportation Specialist Assessment considers access roads to the sites and has recently been revised. The assessment confirms that the Thyspunt site requires significant transport upgrades with regard to public transport, access and emergency evacuation, during the construction phases. The recommended routes in the previous version of the Report were revised as a result of public input and recommendations received between 29 May 2011 and 2 June 2011. Based on the feedback received, the R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and

operations phases for staff access, light vehicle traffic, and heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road, is now proposed to be surfaced to provide improved east-west connectivity. Bypass roads to the east and west of Humansdorp are also now proposed to be constructed to reduce the traffic impact on central Humansdorp. The revised specialist assessment will be made available for public comment and review as part of the Revised Draft EIR Version 2.

Comment 4:

The Social contribution by Eskom towards tourism should be discussed with our Executive Directors in detail as well as the impact of your project on Tourism in our area.

Response 4:

Kindly refer to response 2,

Comment 5:

A visit to Koeberg should be arranged by Eskom.

Response 5:

Your comments are noted however this request does not fall with the ambit of the EIA to address. The local community leaders, Thyspunt Alliance members including councillors from Humansdorp visited the Koeberg plant during the last quarter of 2010. This visit was arranged by Eskom through the local community leaders. Koeberg has a visitor's centre which is open to the public throughout the year. Please contact the Koeberg visitors centre directly if you wish to visit.

Comment 6:

Infrastructural constraints must be discussed.

Response 6:

The social impact assessment has raised the constraints on local infrastructure and the likely impacts associated with a development of this nature. Mitigation measures and recommendations are included in the report to address the impacts.

Comment 7:

Synergies between the two parties must be reached.

Response 7:

Your comment is noted.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke.

The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314
Your Ref: Email 12 June 2011

Earthlife Africa Johannesburg
126 Kelvin Drive
Morningside Manor
2191

Email: judith@softwareafrica.co.za

Dear Ms Taylor

RESPONSE TO MS JUDITH TAYLOR – EARTHLIFE AFRICA JOHANNESBURG – BRANCH CO-ORDINATOR

YOUR REF: COMMENTS ON REVISED DRAFT ENVIRONMENTAL IMPACT REPORT (DEA REF NO: 12/12/20/944)

COMMENT 1:

Has the impact on the environment of mining and beneficiation of uranium been costed into this EIA?

If not, why not as the impacts are huge as proved by ongoing cases in the USA?

RESPONSE 1:

The current Environmental Impact Assessment in terms of the authorisation of the Nuclear-1 Power Station is a project specific tool. The scope of the Nuclear-1 EIA is therefore restricted to a specific power station on a specific site or sites within a defined geographical area. As such the Nuclear-1 EIA process does not take into account the potential impacts that take place throughout the life-cycle of nuclear energy generation. The cost of different technologies is assessed in the Integrated Resource Plan issued by the Department of Energy in 2010. The cost of fuel is factored into the price per MWh.

COMMENT 2:

Is the EIA looking at health impacts internationally of nuclear power plants and the risks to not only human health but food and water security?

If not, why not?

RESPONSE 2:

Your comments are noted. As per our Response

- Human Health Risk specialist study focused on normal operation, not a worst case scenario..



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



- Furthermore the specialist used the source terms available for the considered designs and served as a basis for air dispersion modelling to estimate air concentrations and deposition rates in the vicinity of the proposed NPS. Source terms for liquid effluent for the designs formed the basis for the assessment of the ocean pathway of exposure. The basis for assessment was the PPE (the Plant Parameter Envelope). The PPE presents discharge figures that are representative of Gen 3 reactor designs currently considered. The approach was applied for site assessment in the absence of final selection of a specific reactor technology. The resultant health risk impact assessment is therefore valid for the reactor designs currently under consideration. The premise of the PPE approach is that any combinations of reactors within the PPE will not exceed the dose limits and dose constraints of the NNR.

COMMENT 3:

Is the EIA looking at the destruction of existing jobs and export revenue in the various sites being considered?

RESPONSE 3:

The Economic Impact Assessment (Appendix E 17 of the Revised Draft EIR) assesses the net economic impact, including both the creation of new jobs and potential impacts on existing jobs.

COMMENT 4:

Will these workers whose livelihoods are destroyed and the companies put out of business be compensated?

If not, why not?

RESPONSE 4:

Impacts on existing businesses will not be compensated. The Economic Impact Assessment (and associated assessments such as the Marine Ecology Assessment and the Tourism Impact Assessment – respectively Appendices E15 and E22 of the revised Draft EIR) found that the negative economic impact on existing businesses would be insignificant. Although there may be a negative impact on tourism at Thyspunt in the short-term, the long-term net impact on tourism after the construction phase was predicted to be neutral at Thyspunt. Although a minimal negative impact on squid fishing is predicted at Thyspunt, this can be compensated by the fishing vessels moving further to fishing grounds, as the area that would be directly impacted through exclusion of fishing vessels is between 2.86 % (worst-case scenario) and 2.53 % (least-case scenario) for the local fishery and between 0.42 % (worst-case scenario) and 0.37 % (least-case scenario) for the fishery as a whole.

COMMENT 5:

As nuclear power plants produce 0.05 jobs per megawatt, has the project been costed against truly sustainable power solutions that produce up to 10 jobs per megawatt?

If not, why not?

RESPONSE 5:

Please provide a scientifically valid source for your claim of the number of jobs produced per MW.

The scope of the Nuclear-1 EIA is restricted to a specific power station on a specific site or sites within a defined geographical area. Government has, through the consultative Integrated Resource Plan process, taken a decision on the mix of generation technologies required to supply South Africa's future electricity needs for the next two decades.

COMMENT 6:

What funds are to be placed aside for remediation and closure of the plant in 25 years time?

Will they be sufficient and on what model do you based (sic) that?

RESPONSE 6:

Eskom sets aside a percentage of the operational income for the power station for the storage of High Level Waste and for decommissioning.

Section 3.3.3.4 of the Economic Impact Assessment Report (Appendix E17 of the Revised Draft EIR) states that it is customary in international practice to use a figure of 15% to estimate the cost of decommissioning a nuclear power station. If this is applied to the estimated nuclear power station cost, a decommissioning cost of between R17.5 and R20 billion in 2009 prices is projected.

COMMENT 7:

How is the highly toxic waste to be stored and marked with symbols that can be read 100 000 years ahead?

If you cannot answer the above question, how can you ethically conduct this EIA?

RESPONSE 7:

Low-Level and Intermediate Level Waste (LLW and ILW) for nuclear power stations are stored in purpose-designed containers, which are stored under conditions that do not permit the release of nuclear waste. Please refer to Appendix E29 for further information in this regard.

COMMENT 8:

What provisions are included in the design of the proposed plant to protect against rising sea levels due to climate change, which may well inundate it?

RESPONSE 8:

The Nuclear-1 EIA included Coastal Engineering Reports and 1:100 year flood line assessments for all three sites (respectively Appendices E16 and E9 of the Revised Draft EIR), which examine the potential impact of sea level rise and extreme weather events, including meteo-tsunami events. The

nuclear island and power supplies to the cooling system of the nuclear power station will accordingly be located at an altitude above the level where inundation of the critical systems is impossible.

COMMENT 9:

What is the design of the proposed plant and its specification?

RESPONSE 9:

The generic design of the proposed power station is based on an “envelope” of different commercially available Generation III Pressurised Water Reactor nuclear power station designs and is provided in the Consistent Dataset (Appendix C of the Revised Draft EIR).

COMMENT 10:

How do you justify, ethically and morally, conducting an EIA, when you do not know what plant is proposed?

RESPONSE 10:

To answer this question it may be appropriate to explain the envelope of criteria in colloquial terms, as has been done in public meetings during the Nuclear-1 EIA process. If the envelope of criteria is compared to the specifications for buying a vehicle, this envelope may contain requirements with respect to top speed, fuel efficiency, type of tyres and wheels, fuel tank size, CO₂ emission limits, cruise control, numbers and positions of airbags and a number of other safety systems such as ABS and EBD. The only thing that isn't specified is the brand of vehicle. Providing such a list of criteria would ensure that only a luxury vehicle with certain characteristics could qualify, but that a base model (entry-level vehicle) would not qualify. Similarly, if a vendor proposes a power station design that fails to comply with the criteria established in the Consistent Dataset, that design would not qualify for consideration.

In this respect, it is common practice in EIA processes, especially for installation of industrial plants, to consider the performance of the systems and type of technology proposed to be installed, without referring to specific suppliers or manufacturers of this technology, of which there may be a range available in the market. As long as the inputs and outputs of the proposed technology are known, it is not necessary to know the brand name of the technology.

Yours faithfully
for GIBB (Pty) Ltd

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

The Nuclear-1 EIA Team

**PROPOSED ESKOM NUCLEAR POWER STATION
AND ASSOCIATED INFRASTRUCTURE**

ENVIRONMENTAL IMPACT ASSESSMENT (EIA: 12/12/20/944)

**COMMENTS ON
DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

**(Volume 17 RDEIR IRR 04 July 2011)
(MINUTES OF GANSBAAI PUBLIC MEETING 23 MAY 2011)**

Issues have been received from the following stakeholders:

| No | Name | Organisation |
|-----------|------------------------|--|
| 1 | Wilfred Chivell | Dyer Island Conservation Trust |
| 2 | John Williams | Save Bantamsklip and Stanford Conservation Trust |
| 3 | John Williams | Save Bantamsklip and Stanford Conservation Trust |
| 4 | Mike Kantey | Coalition Against Nuclear Energy |
| 5 | Eugene Henry | Pearly Beach Ratepayers Association |
| 6 | Eugene Henry | Pearly Beach Ratepayers Association |
| 7 | Eugene Henry | Pearly Beach Ratepayers Association |
| 8 | Eugene Henry | Pearly Beach Ratepayers Association |
| 9 | Mike Kantey | Coalition Against Nuclear Energy |
| 10 | Rob Fryer | Overstrand Conservation Foundation |
| 11 | Rob Fryer | Overstrand Conservation Foundation |
| 12 | Mike Kantey | Coalition Against Nuclear Energy |
| 13 | Rob Fryer | Overstrand Conservation Foundation |
| 14 | John Williams | Save Bantamsklip and Stanford Conservation Trust |
| 15 | John Williams | Save Bantamsklip and Stanford Conservation Trust |
| 16 | John Williams | Save Bantamsklip and Stanford Conservation Trust |
| 17 | Chairman David de Waal | Call to Order |
| 18 | Dave Whitelaw: | Private Landowner and Conservationist |
| 19 | Dean James | Gansbaai Sand and Stone |
| 20 | Dean James | Gansbaai Sand and Stone |
| 21 | Dean James | Gansbaai Sand and Stone |
| 22 | Chris Pretorius | Interested and Affected Party |
| 23 | Chris Pretorius | Interested and Affected Party |
| 24 | Chris Pretorius | Interested and Affected Party |
| 25 | Chris Pretorius | Interested and Affected Party |
| 26 | Chris Pretorius | Interested and Affected Party |

| | | |
|----|-------------------|--|
| 27 | Mike Kantey | Coalition Against Nuclear Energy |
| 28 | Mr Daniel Niemand | Interested and Affected Party |
| 29 | Ms Sarah Niemand | Interested and Affected Party |
| 30 | Dave Whitehall | Interested and Affected Party |
| 31 | Mike Kantey | Coalition Against Nuclear Energy |
| 32 | Mike Kantey | Coalition Against Nuclear Energy |
| 33 | Mike Kantey | Coalition Against Nuclear Energy |
| 34 | Lesley Richardson | Flower Valley Conservation Trust |
| 35 | Lesley Richardson | Flower Valley Conservation Trust |
| 36 | Lesley Richardson | Flower Valley Conservation Trust |
| 37 | Lesley Richardson | Flower Valley Conservation Trust |
| 38 | John Williams | Save Bantamsklip and Stanford Conservation Trust |
| 39 | Eugene Henry | Pearly Beach Ratepayers Association |
| 40 | Un-identified | Interested and Affected Party |
| 41 | George Adelaide | Interested and Affected Party |
| 42 | Rodney Anderson. | Gansbaai Ratepayers Association |
| 43 | Rodney Anderson. | Gansbaai Ratepayers Association |
| 44 | Rodney Anderson. | Gansbaai Ratepayers Association |
| 45 | Lyn Eager | Interested and Affected Party |
| 46 | Mike Kantey | Coalition Against Nuclear Energy |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|--|--|
| 1 | | Wilfred Chivell, Dyer Island Conservation Trust | The presentation mainly deals with environmental impacts associated with the Thyspunt site, as Gansbaai may be impacted on by the construction of a nuclear power station at the Bantamsklip site. I like to see a presentation dealing with impacts associated with the Bantamsklip site. | A public meeting was held in Gansbaai in March 2010 during which GIBB presented the findings of the Draft Environmental Impact Report (EIR). Interested and Affected Parties (I&APs) subsequently requested changes to be made to a number of specialist studies and the main environmental report. The key aim of the meeting was thus to present the key changes made to the Report (i.e. the Revised Draft EIR [Revision]). Most of those changes revolved around the Thyspunt site. This is the preferred site as stated in the Draft EIR and the local communities situated near the Thyspunt site appointed their own specialists to assess the potential impacts of a nuclear power station. The results of those specialist studies had to be evaluated and addressed in the Revised Draft EIR by the relevant specialist studies. There are also changes to the information presented on the potential impact Bantamsklip site, which includes a further review of potential impacts to heritage resources in the area. |
| 2 | | John Williams, Stanford Conservation Trust | The Bantamsklip site is still on the list of possible sites for Nuclear-1. Even though the preferred site for Nuclear-1 is Thyspunt, Bantamsklip may still be used as a nuclear site in the future. I would like to know what the status is of the Bantamsklip site. | The status of the Bantamsklip site has not changed since the publication of the previous Draft EIR (i.e. the Revised Draft EIR). Thyspunt remains the recommended site for environmental authorisation by the GIBB, subject to a number of conditions. Bantamsklip remains a site that Eskom may consider for the future construction of a nuclear power station. However, this site is not the preferred site for Nuclear-1 by GIBB as detailed in the Revised Draft EIR (Revision 1). The DEA is however the decision-making Authority. |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|--|---|
| 3 | | John Williams, Stanford Conservation Trust | <p>The 9 600 MW of nuclear generation required by the Integrated Resource Plan (IRP) would result in an additional nine power stations of the size of the Koeberg Nuclear Power Station, having to be constructed. Thus, there are more than three power stations being planned by Eskom. This implies that nuclear power stations would be built on all three sites currently being considered for Nuclear-1.</p> <p>The question is where the other stations will eventually be placed. Please confirm if Bantamsklip may be used in future and whether other sites are going to be revisited with a new EIR. Furthermore, confirm if this EIA is for single nuclear power station or for six power stations.</p> <p>Assuming the recommendations of the Draft EIR remains the same, but that the Department of Environmental Affairs (DEA) decline the recommendation that Thyspunt be considered for environmental authorisation, will the status of the Bantamsklip site remain the same.</p> | <p>Many of the questions were answered in the presentation delivered at the public meetings held in May 2011. This EIA is for a single 4 000 MW nuclear power station. Koeberg Power station is 1 800 MW; to meet the 9 600 MW in the IRP, 3 power station of 2 -3 units each would be required. Should Eskom wish to construct a nuclear power station that exceeds this generation capacity, the utility will have to undertake a new EIA. Thyspunt was the preferred site recommended in the Draft EIR. Nothing has changed in this regard during the revision of the Report (i.e. the Revised Draft EIR [Revision 1], except that new specialist studies have been undertaken to confirm that our assumptions and recommendations are correct. The recommendation still stands that Thyspunt is the recommended site, but with very significant conditions. GIBB had to consider alternatives as required by the National Environmental Management Act (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations of 2006. GIBB therefore considered five alternative sites for this EIA, and three of these sites were taken forward into the impact assessment phase for further detailed studies. All the specialist studies undertaken for this EIA were focussed on these sites.</p> <p>GIBB cannot pre-empt what the DEA (and the other commenting authorities) may decide, but they will have to examine and take cognisance of the contents of the Revised Draft EIR together with the specialist study findings. The Authority will have to decide whether they agree with the assessment made in the Revised Draft EIR that Thyspunt be considered for environmental authorisation, subject to the conditions provided in the Report. The DEA could disagree with the findings and recommendations in the Report and</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|---|---|
| | | | | <p>decide that, for instance, the Duynefontein site is more preferable from an environmental perspective or that none of the sites be authorised.</p> <p>This EIA is only for one nuclear power station of 4 000 MW. The EIA Team, including all the appointed specialists, based their assessments on an envelope of criteria (i.e. the Consistent Dataset included as an appendix in the EIR) and that if any of those assumptions are invalidated then a new EIA process will need to be undertaken or part of the process which would need to be communicated with the public.</p> <p>GIBB had arranged a series of public meetings to discuss the findings on Revised Draft EIR. The dates and venues of these meetings were provided in advertisements placed in national, regional and local newspapers and letters to registered I&APs, which stated that this presentation at the meetings will focus on the key changes provided in the Revised Draft EIR (Revision 1). In the previous public meetings held in the Gaansbaai area, which Mr Williams attended, the findings of the Draft EIR were discussed.</p> |
| 4 | | Mike Kantey, Coalition Against Nuclear Energy | This issue is vitally important and that the Government not grant authorisation for a nuclear power station to be constructed on three sites. The Minister, in recent announcements, is talking about one nuclear reactor being built. This public meeting is crucial for any legal process that is ongoing with respect to this EIA. A large amount of money is required for the | Your opinion and feelings on the approval and construction of a nuclear power station are noted. GIBB will endeavour to provide a transparent Public Participation Process in order to ensure a transparent, legally compliant EIA. |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|--|---|
| | | | proposed nuclear power station. | |
| 5 | | Eugene Henry, Pearly Beach Ratepayers Association | What is the definition of 'spoil' and is it radioactive water waste being pumped into the ocean? | Spoil is sand and rock which would be excavated for the construction of the proposed nuclear power station. One of the disposal options considered and recommended in this EIA is to dispose this over-burden material in the ocean. Spoil would be a result of activities occurring during construction and would not include radioactive waste. |
| 6 | | Eugene Henry, Pearly Beach Ratepayers Association | With regards to the water required for the cooling of the power rods. Is that retained on site or is it also disposed of on in the ocean? | The water required for the cooling of the power station is taken from the sea and used for once through cooling and then pumped back into the ocean. This is a closed system. At no point does this water come into contact with the fuel rods or other radioactive material in the nuclear power station. |
| 7 | | Eugene Henry, Pearly Beach Ratepayers Association | The decision taken by the Minister of Energy to provide 9 600 MW for nuclear energy in the Integrated Resource Plant (IRP) was it subject to public participation? | The IRP 2010 (Revision 2) was accepted by cabinet in March 2011 and went through an extensive public participation process, which ran through most of 2010. The commenting process was extensively advertised in the media. |
| 8 | | Eugene Henry, Pearly Beach Ratepayers | The PBRA was not party to any of those discussions and were not able to provide any input to the IRP. | GIBB cannot speak on behalf of the Government but is aware that there were advertisements placed in newspapers advertising the process and requesting input from the public. |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|---|---|
| | | Association | | GIBB is also aware that the public participation process was extended and that public hearings were held in 2010. |
| 9 | | Mike Kantey, Coalition Against Nuclear Energy | <p>The IRP process was well advertised in national newspapers and was well publicised in the public media. The question is, however, whether the PBRA were consciously approached to participate in the public participation process for the IRP. It is obvious that the PBRA was not approached.</p> <p>The PBRA can reserve their right to participate according the provisions made in the Constitution regarding public participation.</p> <p>With regards to civil society's response to the IRP, 430 submissions were made. The majority (99.9 %) of these submissions were in support of the PBRA's concerns, but is of the opinion that these submissions were ignored by Government.</p> | Your comment is noted, however GIBB cannot provide any further comment. GIBB is not consulted to comment on behalf of Government, and are uncertain as to whether or not the PBRA were indeed approached as part of the public participation process for the IRP. |
| 10 | | Mr Rob Fryer, Overstrand Conservation Foundation | If a separate EIA process will be required for the housing and related infrastructure needed for the 7 700 workers and their dependents, who will be involved in the construction process and whether the Environmental Management Plan (EMP) for the power station has addressed this concern. | The principal policy of Eskom is to make use of existing housing in the area where the power station would be built, if authorised, as far as possible. However, if housing is required and Eskom cannot identify an area that is already zoned for residential use, a separate EIA process will be required. The impacts associated with housing are not considered in the EIA for the nuclear power station, as it considers only the impacts associated with the power station |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|--|---|
| | | | | itself and its immediately associated infrastructure. A separate EIA process for housing may therefore be required in future. The social aspects associated with accommodation of workers have been considered in this EIR, within the Social Impact Assessment (Revised DEIR Revision 1 Appendix E18). |
| 11 | | Mr Rob Fryer, Overstrand Conservation Foundation | This is a major flaw in the EIA process. Were any investigations made as to whether the area (around the Bantamsklip site) can support 7 700 workers and their dependents. In my opinion there is no such infrastructure in the area. | Due to the nature of this EIA, which looks at three alternative sites, Eskom cannot plan to develop such infrastructure if it is not sure which of the sites will be approved for the construction of the power station, if any. However, Eskom has undertaken preliminary discussions with local authorities at the Thyspunt site to identify areas that they consider suitable for the development of housing infrastructure. Eskom also engaged with the local authorities regarding infrastructure around the Bantamsklip site. |
| 12 | | Mike Kantey, Coalition Against Nuclear Energy | The question is whether considering housing in the Nuclear-1 EIA constitutes a fatal flaw or not. The answer provided by Mr Heydenrych that discussions were held with local authorities near the Thyspunt site is not referred to in the Revised Draft EIR (Revision 1) and asked that this be noted. | The Nuclear-1 EIA only considers the proposed nuclear power station and its immediate associated infrastructure, and that it does not include housing. If housing were to be required at the Thyspunt site (or any other site) then the associated impacts will be considered in a separate EIA process. |
| 13 | | Mr Rob Fryer, Overstrand Conservation Foundation | The OCF is of the understanding that the EIA process for the transmission lines for the proposed Bantamsklip power station is to continue, irrespective of the outcome of the EIA for the proposed Nuclear-1 power station. | GIBB is also the appointed Environmental Consultant for the Bantamsklip Transmission Lines EIA. This EIA process has been put on hold by Eskom Transmission. The process was halted at the conclusion of the last multi-stakeholder workshops held in Witzenberg and Bredasdorp in November 2009, and at that stage feasible routes for the transmission |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|--|---|
| | | | <p>At a previous public meeting for the Bantamsklip transmission lines EIA, a conclusion was made that the appointed specialists would confer and provide a suitable route for the transmission lines to the proposed power station and present their findings to the public.</p> <p>I conferred with several of the specialists and came to the understanding that there was not a feasible route for the transmission lines. Please confirm what the status of this EIA process is and whether a feasible route has been identified.</p> | <p>lines had as yet not been identified. The Environmental Impact Assessment for the Transmission lines has provided sufficient information to inform this process. Since Bantamsklip is not the preferred site the completion of the EIA has been put on hold.</p> |
| 14 | | John Williams, Save Bantamsklip and the Stanford Conservation Trust | <p>The Bantamsklip EIA and EIR are fatally flawed because the biodiversity of the area surrounding the Bantamsklip site is of global importance. I am of the opinion that there are no mitigation measures to adequately address the potential impacts of the power station on marine and terrestrial ecosystems. The potential impact of spoil and heated water released into the ocean is an important issue and must also be noted.</p> | <p>The Marine Specialist Report discusses abstraction of cooling water and organism entrainment, release of warmed cooling water and release of desalination effluent issues in sections 4.1.2 ,4.1.3 and 4.1.4 respectively. The mitigation measures for these activities are discussed in sections 5.1.2-5.1.3 in the Marine Specialist Report.</p> <p>Abstraction of cooling water will result in a low to medium impact and no irreplaceable resources will be impacted upon. The release of warmed cooling water is predicted to have medium consequences and be of medium significance due to the fact that it is a restricted area that would be affected. Release of desalination effluent will have no impact during operational phase, but rather only during construction. The brine will be sufficiently diluted within</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|--|--|
| | | | | <p>110m from the point of release and any impacts will be extremely localised. This impact is considered to be of low-medium significance.</p> <p>Abstraction of cooling water will be mitigated by ensuring the rate of water being drawn into the intake pipes is slow enough for any organisms to swim comfortably against the flow direction. The design of outflow pipes will ensure effluent is pumped far out enough to adequately disperse. There are also multiple outlet points to minimise the temperature. Desalination effluent will be released with cooling water to enable mixing.</p> <p>Impact assessment and mitigation for terrestrial systems on the Bantamsklip site are covered in sections 5.2.5 and 5.2.6 of the Dune and Botany Impact Assessment Specialist Report in the Revised DEIR Revision 1 respectively. The assessment of impacts resulted in the conclusion that there would be no significant impacts of the nuclear power station after mitigation. There are also several mitigatory measures recommended for aspects such as the size and location of the nuclear power station footprint, habitat fragmentation, powerlines, search and rescue operations for plants, a rehabilitation plan, coastal corridor and buffers, inlet and outlet pipes, spoil sites as well as cumulative impacts.</p> |
| 15 | | John Williams, Save Bantamsklip and the Stanford Conservation Trust | Why was there no recognition given to the Buffelsjagsbaai community, which is situated 3 km east of the EIA footprint. The Buffeljagsbaai community is not mentioned in any of the specialist studies or EIA | GIBB is aware of the Buffeljagsbaai community and has met with members of this community during the Bantamsklip Transmission Lines EIA public meetings. The community is considered within the Nuclear-1 EIA and GIBB can confirm that there are indeed members of the community noted |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|--|---|
| | | | documents and is not shown in any of the maps provided in the Revised Draft EIR (revision 1). The community is 500 strong 'in the season' and when added to the community of Pearly Beach there are 5 000 people living within 7 km of the footprint of the EIA. The Buffeljagsbaai community has not been consulted and asked if the community may have to be relocated. | within the I&AP database, namely Keshie (surname unknown) and Sarah Niemann. There are no recommendations to move any of the communities situated within the vicinity of any of the three sites. |
| 16 | | John Williams, Save Bantamsklip and the Stanford Conservation Trust | <p>The Buffeljagsbaai community was not placed in any of the maps produced for the Revised Draft EIR (Revision 1).</p> <p>Furthermore, it must be noted that nature reserves have been rezoned over the EIA footprint. These reserves have now been incorporated into the EIA footprint.</p> <p>This is purposeful deception in terms of mapping and recording existing demographics and land use as no acknowledgement was given to the Buffeljagsbaai community or to the status of Groot Hagelkraal, Soetfontein and Pearly Beach Nature Reserves. The status of the reserves as protected areas must be acknowledged in the EIR.</p> | <p>The comment was noted.</p> <p>Although the Buffeljagbaai Community is not indicated on any of the maps in the main Revised Draft EIR (Revision 1), the community is mentioned within the Social Impact Assessment Report (Appendix E18), Visual Assessment (Appendix E19), Economic Assessment (Appendix E17) and Human Health Risk Assessment (Appendix E24). The Economic Assessment specifically acknowledges the Buffeljagsbaai community's dependence on non-commercial fishing.</p> <p>The Groot Hagelkraal Farm has been declared as a Natural Heritage Site at Eskom's (landowner) initiative. The Pearly Beach and Soetfontein Nature Reserves are managed by Cape Nature and border the Bantamsklip Site (Groot Hagekraal Farm).</p> |
| 18 | | Dave Whitelaw: Private Landowner and | Will the outcome of the Nuclear-1 EIA be revisited should further EIAs, such as for the construction of housing for workers and | One of the key EIAs that Eskom is also undertaking is for the transmission lines associated with the proposed power station. Authorities have met with both sets of independent |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|---|---|
| | | Conservationist | their dependents, identify any fatal flaws. | <p>consultants, which in the case of the Bantamsklip Transmission Lines EIA is also GIBB. The Authorities will aim to make their decisions in an integrated manner, but due to the different programmes for these EIAs, this may prove difficult. However, the DEA is kept informed of the progress on all the EIAs. GIBB has looked at cumulative impacts and subsequent EIAs that may be undertaken and submitted to the DEA will need to assess cumulative impacts of the proposed power, as well as the proposed development at hand.</p> <p>The transmission lines EIA serve as a good example. Should the power station receive a position decision but the transmission lines a negatives decision, obviously the proposed project cannot proceed, as a power station needed electricity to be brought into the site and power generated to be evacuated from the site onto the national electricity grid. The same principle applies if the nuclear license and the additional 20 permits required are not granted. All these required authorisations must first be obtained before the power station can be constructed.</p> |
| 19 | | Dave Whitelaw: Private Landowner and Conservationist | Were any of the results on studies done regarding increased flooding and sedimentation was derived from computer modelling or by means of site visits and field research. | Computer modelling was used, but that the data was based on research conducted over a number of years to determine in which direction and at what velocities the currents are flowing. This information was therefore obtained based on information obtained in the field and based on computer modelling. |
| 21 | | Mr Dean James. Gansbaai Sand and Stone | Would it be possible for the spoil material to be transported inland where it can be crushed and re-used? By reusing this | GIBB and the appointed specialists did consider alternative options for disposing of the spoil material. As the spoil will consist of many million cubic meters of material, transporting |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|--|--|
| | | | material, it will also save money. | <p>and disposing of it inland will result in very large heaps of sand and stone. The transport of that sand and stone inland will also result in potential additional impacts. The Revised Draft EIR (Revision 1) therefore recommends that the spoil be disposed of in the ocean. Mr Williams can, however, request Eskom if he can make use of the spoil material.</p> <p>There will be two types of spoil created by construction activities, namely sand and rock. Eskom is of the opinion that alternative means of disposal for this material can be considered on a case by case basis and Eskom could consider providing a portion of the spoil to private concerns.</p> |
| 22 | | Chris Pretorius, resident of Wolvengat | The initial EIR GIBB stated that a 40 MW power station will be constructed, with an exclusion zone of 8 km in which no person will be allowed to reside. Now that a 4 000 MW station is considered, what is the required exclusion zone? | Since the start of the EIA process in 2007, it was stated that a 4 000 MW station is proposed to be constructed. There are two different radii of exclusion zones, namely a 800 m zone in which no development will be allowed and a 3 km zone in which there will be specific restrictions on development. The zones would, however, need to be confirmed by the National Nuclear Regulator and are an assumption to the EIA. Also Eskom owns all the land in the 800 m exclusion zone at all three of the alternative sites. |
| 23 | | Chris Pretorius, resident of Wolvengat | I would like to know if in the original EIR, the proposal was for a smaller station but that the subsequent EIR made provision for a larger station. | Although the EIA application was for 4 000 MW, Eskom had requested that GIBB investigate whether a 10 000 MW station can be accommodated at any of the three sites. However, the EIA Application is still for a single 4 000 MW nuclear power station. |
| 24 | | Chris Pretorius, resident of | In the original EIR GIBB clearly stated that there will be an 8 km exclusion zone where | There are different exclusions zones for different types of nuclear power stations. The Koeberg Nuclear Power |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|---|--|
| | | Wolvengat | no residential development will be allowed, then a 12.5 km exclusion zone in which agriculture will be allowed but which will have to be monitored and then a further 16 km in which people will be allowed to reside. So what are the exclusion zones? | <p>Station, being an older generation power station, has a 16 km zone.. The power station proposed for Nuclear-1 is a Generation III nuclear power station, which has more advanced technology and has different safety zones. Therefore if the proposed power station conforms to criteria in this EIA then the exclusion zones of 800 m and 3 km will apply.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>As stated this would then be one of the design criteria for any proposed new technology to be deployed in future.</p> |
| 25 | | Chris Pretorius, resident of Wolvengat | The first EIR is therefore incorrect. | The initial EIR is correct. The Koeberg Nuclear Power Station has larger exclusion zones than the power station proposed for Nuclear-1. |
| 26 | | Chris Pretorius, resident of Wolvengat | Will a 3 km exclusion zones will be put in place, will the community of Buffeljagsbaai be relocated, considering that they are situated 2.3 km from the site? | The emergency planning zones work under the European Utility Regulations. These Regulations state that no person is allowed to reside within 800 m of the nuclear site. However, in the case of a nuclear accident, those people residing within 800 m to 3 km from the site, short term relocation of up to 1 month may be required if there was an accident. |
| 27 | | Mike Kantey, Coalition Against Nuclear Energy | It should be noted that the company undertaking the Pebble Bed Modular Reactor (PBMR) programme requested an 800 m exclusion zone. It was never accepted by the National Nuclear | The exclusion zone for the PBMR was 400m. It is important to note that there are currently people living within 2 km of the Koeberg Nuclear Power Station. It is this possible for people to live within this exclusion zone, even in the case of Koeberg, which has a larger exclusion zone than the one |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|---|--|
| | | | <p>Regulation and is not stipulated in the regulations published under the National Nuclear Regulator Act 47 of 1999 (NNRA). The exclusion zone stipulated in these regulations is for 16 km in which no development is to take place.</p> <p>With regards to the Koeberg Nuclear Power Station, there are disagreements between the City of Cape Town and the Authorities because the City is rapidly expanding in the direction of Koeberg and is not allowed to construct any infrastructure in the Koeberg site as per the NNRA. If Eskom is able to successfully change the Act in their favour by reducing the exclusion zone to 800 m, as per the PBMR literature, then yes perhaps, but if you consider that the exclusion zones put in place by the International Nuclear Atomic Agency (INAA) for Generation III Nuclear technology is way beyond 10 km, the Buffeljagsbaai community will have to be forcibly removed.</p> | <p>proposed for Nuclear-1. For this reason, no one will be relocated from any of the proposed sites for the Nuclear-1 power station.</p> <p>The Exclusion Zone is described as a radius determined for the purpose of evacuating persons in the event of a nuclear accident, according to the siting regulations, no members of the public resident, no uncontrolled recreational activities, no commercial activities, or institutions which are not directly linked to the operation of nuclear installations situated within this zones. Over and above the 800m exclusion zone proposed by Eskom, Eskom has chosen to own land within the 2km radius of the nuclear power station and thus enveloping the 800m radius. This will further be submitted to the NNR through nuclear licensing processes over which the actual emergency planning zones will be agreed</p> |
| 28 | | Mr Daniel Niemand, resident of Buffeljagsbaai. | <p>Ons in die gemeenskap het die kelp projek by Buffeljagsbaai van die Staat ontvang in 2001. Dit is die enigste vorm van werkskepping in in ons omgewing. Die plasing van die kragstasie gaan hulle affekteer omrede dit ook die area geleë is waar hulle kelp geneem word van die see en dit dus hulle gebied kleiner sal maak. Ek</p> | <p>Die potensiële impak wat die kragstasie op die gemeenskap sal hê met betrekking tot die area waar hulle kelp van die see kan neem, is 'n impak wat geïdentifiseer en in ag geneem moet word. As gevolg van die feit dat daar sekuriteitssones rondom die kragstasie sal wees, kan die gemeenskap met Eskom vergader om moontlik toegang tot die perseel te verkry deur middel van 'n permit.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|------------------------|---|--|
| | | | <p>is bekommerd dat die warm water vanaf die kragstasie die kelp negatief sal affekteer.</p> <p><u>Translation:</u> The community received their current land from the Government in 2001 and that the harvesting of sea kelp is our only source of work in the area. If the exclusion zones were put into place, it will reduce the area in which they are currently harvesting kelp. Mr Niemand is also concerned that the water being pumped in and out of the proposed power station may negatively affect kelp in the area.</p> | <p>Die "Seelewe" spesialis is gevra om die impak van stasie op seelwew spesies soos kelp te identifiseer. Die doel van die studie was, onder andere, om die afstand en diepte waar die verhitte water vrygelaat moet word te bepaal, sodat marine spesies nie negatief beïnvloed word nie. Al is die water 12 °C warmer as die water wat ingeneem word, sal dit by 'n diepte en afstand vrygelaat word waar dit nie die kelp negatief sal beïnvloed nie.</p> <p><u>Translation:</u> The potential impact of the power station on reducing the area in which kelp can be harvested by the Buffeljagsbaai community is an impact that would need to be identified and considered. Considering that there will be security zones around the station, the community may be able to arrange with Eskom and other authorities that members of the community can gain access to the site through a permit system to harvest kelp.</p> <p>The marine specialist appointed for the Nuclear-1 EIA was requested to determine the impact of the proposed power station on marine species such as kelp. One of the aims of the study was to determine at what distance and depth the heated water from the station can be discharged into the ocean without affecting marine species such as kelp. Although the discharged water will be approximately 12 °C warmer than the water being pumped into the station, it will be discharged at a depth and distance which will not affect kelp species.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|--|--|
| 29 | | Ms Sarah Niemand, resident of Buffeljagsbaai. | <p>Die kelp in die area het koue water benodig om te oorleef.</p> <p>Ons gemeenskap verskil van die ander hier naby Koeberg omdat die Buffeljagsbaai gemeenskap heeltemal afhanklik is van die see vir hulle inkomste. Daar is geen ander industrie in die area wat die gemeenskap kan ondersteun nie.</p> <p><u>Translation:</u> The kelp in their area is very dependent on cold water.</p> <p>There is a difference between the communities residing close to Koeberg and the Buffeljags community in that the members of her community are dependent on the sea for their livelihoods. There are no other industries in the area that can support the community or provide them with employment.</p> | <p>GIBB is bewus is van spesies soos kelp en perlemoen wat afhanklik is van koue water om te oorleef. Die spesialis wat aangestel is vir die studie het hierdie feit in ag geneem in haar studie en bevind dat daar geen impak op kelp sal wees nie solank Eskom haar spesifikasies navolg.</p> <p>Daar is wel gemeenskappe naby die Koeberg stasie is wat afhanklik is van marine bronne soos kelp vir hulle lewensbestaan, en dat studies in die area gewys het dat daar geen impak op kelp in die area is nie.</p> <p><u>Translation:</u> GIBB is aware that species such as kelp and abalone are dependent on cold water conditions. The appointed specialist did consider this potential impact and her findings show that there will be no impacts on kelp or abalone as long as Eskom follows the specifications she provided. The release of warmed cooling water is discussed in section 3.2.3 of the Marine Ecology Impact Assessment.</p> <p>There are also communities living adjacent to the Koeberg Nuclear Power Station that are also dependent on the harvesting of marine resources such as kelp for their livelihoods and that studies undertaken in that area showed that there was no impact on marine species.</p> |
| 30 | | Dave Whitehall, Landowner | I would like to point out that a section of the Revised Draft EIR stated that the temperature of sea water can vary between different locations and that generalisations cannot be made. | <p>The comment is noted.</p> <p>The marine specialist also looked at species such as and</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|---|--|
| | | | <p>Furthermore, apart from the impact on kelp forests in an area such as Walker Bay, the impacts on penguins and fish populations must also be considered.</p> | <p>penguins and sharks, as there is shark diving in this area, and the results indicate that none of these species will be affected by the proposed power station.</p> |
| 31 | | <p>Mike Kantey, Coalition Against Nuclear Energy</p> | <p>The bottom feeders such as mussels and abalone can be impacted on by the accumulation of radioactive substances (e.g. Strontium and Ceasium) in them.</p> <p>Black Mussel populations has been be affected by the proposed power station. A report providing 20 years of research done on black mussel populations adjacent to Koeberg was produced. It has shown radioactivity in their bodies.</p> <p>Another point is that the radioactivity of the sea water comes precisely from the discharge of Strontium 19 and Ceasium 137 as by-products. In the opening remarks of the presentation the assertion is made that nuclear energy is clean but this does not take into consideration that the routine emissions of Strontium and Ceasium 137 have half-lives of several thousand years. So the radioactive decay of Strontium and Ceasium 137 over hundreds of years continues to have an impact on abalone and mussel populations.</p> <p>The Buffeljags community is dependent on</p> | <p>Those aspects regarding radioactivity and its potential impacts on marine life have been considered in the EIA and specifically dealt with in the marine ecology report. The levels of radiation found in areas surrounding the Koeberg Nuclear Power Station has been monitored for the past 20 years and it has been found that there are no impacts associated with the presence of these elements. It should be noted that these elements occur naturally in the atmosphere and in the sea water since atmospheric nuclear testing started in the 1940s. However, the finding of the marine specialists is that these elements have no health effects on marine species at the Koeberg Nuclear Power Station.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>As discussed the facility will be subject to a licence application to the NNR - as has been discussed comprehensively above this will require a safety case which will examine the radiological impact from all initiating events which have the potential for an offsite impact including via marine pathways and from any routine releases in accordance with standards and practices in line with international best practice.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|--|--|
| | | | <p>the sea for their livelihoods so these types of impacts will negatively affect them.</p> <p>Furthermore, it is important to consider all the marine tourism activities such as whale watching and shark diving and potential impacts on these activities from a biological, radiological, and zoological perspective. This stated that this constitutes a fatal flaw in the EIA.</p> | |
| 33 | | Mike Kantey, Coalition Against Nuclear Energy | <p>The environmental science laboratory reports produced by Eskom show that substantial amounts of Cesium 137 and Strontium in relation to volume of abalone. Any attempt to pretend that there are no environmental impacts is disappointing. I would be happy to provide these reports and the figures and tables drawn from them. Having said that, and having noted the response with regard to Nuclear testing in my own analysis of the allegations in your own report and representations to the public I think that one must argue that if you look in the way that the wind regime operate in the northern and southern hemisphere, it is such that 99.99 percent of weapons testing above ground prior to cessation in 1972 demonstrates very little penetration in the southern hemisphere. Moreover, one would expect that after 1972, the volume of Cesium 137 would decline. Studies produced by Eskom's own researchers</p> | <p>GIBB stands by our initial statements that the report is based on studies undertaken by prominent scientists at the University of Cape Town, namely Professor Charlie Griffiths and Dr Tammy Robinson.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>As stated the findings are based on an independent report by acknowledged specialist in the field.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|--|--|
| | | | <p>have shown that the Strontium 90 level actually increases. This follows that the assumption that the levels of these elements in the atmosphere are caused by nuclear fallout is unscientific. It follows that the contamination in abalone is due to the nuclear facility.</p> | |
| 34 | | <p>Lesley Richardson, Flower Valley Conservation Trust.</p> | <p>I am referring to the scoring of the three different sites. Should the EIA be undertaken again from the start and if other sites besides these three would be assessed and whether they would have provided a different range of outcomes. Why were these three sites chosen?</p> | <p>The three sites currently being considered were identified in the Nuclear Site Investigation Programme, which began in the 1980s. There were initially five sites identified for initial assessment in this EIA. These include the three sites assessed in the impact assessment phase of the EIA as well as two other sites that were situated in the Northern Cape. Additional sites such as the Coega Industrial Development Zone have also been suggested, but for various reasons were found to be unsuitable for the construction of a nuclear power station or could not be considered further in the EIA for Nuclear-1.</p> |
| 35 | | <p>Lesley Richardson, Flower Valley Conservation Trust</p> | <p>Will there be exclusion zones off-shore that may inhibit people from fishing close to the proposed power station.</p> | <p>There will likely be a 1 to 2 km security exclusion zone on the sea surrounding the proposed station. This will be identified through an investigation that will be undertaken by the National Intelligence Agency.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>No additional comment - as stated this is effectively part of the potential physical security arrangements and therefore subject to additional requirements.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|--|--|
| 36 | | Lesley Richardson, Flower Valley Conservation Trust | Is there environmental monitoring on site during construction and maintenance and if there is a body that can undertake this monitoring. | <p>With most EIAs, there is a recommendation that an independent Environmental Control Officer (ECO) be appointed to monitor construction activities to ensure that they comply with the provisions set out in the EMP, if approved by the DEA. It will be suggested in the EIR that the ECO report to an Environmental Monitoring Committee (EMC) which will consist of specialists, government representatives and local community members. The ECO will also have the right to report any transgressions directly to the Authorities.</p> <p>There could therefore be up to 15 people on site that monitor environmental compliance. External auditors are also appointed to monitor the sites every three to six months. This monitoring continues during the operation of the facility, it is a requirement from the authorities that internal and external audits also take place.</p> |
| 37 | | Lesley Richardson, Flower Valley Conservation Trust | Will there also be monitoring undertaken to assess long term environmental impacts associated with the power station. | <p>Eskom is committed to the long term conservation of the areas surrounding their power station. An example is the new pumped storage scheme in the Drakensberg, which is situated in an environmentally sensitive area. That facility is now part of an 8 000 ha conservation area that is managed by Eskom. All environmental baseline studies were undertaken 6 months prior to commencement of construction and there will be ongoing monitoring to assess potential future impacts.</p> <p>Eskom will be held accountable for the long term conservation of such areas. In the case of Bantamsklip, Eskom have met with nature conservation authorities to develop a nature conservation area surrounding the site,</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|---|--|
| | | | | should it be recommended as the preferred site and environmental authorisation has been provided. |
| 38 | | John Williams, Save Bantamsklip and the Stanford Conservation Trust | <p>I refer to the question by Ms Richardson regarding the selection of the 5 original sites.</p> <p>Can it please be noted that the Bantamsklip site was originally chosen by the Apartheid government because it was situated close to the previous De Hoop Nuclear Complex, which was erected with the aim of launching nuclear armed missiles. Furthermore, given the fact that South Africa has dismantled its nuclear weapons and abandoned its nuclear programme, the Bantamsklip site would not have been selected by the present government, given the environmental sensitivity of the surrounding area.</p> <p>I would also like to point out that the Bantamsklip site maps and indicated areas in the vicinity of the site that is currently under conservation. These include the Cape Agulhas National Park, as well as the Soetfontein and Pearly Beach Nature Reserves. Please also note this area is recognised globally as a world heritage site, and that the land must therefore be donated to the South African National Parks (SANParks).</p> | <p>Comment noted.</p> <p>One of the mitigation measures proposed for the Bantamsklip site is the creation of a nature reserve for the non-development portion for the site. The Botany and Dune Ecology Impact Assessment Appendix E11 in the Revised Draft EIR Revision 1 states that this will improve the conservation status of certain vegetation types on the Agulhas coastal plain.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|---|---|
| | | | | |
| 39 | | Eugene Henry, Pearly Beach Ratepayers Association | Were recent events in Japan, where several nuclear reactors were damaged due to earthquakes and subsequent tsunamis, taken into account?. | Your comment is noted. The Japanese disaster is indeed a stark reminder of the unpredictability of the natural environment. However, it is well known that South Africa is located on a vastly more stable tectonic environment than that of Japan, which is situated close to a major subduction zone within the Pacific Ocean. The descriptions and facts reported in the Geological Hazard and Seismic Risk Assessment stem from published data and work undertaken by the Council for Geoscience and others. In terms of the identification of faults and seismic risk, the information |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|------------------------|--|---|
| | | | | <p>represents the current knowledge and understanding based on a regional picture. New evidence of neotectonic¹ movements may be discovered in the more detailed investigations that still have to be undertaken for the design of the power station. However, based on current knowledge, the site has been found to have no seismic disqualifiers. Information obtained during more detailed studies will be used to refine the design of the power station, but will not change the siting decision.</p> <p>Furthermore, the safety of the KNPS has recently undergone a special review considering the events at the Fukushima nuclear power plant. The evaluation by the NNR on the safety assessment done by Eskom concluded that KNPS is able to withstand these events from Fukushima.</p> |
| 40 | | Unidentified I&AP | <p>The interested party stated that in the first EIR, it was stated that there are no marine mammals of any significance in the area surrounding Bantamsklip. I have personally seen southern right whales with their calves in this area.</p> <p>There were also several sections in the report which stated that the impact on marine mammals in the area is 'unlikely', and asked that clarification be provided as to the definition of this word.</p> | <p>There are cases where it is possible to quantify the impact that heated water may have on the environment, as certain thresholds can be identified where it becomes an impediment to marine species. In the case of the release of spoil into the water, the marine specialists were able to determine that there will be times during the year when, if the spoil exceeds a certain threshold, it would affect marine species.</p> <p>In all cases, however, an EIA remains a predictive tool and the Environmental Assessment Practitioner relies on the feedback provided by the specialists to determine the level of environmental impacts associated with a given development. These results can be based on quantified</p> |

¹ The study of tectonic movements in current or recent geological time

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|---|---|
| | | | | <p>figures or their expert knowledge that was gained with experience working in their respective fields.</p> <p>The word 'unlikely' can be defined as having a low probability.</p> |
| 41 | | Mr George Adelaide | <p>Please note that I have witnessed Eskom dismantle transmission lines, and left the remains of the pylons on the ground where they are still visible. He asserted that in this case, the environmental monitoring on site was poorly managed.</p> <p>Eskom has identified 17 sites in the Western Cape for pumped storage schemes, 14 of which are situated in protected areas.</p> | <p>Comment noted.</p> <p>This is an unacceptable process. In order for us to give a detailed response the following is required: Which transmission line(s) is being referred to? Name of the project or the area of concern? Property name of where this happen? Was it reported to Eskom and to which Eskom Division? When did this happen?</p> <p>We need this information to ascertain whether this was a transmission or distribution line and to identify the scheme that was responsible for it. It is difficult to respond without the information required / mentioned above.</p> |
| 42 | | Mr Rodney Anderson, Gansbaai Ratepayers Association. | Please explain the process of decommissioning of a nuclear power plant entails. | <p>Generation III nuclear power stations have an operating life of between 60 to 80 years. When a nuclear power station is decommissioned, it is literally taken to pieces and that all radioactive material and plant will be taken to the Northern Cape for disposal at the Vaalputs site. The nuclear fuel will be kept on site for a period of 10 years, after which it will be buried underground in granite formations.</p> <p>However, in the case of the Koeberg Nuclear Power Station or future sites for Nuclear power stations in South Africa, it is likely that these sites will be used again for the construction</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|--|---|
| | | | | new power stations, as existing services such transmission line servitudes are already connected to those sites. |
| 43 | | Mr Rodney Anderson. Gansbaai Ratepayers Association | Were any other nuclear power stations in the world decommissioned and turned into greenfield sites | There have been other nuclear power stations which have been converted into greenfield sites. The first of which is a PWR station constructed in the USA which is now back to a greenfields site. |
| 44 | | Mr Rodney Anderson. Gansbaai Ratepayers Association | We, and our grandchildren, will not be alive for the decommissioning of the station; we have to ensure that construction of the station is never undertaken in the first place. | Comment noted. |
| 45 | | Ms Lyn Eager | Why were the other two sites of the original five scoped out? | The alternative sites in the Northern Cape are both very long distances away from the transmission network and from the areas where the electricity is required. For this reason, long new transmission lines would have been required. The impacts associated with transmission lines are high and much more land would have had to been secured to build the lines. However, Eskom has stated publicly that it may still consider these sites as future locations for nuclear power stations. |
| 46 | | Mike Kantey, Coalition Against Nuclear Energy | The decommission story is interesting because while it is likely to take place in 80 years he has inside knowledge to talk about many reactors constructed before Three-Mile Island. What is interesting is that after the German Vice Chancellor, Ms Merkel, proposed to extend the lives of 17 reactors, she lost the province of Warten Witzenberg. | Thank you, your comment is noted |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|------------------------|--|----------|
| | | | <p>So the authorities may believe that it is in the interest of the public to extend the life of nuclear power stations, but many citizens disagree. This is because of the age of these stations and the overall decay of the metals that protect the core of the reactors.</p> <p>There is no civilian reactor built in the 1970s for which we have the authority to say that it can last for more than 40 years. Now that we have reached 2011, the anniversary of that timeline, there will be many nuclear power stations that will be deactivated, long before they have any positive impact on reducing global warming. They will have to be replaced and their lives not extended.</p> | |

**PROPOSED Eskom Nuclear Power Station
AND ASSOCIATED INFRASTRUCTURE**

ENVIRONMENTAL IMPACT ASSESSMENT (EIA: 12/12/20/944)

**COMMENTS ON
DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

(Volume 18 RDEIR IRR 07 July 2011 – Humansdorp Minutes)

Issues have been received from the following stakeholders:

| No | Name | Organisation |
|-----------|--------------------|---|
| 1 | Sam van der Merwe | Interested and Affected Party |
| 2 | Clifton Booysen | Interested and Affected Party |
| 3 | Juline Prinsloo | Kouga Tourism Board |
| 4 | Chris Barrett | Thyspunt Alliance and St Francis Kromme Trust |
| 5 | Dr Yvette Abrahams | Commissioner for Gender Equality |
| 6 | Renan Stuurman | Humansdorp Community Leader |
| 7 | Dries du Preez | Interested and Affected Party |
| 8 | Frank Tamboer | Interested and Affected Party |
| 9 | Bruce Oliphants | Interested and Affected Party |
| 10 | Dries du Preez | Interested and Affected Party |
| 11 | Godfrey Africa | Interested and Affected Party |
| 12 | Eugene Goliath | Kouga Municipality |
| 13 | Unidentified I&AP | Interested and Affected Party |
| 14 | Chris Barrett | Thyspunt Alliance and St Francis Kromme Trust |
| 15 | Vernon Adams | Humansdorp Community Representative |
| 16 | Godfrey Africa | Interested and Affected Party |
| 17 | Chris Barrett | Thyspunt Alliance and St Francis Kromme Trust |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|--|--|
| 1 | | Sam van der Merwe Interested and Affected Party | <p>I am concerned that this study is bound to the properties already owned by Eskom. What about alternatives? We know that the present power demand is as a result of Coega. Is there no way we could look at suitable alternative sites comparable to Thyspunt, but closer to Coega? If you look at the area east of Coega, there is a large unutilised area. Very little would be affected if that site was used. Why can't that be used?</p> <p>You place emphasis on ecological effects on the limestone fynbos area. What about the coastal fynbos; it is also endangered? Don't underplay the importance of the word</p> | <p>The alternative sites were identified in the 1980-90s, through the Nuclear Site Investigation Programme (NSIP). Nuclear safety is of paramount importance, and there are not many coastal sites in South Africa that would be suitable for a nuclear power station. Five sites were identified by independent consultants from the University of Cape Town as being the most suitable sites investigated by the study and these formed the starting point of this EIA with respect to alternative sites. Regarding the Coega Industrial Development Zone (IDZ) as a candidate site, one of the challenges is that limited seismic monitoring has been done there. At the other candidate sites a detailed seismic monitoring has been carried out over several years. It would take at least five years to bring the Coega IDZ site up to the same level of detail as the three preferred sites are today. Other challenges include the fact that it is in an area of very deep sands. There is also a Coega fault, which has not been studied in-depth. Hence the recommendation has been made that for Nuclear-1, the Coega IDZ cannot be considered as an alternative site. It may well however be considered by Eskom in the future as a nuclear site.</p> <p>Also, this nuclear power station is not driven by the Coega IDZ, but rather because the lifespans of the existing coal-fired power stations in South Africa are coming to an end and also because of the increasing electricity demand (3% increase per annum) in the country.</p> <p>There is coastal fynbos at Thyspunt, and the botanical specialist did look at this. It is however not as localised as the limestone fynbos. The specialist has stated that the coastal fynbos occurs in many areas outside the site and</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|---|--|
| | | | <p>“could” when it says “it could be reduced” through the development.</p> <p>Regarding seismic activity, I understand that the presence of a geological contact zone caused you to plan your site in a specific area. Isn't that a warning that there is a seismic risk in the area?</p> <p>Regarding the marine ecology, many people depend on the sea as a food source. More studies may be needed to determine the exact effects on the sea currents.</p> | <p>hence the impacts on coastal fynbos would not be that significant. The Botanical Study forms Appendix E11 of the Revised Draft EIR revision 1.</p> <p>Contact zones are lines where two different rock types come together; it is not a fault. From a seismic point of view, they are not features that cause earthquakes, but from an engineering point of view, critical buildings like the reactors should not be placed across these contact zones. From an earthquake risk point of view Thyspunt is actually the best alternative site.</p> <p>Extensive modelling of the marine environmental has been done in the oceanographic study, which was based on number of years of monitoring. The impacts of ocean conditions have been modelled. This information has been included as Appendix E15 in the Revised Draft EIR revision 1. A further revised Marine Ecology Report is included in the Revised DEIR revision 2 and it also concludes that there will be minimal impact on the chokka squid industry.</p> |
| 2 | | Clifton Booyesen Interested and Affected Party | I want to make a statement, not ask a question. I have visited the Koeberg Nuclear Powers Station. For me the issue is about development and sustainable job creation. The station should not go anywhere else; it must be here. We need the jobs. | Thank you, your comment is noted. However please keep in mind that the final decision regarding the Authorisation and the preferred site for the Nuclear-1 Power Station is the responsibility of the Competent Authority - the Department of Environmental Affairs |
| 3 | | Juline Prinsloo Kouga Tourism Board | It was stated that it will take 9 years to build, and will create 7 700 jobs. Are these jobs going to be local jobs, and do the 7 700 jobs include technical jobs? | The 9000 jobs will be created at the peak of construction (i.e. year 6). This includes all jobs, including manual labour and technical jobs. GIBB's recommendation is that at least 25% of these jobs must be for locals. Eskom will have to do training for the local people like has been done at Medupi |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---------------------|---|---|
| | | | <p>Can the existing infrastructure accommodate the expected influx of people?</p> <p>The expected 960 new vehicle trips through Humansdorp will require proper planning, and a proper route would have to be found to the R330. The four-way stop and the taxi rank will pose problems.</p> <p>Regards the Chokka industry and the heating the sea water, you have proposed</p> | <p>Power Station.</p> <p>The issue of the existing infrastructure is an important issue because there are already backlogs in infrastructure delivery. A key recommendation of the Environmental Impact Report (EIR) is that Eskom should agree with municipalities as to who will provide this infrastructure before construction starts.</p> <p>Your comments are noted. Similar concerns from the public around Humansdorp area have been raised and acknowledged regarding vehicles driving through and around Humansdorp. As such the Transport Specialist study was revised to consider other alternative routes. The revised report recommends that the main street through Humansdorp and Saffrey Street be bypassed. New transport roads for abnormal load vehicles were therefore considered and three alternate bypasses were investigated. The preferred alternative directly links between Voortrekker Road (MR389) and Park Street (MR381) and is 850m in length. The beginning of Alternative A crosses the Boskloof Valley and the rest of the route will be constructed on Municipality land.</p> <p>The alternative is considered as the most viable option as it is the shortest and most economical route to construct, and it has a good alignment for the transportation of abnormal loads. Once the route is constructed, it will also alleviate the traffic congestion in Humansdorp.</p> <p>Discharge of water into sea is a standard, common technology used all over the world. If one mixes the water</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---------------------|--|--|
| | | | <p>multiple release points but has the success of this been proven elsewhere?</p> <p>You want to build cut-off walls to protect the wetlands. You didn't elaborate on the type of materials that will be used, or how you would look at the environmental aspects of the site etc.</p> <p>Not much has been said about tourism impacts. We would like to have inputs in this.</p> <p>Regarding the heritage impacts, there wasn't much said about storage of the radioactive waste, how do you store it etc.</p> | <p>quickly, the temperature comes down quickly. Within a few hundred metres of the release point the water has returned to its original temperature.</p> <p>The cut-off wall would be a barrier 20 m deep to the bedrock. It would stop water from seeping into the site. The wall is normally made of clay slurry. It has been used before and the same technology was used at the Koeberg Nuclear Power Station in the 1970s.</p> <p>Mr David Scott the tourism specialist contacted Ms Juline Prinsloo on 15 June 2011 via phone. Concerns raised by Ms. Prinsloo is also addressed in IRR 15 will form part of the Revised Draft EIR Version 2. The document will be made available for public comment and review.</p> <p>Radioactive waste management practices envisaged for the Nuclear-1 Power Stations are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal. The High-level waste (spent fuel) unsuitable for disposal at Vaalputs will be stored safely on site until a suitable facility is available in South Africa. It firstly goes into wet storage within the plant for 20 - 30 years, and thereafter goes into dry containers, encased in concrete and stays on site.</p> <p>With the implementation of appropriate mitigation measures all potential impacts are expected to be of low significance.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|---|---|
| 4 | | Chris Barrett Thyspunt Alliance and St Francis Kromme Trust | <p>We have raised the issue of transport before. What you are envisaging at the moment, is one heavy-duty truck going down Saffrey street every 24 seconds, and also going down the R330 where there are kids crossing the road to school. This is excluding any existing traffic.</p> <p>This traffic issue must be looked at, because it affects the social and economic studies, and hence they must all be reviewed. I have heard it said that that no expenditure on the road between Humansdorp and St Francis would be required. This is nonsense.</p> | <p>Your comments are noted. Similar concerns from the public have been raised and acknowledged regarding vehicles driving through and around Humansdorp and Cape St. Francis. As such the Transport Specialist study was revised to consider other alternative routes. The revised report recommends that the main street through Humansdorp and Saffrey Street be bypassed. New transport roads for abnormal load vehicles were therefore considered and three alternate bypasses were investigated. The preferred alternative directly links between Voortrekker Road (MR389) and Park Street (MR381) and is 850m in length. The beginning of this alternative crosses the Boskloof Valley and the rest of the route will be constructed on Municipality land.</p> <p>The alternative is considered as the most viable option as it is the shortest and most economical route to construct, and it has a good alignment for the transportation of abnormal loads. Once the route is constructed, it will also alleviate the traffic congestion in Humansdorp.</p> <p>The revised Transport specialist study further acknowledges that the Thyspunt site requires significant transport infrastructure upgrades. The R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed to be surfaced to provide improved east-west connectivity.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|---|---|
| | | | | <p>There will lastly also be an additional assessment done on the feasibility of an access route on the western side of the Thyspunt site. This assessment will include an integrated assessment on wetlands, invertebrates, ecology, and fauna.</p> <p>This information together with the revised Traffic and Transportation Report will appear in the Revised Draft EIR v2.</p> |
| 5 | | Dr Yvette Abrahams Commissioner for Gender Equality | In Hankey we have had a similar issue regarding underpasses for pedestrians. Every underpass costs R70 million. If you redo the transportation report, every time that you add an underpass can you please add R70 million to the project cost, and explain who will pay for it? With regards to bulk services, who pays for those; the national tax payer, the municipal taxpayer or Eskom? | <p>Thank you, your comment is noted.</p> <p>Nuclear-1 site EIA has not been decided on yet. Such discussions with municipalities can only start after environmental approval</p> |
| 6 | | Renan Stuurman Humansdorp Community Leader | Concerned that we are talking as a non-global player. We are talking as if there is no electricity crisis. We need to pre-empt the crisis. People's objections stem from a small town mentality. People are saying the power plant can be built anywhere but not here. People want to use their democratic rights to disadvantage others through their decisions. How many times will you come here before we build this plant? Energy is not a luxury; it is a need and will become even more so in future. Time is running out. What is the next step? We can't waste | <p>Thank you, your comment is noted.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|--|---|
| | | | <p>anymore time. There are needy people here. We cannot tolerate objections as if we don't have a past. This is our chance for us to live close to Thyspunt, close to resources. Let the power plant come.</p> | |
| 7 | | Dries du Preez Interested and Affected Party | <p>The economies of Humansdorp and Jeffrey's Bay are in serious trouble, and are in desperate need for something to change. We need a driver to get business going again. We need something to happen very soon. We know about the changes that came to Ellisras (Lepalali) with the announcement of the Medupi Power Station. We need that kind of announcement in this area. How are you going to protect the jobs for locals, and ensure they are not lost to the inflow of workers from outside?</p> <p>I have heard that engineers, possibly Aurecon, were appointed to look at a coastal road alignment linking Paradise Beach, St Francis, and Jeffrey's Bay. Is it happening and is it a separate study? My concern is that this region will not benefit</p> | <p>This has been raised from page 145 of the Social Impact Assessment (Appendix E17 of the Revised Draft EIR Version 1). There are a number of mitigation measures discussed such as the use of local labour, management of expectation and careful monitoring of various housing constructs. Unfortunately people cannot be stopped from moving around or into the area, but it has been recommended that locals must get preference. Eskom has experience in engaging with local bodies to ensure locals get preference.</p> <p>On previous projects Eskom has engaged with formal community representatives to determine who is local and who is not, to ensure locals do get preference. At Medupi Power Station Eskom agreed on a 70 km radius to identify locals, and transported people within that area. Eskom also had recruitment offices at areas removed from the site. One cannot stop impacts related to migration of people completely but there are ways to minimise it and ensure local employment.</p> <p>GIBB was aware of a coastal road proposal from Jeffrey's Bay to St Francis, but it's not part of the Nuclear-1 EIA.</p> <p>There have been various discussions about transport routes, but the coastal option was not part of this EIA. Once Eskom is at a stage where they know where the access points will</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|--|---|
| | | | <p>from Thyspunt if this road is not built. We need to look at more than just the Thyspunt power plant on its own, but development in the whole area. Need to make sure we get that coastal road.</p> | <p>be, they will start an EIA looking at building roads. At present Eskom is concentrating on determining road access coming from N2 directly down to site.</p> <p>There will also be an additional assessment done on the feasibility of an access route on the western side of the Thyspunt site. This assessment will commence towards the end of 2012 and will include an integrated assessment on wetlands, invertebrates, ecology, and fauna.</p> |
| 8 | | Frank Tamboer Interested and Affected Party | <p>It is worrying that people who are also previously disadvantaged are opposing this proposal; but some people are also concerned that this development will give "darkies" the opportunity to live in the white areas, and whites are concerned about this. I am speaking for a collective of the community, not defending my own kingdom.</p> | <p>Thank you, your comment is noted.</p> |
| 9 | | Bruce Oliphants Interested and Affected Party | <p>I want to commend people from Jeffrey's Bay in sharing the same view in terms of job opportunities and economic improvement. My view is that should the project go ahead, jobs will be created and the economy of Kouga will improve. This is in line with one of the five key focus areas of the African National Congress (ANC) in its manifesto. But I am concerned with the estimated percentage of the local labour force that will be employed, only 25%. This doesn't deal with the crisis of unemployment here at the moment. Is this figure cast in stone?</p> | <p>The recommendation of 25% local labour is a minimum but hopefully more than that would be achieved.</p> <p>25% is what Eskom would specify as a minimum in contracts. Sometimes it would be 50% and other times 10%, depending on the type of contract. However, there will be many other opportunities outside of the 7 700 created e.g. support services, food, and laundry etc.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---------------------|---|--|
| | | | <p>Migration of people from other areas to Kouga is natural and we can't change it. The present population is about 100 000 and 7 700 jobs are to be created. In Cape Town, most people residing there are those who have moved there from the Eastern Cape looking for greener pastures. The same in Gauteng and many have gone there from the Eastern Cape. I recommend that Eskom urgently start compiling a database of local people here but should not cut off those who are migrating in.</p> <p>In past presentations it was shown that a high volume of vehicles will be using our roads. We agree that the present infrastructure is not sufficient and it is out of the question for vehicles to use the main road of Humansdorp or Saffrey Street. We are happy to hear that alternatives will be considered. Why don't you consider developing a road from the N2, an alternative road, which then joins into the road to Oyster Bay? Through this Eskom could create jobs through the construction of roads.</p> <p>I don't want to use this as a political platform, but earlier on a doctor made political statements which undermined a political organisation. We don't want to hear about the ANC or ANCYL which has</p> | <p>Any roads used by Eskom would have to be upgraded and Eskom would have to maintain the roads. The suggestion of a link between the N2 and the Oyster Bay road will be taken to the transportation specialist for consideration.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|---|--|
| | | | nothing to do with the project. We are here to hear about Thyspunt. | |
| 10 | | Dries du Preez Interested and Affected Party | The 7 700 jobs is only a small part of the improvements that would come to Thyspunt. If you consider the growth to supporting industries, it could probably create a further 10 000, 20 000 or 50 000 jobs. | Thank you, your comment is noted. |
| 11 | | Godfrey Africa Interested and Affected Party | <p>What resource planning has Eskom done? It is a 9-year construction project, and we are a few years away from starting, so we should be able to identify enough young kids in grade 11 or 12 in the area that could be trained up to be engineers or artisans so that by the time the project starts, we have local technical skills available. This could increase the minimum of 25% to a better number.</p> <p>To what extent will Eskom be able to influence BBEE and local employment in the tenders? To what extent will you be able to ensure that the process doesn't end up with only friends of friends benefiting. What safety mechanisms are there to ensure this doesn't happen?</p> | <p>Not much resource planning has been done yet, but as soon as there is more certainty regarding the chosen site, Eskom will need to start doing that soon. In terms of identifying local young people for education, Jongi Dyabaza and representatives from Eskom Development Foundation, has been going to schools closest to the site. Eskom has not started considering bursaries yet but will be getting the training manager to start on this soon.</p> <p>Eskom has strong policies regarding local content. When Eskom started negotiating for nuclear units three years ago (which subsequently stopped because of the financial crisis), there were very strict clauses for local training, employment, etc. Eskom is presently driving this Thyspunt process, but it will eventually become a government lead process, and they will require local content. Dave West, who is here at this meeting, is from Eskom's Audit and Forensic Department and because of the significance of this project; the whole process is being audited by an external auditor. On every contract we require an external audit number to confirm it is</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--------------------------------------|--|--|
| | | | | <p>fair.</p> <p>Eskom's Chief Executive is very strict on this. He and a number of Eskom staff went on a business trip to China. When they were presented with expensive watches by their hosts as gifts, he cancelled the trip and brought everyone back.</p> |
| 12 | | Eugene Goliath Kouga Municipality | <p>How is Eskom planning to develop local skills before the plant is developed? I am actually supporting the development, but will the Kouga people become the future gardeners and sweepers at the plant? What is Eskom doing to develop skills in this area's schools? Eskom is not presently developing skilled artisan here. All the people here leave to be trained in other areas. Eskom should build a training college here so that we have trained locals ready by 2013 or 2015 approximately. Of the 25% that will be local workers, at least 75-80% of those should be skilled workforce.</p> <p>When will your planning start? You said Jonghi went looking at schools this week. This won't help much. You need to look at building a school. Eskom should do an Oprah Winfrey on us in this area.</p> <p>Maybe look at building a school where extra lessons in Maths and Science can be given by those who are already doing it in this area, like Mr Sammy Jantjies.</p> | <p>Eskom is continuously investing in its people for training in all aspects of its operations. The locals are favourably considered for opportunities that Eskom presents.</p> <p>Mr. David Nicholls runs the engineering department of Eskom's nuclear group. The nuclear engineering manager at the Koeberg Nuclear Power Station is Mr Cedric Davis, a coloured man from Cape Town. The head of standards is a coloured man from Cape Town. In general, about 70% of Eskom's members of staff are PDI individuals. All of his senior managers are PDIs, one of whom was sent to the United States for three years to get a PhD. Eskom is very keen to develop people.</p> <p>Agreed. Regarding sustainability, this project will last for 80 - 90 years and it is unlikely that once established that Eskom will ever stop using it. This project will still be going when we are all gone.</p> <p>At Medupi, there was a long construction period and plenty of opportunity to train people, but what is more important is when operations start. When Eskom started construction they appointed people from the local community, all locals,</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|--|---|
| | | | <p>The top technicians in this area are not from this area, they came here for the jobs. We want someone from this area, working on the project. This project gets my vote. One of the municipal CFOs in the Western Cape comes from this area. You said you have some people from Cape Town, at Koeberg. Similarly we would like to have people from this area, for this project. Local sustainability and development is needed.</p> | <p>and they will be operating and maintaining the Medupi plant once operational. All are from the local community.</p> |
| 13 | | Unidentified Interested and Affected Party | <p>I also support transformation and empowerment but we must remember that this is not a Kouga thing, it is a South African need. When we say local we mean local South Africa, not Zimbabwe, or Namibia etc.</p> | <p>Thank you, your comment is noted.</p> |
| 14 | | Chris Barrett Thyspunt Alliance and St Francis Kromme Trust | <p>Education and the future of the country are paramount. How many hundreds of millions of Rands have you spent on land here, and how much are you planning to invest in developing people?</p> <p>I'll leave it as the question was asked and unanswered. I asked about local training figures, not national figures. I asked for the amount spent on land as well.</p> | <p>Nationally, Eskom has taken on board about 4 000 learners, and has issued many bursaries. Eskom will be putting in place enough resources in this area to support the local requirements of the power station, and they have been very committed to people development in recent years.</p> <p>Eskom owns most of the land around the site and negotiations with owners of adjacent properties are at an advanced stage for Land Acquisitions. As soon as the deals on the properties are concluded the transactions will be disclosed with the deeds offices.</p> <p>Eskom is continuously investing in its people for training in all aspects of its operations. The locals are favourably considered for opportunities that Eskom presents.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|---|--|
| | | | | <p>In terms of the 2010 Eskom Annual Report. In 2010, a total of 5 255 bursaries were in the Eskom pipeline, corporate social investment was R 58 million, and the amount spent on training was R758 million.</p> |
| 15 | | <p>Vernon Adams Humansdorp Community Representative</p> | <p>Need to know if the same thing that happened in Japan will happen here. People are spreading rumours in the community that the same thing will happen.</p> <p>What do we want? If there is no job creation in RSA, it's a problem. The opportunities are here for jobs. Let us stop arguing, and grab the opportunity. We have done a great job, and I don't feel that we will have a Japan incident here.</p> | <p>The Japanese reactor accident happened for two reasons: the height of the plant above sea level and the height of the tsunami. The plant was basically flooded. The present plan is to build Thyspunt about 15 m or higher above sea level, which is higher than the Koeberg plant which is at 8 m. South Africa doesn't have tsunamis, but Eskom has modelled them for the power station. It should be noted that if the tsunami that hit Japan were to hit Koeberg, it would damage and maybe even destroy it, but it would not lead to a radioactive release. Koeberg was designed to a higher level of tsunami than the Japanese station. It is interesting that Japan is on the ring of fire, and still they designed to a lower standard than we did here in the 1970s. We have no fears over tsunami issues.</p> |
| 16 | | <p>Godfrey Africa Interested and Affected Party</p> | <p>Has Eskom had records of accidents at the Koeberg Nuclear Power Station? Safety is vital. Is Eskom communicating these statistics to the public?</p> | <p>The Koeberg Nuclear Power Station has had no incidents that have shown any health effects on the public. Eskom does measure how much radiation is released from the station during normal operation and they publish this data in their Annual Reports. The international standard for exposure to the public is 1 000 micro Sieverts (μSv) per year. Eskom's maximum limit imposed by the NNR¹ is one quarter of that, 250 μSv. The level in Eskom's last annual report is about 5 μSv. The lowest point, at which measurable health effects can be seen is 100 000 μSv.</p> |

¹ National Nuclear Regulator

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|---|---|
| | | | <p>To what extent has Eskom engaged the councillors and local municipalities in terms of their Integrated Development Planning for this project? How ready is the municipality to embrace this project from that point of view? What communications have been had regarding the infrastructure needs?</p> <p>This is not a political project. It is about our country and community, and people should not come here to score political points.</p> | <p>Eskom does need to engage local authorities. This is only the first authorisation that Eskom needs, and Eskom doesn't have certainty yet that it would get the Thyspunt site. It is GIBB's recommendation that the DEA should consider authorising the Thyspunt site, but it is not certain yet. Eskom are therefore not in a position to start that communication and planning yet. They will commence once the site allocation is certain.</p> <p>Thank you, your comment is noted.</p> |
| 17 | | Chris Barrett Thyspunt Alliance and St Francis Kromme Trust | <p>We have heard that various studies will be redone including the transport study, which will probably impact on the economic and cultural studies also. I have heard there will be a period of public review, presumably 45 days after their release. Is that correct? Will this apply to at least transport, economic, cultural, heritage and marine/oceanographic reports, all of which are being looked at?</p> | <p>The following reports have been revised and compiled and will be made available for public comment and review as part of the Revised Draft EIR Version 2:</p> <ul style="list-style-type: none"> • Marine Impact Assessment; • Transportation Specialist Report; • Heritage Impact Assessment; • Addendum to the Dune Geomorphology Report; • Emergency Response Report; • Geohydrology Report; and • Assessment of the Western Access Roads to the Thyspunt site. <p>The Economic Impacts Assessment is not being revised.</p> <p>All registered I&APs of any future developments in terms of the revision of specialist reports and associated review period.</p> |

5 August 2015



Our Ref: J27035 / J31314

The South African Squid Management Industrial Association (S.A.S.M.I.A)
PO Box X13130
Suite 196
Humewood
6013

Email: gregchristy@intekom.co.za

Cape Town

14 Kloof Street
Cape Town 8001
PO Box 3965
Cape Town 8000

Tel: +27 21 469 9100
Fax: +27 21 424 5571
Web: www.gibb.co.za

Dear Mr Christy

RESPONSE TO MR CHRISTY – S.A.S.M.I.A

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

We as SASMIA and our advisors are a little confused regarding the situation relating to our proposed submissions on Draft 2.

Comment 1:

It has become apparent at the meeting of Arcus GIBB, authors of the Ecology Report, and the Squid Working Group, that there are some obvious shortcomings and that the report would have to be redrafted in order to take into consideration new information and approaches which was presented at the meeting.

The agreed way forward from the meeting was that there would be another meeting after which the Squid Working Group would give further comment.

Response 1:

A second meeting was held by the Department of Agriculture, Forestry and Fisheries Squid Working Group (with SASMIA, GIBB, the Marine Specialists and Eskom as observers) to discuss the Revised Draft EIR and its marine specialist report on Friday, 08 July 2011.

Comment 2:

The question which arises is whether we need to base our comments on this report which is still under refinement? If so, then we will be commenting on a document which has been shown to be incomplete and inadequate. Please can you give guidance on this?

Response 2:

As discussed during the second Squid Working Group Meeting (referred to in Response 1 above) SASMIA and the Squid Working Group are requested to forward comments on the Revised Draft EIR



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.



and its specialist reports by close of the comment period on 07 August 2011. After the comment period has closed GIBB will determine which specialist reports will be revised and whether they will be placed in the public domain for comment. Mr Greg Christy, a member of Thyspunt Alliance, was present at both meetings. It was agreed at the meeting that the discussion would be regarded as informal and the written submission would be the final and formal response from the members of the Working Group. However Mr Christy would be in a position to share with the Thyspunt Alliance the outcomes of the discussion. Arcus GIBB would prefer at this point not to preempt the outcomes of the formal submission.

Comment 3:

It was also suggested, at the Squid Working Group, that we conclude the methodology as to how one would calculate the effects on the squid catches if the Nuclear-1 is constructed.

This was suggested by Doug Butterworth that it be set down in the relevant sections in the EIA.

Response 3:

Thank you. Your comment is noted and the issue was discussed at both the Squid Working Group Meetings. Some refinement of the methodology has been proposed and some new data has been provided by departments represented on the Squid Working Group, including the squid industry representative Mr Christy. However whether this data will result in any significant change to the outcomes of the current report still needs to be determined.

Comment 4:

Flowing out of all of these meetings, we as SASMIA would like to request a Key Focus Group meeting with the Economic Specialist, as we need to be enlightened about all aspects of this report pertaining to the impacts of Nuclear-1, on the Economic conclusions drawn on the squid sector and the relevant cost comparatives between the 3 sites.

Response 4:

Once GIBB have received all comments on the Revised Marine Report pertaining the potential impacts of the proposed Nuclear Power Station on squid we will determine whether any additional Key Focus Group Meetings are required as part of the EIA process and communicate this decision to SASMIA. There was an economist present at the Squid Working Group whom we anticipate will also provide input into the Working Group's submission. If there are new questions which SASMIA wish to raise with respect to the economic specialist report please submit them with your other comments by the 7 August 2011.

Yours faithfully
for GIBB (Pty) Ltd



Nuclear-1 Project Team

5 August 2015

Our Ref: J27035 / J31314
Your Ref: Email dated 04 July 2011

Thyspunt Alliance
St Francis Kromme Trust

Emails:
krommetrust@barratt.co.za
dolphin@intekom.co.za

Dear Mr Barratt



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)

An extension of time is required for corrections to the minutes bearing the following in mind:

Comment 1:

It took on average about three weeks to produce the minutes (despite the promise of 1 week and the use of professional staff and modern technology).

Response 1:

Thank you, your comment is noted.. Every effort was made by the Nuclear-1 EIA and Public Participation team to compile the minutes as efficiently as possible however the lengthy nature of the meetings and comments made during the meetings necessitated a longer than anticipated time needed to not only compile the minutes from the audio recordings but also review the minutes, ensure accuracy as far as possible, update the I&AP database and compile attendance registers.

Comment 2:

Minutes of the first Sea Vista meeting have not as yet been produced.

Response 2:

Minutes of the Sea Vista Meeting and attendance register were circulated to meeting attendees on Friday, 24 June 2011 and were resent to yourself as per the correspondence from the GIBB Nuclear-1 Public Participation office sent on 06 July 2011.

Comment 3:

There is no attendance register for the second Sea Vista meeting.



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.



Response 3:

Kindly refer to response 2 above.

Comment 4:

The audio recording of the first Sea Vista meeting and the Humansdorp meeting have not been received.

Response 4:

Your comment is noted however this request was only received on 04 July 2011. A DVD with the audio recordings will be sent to yourself as requested and as per the correspondence from the GIBB Nuclear-1 Public Participation office sent on 06 July 2011.

Comment 5:

I&APs are currently fully involved in reviewing work that took your specialists a vast number of months to complete.

Response 5:

Your comments are noted. However please note that although there was an approximate one year interval between the release of the Draft EIR and the Revised Draft EIR Version 1 the Nuclear-1 specialist team was not permanently occupied in terms of the revision of the specialist reports. Much of this time was occupied by correspondence with I&APs and Key Stakeholders as well as the incorporation of substantive information into the main EIA report.

Comment 6:

We would suggest that the minimum extension should be the 28th August as this allows the I&APs a similar time to that taken by your organisation to prepare the minutes (i.e. after the revised review period closes).

Response 6:

We acknowledge your request. The comment period was extended by 45 days and an additional extension of this period was not considered.

Comment 7:

You noted that a further comment period of 45 days would be available for various specialist reports (including transport, economic, cultural, heritage & marine/oceanographic).

Please advise which others reports will be altered.

(This is requested on behalf of The Thyspunt Alliance & St Francis Kromme Trust. Please respond to krommetrust@barratt.co.za and dolphin@intekom.co.za)

Response 7:

The following reports have, to date, been revised and compiled, and will be made available for public comment and review as part of the Revised Draft EIR Version 2:

- Marine Impact Assessment;
- Transportation Specialist Report;
- Heritage Impact Assessment;
- Addendum to the Dune Geomorphology Report;
- Emergency Response Report;
- Geohydrology Report; and
- Assessment of the Western Access Roads to the Thyspunt site.

The Economic Impacts Assessment is not being revised.

All registered I&APs will be advised of any future developments in terms of the revision of specialist reports and associated review period.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, appearing to be a stylized 'S' or 'G' followed by a horizontal line.

The Nuclear-1 EIA Team

5 August 2015



Our Ref: J27035 / J31314
Your Ref: Email dated 07 July 2011

Marylou and Bruce Botha
PO Box 883
Knysna
6570

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

Dear Mr and Mrs Botha

RESPONSE TO MR AND MRS BOTHA – INTERESTED AND AFFECTED PARTY

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

Comment 1:

As an interested and affected party, herewith my comments on the above mentioned proposal: I do not believe that the health and well being of the planet's citizens and future citizens is under consideration when nuclear energy is being proposed. The evidence of this attitude is everywhere. You just need to look out the window (or in the cancer wards at hospitals).

Response 1:

Thank you for your comment. The Human Health Risk Assessment (HHRA) Report (Appendix E24 of the Revised Draft EIR) considered the impact of the proposed Nuclear Power Station on the human health. The study has a qualitative interpretation in terms of assessing the health risk and uses a dose assessment approach. The assessment of dose to the public takes into account all possible pathways, including through air/atmospheric emissions at different intervals (both for normal operating conditions and accidental conditions). Dose limits are there to ensure protection to the members of the public. Furthermore, exposures must be as low as reasonably achievable (ALARA), as has been explained in the HHRA. The nuclear industry is well regulated to ensure that systems are in place to ensure safe operations of the facility without risk to the public and the environment taking into account lessons learned from past historic incidents and accidents (including Chernobyl and Three Mile Island). The fact that there is a known risk to deleterious effects of ionising radiation does not mean that the health outcome will in fact manifest at the exposure levels near a nuclear power plant. The risk is based on the amount of radiation dose one will receive within a certain period of time and how this risk increases with the amount of radiation dose. The risk becomes significant only at exposure above a certain level of exposure. For exposures in the *de minimus* range this risk would be trivial. Hiroshima and Nagasaki was used as an example to illustrate the risk of hereditary effects associated with ionising radiation. Regulatory dose limits are based on many studies and the dose of 100 mSv is more than 2 orders of magnitude higher than what would be the case at the nuclear power station under the requirement for ALARA.



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.



This approach is in line with the regulatory requirements as set out by the National Nuclear Regulator on safety standards and regulatory practices (R388) which is based on the accepted international system of radiation protection to ensure that public and the environment are not at risk from the effects of ionising radiation. Regulatory limits set by the National Nuclear Regulator are in line with recommendations from the International Commission of Radiological Protection (ICRP). The ICRP is an advisory body that offers its recommendations to regulators and advisory agencies, mainly by providing guidance on the fundamental principles on which radiological protection can be based. Virtually, all international standards and national regulations addressing radiological protection are based on the commission's recommendations. This includes international basic safety standards (from the International Atomic Energy Agency (IAEA)) and various labour conventions. The system takes into account biological information and trends in the setting of radiation safety standards. The recommendations made by the ICRP are based on scientific knowledge and expert judgement also balancing societal and economic aspects. The commission uses information from various sources such as epidemiological studies, experimental studies to estimate risks associated with external and internal exposure to radiation and provides risks estimates at the low dose of interest in radiological protection.

Lastly, the National Nuclear Regulator will not grant a Nuclear Installation Licence (based on NNR act (act 47 of 1999) if the applicant can not demonstrate that the risk to the public remains as low as reasonably achievable. Such analysis is performed through the licensing process with the National Nuclear Regulator details of which are contained in the Site Safety Report (SSR) and Safety Analysis Report (SAR), respectively) which will form part of the NNR licensing process which includes a public participation process. The HHRA specialist report is based on these principles, that no plant will be build on the site unless it can be demonstrated that it will comply with the limits as set out by the NNR. Should the cumulative impact exceed the regulatory limit, a license shall not be granted by the regulator.

COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:

Epidemiological studies do indicate a statistical link between high level radiation exposure and the risk of excess "cancers" within a study population. Indeed the ongoing studies of survivors of the second world war Japanese atomic weapons continue to inform the basis of radiation protection risk factors and associated exposure limits based on the assumption of the existence of "the linear no threshold" relationship between exposure and risk. However at low exposures associated with occupational and environmental exposure to sources originating from man-made radioactivity this relationship is unproven and remains the subject of intense scientific debate and in particular no direct causality between specific elements such as caesium or their isotopes has been established. However the Radiation Protection community continues to adopt a conservative approach in assuming the linear no threshold model applies in these situations. There have been a number of epidemiological studies undertaken around various industrial facilities including for example studies undertaken around nuclear fuel reprocessing sites which historically had enhanced Cs discharges and also around non-nuclear facilities and which have in some instances indicated statistical "clusters" of excess "cancers" however in general the results and causality remain inconclusive and various theories have been proposed including those relating to the migratory nature of the workforce and genetic interaction with other non-radiological environmental stressors.

Comment 2:

I do not have any faith in any human beings to control nuclear energy. The Japanese have poisoned their environment and their people- and they are supposed to be an efficient and techno savvy nation.

Response 2:

It is acknowledged that the incident at Fukushima, as a result of a natural disaster, has highlighted many important safety factors in terms of the future of nuclear energy. The following from 18 Jan 2012 (NucNet) News reported; "About 30 workers at the Fukushima-Daiichi nuclear power plant in Japan received between 100 millisieverts (mSv) and 250 mSv of radiation exposure, which would have increased their chances of cancer by about one percent to 2.5 percent, a parliamentary committee in the UK was told. Her Majesty's chief inspector of nuclear installations, Mike Weightman, told the House of Commons Energy and Climate Change Committee that in terms of the workers, "there don't appear to be any acute radiation effects".

He said 30 of them have had "a significant dose", but it is not in the sense of an immediate life-threatening dose. In a declared nuclear emergency, the recommended limit is 100 mSv. The International Commission on Radiation Protection is mandated to sanction a maximum accumulated dose of 250 mSv in extraordinary circumstances. Mr Weightman said public evacuation was well-organised and exposure countermeasures for the public have been "effective so far", and there will be a longer-term health monitoring programme."

Nuclear safety risks will be considered in the National Nuclear Regulator's licensing process. Please refer in this regard to the Co-operative Governance Agreement included in Appendix B4 of the Revised Draft EIR.

Comment 3:

Supplying citizens with nuclear energy will not encourage our innate human ability to solve problems and find a cleaner better way to live. Too many fat cats get richer while ruining future generations' quality of life. The millions that have already been spent on this insane proposal could have been put to much better use. Please ditch the idea completely.

Response 3:

Thank you, your comment is noted..

Comment 4:

I have read and follow Dr Helen Caldicott's views on nuclear energy, how it pollutes the environment right from the mining of plutonium stage through to waste disposal. We have read as many articles as we can bear to read, and they are all terrifying. No comments on the details of the above mentioned proposal because the entire concept is flawed.

This is a link to the kind of article that we read:

<http://www.nuclearfreeplanet.org/articles/nuclear-witnesses-insiders-speak-out-john-w-gofman-medical-physicist.html>

"My particular combination of scientific credentials is very handy in the nuclear controversies, but advanced degrees confer no special expertise in either common sense or morality. That's why many laymen are better qualified to judge nuclear power than are the so-called experts."

"People like me and a lot of the atomic energy scientists in the late fifties deserve Nuremberg trials. At Nuremberg we said those who participate in human experimentation are committing a crime. Scientists like myself who said in 1957, "Maybe Linus Pauling is right about radiation causing cancer, but we don't really know, and therefore we shouldn't stop progress," were saying in essence that it's all right to experiment. Since we don't know, let's go ahead. So we were experimenting on humans, weren't we? But once you know that your nuclear power plants are going to release radioactivity and kill a certain number of people, you are no longer committing the crime of experimentation--you are committing a higher crime. Scientists who support these nuclear plants--*knowing* the effects of radiation--don't deserve trials for experimentation; they deserve trials for murder. . . ."

"Licensing a nuclear power plant is in my view, licensing random premeditated murder. First of all, when you license a plant, you know what you're doing--so it's premeditated. You can't say, "I didn't know." Second, the evidence on radiation-producing cancer is beyond doubt. I've worked fifteen years on it [as of 1982], and so have many others. It is not a question any more: radiation produces cancer, and the evidence is good all the way down to the lowest doses.""

Response 4:

Your comment is noted and we appreciate the submission of the article. The status quo at each of the site alternatives as well as the impacts of the proposed construction and operation of a Nuclear Power Station on the social, economic and biophysical environment has been fully assessed. The assessment of nuclear safety risks will be considered in the National Nuclear Regulator's licensing process. Please refer in this regard to the Co-operative Governance Agreement included in Appendix B4 of the Revised Draft EIR.

Comment 5:

We hope that the decision makers realise the incredible burden of responsibility they are taking on. Please deny this proposal.

Response 5:

Thank you, your comment is noted..

Yours faithfully
for GIBB (Pty) Ltd



The Nuclear-1 EIA Team

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|---|--|
| 1 | | Bill Trollip Interested and Affected Party | <p>Until such time as the authorities choose what type of reactor is going to be installed, this whole assessment is a waste of time.</p> <p>For the simple reason that there are American, Japanese, Chinese, Korean, Russian and French reactors and each and everyone of them will have a different approach to the way they want it built. For example to bury it or not and the exact location. Surely a decision in this regard would be firstly required. Furthermore, where we are going to get the equipment from and what would the vendor's input be into the situation.</p> | <p>Unfortunately, one does not usually have the detailed plan and design of a proposed development when undertaking an Environmental Impact Assessment. The methodology that was used was that a consistent dataset was compiled by Eskom based on all pressurised water reactor plant types available internationally by various vendors.</p> <p>This is a conservative set of criteria that encompasses all the aspects of a nuclear power plant that potentially impacts the environment. If the proposed plant is authorised these criteria would be mandatory for potential vendors.</p> |
| 2 | | Nick Bormann (Oyster Bay resident) | <p>The main concern for the people of Oyster Bay is the westerly access road that stretches between the Oyster Bay Community Hall and Umzamuwethu.</p> <p>Therefore, I think that the main concern is the noise. Especially, if you are talking about 600 plus vehicles, trucks and busses proposed to travel on this road. Why can we not look at the blue route as an alternative seeing that the noise factor is such a great concern for the residents of Oysterbay?</p> | <p>It was previously mentioned that the Oyster Bay mobile dune system is regarded by the biophysical specialists as very sensitive. For this reason GIBB has recommended that further impact on the dune system should be avoided. For similar reasons the proposed northern access road was found not to be acceptable.</p> <p>The Transport Assessment Report was substantively amended and the feasibility of the western access road was re-assessed. The revised report recommends that a combination of both Oyster Bay Road (Route 1 to western access) and R330 (Route 2 to eastern access) be used for transportation during the construction phase, which will improve the impact on traffic congestion, noise and safety to low / medium. The construction vehicles (normal heavy loads) will utilise only the upgraded Oyster Bay Road</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|---|---|
| | | | | <p>(DR1763 - western access) to minimise the impact of construction traffic on the existing network and the infrequent abnormal loads will utilise the R330 (MR381) during the night time. Several bypasses have been recommended for construction traffic to avoid using the Humansdorp Main Street travelling between the N2 and the Oyster Bay Road, as well as to avoid the Humansdorp Main Street to travel between Voortrekker Road (R102) and the R330.</p> <p>A Noise Impact Assessment was completed as part of the Environmental Impact Assessment and looking specifically to the noise adjacent to Umzamuwethu. The Noise Specialist came to the conclusion that the most significant source of noise would come from the Open Cycle Gas Turbine¹ plant that would operate at erratic intervals, from the high voltage yard situated north of the dune system. The noise would have to be mitigated to avoid undesirable noise impacts to residents of areas like Umzamuwethu.</p> |
| 3 | | Jaco Marks Interested and Affected Party | Why can the blue road access route not be connected midway with the purple route. If you connect these two roads then you would miss all the sensitive dunes. | <p>The dunes that would need to be traversed are hardened calcareous dune ridges and valley slacks and although the dunes look like degraded veldt they are fairly sensitive in terms of vegetation communities. This fact has been highlighted by the Flora Specialist. When there is sensitive vegetation communities there are likely to be vertebrate and invertebrates as well.</p> <p>The specialists did not look at the mentioned crossing of the Oyster Bay Headland Bypass Dunes specifically. However, this crossing is unlikely to be feasible when one takes in</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|------------------------|---|--|
| | | | <p>Currently the road is not being maintained by the local government and the impact on the road will probably increase three hundred times. Thus the question is who is going to maintain the road? The road is not maintained by the government and the question remains who is going to keep the road in good condition.</p> | <p>consideration the Biophysical Specialists views. This would need to be investigated further.</p> <p>The Transport Assessment Report was substantively amended and the feasibility of the western access road was re-assessed. The revised report recommends that a combination of both Oyster Bay Road (Route 1 to western access) and R330 (Route 2 to eastern access) be used for transportation during the construction phase, which will improve the impact on traffic congestion, noise and safety to low / medium. The construction vehicles (normal heavy loads) will utilise only the upgraded Oyster Bay Road (DR1763 - western access) to minimise the impact of construction traffic on the existing network and the infrequent abnormal loads will utilise the R330 (MR381) during the night time. Several bypasses have been recommended for construction traffic to avoid using the Humansdorp Main Street travelling between the N2 and the Oyster Bay Road, as well as to avoid the Humansdorp Main Street to travel between Voortrekker Road (R102) and the R330.</p> <p>It is built in the EIA that the Applicant (i.e. Eskom) would need to maintain the road in the condition it is found before the commencement of construction.</p> <p>The road is currently not in a good condition and thus it is not feasible for Eskom to use the road in its current condition. It is noted in the Environmental Impact Report (EIR) that Eskom would need to bring the road up to feasible standard. During the first nine years of the construction</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|---|---|
| | | | | <p>period Eskom would be completely responsible for the maintenance of the access roads to the site.</p> |
| 4 | | <p>Johan Strydom (Oyster Bay resident)</p> | <p>This question is for Eskom. If the blue road access route is no longer being considered, why was Eskom still buying farmland on this route, as late as 2010?</p> | <p>One of the key recommendations to Eskom in the Revised Draft EIR version 1 is that they are required to acquire extra land to ensure that areas such as wetlands (which are currently degraded) can be rehabilitated and conserved. Eskom is in the process of buying additional properties at their own risk, knowing full well that the Thyspunt site may not be authorised. Particular parcels of land and wetlands have been identified for acquisition and conservation.</p> |
| 5 | | <p>Jonathan Biko (Umzamuwethu resident)</p> | <p>I heard about the discussions, assessments, the roads and what was already done. Also, I heard about the number of employees that will be on site.</p> <p>Is Eskom going to develop the people of the disadvantaged communities that are sitting right on the doorstep of this proposed nuclear power station?</p> <p>I have seen on the TV news about what is happening in Medupi. What is Eskom going to do to avoid what happened in Medupi, at the proposed nuclear power station?</p> <p>Eskom is employing people from other areas that are not living close to the project because the local community are unskilled, un-educated and suitable for skilled jobs. What is Eskom going to do to alleviate this problem?</p> | <p>The recommendation of the EIA is that 25% of all employment needs to go to local people. Furthermore, one needs to bear in mind that the 7 700 figure that was mentioned, is only applicable to employment for the peak years of construction. Highly skilled jobs would have to be recruited from outside. However, unskilled labour would be employed locally.</p> <p>In terms of the Medupi Power Station project there was a strike in June 2011 for several days. The strike was mostly about foreign welders that were brought in from Thailand. There is a general shortage of welders in South Africa therefore welders from others countries are recruited on large construction projects. Eskom has established a process to train specialist welders over the next few years. Many local people were trained during the construction of the Medupi Power Station. People are given general training during the construction phase and others who have Matric or have completed school are trained in positions as operators at the plants. Therefore when operations commence these people are already trained. The idea is to try to train local</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|--|--|
| | | | <p>What is happening to avoid employing people from far away and not employing people from close by?</p> <p>As black people we are just taken as workaholics or wheelbarrow labour but lucrative tenders are given to white people whose been opposing this proposed nuclear plant. However, now that they (white people) realise that the nuclear plant is coming to us, Eskom is offering the tenders to them. The white people then go to the townships to gather people for the job.</p> <p>The request is that they must also be considered when Eskom requirements are not for highly skilled people.</p> <p>An example is that tenders are given to currently to white people on site even though the requirements are not for such highly skilled people but not given to them because they are black. Tenders are only given to white people.</p> | <p>people to operate the power station. Eskom's intention with the new nuclear station is similar.</p> <p>Eskom is very serious about ensuring that local, previously disadvantaged communities do get opportunities. The tenders referred to in the meeting are related to land management and removal of invasive plants. Eskom has to follow the commercial processes, this requires that people are registered on the Eskom data base so that when the tender goes out they can be part of the tender process. Eskom has had meetings with local Business Forums and hope that they will assist in identifying people and companies that can register on the Eskom database.</p> |
| 6 | | Sini (Surname unidentified) (Umzamuwethu resident) | Tired of the political twist and turns. | Your comment is noted. |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|--|--|--|
| 7 | | Unidentified I&AP (Oyster Bay resident) | I attended one of the EIA meetings last year in March and made a comment that was not minuted. In my opinion, if I had the time to follow-up and was paid what I believe I am worth then I would have challenged the case and tried to rectify the matter. The reason I am standing up today is that there is definitely a bit of a political twist to these things invariably. However, the government has done an enormous amount to enable people to receive training. | The meeting held in Oyster Bay on 08 July 2011 was called to discuss and debate the Revised Environmental Impact Report version 1 and issues beyond this will not be debated. |
| 8 | | Mizandi (Surname unidentified) (Umzamuwethu resident) | <p>I am very disappointed because Eskom is taking so long to get started and the people from Umzamuwethu are looking forward to the proposed development.</p> <p>What is Eskom's responsibility in terms of monitoring victimisation of the workers? What is going on?</p> <p>Eskom is already in bed with some popular public person as they are working on the tender already.</p> <p>I also heard about the training that Eskom is going to provide. We need the date when the scheduled training will commence.</p> <p>The majority of people need the development and Eskom should keep this in mind.</p> | <p>Eskom does not know when the Government would approve the proposed Nuclear-1, and indeed if they would approve it. The appointed Vendor would undergo the standard tender procurement process and would be responsible for the development of local skills.</p> <p>Eskom is currently not engaging in any tendering processes. This will only be done once the project is approved by the authorities. Once the project is approved Eskom and its contractors will be responsible to put in place training programmes which will develop basic skills and enable locals to participate. Eskom has ongoing programmes to develop learners. Engineers and learner technicians are a specific focus. Eskom can be contacted for more information. 0118008111</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|---|---|
| 9 | | Joseph Williams Interested and Affected Party | I refer to the access road indicated with the pink line that cuts through Umzamuwethu and Oyster Bay. People move across this road. Also, people work in Oyster Bay and live in Umzamuwethu. People from Umzamuwethu also go to the beach in Oyster Bay. What are the safety standards that will be in position when the road is actually in use? | There is definitely a concern for pedestrians crossing the access roads, especially around the Humansdorp, Sea Vista and Umzamuwethu areas. Therefore, traffic specialists recommended either an overpass or underpass be used in these situations. Hundreds of vehicles will be travelling on these roads and thus the overpass or underpass will be required to alleviate safety concerns. |
| 10 | | Zolani Maluni (Umzamuwethu resident) | <p>Is Thyspunt a suitable site for a nuclear power plant?</p> <p>Are you working hand in hand with the local municipality for any deals or community trustees?</p> <p>During that time of the elections many people were victimised at the site where they were cutting bushes.</p> <p>If the nuclear plant is sustainable on the Thyspunt site then it should happen sooner rather than later. We need to emphasise we are for nuclear but if beneficial to the community.</p> <p>Before the construction site commences the</p> | <p>Three sites (Thyspunt, Bantamklip and Dynefontein) were assessed and recommended as being the most suitable for Nuclear-1. The site selection process preceded the EIA in the form of the Nuclear Site Investigation Programme. Suitable alternative sites for the construction of a nuclear power station were independently researched in the 1980s.</p> <p>Eskom has engaged with the local authorities. This engagement would increase from now on and will become more concentrated as the certainty that this site will be authorised grows.</p> <p>Comment noted.</p> <p>Comment noted.</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|---|---|
| | | | <p>houses first need to be built and this is going to help us.</p> <p>Everybody is looking at Eskom and asking when are they going to do that.</p> <p>When is it going to happen?</p> | <p>There are several authorisations that are required prior to this site being confirmed as the first site for a nuclear power stations. The Department of Energy and Eskom are working together to determine the process to be followed. It is hoped that this process will enable the tender process for the main vendor to commence as soon as possible. October 2012: discussions are continuing but no specific timelines have been determined.</p> |
| 11 | | Nick Walman Interested and Affected Party | <p>Will the 6 km exclusion zone around the nuclear power station exclude other development? What happened to that? I know it was reduced to 1 km but since then it has sort of disappeared.</p> | <p>There were larger exclusion zones in the early Scoping Phase. The design of the nuclear power station has changed and the exclusion zone is now based on international recommendations. The smallest exclusion zone is 800 m and no private development is allowed within this. Secondly there is a zone of 3 km within which there will be restrictions on future development. The owner controlled zone of Eskom is within 2 km of the power station, but is not required by legislation and is governed by Eskom's internal policies.</p> |
| 12 | | Unidentified I&AP (Oyster Bay resident) | <p>The road will become a lot busier. Thus the question is what the impact will be on tourism in the area.</p> <p>Furthermore, is the nuclear power station specifically going to have an impact on the tourism in the area? If increase of vehicles on roads, what impact will this have on tourism?</p> | <p>The Tourism Impact Assessment formed part of the Economic Report (Appendix E17 for the Revised Draft EIR Version 1) and it was found that the highest potential negative impact on tourism could occur at the Thyspunt site. The impact on tourism has been quantified in bed nights and the negative or positive impacts of the proposed power station have been predicted during construction and operation. He added, however, that it has been the experience at other power stations such as the Medupi</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|--|--|
| | | | <p>What is the impact going to be on tourism if nuclear plant is built in this area?</p> | <p>Power Station that local business-based tourism can increase substantially as a result of the influx of Eskom employees and contractors.</p> |
| 13 | | <p>Ilse van Lingen (Resident of St. Francis Bay and DA Member of Parliament)</p> | <p>The International Atomic Energy Institute (IAEI) told them through the NNR in parliament that the safety zones are not being deviated from the 16 km, 30 km or 50 km zones. This is according to the European standard which is not approved by the IAEA. This is what the manufacturers reckon is safe because they want to pass or get their product sold. This is not correct and we are investigating the correct information through IAEA at the moment. We must not believe what we see here.</p> <p>We must not confuse emergency planning zones with international standards and land ownership. We must understand that it has got to do with exit and safety routes to get out in case of an emergency.</p> | <p>There are no international norms and standards on the exclusion zone. The European Utilities standards recommend the 800 m and 3 km zones, the NNR in parliament indicated that they would consider changes to the emergency zones. Each site is studied and the emergency planning zones are confirmed based on these studies. Eskom has assumed the EUR standards based on the safety of the technology proposed for the plant.</p> <p>Emergency Response studies were undertaken as part of the EIA process. The Emergency Response report forms Appendix E26 of the Revised Draft EIR Version 1. The studies found that it is feasible to develop and implement an emergency plan based on the EUR requirements; however, the proposed radii are still to be agreed with the National Nuclear Regulator based on technical arguments. This will further be confirmed once the design has been selected.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>Agreed the proposed arrangements are based on best practice however definitive situation can only be determined</p> |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|---|--|---|
| | | | | as part of the licensing application and process |
| 14 | | Philemon Mafikeng Interested and Affected Party | <p>Eskom said it has a skills development project. The question is why can you not develop the people's skills before the start of the power station?</p> <p>Last year the community asked Eskom if they can give to the primary school in Umzamuwethu. Please advise if this is still on track.</p> | <p>This is a very good suggestion, but Eskom is required to gain all the necessary approvals first before commencing with the construction of nuclear plant. This includes skills development.</p> <p>Eskom Development was asked to look at how to assist the Umzamuwethu school. GIBB cannot guarantee what Eskom Development Foundation will be able to contribute, but they have visited the site and submitted a proposal.</p> |
| 15 | | Joseph Williams Interested and Affected Party | Where is Umzamuwethu located in this control zone and will Umzamuwethu have space to grow as a community? | The largest control zone is 3 km. Oyster Bay is about 5 km from proposed nuclear plant. Thus Oyster Bay and Umzamuwethu fall outside the control zone. |
| 16 | | Unidentified I&AP (Umzamuwethu resident) | I was one of the people that went to the Koeberg Nuclear Power Station last year in September. I would prefer that Eskom and GIBB not confuse the community. They are saying 5.5 km and that Umzamuwethu is outside the zone. | There are different types of reactors. The Koeberg Nuclear Power Station was built in 1970s when nuclear reactors required larger emergency planning zones compared to today. The newer nuclear plant designs require much smaller emergency zones. |
| 17 | | Unidentified I&AP Interested and Affected Party | Where will the waste generated at the nuclear plant be taken? | There are three types of waste that require different forms of disposal. There is only one nuclear waste disposal site in the Northern Cape called Vaalputs Waste Disposal Site. Low and intermediate level waste would be transported to this site in special containers. A special license is also required for radioactive waste transport. The third type of waste is high level waste. It is managed under very controlled |

| NO | DATE | NAME & ORGANISATION | ISSUES / COMMENTS | RESPONSE |
|----|------|------------------------|-------------------|---|
| | | | | conditions and is kept on the site of the nuclear power station for the life time of the power station (i.e. 60 years). |

**PROPOSED ESKOM NUCLEAR POWER STATION
AND ASSOCIATED INFRASTRUCTURE**

ENVIRONMENTAL IMPACT ASSESSMENT (EIA: 12/12/20/944)

**COMMENTS ON
DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

(Volume 23 RDEIR IRR 12 July 2011 – St Francis Bay Minutes)

Issues have been received from the following stakeholders:

| No | Name | Organisation |
|-----------|---------------------|---|
| 1 | Christopher Barratt | Thyspunt Alliance and St Francis Kromme Trust |
| 2 | Hylton Thorpe | Thyspunt Alliance and St Francis Residence Association |
| 3 | Christopher Barratt | Thyspunt Alliance and St Francis Kromme Trust |
| 4 | Christopher Barratt | Thyspunt Alliance and St Francis Kromme Trust |
| 5 | Trudi Malan | Thyspunt Alliance and Cape St Francis Civics Representative |
| 6 | Trudi Malan | Thyspunt Alliance and Cape St Francis Civics Representative |
| 7 | Greg Christy | SASMIA |
| 8 | Hylton Thorpe | Thyspunt Alliance and St Francis Residence Association |
| 9 | Mike Kantey | Coalition Against Nuclear Energy |
| 10 | Hylton Thorpe | Thyspunt Alliance and St Francis Residence Association |
| 11 | Mike Kantey | Coalition Against Nuclear Energy |
| 12 | Christopher Barratt | Thyspunt Alliance and St Francis Kromme Trust |
| 13 | Riaana Tolan | Greenpeace Africa |
| 14 | Mike Kantey | Coalition Against Nuclear Energy |
| 15 | Riaana Tolan | Greenpeace Africa |
| 16 | Andre Fouche | Interested and Affected Party |
| 17 | Randall Arnolds | Interested and Affected Party |
| 18 | Peter Bosman | Interested and Affected Party |
| 19 | Dr Yvette Abrahams | Commissioner for Gender Equality |
| 20 | Dr Yvette Abrahams | Commissioner for Gender Equality |
| 21 | Dr Yvette Abrahams | Commissioner for Gender Equality |
| 22 | Un-Identified | Interested and Affected Party |
| 23 | Mike Kantey | Coalition Against Nuclear Energy |
| 24 | Christopher Barratt | Thyspunt Alliance and St Francis Kromme Trust |
| 25 | Trudi Malan | Thyspunt Alliance and Cape St Francis Civics Representative |
| 26 | Dr Jansen | Interested and Affected Party |
| 27 | Donna | Interested and Affected Party |

| | | |
|----|---------------------|---|
| 28 | Hylton Thorpe | Thyspunt Alliance and St Francis Residence Association |
| 29 | Andrea von Holdt | Coega Development Corporation – Environmental Manager |
| 30 | Bridget Elton | Interested and Affected Party |
| 31 | Christopher Barratt | Thyspunt Alliance and St Francis Kromme Trust |
| 32 | Graham Wilman | Interested and Affected Party |
| 33 | Un-Identified | Interested and Affected Party |
| 34 | Ian McKnee | Interested and Affected Party |
| 35 | Mr Kuleku | Bet Live |
| 36 | Mike Kantey | Coalition Against Nuclear Energy |
| 37 | Lynn Andrews | Squid Industry |
| 38 | Helmie Tilders | Member of Foster and affiliated to Thyspunt Alliance |
| 39 | Bridget Elton | Interested and Affected Party |
| 40 | Hylton Thorpe | Thyspunt Alliance and St Francis Residence Association |
| 41 | Riaana Tolan | Greenpeace Africa |
| 42 | Pixie Anderson | Interested and Affected Party |
| 43 | Trudi Malan | Thyspunt Alliance and Cape St Francis Civics Representative |
| 44 | Basil Webber | Interested and Affected Party |
| 45 | Greg Christy | SASMIA |
| 46 | Dr Yvette Abrahams | Commissioner for Gender Equality |
| 47 | Christopher Barratt | Thyspunt Alliance and St Francis Kromme Trust |
| 48 | Rudolf McDonald | Interested and Affected Party |
| 49 | Trudi Malan | Thyspunt Alliance and Cape St Francis Civics Representative |
| 50 | Kobus Reichert | Heritage Representative for the Gamtkwa Khoisan Council |
| 51 | Charles Lead | Interested and Affected Party |
| 52 | John Hammond | Pub Owner |
| 53 | Hylton Thorpe | Thyspunt Alliance and St Francis Residence Association |
| 54 | Bridget Elton | Interested and Affected Party |
| 55 | Elwin Malgas | Interested and Affected Party |
| 56 | Leanne Swanepoel | Interested and Affected Party |
| 57 | Greg Christy | SASMIA |
| 58 | Mike Kantey | Coalition Against Nuclear Energy |
| 59 | Trudi Malan | Thyspunt Alliance and Cape St Francis Civics Representative |
| 60 | Rene Royal | Enviro Consultant |
| 61 | Christopher Barratt | Thyspunt Alliance and St Francis Kromme Trust |
| 62 | Hylton Thorpe | Thyspunt Alliance and St Francis Residence Association |
| 63 | Mike Kantey | Coalition Against Nuclear Energy |
| 64 | Andre Fouche | Interested and Affected Party |
| 65 | Greg Christy | SASMIA |

| | | |
|----|-------------|---|
| 66 | Shaun Thyme | Interested and Affected Party |
| 67 | Trudi Malan | Thyspunt Alliance and Cape St Francis Civics Representative |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|--|
| 1 | | Chris Barrett Thyspunt Alliance and St. Francis Kromme Trust | I am not happy with the EIA process that has been conducted. There has been a lack of independence, which is a requirement of the NEMA (National Environmental Management Act). Items which have been put forward by I&APs have been ignored. The goal posts have changed over time. Every time we seem to have a different set of criteria that we are looking at. Items are added or subtracted. The whole process has changed. ACER Africa has been excluded. Why? | <p>Your comment is noted. GIBB believes that the EAP has been entirely independent, but due to the issues raised GIBB has written to the DEA regarding the matter. The first letter was submitted to the DEA on 20 June 2011, failing to receive a response a second letter was submitted on 29 November 2011. GIBB also met with the Chief Directorate of the DEA on 15 August 2012 to further discuss the matter.</p> <p>Please note that this EIA is the first EIA for a nuclear power station of this scale in South Africa and as such this EIA is constantly evolving to improve decision making and transparency throughout the process.</p> <p>It is assumed that when you are referring to 'a different set of criteria', that you are referring to the impact assessment methodology/ criteria followed. Subsequent to the RDEIR version 1 being available for public comment, the DEA requested the EAP to review the impact assessment methodology used in the Revised Draft Environmental Impact Report (Version 1), so as to simplify the criteria for assessment of significance and identification of a preferred site. In response, an approach has been developed that identifies and describes key decision-making issues contained in the individual specialist studies. These decision-making issues apply to both the acceptability of the proposed Nuclear Power Station as well as to the preferred site.</p> <p>One of the reasons that GIBB has taken over the public meeting phase of the public participation process is to ensure that minutes of the public meetings are completed timeously. GIBB endeavoured to get the minutes out as</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|--|---|
| | | | <p>We were only given two hours at the meeting in St Francis on 12 July 2011 to make comment on a document which is thousands of pages long. This equates to only about 15 seconds of comment time per person here tonight.</p> <p>We feel excluded. For example we asked for an extension in time. Why were other parties told three weeks ago that the extension has been granted, but not us? Surely all I&APs should be told that right away?</p> <p>There have been errors and omissions in all the documents given us. For example, St. Francis Bay was first shown as ~30 km from</p> | <p>soon as possible after the various meetings. GIBB also used alternative minute-takers for each meeting to ensure that the minutes were compiled quickly.</p> <p>Your comment is noted.</p> <p>All I&APs that had lodged comments in writing with the PPP Office requesting an extension of the Comment Period, had indeed been notified of the extension. The extension was also announced at all the public meetings up to the meeting at St Francis on 12 July 2011. The previously set comment period concluded on 23 June 2011. Before that date all registered I&APs received written notification of the extension of the comment period.</p> <p>The announcement of the extension was made only one week prior at the Gansbaai Public Meeting (which was held on 04 July 2011). All registered I&APs with email addresses received email notification of the extension to the Comment Period on 10 June 2011. Those with only postal addresses were sent letters notifying them of the extension, which were dispatched on 11 June and 13 June from the Central Post Office, Cape Town.</p> <p>There is one reference to Danger Point on page 83 of the Visual Impact Assessment, with reference to the impact of lighting at the power station of existing lighthouses. Seal</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|--|---|
| | | | <p>the site. In the second round it was shown as 16 km away instead of 10 km, which is now shown. The current report comments on the dangers of light emissions from Thyspunt on the Danger Point Lighthouse, which is approximately 700 km.</p> <p>There has been a lack of transparency. Minutes have to be queried every time. Regarding of the process by which the different sites were rated, it took a legal letter sighting PAIA (the Promotion of Access to Information Act) to get this information from the consultants. Surely this info should be in the public domain? We heard tonight that this rating was done from a qualitative point of view. We query that and believe that it is totally subjective. We have requested focus group meetings with specialists but this has been denied.</p> <p>We believe that the whole process lacks credibility, and are not the only ones who say that; Eskom asked for a peer review. A quote from this peer review document: "Despite the apparent exaggeration of the impact significance and issues described earlier with respect to baseline assessment, it seems clear that of the three sites, Thyspunt is relatively the most sensitive". Furthermore, under Recommendations it states: "Strengthen the significant rating</p> | <p>Point is incorrectly referred to as "Danger Point".</p> <p>GIBB has responded to the DEA on the issue regarding GIBB's independence. The letter of response from GIBB to the DEA is included in the Revised Draft Environmental Impact Report Version 1.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|--|
| | | | <p>criteria and ensure it is consistent with the principles that should apply as detailed in the review.” This has not been done.</p> <p>As far back as June last year, the DEA wrote to the EAP (Environmental Assessment Practitioner) and stated “It is clear that Thyspunt is the most sensitive and therefore it does not make sense that Thyspunt is recommended as the preferred site”. Based on the above analysis we have reason to believe that your independence may have been compromised”. We believe it has been compromised throughout the process.</p> | |
| 2 | | Hylton Thorpe Thyspunt Alliance and St. Francis Bay Residents Association | Regarding notification of the extended response period, why could a bulk email not have been sent to all I&APs so as to ensure they were all notified at the same time of the extension? | At the time, approximately 60% of those individuals registered on the I&AP database used post as their primary means of communication with the EIA Team. Only the remaining 40% of I&APs used emails. GIBB hope to obtained the email addresses of additional and existing registered I&APs during the course of the public meetings held in 2011 .All registered I&APs with email addresses received email notification of the extension to the Comment Period on 10 June 2011. Those with only postal addresses were sent letters notifying them of the extension, which were dispatched on 11 June and 13 June from the Central Post Office, Cape Town. |
| 3 | | Chris Barrett Thyspunt Alliance and St. Francis | One of the reasons for the delay in minutes is because it goes to Eskom for comment before it is published, which is | The minutes are supposed go to all stakeholders, including Eskom for comment. As is typical of all EIAs, the Applicant does get to review all documentation before it goes out to |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|---|
| | | Kromme Trust | <p>unacceptable.</p> <p>The chairperson of the meeting in St Francis Bay on 12 July 2011 said that he was prepared to keep the meeting running the whole evening. We have experienced these meetings in the past being cut by the EAP and have been asked to go home, and were told that they would schedule another meeting, which never happens.</p> | <p>the public. Eskom reviews the minutes before they are sent out to I&APs and then all registered attendees of the meeting have an opportunity to do so.</p> <p>Your comment is noted.</p> |
| 4 | | Chris Barrett Thyspunt Alliance & St. Francis Kromme Trust | We now know why we get biased minutes. | Comment noted. Gibb denies that the minutes are biased. You are requested to point out cases where you believe there is bias. Gibb will review this against the recordings taken during the meeting. |
| 5 | | Trudi Malan Thyspunt Alliance and Cape St. Francis Civics Representative | <p>Would like to have transcribed minutes of the meeting held in St Francis Bay on 12 July 2011 i.e. a verbatim record of the meeting. What happens presently is that post-meeting comments are added to the minutes and we do not get the opportunity to respond to the post meeting comments.</p> <p>Regarding the Revised Draft EIR, I was hoping the specialist studies would speak to each other, but it is still not the case. The</p> | <p>This is not true as I&APs are given 14 days to comment on minutes, including the post-meeting notes. GIBB noted the request for verbatim minutes, but after much consideration decided that in the interest of readability, they would not be issued verbatim. All the points made at the various meetings have been captured in the minutes and all registered attendees of the meetings were given an opportunity to verify this. GIBB feels it is necessary to add post meeting notes because all the documentation is not necessarily available during the meetings, but I&APs still had the chance to comment on those notes.</p> <p>Should any inconsistencies exist between the specialist studies, please be assured that this will be corrected..</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|--|---|
| | | | <p>distances still differ in all the specialist studies.</p> <p>In Chapter 6, the Project Description, and this speaks to Eskom, point 3.8.7 states; "Eskom has completed investigations into housing at all three sites. They have spoken to the various municipalities and current development around Humansdorp and Jefferies bay would accommodate all these housing needs and no further EIAs would be required." I have contacted Environmental Affairs in the Eastern Cape and they disagree. We have been given the assurance throughout this process that once they have decided where they want to build the staff village, there will be an EIA done. This will impact on us as rate payers; our municipality is overburdened from a sewerage, waste management and water perspective. Every house that gets allocated to an Eskom staff village is one house less house for a person in our community; someone who has been living here for years without housing. I've asked before at meetings for Eskom to indicate where these planned areas are that have been discussed with the local authorities. Neither Eskom nor the local authority will tell us what is going on.</p> | <p>Eskom has responded to this previously. Eskom has engaged with municipalities' at all three alternative sites to understand what the accommodation options would be. Studies on these areas have not yet been completed. In Bantamsklip area it is clear that a new area would need to be rezoned for housing. Duynefontein has residential areas available which could be used and hence we would not need to rezone or do an EIA there. At Thyspunt there is the possibility that Eskom could build on an area already zoned for residential. Eskom would want to establish the construction village in the Humansdorp area, while permanent staff may establish themselves in the Jeffrey's Bay area in existing established areas. The construction village is the most significant area, and we anticipate this will be in the Humansdorp area. If it was in an area not zoned residential, then it would need an EIA. If the site was in an area already zoned residential, it would not need an additional EIA.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|---|--|
| | | | <p>In Chapter 6, the Project Description, it states that “no detailed design is yet available for the intake and outlet tunnels”. Unless a detailed design forms part of this EIR, no environmental department would be able to issue a record of decision because we don’t know where the tunnels will be or what they will look like. None of us have had opportunity to comment on the appended Eskom 2011 tunnel feasibility report. I’m concerned that the specialists would have made comments on tunnels, not knowing what they will look like.</p> <p>In the Coastal Engineering Investigation, done as part of the site safety report for the NNR, reference is made to the Agulhas slump saying “a quantitative assessment of the risks of occurrence and the geometry of future slump events along the SA coast is not available at present and should be studied”. When will this study be completed, because this is important in the case of Thyspunt? It has to do with tsunamis because Thyspunt is rated the highest of all the sites in terms of tsunami impacts. I would also like to know when all the recommendations that are made in the Coastal Engineering Investigation are going to be implemented because unless they are done, this EIA is not a complete document. Page 11 of this study says “the impact</p> | <p>There is a set of criteria in the EIR called the “consistent data set” and it can be found as Appendix C to the revised Draft EIR Version 1. It indicates the various parameters of the conceptual design e.g. the inlet and outlet pipes, number of the pipes, diameter of the pipes, depth at which they would be buried, the distance they would run out to sea, etc. GIBB’s approach has also been to allow the specialist to make recommendations as to the acceptable limits of how these infrastructure items should be designed, and which designs they would prefer. The specialists have done that in their various reports.</p> <p>All the engineering feasibility studies on which the EIR is based have been made available to I&APs. The recommended mitigation measures from the specialists are captured in the EMP and will be done during the detailed design phase. . Flooding from the sea is addressed in the “1-100 years flood line” specialists report.</p> <p>The Coastal Engineering Investigations are appendices to the Oceanographic Assessment (Appendix E16 of the Revised Draft EIR Version 1).</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|--|--|---|
| | | | <p>structure details are not yet defined. No coastal structures have been superimposed and considered in the calculations. The results will be subject to review once the design of the intake and terrace has advanced and the coastal structure can be incorporated in the assessment.” Until these studies have been completed, the EIA is not a complete document and no department can issue a record of decision when we don’t even know what it looks like.</p> <p>This study is in the EIA. It is called the Coastal Engineering Investigations.</p> | |
| 6 | | Trudi Malan Thyspunt Alliance and Cape St. Francis Civics Representative | <p>I want to respond to Deidre’s comment that Eskom has not yet completed the studies into the location of the housing village by quoting from the report: “Eskom has completed investigations and no EIA will be required”. Where exactly in Humansdorp is this residential zoned area that you have chatted to the municipality about? Where is the exact location of the staff village?</p> <p>I have spoken to Mr Greeff regarding this issue of the staff village and he said he knows nothing about it and doesn’t deal with it. He told me to speak to Deidre Herbst. I have asked you this questions three times and you keep referring to areas</p> | <p>The location for a construction village has not been selected as yet.</p> <p>The report you are referring to is not Eskom’s report; it is the independent social specialist’s report (Appendix E18). Eskom has had discussions with the municipalities but have not concluded that the village would be at a specific location. If one refers to the Issues and Response Report (IRR), in the response section, one will find that the same response has been given. There has been no decision taken on this but Eskom hopes to find an area already zoned as residential.</p> <p>The EIR makes the statement that Eskom has completed an “initial investigation”. The word “initial” was left out from the statement by Ms Malan regarding this issue. Towards the end of the section it says “it is highly unlikely that an EIA</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|--|---|--|
| | | | around Humansdorp. Why then in your report do you say that Eskom has completed an investigation into housing? | would be done because it is already zoned residential". So the report does not say EIAs are not necessary. |
| 7 | | Greg Christy SASMIA (South African Squid Management Industrial Association) | <p>Regarding the Marine Ecology Report, I am shocked that it was not included in the list of key factors for the rating of the alternative different sites. This is despite there being approximately 6.37 million m³ of sand that will be pumped out to the ocean, wherever it may be; 2km out, or 5km out to sea. That is approximately 500,000 - 750,000 trucks of sand to be dumped in the ocean. SASMIA is still of the opinion that the Marine Ecology Report is inadequate and flawed. The Economic Report, which is based on the Marine Ecology Report, is therefore also flawed. How it will affect our industry is not adequately explained. Effects on our industry have been downplayed to a mere 1%. This assumption is also flawed. GIBB has agreed to a focus meeting in Cape Town between squid experts and the marine specialist who wrote this report. The main concerns are the dumping of the spoil, the discharge of warm water and brine, and also chemicals released (cooling waters and the desalinated water are full of chemicals). Releases of chemicals have not been specified in the report.</p> <p>I am also concerned that the Marine Living</p> | <p>A joint decision taken by GIBB and all the EIA specialists (including the marine specialist) concluded that the marine impacts would not be considered as one of the key decision factors in the choice of the preferred site because the impacts could be effectively mitigated. The warm water could be released at a point where it would not have an impact on squid. If it is released above the sea floor, from multiple release points, at a high flow rate in order to quickly diffuse the heated water. With regards the spoil, the potential squid impacts form a key consideration in the marine specialist's assessment of Thyspunt, particularly the depths and distance from shore where the squid spawns. This is why a deep disposal option approx. 5km offshore has been recommended.</p> <p>The Marine Living Resources Act of 1998 is indeed listed in</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|---|
| | | | Resources Act of 1998 has not been mentioned at all. This is important legislation and is not alluded to at all. | Section 6 of the Revised Draft EIR Version 1(on page 6-46). |
| 8 | | Hylton Thorpe Thyspunt Alliance and St. Francis Bay Residents Association | <p>The entire EIA is based on the premise that Eskom will be using Generation III technology, which is claimed to be state of the art technology in the nuclear industry with a number of improvements on Generation II. Eskom maintains that this justifies a reduction in the emergency planning zones, from 5 km and 16 km, the accepted international criteria, to 800 m and 3 km. This is in terms of what they call the EURs (European Utility Requirements). The EURs were drawn up by approximately 8 – 12 nuclear industry members in Europe. They are good, but that is the basis on which Eskom is planning to set up these power stations. About two years ago the South African government said that Generation III technology is not affordable. My questions from this are:</p> <p>What is the present position regarding Generation III? Is government</p> | <p>A vendor has not yet been chosen and therefore the actual design has not been chosen.</p> <p>Neither GIBB nor Eskom can speak on behalf of the Government.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---------------------|---|--|
| | | | <p>reconsidering its position, and have they identified a technology and a vendor?</p> <p>What is the government's attitude to Generation III?</p> <p>What is the motivation for reducing the emergency planning zones?</p> <p>In Chapter 3, Project Description, reference is made to minimising the issue of the control of urban developments that will potentially threaten the viability of nuclear sites, and the NNR has admitted that they are considering reducing these emergency zones because it interferes with urban development. In other words, they are saying that urban development is more important than the safety of persons or property.</p> <p>If a Generation III plant is built is there any conceivable event in which there would be a</p> | <p>The obvious answer to that is to reduce the amount of emergency planning actions that might have to be taken. The EUR requirements say, for example, that you must design a plant such that you would never have to evacuate people outside of the 800 m zone. So it is intended for that purpose.</p> <p><u>ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST</u></p> <p>As stated this would then be one of the design criteria for any proposed new technology to be deployed in future</p> <p>These issues will be dealt with by the NNR, but EURs require that the design should be such that you wouldn't have any type of accident that would need you to evacuate people beyond the 3 km zone, but you might have to undertake other emergency actions. As has been communicated in all meetings and documents, the NNR will decide what emergency planning action would be required.</p> <p>The EUR requirements are recognised by Western</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|--|---|
| | | | <p>need to evacuate people outside the 3km zone? Is this a scientific position or a marketing position?</p> <p>Are the proposed reduced emergency planning zones for Generation III in terms of the EUR recognised by the International Atomic Energy Agency or by the United States Nuclear Regulator or by any other regulator?</p> <p>St. Francis Kromme Trust raised questions about these emergency zones, and received a written answer from Jaana Ball to the effect that “because South Africa does not have specific regulations for the selection of sites, we follow the requirements of the United States Nuclear Regulatory Commission.” Their requirements are still 10 miles and 50 miles i.e. 16 km and 80 km zones, which go beyond Jeffrey’s Bay. There are contradictions here. The EIA is based on the assumption of the EUR requirements, while we have a written statement that we are following the American requirements. American requirements do not allow for 3 km zones.</p> | <p>European Nuclear Regulators Association who themselves have issued requirements, but they don’t specify an emergency zone size, but they specify the same sort of requirements as the EUR. The IAEA won’t specify a precise size for the emergency zones, because that is up to the national authority of each country to decide. There cannot be a generic requirement; one would need to look at each site on its own merits.</p> <p>Eskom disagrees with the statement. American requirements will allow for what is appropriate for the particular design of power station, and particular position of the power station. They do not have blanket rules, but review it on a case by case basis. They license each plant individually, like is done in South Africa.</p> <p>The United States Nuclear Regulatory Commission Regulations, in accordance with which the Seismic Assessment (Appendix E4 of the Revised Draft EIR Version 1) has been conducted, requires geological and geophysical investigations of increasing resolution in concentric regulatory radii of 320 km, 40 km and 8 km around each proposed site. These distances do not refer to emergency planning zones, but to the radius of the study area for assessing seismic risks. The answer provided by GIBB, referred to by Ms Malan, referred to the radii of the seismic study area, not to the size of the emergency planning zones.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|--|
| 10 | | Hylton Thorpe Thyspunt Alliance and St. Francis Bay Residents Association | What would implications be for the EIA if Government decided to apply for a technology which did not conform to Generation III specifications? | If the power station fell outside the enveloping criteria that have been specified in this EIA, then any authorisation received would not be valid. Either a new EIA or revision to this EIA would be required. |
| 11 | | Mike Kantey Coalition Against Nuclear Energy | <p>Regarding human health impacts, the EIA hasn't really assessed the impact on human beings. What is fascinating about the Fukushima incident is the level of exposure of human beings to radioactive isotopes, particularly the long lived isotopes such as Caesium 137, a particularly "nasty" isotope.</p> <p>Impacts on human health starts with airborne emissions, and liquid effluents released during normal operations. Mr Kantey indicated that he has in his possession 30 years worth of emissions data for Koeberg.</p> <p>The reason we talk about Caesium 137 and Strontium 90 is because they are the two most common by-products of the process and the most long lived (Strontium 90 half life is 28 years, and Caesium 137 has half life of 30 years). This is the problem with Chernobyl, and will be the problem at Fukushima. The problem is not from background radiation but from that which gets into the human body through inhalation and ingestion. Once it gets inside there are problems e.g. Strontium 90 is a bone</p> | <p>There have been 28 different specialist studies, of which a number assessed the social issues, economic issues, and bio-physical issues, so it is not correct to say that the full suite of environmental impacts have not been addressed. With reference to the tourism impacts; the EIA has specifically looked at the tourism bed night impacts at all three of the sites. The tourism impact has been quantified and this has fed through to the economic impact assessment. A Human Health Risk Assessment has also been conducted (Appendix E24 of the Revised Draft EIR Version 1).</p> <p>It must furthermore be kept in mind that there is a cooperative governance agreement between the DEA and the NNR, and in terms of this, the NNR will be the decision-making authority on all aspects relating to nuclear safety and health. The DEA will not make a decision on these facets of the study.</p> <p>Chapter 1 of the EIA states that whilst "Site Safety Reports" prepared as part of the authorisation process for nuclear licensing have been included as appendices in this draft EIA Report (Appendices E24, E26 and E27), radiological issues will not be assessed in detail[7] in the Draft EIR and the DEA</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|---|---|
| | | | <p>seeker and can cause lymphoma and leukaemia, particularly in children, and Caesium 137 has impacts on soft tissues causing ovarian, breast and pancreatic cancers. These toxic compounds will lie around for decades. In the case of the dairy industry, a study in Long Island showed high levels of Strontium in baby teeth. Studies worldwide have shown routine nuclear power plant operations to have negative impacts on human health. We don't have the cancer studies for Koeberg; these have not been forthcoming. The WHO has been held hostage by the International Atomic Agency, and so we are not expecting to get credible results from investigations and hence we are left with our own devices.</p> <p>The issue also extends further into the economic impacts, including impacts on chokka industry, fruit growers, diary industry, and the eco-tourism industry, which is the greatest asset of this place and the garden route in general. Many people have invested into B&Bs, guesthouses, the Billabong, and it forms a substantive portion of the economics of the Kouga Municipality. Surely the jobs and bed nights could be counted and one could come up with some figures and juxtapose those against the proposal for the power plant. One wonders</p> | <p>will not consider radiological impacts in decision-making.</p> <p><i>Footnote [7] The Emergency Response (Appendix E26) and Site Access Control Report (Appendix E27) and Human Health Risk Assessment (Appendix E24), which have been prepared on a high level,, are appended to this EIR for information only. Further details on these reports will be prepared as part of the NNR nuclear licensing process, as their findings will be evaluated by the NNR."</i></p> <p>The exclusion of the detailed assessment of nuclear safety aspects from the EIA is thus in keeping with South African legislation. The NNR licensing process, during which nuclear safety aspects will be considered in detail, also provides for public hearings where issues of this detail can be raised.</p> <p>The project cannot go ahead without all the relevant authorisations.</p> <p><u>ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST</u></p> <p>As stated the overall authorisation and licensing processes are conducted independently and therefore deal with different specific aspects and details at different times and through different methodologies processes and regulations subject of course to any co-operative arrangements between the respective authorising bodies.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|---|
| | | | <p>what the outcome of that would be.</p> <p>People have a right to choose where they want to live, this is enshrined in the constitution, and therefore the opposition to his power station actually starts tonight. Want to pay tribute to Trudi Malan, Hylton and Chris and others of the Thyspunt Alliance. And to the Supertubes Foundation in Jeffrey's bay, but you people here need to get behind your colleagues, you can't leave it to them. You need a united opposition and us as the Coalition will support you, not only politically but also in terms of your legal challenge. We are contemplating a class action.</p> | |
| 12 | | Chris Barrett Thyspunt Alliance and St. Francis Kromme Trust | Regarding the last comment about the NNR and the agreement, we have asked the EAP for copies of correspondence between Eskom and the NRR. We have been waiting for 15 months. This would provide greater insight into this issue. | <p>GIBB has no copies of correspondence between Eskom and the NNR. Such a request would have to be referred to Eskom itself. A formal licence application to the NNR has not as yet been made. The licensing process cannot start until the supplier has been selected through the procurement process. You are advised to make an application in terms of the Public Access to Information Act making specific reference to the communication you are referring to.</p> <p><u>ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST</u></p> <p>As stated the process of granting a nuclear licence is totally independent of this process and this process does not require the commencement of such a process which would</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|---|
| | | | | <p>be conducted independently. At the time of lodging of any licence application such application is required to be publicised.</p> |
| 13 | | <p>Riaana Tolan Greenpeace Africa</p> | <p>Have just been to the Fukushima area. Interested in the 3km emergency zones planned for Nuclear 1, considering that I was measuring the impacts of radiation at Fukushima up to 60km from the nuclear power plant. Radioactive impacts from nuclear incidents are not limited to 3km.</p> <p>Regarding waste, the waste management practice will depend on the reactor type and the fuel used. Table 5.4 of the EIR gives key features of the Nuclear 1 station, and the nuclear fuel. Are these numbers maximum numbers of specific numbers? If they are specific numbers, this then limits the number of reactor types that could be considered.</p> <p>The specification talks about enrichment, but doesn't mention other options. Does this mean that Mixed Oxide fuel will not be allowed in the reactor? Mixed Oxide fuel is a mixture between uranium and plutonium fuel, and is associated with increased safety risks.</p> <p>It was identified that high risk waste will be kept on site, up to 10 years after</p> | <p>The figures in Table 5.4 are the maximum figures. GIBB worked on a set of criteria, and considered the worst case scenario of the many different types of nuclear plants that could be considered.</p> <p>The actual design of the reactor has not yet been decided, so Eskom cannot comment on the use of MOX fuel at this stage. At this stage, the use of MOX is not envisaged. MOX fuel is not used at the Koeberg Nuclear Power Station, but Eskom cannot comment on what might happen in 20 – 30 years' time.</p> <p>It is not accurate to state that the nuclear industry has not found solutions for long term storage. Either it is processed</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|---|--|
| | | | <p>decommissioning i.e. up to 70 years from commissioning. How do we know that there will be a solution for the storage of the waste after 70 years? The nuclear industry has been looking for a solution for 60 years already without any progress.</p> <p>How will the safety of the spent fuel on site be guaranteed? One of the main problems at Fukushima is the spent nuclear fuel storage pond which needs to be cooled.</p> | <p>and disposed of, or disposed of. Finland is currently building their final depository after all their testing and research. Sweden is also about to start building theirs. USA has operated a waste isolation pilot plant since 1999, and has over 11 years of experience in doing this.</p> <p>In South Africa the Vaalputs Waste Site is currently licensed for only low and intermediate level nuclear waste but would be one of the sites/areas considered for high level waste disposal. The South African Government has initiated legislation and processes to address this issue. There is no reason why a solution would not be found.</p> <p><u>ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST</u></p> <p>The proposed arrangements are in line with international best practice. Liquid and gaseous effluents will be controlled within defined and regulated limits as per license conditions and as assessed through the plant safety case. The arrangements for solid waste management are also in accordance with international best practice. i.e. either storage and disposal at Vaalputs for low and intermediate wastes or on site wet or dry storage for spent fuel pending provision of a centralised or dispersed long term storage facility are all in accordance with internationally accepted practices. It must be understood that the social discourse on radioactive waste disposal has become largely a socio-political one rather than a rigorous debate on the technical merits of particular options</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|--|
| 14 | | Mike Kantey Coalition Against Nuclear Energy | Regarding this talk about the reactor type not having been chosen yet, the evidence is compelling for the Areva EPR. For example it is mentioned by name in the IRP 2010. They also talk about 9 1600 MW. If dividing that by 6, the only possible reactor technology that could meet that specification is the Areva EPR. One gets the impression that the decision to build EPR has already been taken. | Comment noted. Eskom confirms that no technology has been chosen. In the IRP the DOE may have chosen to use the EPR as reference or for modelling purposes. |
| 15 | | Riaana Tolan Greenpeace Africa | Eskom says reprocessing of waste is an option but the EIR says it not option because it is too expensive. | <p>Page 31 of Chapter 3 of the Revised Draft EIR Version 1 states the following: “Two options for the long-term management of spent fuel are pursued internationally: (a) direct final storage of the spent fuel in a deep underground geological storage facility (referred to as Geological Disposal); (b) reprocessing of the spent fuel to extract unused uranium and plutonium for re-use and concentration and storage of the residual (about 3 – 4 % of the spent fuel) high level waste in a deep underground geological storage facility. In South Africa, where there are currently no facilities for the reprocessing of fuel or for geological storage, all the HLW will remain in the fuel facility inside the plant (as is the case at Koeberg)”.</p> <p>The Executive Summary of the Waste Assessment (Appendix E 29 of the Revised Draft EIR) states the following: “While reprocessing of spent fuel is not excluded as an option for spent fuel management, there is no intention to reprocess the Nuclear-1 Nuclear Power Station spent fuel at present. The main reason being the very high cost</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|--|---|---|
| | | | | associated with spent fuel reprocessing.” |
| 16 | | Andre Fouche Interested and Affected Party | <p>Concerned about the preferred transport route, the R330. Not enough emphasis has been placed on the impacts on people’s lives over the next 10 years. This is as long as some of us will live here. There will be an unbearable noise for the next 10 years. You have looked at flora etc, but what about people and the value of our property? We came here to live for peace and quiet and paid a lot of money for our property. Would you buy a house here now with enormous lorries coming across here? We should all be up in arms about this. It is probably the most important point.</p> <p>What about the other two sites? They probably don’t have as many numbers of houses impacted. In all the points listed as being relevant to the choice of site, nothing was mentioned about houses and the impact on people’s lives.</p> <p>I live on the river and even with the current traffic flows, if there is an easterly wind blowing; the noise from normal traffic flow is already bad.</p> | <p>A Noise Impact Assessment (NIA) was conducted as part of the EIA. It looked at various sources of noise including the roads, the R330, and the Oyster Bay Road. It concluded that the additional noise would not be an impact of high significance. There are certain areas where the Noise Impact Assessment did predict a significant impact, particularly at the Umzamuwethu informal settlement, which is close to the western access road to the power station site.</p> <p>Please note that the Transport Assessment Report was substantively amended and the feasibility of the western access road was re-assessed. The revised report recommends that a combination of both Oyster Bay Road (Route 1 to western access) and R330 (Route 2 to eastern access) be used for transportation during the construction phase, which will improve the impact on traffic congestion, noise and safety to low / medium. The construction vehicles (normal heavy loads) will utilise only the upgraded Oyster Bay Road (DR1763 - western access) to minimise the impact of construction traffic on the existing network and the infrequent abnormal loads will utilise the R330 (MR381) during the night time. Several bypasses have been recommended for construction traffic to avoid using the Humansdorp Main Street travelling between the N2 and the Oyster Bay Road, as well as to avoid the Humansdorp Main Street to travel between Voortrekker Road (R102) and the R330.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|----------------|
| 17 | | Randall Arnolds Interested and Affected Party | <p>I am a coloured person. What is striking about the three sites is that they are in areas where coloured people were allowed to stay. What motivated Eskom to do that? Also, the nuclear dumping site is in Namaqua land, close to the Nama people. We appreciate the chairman's way of handling the meeting, but do not trust the chairman's politeness considering how Arcus GIBB has handled these meetings up until now.</p> <p>The Humansdorp community have been waiting for houses for ages. Madiba came and launched a million houses, including in Humansdorp. The housing waiting list in Humansdorp is large. I don't know about any land that is available for Eskom to build houses. Again you are robbing the coloured community of land and we are getting tired of it.</p> <p>Last time I was here I reminded Mr Stott about the earthquake, 5 on the Richter Scale that we had under the sea. I asked him if this plant was earthquake resistant. He said sarcastically that "there are earthquakes all over the country, and these things are built to withstand earthquakes". As a Christian I believe that when a Christian asks questions with honest motives, God will raise the standard here.</p> | Comment noted. |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|--|--|--|
| | 18 | Peter Bosman Interested and Affected Party | <p>Want to reiterate the issue of the social impacts of the transport plans in this area. The noise will be terrible. One of the reasons for choosing this road over the other one is because the noise impact at Umzamuwethu is significant. But here these vehicles will travel through residential areas which extend 3-4 km. At one point the residential area is on one side, and the primary school is in the other side of the road. The 950 vehicles per day will make the road significantly more dangerous. The other route, apart from Umzamuwethu, passes through no residential area at all. A transport consultant who recommends that the main route for heavy traffic should be diverted from Main Road Humansdorp to Saffery Road, doesn't fill me with confidence.</p> <p>Written comments were handed over to GIBB.</p> | <p>Comment noted.</p> <p>Similar concerns from the public around Humansdorp area up to St Francis have been raised and acknowledged regarding the use of Saffery Road. As such the Transport Specialist study was revised to consider other alternative routes. The revised report recommends that the main street through Humansdorp and Saffrey Street be bypassed. New transport roads for abnormal load vehicles were therefore considered and three alternate bypasses were investigated, as shown in the figure attached. All three alternatives are proposed new roads that run along existing land boundaries between farmland.</p> <p>Alternative A directly links between Voortrekker Road (MR389) and Park Street (MR381) and is 850m in length. The beginning of Alternative A crosses the Boskloof Valley and the rest of the route will be constructed on Municipality land.</p> <p>Alternative B is connects between Voortrekker Road (MR389) and Park Street (MR381) along the east of the Boskloof area, and crosses privately owned farmlands and is 1.3km in length. The topography of Alternative B is considered acceptable, except for the section of the route where it crosses the Boskloof Stream at a deep vertical alignment. Additional cost will be required for the construction of a bridge to cross the stream at an acceptable grade.</p> <p>Alternative C is located the furthest east from Humansdorp and is the longest of all three alternatives (2.7 km). This</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|--|--|---|
| | | | | <p>route also crosses privately owned farmlands. Similar to Alternative B, Alternative C crosses two relatively deep valleys, which will require additional cost for the construction of bridge structures to achieve acceptable grade crossings.</p> <p>Alternative A is therefore considered as the most viable option as it is the shortest and most economical route to construct, and it has a good alignment for the transportation of abnormal loads. Once the route is constructed, it will also alleviate the traffic congestion in Humansdorp.</p> <p>The revised Transport specialist study therefore acknowledges that the Thyspunt site requires significant transport infrastructure upgrades. The R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed to be surfaced to provide improved east-west connectivity. The Transport Specialist Study will form part of the Revised Draft EIR Version 2 which will be made available for public review in due course.</p> |
| | 19 | Dr Yvette Abrahams Commissioner for Gender Equality | In response to complaints, we have begun to monitor this particular consultation. We are concerned as to whether this consultation upholds the Constitution and PAJA (Promotion of Administrative Justice Act) principles. There is no case law that | With regards to decommissioning costs, the Economic Assessment reports that 15% of the capital cost of the power station needs to be allocated for decommissioning. In 2009 prices, which is what the report was based on, this amounts to R17.5 billion for decommissioning. This is based on international experience of decommissioning plants. |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|--|---|
| | | | <p>says that the national interest must precede the local interest. In fact in most cases the local interest is considered paramount.</p> <p>Need to raise a few points of national interest:</p> <p>PAJA section 6.2e, and case law, states that if any incorrect or incomplete information is given as part of this process, then the EIA becomes illegal. I will be submitting a full written statement. My concerns are firstly regarding costs:</p> <ul style="list-style-type: none"> • decommissioning costs aren't shown; • the costs of a nuclear incident are not included. The insurance industry will not insure nuclear, therefore I expect you to be discounting actuarial cost over life of the project. After Fukushima, the Japanese government is now upping tax by 1.5% to pay for it. • costs of externalities; tarring of roads, bulk sewage services etc. Is this cost for the ratepayers? • low and intermediate waste will apparently be disposed of at Vaalputs, but how will it get there? Does the transport route not become part of EIA? • The revised EIA proposes many new measures, but you haven't revised your costs accordingly. | <p>There is no EIA for the transport to the Vaalputs Waste Site. The waste will be transport via public roads, in containers designed as per specifications of the NNR. Eskom does need to obtain a license from NNR for this transportation.</p> <p>The costs remained constant at 2009 prices because the purpose of the economic assessment was to determine the preferred site from an economic point of view. So a</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|---|
| | | | <p>With regards to heritage issues, I hold a PhD in Khoisan history. I have about 150 issues with your heritage study and will supply them in writing.</p> | <p>comparison was made between the sites, and this would not differ with updated costs. The relative differences between the sites would remain the same.</p> <p>Comment noted.</p> |
| | 20 | Dr Yvette Abrahams (Commission for Gender Equality) | The answer regarding adjusting costs has not addressed my question. The transport plan is changing to 5 km instead of 2.5 km; your costs are doubling. | The economic specialist has said that these new mitigation measures are insignificant in terms of the total costs. |
| | 21 | Dr Yvette Abrahams (Commission for Gender Equality) | On what basis are you reaching your 15%? What power station decommissioning is this based on? To best of my knowledge, no power station has ever been decommissioned. | Very few of the Koeberg-type reactors have been decommissioned because they have a 40 year design life. However, Shippingport in the United Kingdom, the first reactor of its type, has been reduced to a greenfield site and is back to public use. Zion in the United States of America has been largely decommissioned and is in its final stages. So decommissioning has been done and the costs are understood and well documented. |
| | 22 | Unidentified I&AP | What was the size of the Shippingport reactor? | It is possibly 80 MW. Zion was over 2x 1 000 MW, which is larger than the Koeberg Nuclear Power Station, and was shut down about 15 years ago. Most components have left site and they are finalising the job. So decommissioning has been done. The fact is that these stations, like the Koeberg Nuclear Power Station, were built in the 1970s, and will end life in the 20s and 30s of the 21 st Century, therefore we're not into decommissioning this type of reactor yet, but it has been done because the United States shutdown happened quite early. |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|---|
| | 23 | Mike Kantey Coalition Against Nuclear Energy | Do you have any idea of the route that the nuclear waste to Vaalputs might be travelling on? | There is no set route and it may differ from time to time. |
| | 24 | Chris Barrett Thyspunt Alliance and St. Francis Kromme Trust | Who will bear the costs of services, roads, sewage, fire brigades, etc? | Based on the approach taken with the Ingula Pumped Storage Scheme in the Drakensberg and engagement with the Provincial road authorities, upgrades of infrastructure such as roads will be for Eskom's cost. Maintenance of roads through the construction phase will also be for their cost. The EIA recommends that other infrastructure e.g. sewage works will need upgrading, because some of this infrastructure is not even capable of meeting current needs. Eskom will need to negotiate with municipalities to agree on the apportionment of financial responsibility for such upgrades. |
| | 25 | Trudi Malan Thyspunt Alliance and Cape St. Francis Civics Representative | Jaana Ball mentioned that the economic specialist indicated costs associated with the revised measures are small and insignificant. But Eskom proposed to string power lines across the dune fields by helicopter. I have costs for such procedures; they are significant. If Eskom incorporates these costs in their planning, it would immediately make Thyspunt the most expensive site. | The question was asked that between the first EIR and Revised EIR, were there new mitigation actions proposed, and have those been brought into the Economic Assessment? This was the question that was answered earlier. The stringing of the power lines by helicopter was a mitigation action proposed in the Draft EIR, and the economic specialist was given those costs. |
| | 26 | Dr Jansen Interested and Affected Party | It was announced today that Germany is planning to close all nuclear power plants by 2022. If they are closing theirs, why are we building more? | The BBC (http://www.bbc.co.uk/news/world-europe-13592208) reports that Germany's decision to close down its nuclear power stations will most probably lead to an increase in the import of nuclear energy from France. Phasing out nuclear power will also result in increased |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|-------------------------------------|--|--|
| | | | <p>Met a marine geologist from Cape Town on this coastline. He said that there was, at one stage in history, a huge tsunami of higher than 30m here.</p> | <p>dependence on fossil fuels, which result in proportionately larger releases of greenhouse gases into the atmosphere than nuclear power, which has a greenhouse gas footprint similar to some renewable technologies (see Section 4.2.2 of the Revised Draft EIR). There is a further risk that Germany will not manage to quickly halt its dependency on fossil fuels, especially coal-based energy, which creates unintended negative environmental impacts of its own.</p> <p>The Oceanographic and Hydrological specialist studies considered feasible tsunami events based on sub-sea earthquakes and slumps. The largest tsunami predicted to be possible at the Thyspunt site is a “meteo-tsunami (a tsunami coinciding with extreme meteorological events” of approximately 14.8 m above sea level. However, no evidence of tsunamis at the Thyspunt site has been found. Should I&APs have scientifically valid evidence of such events, they are welcome to forward such evidence to the EIA Team.</p> |
| | 27 | Donna Interested and Affected Party | <p>Familiar with Saffery Street. There are three schools in the proposed transport corridor and a hospital. One block up from Saffery Street, possibly Du Plessis Street, is a high school. Three or four blocks down is a primary school, plus a primary school in Kwanomzamo. This must all be considered.</p> | <p>Similar concerns from the public around Humansdorp area up to St Francis have been raised and acknowledged regarding the use of Saffery Road. As such the Transport Specialist study was revised to consider other alternative routes. The revised report recommends that the main street through Humansdorp and Saffrey Street be bypassed. New transport roads for abnormal load vehicles were therefore considered and three alternate bypasses were investigated, as shown in the figure attached. All three alternatives are proposed new roads that run along existing land boundaries between farmland.</p> |

| NO | DATE | NAME & ORGANISATION | |
|----|------|------------------------|--|
| | | | <p>Alternative A directly links between Voortrekker Road (MR389) and Park Street (MR381) and is 850m in length. The beginning of Alternative A crosses the Boskloof Valley and the rest of the route will be constructed on Municipality land.</p> <p>Alternative B is connects between Voortrekker Road (MR389) and Park Street (MR381) along the east of the Boskloof area, and crosses privately owned farmlands and is 1.3km in length. The topography of Alternative B is considered acceptable, except for the section of the route where it crosses the Boskloof Stream at a deep vertical alignment. Additional cost will be required for the construction of a bridge to cross the stream at an acceptable grade.</p> <p>Alternative C is located the furthest east from Humansdorp and is the longest of all three alternatives (2.7 km). This route also crosses privately owned farmlands. Similar to Alternative B, Alternative C crosses two relatively deep valleys, which will require additional cost for the construction of bridge structures to achieve acceptable grade crossings.</p> <p>Alternative A is therefore considered as the most viable option as it is the shortest and most economical route to construct, and it has a good alignment for the transportation of abnormal loads. Once the route is constructed, it will also alleviate the traffic congestion in Humansdorp.</p> <p>The revised Transport specialist study therefore acknowledges that the Thyspunt site requires significant transport infrastructure upgrades. The R330 is now</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|--|
| | | | | <p>proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed to be surfaced to provide improved east-west connectivity. The Transport Specialist Study will form part of the Revised Draft EIR Version 2 which will be made available for public review in due course.</p> |
| | 28 | Hylton Thorpe Thyspunt Alliance and St. Francis Bay Residents Association | <p>Would like to make a proposal that no road access to Thyspunt should pass within 1 km of any urban edge. Eskom should figure out how to get that right. The present proposal is extremely disruptive to local communities.</p> | <p>The Transport Specialist study was revised to consider other alternative routes. The revised study therefore acknowledges that the Thyspunt site requires significant transport infrastructure upgrades. The R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed to be surfaced to provide improved east-west connectivity. The Transport Specialist Study will form part of the Revised Draft EIR Version 2 which will be made available for public review in due course.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|---|
| | 29 | Andrea von Holt Coega Development Corporation Environmental Manager | <p>Rebulsrus is within the 3 km emergency planning zone. I have five questions:</p> <ul style="list-style-type: none"> • The wetland study apparently says the Langefontein wetland was not linked to the construction footprint therefore won't be impacted on by the dewatering. But then the specialist recommended feeding the wetland with water pumped out of the construction site. This implies there could be a link, otherwise why would you artificially supplement a natural wetland system? • The Waste Impact Assessment confirmed that enough waste site space was available for radioactive waste. But where will the non-nuclear hazardous waste be taken to? The only site I know of in the area is Aloes at PE, and it has a limited life span. • Is our country and the Kouga Municipality really ready for nuclear? • Has Fukushima had any impact on Eskom's planning for nuclear in South Africa. Please can you elaborate on your response in your response report? | <p>The recommendation refers to the coastal seep wetlands not to the Langefontein wetland. The coastal seep wetlands are fed by groundwater from the central portion of the site.</p> <p>Specific sites have been identified. The Aloes Waste Disposal site is the only site in the Eastern Cape that can accept hazardous waste. Although this site has an estimated life span only for the next five years, upgrading and expansion of the waste site is planned.</p> <p>Yes, the Minister has stated that the Japan incident will be taken into account in planning our nuclear programme.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|--|--|--|
| | | | <ul style="list-style-type: none"> If a negative environmental authorisation is issued by DEA, what is Eskom's plan for power provision? If a power plant is not to be built at Thyspunt, would Eskom retain the land at Thyspunt? | <p>If a negative authorisation is issued for Thyspunt, Eskom would look at the other two sites. If negative decisions are received on those also, other sites would have to be looked at, or request amendment of the IRP. The obvious option is more coal-fired power stations, but it would be government's decision. If Eskom couldn't build on this site, it would sell the land.</p> |
| | 30 | Bridget Elton Interested and Affected Party | <p>There are seismic readings occurring here at the moment. Along what fault lines are they occurring? There was an earth tremor this morning and a couple of weeks ago. Are readings being taken on site and do they influence what is recorded in the document?</p> <p>The report says it is based on seismic readings of the last 8 years. But it needs to consider what is happening now because it is serious, because the world is moving, things are changing e.g. Iceland volcanic eruptions and Fukushima. We feel the tremors right here on our doorsteps.</p> <p>Reuben touched earlier on a UNESCO site. Please elaborate.</p> | <p>It is the responsibility of the Council of Geosciences' to do ongoing monitoring of seismic events. GIBB do have a seismic assessment report completed earlier this year which was based on decades of monitoring.</p> <p>Eskom has an on-going seismic monitoring programme. Eskom can't comment on recent events but they are being captured. Monitoring of all the candidate sites continuously takes place and will be doing so as long as Eskom intends to build something on it.</p> <p>UNESCO stands for the United Nations Educational, Scientific and Cultural Organisation. They govern the international convention on World Heritage sites, which are sites of value to the whole of humankind. There are various criteria in terms of that convention, for example, for landscapes of cultural and scenic value. There are currently seven world heritage sites in South Africa. A nominated site has to go through a long evaluation process to approve it as</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|---|
| | | | <p>Can Eskom clarify if they are a member of any conservation group here in the St. Francis area or not?</p> | <p>a World Heritage Site. In the opinion of the heritage specialist, this site has the potential to become one of these World Heritage Sites.</p> <p>Eskom belongs to the conservancy area that the site is included in and is an active member. This is the St. Francis Bay Conservancy and Gert Greeff is the Eskom member.</p> |
| | 31 | Chris Barrett Thyspunt Alliance and St. Francis Kromme Trust | <p>The EAPs have specifically said that Eskom is not a member of the conservancy, and as a result one of their positive points was that the whole nature of the area would change and it would be a terrific plus.</p> <p>(Comment by Bridget Elton: This was in the letter dated 20 March 2010 to the Kromme Trust, from Jaana. It was response number 12.).</p> <p>Eskom historically have not cleared the site of what they should have. They only started clearing it now. Why should we think that because there is a nuclear power station, things are going to continue in a bed of roses?</p> | <p>GIBB relooked at Response 12 in the IRR (Issues and Response Report) and Eskom has confirmed that it is a founding member of the St. Francis Conservancy and remains one of the active members.</p> <p>The issue about improvements for the area is not about a conservancy. It was about possibly proclaiming the area as a nature reserve, which would give it greater protection than if it were just a conservancy.</p> <p>The statement that Eskom has only started clearing now is incorrect. Eskom has had an ongoing alien clearance programme at Thyspunt for many years.</p> |
| | 32 | Graham Wilman Interested and Affected Party | <p>We have been on the site for more than 55 years. We were all here a year ago, and Mr Christy raised the issue to the specialist regarding the marine issues, and these</p> | <p>GIBB commissioned an independent waste study and took every issue raised, in meetings and in the IRRs, and compiled a huge document, categorised it per specialist study and provided that to the specialists. Many of the</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|---|--|
| | | | <p>have been brushed aside and we have not been adequately answered regarding the chokka industry.</p> <p>Regarding the routes for transporting the waste; the specialist gave the routes; it would all be transported by road. It would go through Knysna, Wilderness and then through George. This was raised as a concern in case of an accident; Knysna has no bypass. I don't believe that this has been addressed during the last year.</p> <p>The transport for personnel from Humansdorp was going to be via the Oyster Bay Road, which is a gravel road. There was no intention to upgrade it to a tarred road. This brought questions from the dairy people. Don't believe this have been addressed in the last year.</p> | <p>specialist studies have undergone significant changes. Regarding the marine aspects, Dr Tammy Robinson and Prof Charles Griffiths consulted the Squid Working Group. GIBB received personal confirmation thereof the week of 11 July 2011, from a member of the Squid Working Group. The marine specialists have revised their study and have come to the same conclusion that the chokka industry will not be significantly impacted. A specialist meeting between the specialists, the industry and the squid working group has been arranged in Cape Town. If there is disagreement between specialists and the working group, then it will be recorded in the final EIR and presented to the DEA for them to decide. Specialists do sometimes disagree with each other.</p> <p>Please note that the Transport Specialist study was revised to consider other alternative routes. The revised study therefore acknowledges that the Thyspunt site requires significant transport infrastructure upgrades. The R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed to be surfaced to provide improved east-west connectivity. The Transport Specialist Study will form part of the Revised Draft EIR Version 2 which will be made available for public review in due course.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|--|---|---|
| | | | <p>It was clearly stated that the Van Stadens Bridge is underrated for the size of equipment that has to be transported over it. This has not been addressed. The same applies to the bridge over the Kromme River.</p> <p>Regarding the heritage issues, we've been involved with the site for a long time. There are fish kraals that will be destroyed. There are underwater systems, and Khoi middens and these have not been addressed. The 200m green zone from the shoreline is not adequate.</p> <p>What progress has been made in a year? I have a feeling of no confidence in this EIA.</p> | <p>There have been investigations conducted for the Traffic Impact Assessment, and these investigations found that the Van Stadens and Kromme River bridges are structurally adequate for the projected traffic flows for Nuclear-1.</p> <p>Comment noted.</p> <p>Comment noted.</p> |
| | 33 | Unidentified Interested and Affected Party | Question to Eskom; how much are you influenced by consultants? Consultants seem to think this is the right place for the plant to be, but I think they are biased. How much are you influenced by the consultant's decision? | Eskom appointed the EAP as an independent consultant to evaluate the potential environmental impacts, assess alternatives and alternative sites. The EAP appointed some of the most well renowned specialists in South Africa. Eskom is influenced by both the EAP and specialist opinions since they are experienced and ethical. |
| | 34 | Ian Mcknee Interested and Affected Party | The Germans have decided to close their nuclear capacity in the next 10 years. What does the German government know, one of the most advanced countries in the world, that we are not being told? | <p>Comment noted.</p> <p>The BBC (http://www.bbc.co.uk/news/world-europe-13592208) reports that Germany's decision to close down its nuclear power stations will most probably lead to an increase in the import of nuclear energy from France. Phasing out nuclear power will also result in increased dependence on fossil fuels, which result in proportionately</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|-----------------------|---|---|
| | | | | <p>larger releases of greenhouse gases into the atmosphere than nuclear power, which has a greenhouse gas footprint similar to some renewable technologies (see Section 4.2.2 of the Revised Draft EIR). There is a further risk that Germany will not manage to quickly halt its dependency on fossil fuels, especially coal-based energy, which creates unintended negative environmental impacts of its own.</p> |
| | 35 | Mr Kuleku Bet Live | <p>Let's be honest; these 7000 jobs are not sustainable. Look at the people toy-toying at Medupi because the jobs were just temporary. Are we prepared to destroy the economy here, hospitality, fishing and farming, for this?</p> <p>I was at the Sea Vista public meeting the day before yesterday. GIBB was holding a meeting there. About 20-25 people were there. They were asking real questions</p> | <p>The estimated number of jobs, at the peak of construction, is 9000. This would be in approximately year six of the nine year construction period. Most of these jobs would be skilled jobs filled by people outside the area but our recommendation, from the specialist, is that 25% of jobs should go to local people.</p> <p>There was unrest at the Eskom Medupi Power Station because of welders brought in from Thailand. RSA does have a shortage of welders and this shortage is being addressed through training programmes to uplift South African skills. With regard to the Medupi Power Station, there has been much business created in the area for small businesses e.g. catering, laundry, etc. All operators from the plant and some technical staff have come out of the local area. So there are sustainable jobs created. For the operational phase of Medupi the number of jobs is estimated at less than 1000, Koeberg has more permanent employers when compared with coal fired power stations.</p> <p>Regarding the open house which was held at Sea Vista, this was held at the request of the community, through the Centre for Environmental Rights which represents them. The message GIBB gave is exactly the same as that given at all</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|--|
| | | | <p>about jobs, health etc. but they could not answer them.</p> <p>I am from Cape Town and will go back to the activists and inform them of this process. We must work together to make sure the people, especially the black people, are not misled.</p> | <p>the other meetings.</p> |
| 36 | | <p>Mike Kantey Coalition Against Nuclear Energy</p> | <p>Regarding the waste report, pg. 61 of the revised draft EIR, v2.0, March 2011: the bullet summary on pg. 61 does not do justice to the issue of nuclear waste. For example, it assumes decommissioning after 60 years which has no precedent in the world; the average is 25 years. Bullet 5 of last sentence reads "It is generally agreed that these arrangements are interim and do not represent a final solution" What is long-term? Reuben has suggested 70 years, but considering the half-lives of some isotopes we should be talking thousands of years. We don't have this length of experience. To say we have 9 years experience in nuclear waste management is silly.</p> <p>Next bullet point at says "underground research labs made a very positive contribution to waste isolation research." But again the issue of time is not taken into consideration. We are not talking historical time, but geological time.</p> | <p>Radioactive waste management practices envisaged for Nuclear-1 are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal. Nuclear Power Station strives to minimise production of all solid, liquid and gaseous radioactive waste, both in terms of volume and activity content, as required for new reactor designs. This is being done through appropriate processing, conditioning, handling and storage systems. In addition, production of radioactive waste is minimised by applying latest technology and best practices for radiological zoning, provision of active drainage and ventilation, appropriate finishes and handling of solid radioactive waste. Where possible, the Nuclear-1 power station will reuse or recycle materials.</p> <p>All forms of radioactive wastes are strictly controlled and numerous specialised systems and management practices are in place to prevent uncontrolled contact with these substances. These controls and practices differ for the different forms of radioactive waste. South Africa still has to formally release a strategy for the long-term management of HLW, including spent fuel. Until such time, all spent fuel is stored temporarily either in spent fuel pools (wet storage), or</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|--|---|
| | | | <p>At the bottom of the page it reads “the assessment results indicate that with implementation of appropriate mitigation measures, all the potential impacts are low.” This is a common theme running through the EIR; “with the proper mitigation impacts will be low”. The impacts are high and we don’t know how successful the mitigation will be. How do we define “proper mitigation” and who gets to measure “proper”? This is a fatal flaw. This waste document has not been properly done.</p> | <p>in dry cask storage facilities (dry storage). This allows the shorter-lived isotopes to decay before further handling, a management strategy that is acceptable from a safety perspective. It must be noted however that as per the Department of Energy’s Media Statement on Nuclear Procurement Process Update as released on 14 July 2015 strategies are complete to develop an approach for South Africa to deal with Spent Fuel/High Level Waste disposal.</p> <p>Disposal of radioactive waste at an authorised facility is being done according to an approved disposal concept, defined and developed with due consideration of the nature of the waste to be disposed of and the natural environmental system, collectively referred to as the disposal system. The disposal system developed for this purpose makes provision for the containment of radionuclides until such time that any releases from the waste no longer pose radiological risks to human health and the environment. The safety assessment process used as basis for this purpose considers both intentional (as part of the design criteria) and unintentional (natural or human induced conditions) releases of radionuclides. Unintentional releases include consideration of unintentional human or animal intrusion conditions, which might lead to direct access and external exposure to radiation.</p> <p>Once released into the environment, radionuclides might migrate through the environmental system along three principle pathways: atmospheric, groundwater and surface water. Due to the physical nature of L&ILW and HLW disposal concepts, migration along the atmospheric pathway is highly unlikely. The principle environmental pathway of</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|---|
| | | | | <p>concern is thus the groundwater pathway, with the surface water pathway of secondary concern as an extension of the groundwater pathway. Disposal systems are designed so that releases to groundwater or surface water are highly unlikely as further explained in Chapter 10 of this EIR.</p> <p>Appropriate decision makers and mandated authorities will gauge the effectiveness of mitigation measures and the measurement of the waste thereof.</p> |
| | 37 | Lynn Andrews Squid Industry | <p>Do you know that squid is mostly an export product. Would you buy squid from an area near a nuclear plant? The wind and currents prevail from the west so it will affect all areas from here to PE. Our whole industry will be affected.</p> <p>I'm not talking about the land but the ocean.</p> | <p>Around the Koeberg Nuclear Power Station there are wines grown and produced which are exported all over the world, there is no reason why this should be different for squid. In addition it is our understanding that only a portion of squid are harvested close to the nuclear site.</p> <p>The impact of radiation on marine organisms was looked at by specialists in the marine report. Those are the same specialists who have done monitoring at the Koeberg Nuclear Power Station since before the power station was built. Their conclusion based on 20 years data is that there is no impact on marine organisms.</p> |
| | 38 | Helmie Tilders Member of Foster, affiliated to Thyspunt Alliance | <p>What has happened in the one year since the last EIA? Wind directions were shown as NW a year ago. We wrote comments about this but it is still shown as NW, which is convenient because if there are problems, all contaminants will blow out to sea. However we actually have a SW wind, which is the predominant wind here, and the</p> | <p>The dominant wind direction for the Thyspunt site and St Francis is west to north-west. More of a north-westerly wind in winter.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|--|---|
| | | | <p>contaminants will blow our way.</p> <p>The last draft EIA agricultural report showed a positive impact of 10-15%. We queried it. It is still shown as a positive impact of 10-15%. How do you get 15% more farming out of this area? About 90% of income in this area is dairy farming. The dairy farms produce 572 million litres per annum, which is sold nationally. It's a fine balance. If they produce more, they have a surplus; if less, someone else produces it. So where does the 15% extra milk go? The answer is given that the extra people coming into the area will consume it. I have done the maths. Each man, woman and child of the newcomers will have to consume 10-15 litres per day. This has been dealt with in a haphazard manner and is not good enough.</p> <p>I asked farmers about possibly changing to other types of farming but farmers said that vegetables, fruit, and wheat would not work here because of the climate. Seems dairy is the only option.</p> | <p>The agricultural assessment by the specialist is based on increased numbers of people entering into the area. Farmers can use the opportunity to produce more.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|--|
| | 39 | Bridget Elton Interested and Affected Party | We dispute the wind direction. If you look at dune system, it shows the wind direction. | The wind roses ¹ in Figures 2-25, 2-26 and 2-27 clearly show that the wind direction experienced most frequently is westerly. The longest “spokes” around the circle indicate the wind direction with the greatest frequency. It is clear from all three the above-mentioned figures that a westerly wind occurs most frequently, throughout the seasons, at both Thyspunt and at Cape St. Francis. This is consistent with the east-west orientation of the Oyster Bay mobile dune system, in that sand is blown from Oyster Bay in the west to St. Francis Bay in the east. |
| | 40 | Hylton Thorpe Thyspunt Alliance and St. Francis Bay Residents Association | Please put up a map of the area. Please explain how a headland bypass dune system could exist here if the wind blows in a NW direction as you propose it does. The headland bypass dune field shows which way the wind has been blowing for thousands of years. Windblown sand is picked up from Oyster Bay and travels to the canals system at St. Francis Bay. The next one goes from Thysbaai and goes straight to Sea Vista and St. Francis. The third system is a small one going from Cape St. Francis beach over the headland. Can't see how anyone can say that SW is not the prevailing wind. | The Dune Geomorphology Assessment (Appendix 2 of the Revised Draft EIR Version 1) addresses the dune dynamics. There are images from page 19 – 22 which explain the wind direction and how the dunes formed. |

¹ A wind rose is a graphic tool used by meteorologists to give a succinct view of how wind speed and direction are typically distributed at a particular location. They show the frequency of winds over a long time period plotted by wind direction, with colour bands showing wind ranges. The directions of the rose with the longest spoke show the wind direction with the greatest frequency. The spokes radiating from a wind rose show the frequency of winds blowing *from* particular directions.

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|--|
| | 41 | Riaana Tolan Greenpeace Africa | Your Thyspunt wind roses are only measuring between Jan 2008 and Sept 2009, which only gives you one season's worth of measurements. From a scientific point of view, this is not enough to determine the prevailing wind. | It is only the wind roses for the Thyspunt site itself that are based on a limited period of monitoring data. The data for Thyspunt itself is from January 2008 to September 2009. However, the wind roses for Cape St. Francis are based on data from 2004 to 2008. |
| | 42 | Pixie Anderson Interested and Affected Party | <p>A comment regarding the Economic Cost study. Are you planning to build a different type of station at Duynefontein, i.e. is the cost here different from the cost there. How is it possible that Thyspunt can be R0.5 billion cheaper to build when considering that this is the site where all the mitigation has to be done, including the fact that this site is where an open cycle gas turbine is to be built?</p> <p>In terms of costs and your transport study; we have only discussed costs from Humansdorp. What about costs from PE? Will the turbines come from PE or Coega, and what about all the other bridges that the reactor would have to pass under? Have you looked at bridge heights?</p> <p>Who will monitor the mitigation works? Will it be government or private? How will we have legal representation if it is not done?</p> | <p>Costs for other sites are higher. Bantamsklip would be the most expensive because it is remote and requires transport upgrades for roads and bridges. This factor is responsible for most of the cost difference between Thyspunt and the other two sites. The costs for the associated transmission lines have also been taken into account</p> <p>In the case of Duynefontein and Bantamsklip, the planned harbour is Saldana harbour. For Thyspunt it would be Port Elizabeth harbour. Certain interchanges will have to be ungraded and they are indicated in the transport report.</p> <p>All mitigation measures recommended by specialists are included in the Environmental Management Plan (EMP). This EMP also has to be reviewed by the DEA and will have to be approved before works commence. A team of independent Environmental Control Officers (ECOs) will monitor construction, and will report to an Environmental Monitoring Committee (EMC) which will include</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|--|---|---|
| | | | | <p>representatives from the community. At the three large power station construction sites an independent auditor carries our regular audits to review compliance. The DEA will also do its own monitoring via the Environmental Management Inspectorate (green scorpions).</p> |
| | 43 | Trudi Malan Thyspunt Alliance and Cape St. Francis Civics Representative | <p>The costs of transmission lines should not be included in the costs comparisons for this EIA. Eskom decided to split the transmission line EIA from the main power station EIA. The transmission lines are not part of the study and so that cost should not be included.</p> <p>If cumulative impacts are being considered, why then haven't all cumulative impacts of the transmission lines been considered? For example, agricultural impacts. The transmission lines will impact on the pivot watering systems. This was not considered. Seems there is selective integration of the two studies. Seems strange that the power lines are not part of the EIA yet it is said that the integration of the site is its positive point.</p> | <p>GIBB, as environmental assessment practitioner, is also required to consider cumulative impacts and that is one of the cumulative impacts.</p> <p>Where possible, GIBB has considered cumulative impacts.</p> |
| | 44 | Basil Webber Interested and Affected Party | <p>A comment regarding the agricultural contribution this project will make. I am a farmer. If there is increased consumption in this area, retailers will source supplies wherever they can get it cheapest. With beef and chicken production, farmers on the</p> | <p>Comment noted.</p> <p>The Agricultural Impact Assessment (Appendix E21 of the Revised Draft EIR Version 1) details the potential economic impacts, and the influx of people during construction phase will increase the demand for agricultural produce.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|---|---|
| | | | <p>highveld can produce it cheaper than we can here. Retailers will import meat from the reef and actually drive local prices down. You will probably drive some local farmers out of business. Recommend you terminate your agreement with your agricultural consultant.</p> <p>As father of four kids, will this road down here be widened? What work will be done on it? Has any costing been done re expropriation requirements?</p> <p>How will a school bus pass a truck with a heavy load? How will this happen practically?</p> <p>To the consultants, be wary of your recommendations you make. You constantly refer to you specialists, such as your economic specialist. As a chartered accountant I have some insight into these things. You will be held accountable for your recommendations. I will make sure you are held accountable. The gaping holes in all your work show that you cannot come to a conclusion on which site to recommend. Until you have done a very thorough study of the economic reality of this project, how can you responsibly make a recommendation to Eskom?</p> | <p>It will also be cheaper for retailers to get supplies from local farmers due to transport logistics, and if it is cheaper to obtain produce from the Highveld farmers surely the retailers would be using them already.</p> <p>Even if retailers source stock from multiple farmers, smaller local farms will still sell more produce due to the increase in demand.</p> <p>There are no plans to widen the roads outside the current road reserves or to expropriate any neighbouring land.</p> <p>Certain extra heavy loads will only be moved outside of peak hours.</p> <p>There are requirements in the EIA regulations regarding the independence of environmental assessment practitioners and specialists. GIBB is currently doing everything in its power to ensure a transparent and legally compliance EIA process.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|---|
| | | | Are you comfortable that you have made a comprehensive, responsible recommendation to the client? | Yes, GIBB is comfortable that a responsible recommendation has been made. |
| | 45 | Greg Christy SASMIA | Who owns this EIA document? Eskom? Arcus GIBB? Who does one pass the buck to? If the report is found to be faulty, who does one go after? | Each specialist study is signed off by the specialist and their companies. As far the EIR is concerned, the EAP, takes the responsibility on behalf of GIBB. |
| | 46 | Dr Yvette Abrahams Commissioner for Gender Equality | The Human Rights Commission has a mining desk and investigates complaints from the public as does the Office of the Public Protector. If there is someone at the DEA or Department of Energy that you feel is not doing their job, you can complain to the Public Protector. The Gender Equity Commission is also empowered to handle public complaints and we report to parliament. People don't make enough use of our services. | Comment noted. |
| | 47 | Chris Barrett Thyspunt Alliance and St. Francis Kromme Trust | Have two questions. What has changed about the roads and bridges that now they don't need upgrading? We were told before that they would need upgrading. For example, we were told especially that the bridge over the Kromme River needs attention. What has changed with that bridge? What PI cover does your company carry? | Preliminary transport studies show that the Van Stadens and Kromme Bridges are structurally sufficient, but may need minor upgrades. It is stated on page 80 of the Transport Assessment (Appendix E 25 of the Revised Draft EIR) that "Initial assessment of the Kromme River Bridge indicates that the bridge will be capable of carrying the increased loading during the construction period". |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|--|
| | 48 | Rudolf McDonald Interested and Affected Party | <p>A question for Eskom, not the consultant. Reading from the report “Eskom identified five sites for the construction of Nuclear 1”. These sites were given to their consultants. Where and when was the decision made to look only at five sites in the whole of RSA? I heard that it was about 30 years ago. If this is true, then I think it was poor form to begin the selection process with data from 30 years back. In those days they would not consider places like the Transkei. Is this correct?</p> <p>When we started this process in 2005, why didn't we start again, because in 2005 the politics and factors in RSA were very different from 30 years ago.</p> | <p>Eskom did indeed start the nuclear site investigation programme in the 1980s. It was done by consultants; the Environmental Evaluation Unit at UCT did the environmental investigation. This continued to the early 1990s. Eskom looked at where they believed the electricity demand would be – along the coastline. Eskom also looked at the geology, assuming it would be a Koeberg type reactor. A lot of Kwa-Zulu Natal was excluded because it was either too built up or the geology wasn't suitable. Eskom also stayed away from homelands and major cities and considered the environment, existing and projected populations, and tidal and wave actions. There were very few sites identified as suitable on the coastline. Eskom proposed the five sites to the consultants and asked them to review what was done and determine if these five sites were still valid. Although they were identified 30 years ago, the EIA still has to look at the present conditions for each of these sites.</p> <p>Specialists had access to all the original documents, but had to assess each site on its own present merits.</p> |
| | 49 | Trudi Malan Thyspunt Alliance and Cape St. Francis Civics Representative | <p>Can the consultants give us their written review of the original nuclear site investigation programme?</p> <p>I would like to quote from the International Atomic Energy Association's publication Standard Safety Series: Site Evaluation for Nuclear Installations, which our country is a signatory to.</p> <p>Point 2.13: “For nuclear power plant, the</p> | <p>GIBB's review of the Nuclear Site Investigation Report (NSIP) is an appendix to the Scoping Report. Later, in the Revised Draft EIR Version 1, the questions that the Thyspunt Alliance had regarding the NSIP were responded to in Appendix 8 IRR 45e. It must be noted that it was a review of the process that was undertaken, not a thorough review of every specialist study that comprised the Report.</p> <p>An EIA process is a detailed review of the suitability of the</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---------------------|---|---|
| | | | <p>total nuclear capacity to be installed on the site should be determined, as far as possible, at the first stages of the siting process. If it is proposed that the installed nuclear capacity be significantly increased to a level greater than that previously determined to be acceptable, the suitability of the site shall be re-evaluated as appropriate". It has not been done in this case. The original site was planned for a 1 800 MW plant; it was not planned for a 4 000 MW plant.</p> <p>Secondly the Nuclear Site Investigation Programme had no public participation involved. The first that the public in this area heard about it was via an announcement in Humansdorp. We then had to use the PAIA (Promotion of Access to Information Act) to get the information because it was considered confidential. It was kept confidential so that the public would not know of Eskom's intentions to buy land here so that they would not increase their selling prices. I maintain that the decision to build at the five previously identified sites is unconstitutional. Eskom has had enough time to think where they should build the plant in the new South Africa but have ignored this at their own peril.</p> | <p>alternative sites being looked at.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|--|
| | | | <p>We are busy with an EIA on a previously selected site. This is not a site selection process. We are contending that Eskom should have relooked at the whole country when they did the Nuclear Site Investigation Programme. They are in contravention of the International Atomic Energy Association's Standard Safety Regulations for Site Selection.</p> | |
| | 50 | Kobus Reichert Heritage Representative for the Gamtkwa Khoisan Council | <p>Jaana Ball stated that the heritage report was done with consultation with the Gamtkwa Khoisan Council. She did not, however, state that we oppose this proposal. Gamtkwa people will not accept this misleading information that has been shared.</p> | <p>The heritage specialist for the EIA, GIBB and Eskom did have a key focus group meeting with the Gamtkwa Khoisan Council on 27 August 2010. Minutes of this meeting were included in the Revised Draft EIR Version 1. The Council members raised the issue of the cultural landscape, which wasn't addressed in the previous version of the heritage report. The heritage specialist therefore took this into account and has since addressed it in the Revised Draft EIR Version 1. GIBB has had a meeting with the South African Heritage Resources Agency (SAHRA) on 24 May 2011 (the minutes are available on the GIBB website) regarding the potential of this site to be considered for an UNESCO site, as well as discussing the findings of the Revised EIR and the permit application for the excavations in the central portion of the site. The additional test excavations at Thyspunt that were approved by the South African Heritage Resource Agency and conducted in 2011 (after the release of the Revised Draft EIR Version 1), have confirmed that the heritage sites in the recommended footprint of the power station at Thyspunt are few in number and of low quality. This implies that direct impacts on heritage resources can be mitigated. Nevertheless Chapter 9 and 10 of the Revised</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|--|--|
| | | | <p>For example, your HIA specialist made it clear that they had consulted with Dr Johann Binneman who has 25 years experience in the study area. They said he shared information with them which was taken into account. I have it in writing from Dr Binneman that this is false. He said this exchange happened at a social gathering and nothing was discussed at length. He says he has data on the site which would change the recommendations of the specialist. He has photographic evidence of an early stone age site, the size of a rugby field, situated under the sand at the site. Why has this information not been obtained from Dr. Binneman? Why are you giving misleading statements in your responses to us? Why are you contravening the NEMA regulations by not including this information in your report? Why are you shifting your process responsibilities over to the Gamtkwa Khoisan people; we have to now prove our existence and our link to the study area to you.</p> | <p>Draft EIR Version 1 recommends that Environmental Authorisation in terms of the current application is granted only if approval is received from the South African Heritage Resources Agency. Please note that the amended Heritage Study will form part of the revised draft EIR Version 2 which will be made available for public review in due course.</p> <p>Dr. Binneman is an expert on the Thyspunt area, and Dr. Hart and Dr. Halkett from the UCT Archaeological Contracts Office both recognise this and know Dr. Binneman. They have referenced his research material in their specialist report.</p> <p>Dr. Binneman, previously of the Albany Museum, spent an evening with the Heritage Impact Assessment (HIA) team during their fieldwork at the Thyspunt site, at the invitation of the HIA team and shared information with the team.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|--|--|
| | | | <p>I asked three weeks ago via email, who is the author of the responses you provided us with. I received no reply, similarly to many other emails I've submitted in the past. We cannot respond to issues on that letter when you are not the author of those responses. I'm asking again; give us the names of the people who authored those responses; those who said the Khoisan people of this area did not lose their land by force; those who said there is no link between the Khoisan community and the archaeology at Thyspunt.</p> <p>We have asked you to do your research properly and if you did it, you would have had the answers to all those questions. You will find the answers in the Jeffrey's Bay library. Am getting sick and tired of people playing with words when we are dealing with fairly straight forward issues.</p> <p>If this is a cultural landscape in terms of UNESCO definition, how can putting a power station there mean a positive impact to the cultural landscape? Moving the power station back 200 m would have no effect whatsoever. It will still destroy the cultural landscape totally. Don't tell me the site is not listed in terms of UNESCO; if it has the potential to be declared a WHS, then it should be respected and this should have excluded Thyspunt from the process.</p> | |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|---|--|
| | | | <p>If it is true that you have consulted with the local historians, then you are aware that Bart Logie has written books about the area. Has he been consulted? If Dr. Binneman has been consulted, then I refer you to your mitigation report: "An open day was held at UCT, where the mitigation report was formulated by inviting academics from all over the country as well as students and other stakeholders. The area that will be most affected by any mitigation work will be the Eastern Cape and all of the artefacts and archaeological material will have to be curated in the Eastern Cape, and the only facility currently is the Albany Museum." Why was the Albany Museum, who will deal with the artefacts, deliberately excluded from this process?</p> <p>To say that SAHRA will still make their decision is a lie. The SAHRA has made their decision. I spoke to Mariagrazia Galimberti from the SAHRA, who said that it doesn't matter what information you bring out of your excavation works, it will not change the SAHRA's decision. They have made their decision already.</p> | <p>Initial brief consultation was undertaken with Dr. Bartel Logie during the Scoping Phase of the EIA. Consultation has been focused on professional academics whom are knowledgeable about the specific issues at the site and surrounds.</p> <p>GIBB was not involved in the open day and mitigation workshop at UCT; it was not part of the EIA. Dr. Tim Hart arranged the workshop on his own accord, and therefore GIBB cannot comment on the proceeding of the workshop, but can say that the curation of artefacts has been discussed, should authorisation be given. The SAHRA, Eskom, Dr. Hart and GIBB are well aware of the capacity of Albany Museum. Eskom has undertaken that should mitigation need to take place, Eskom would consider a facility to curate and store these artefacts.</p> <p>Mr. Reichert is correct. SAHRA has written to GIBB regarding the Draft EIR. SAHRA's communications have been included as Appendix B3 to the Revised Draft EIR Version 1, so GIBB is not trying to hide it any communication from the Authority. As soon as the letter was received by GIBB it was posted onto the EIA's websites. What has been agreed with SAHRA during a meeting held on 24 June 2011 is that SAHRA will provide further comment on this Revised Draft EIR within the Comment Period. As has been indicated at the meeting tonight, SAHRA has given permission for the test excavations to occur in the central portion of the Thyspunt site. Once the results of these excavations are known then SAHRA will provide comment to the DEA on the</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|--|--|--|
| | | | | <p>Final EIR.</p> <p>The Final Minutes of the meeting with SAHRA held on 12 October 2009 confirming the statements made above are available on the GIBB website.</p> |
| | 51 | Charles Lead Interested and Affected Party | Regarding access to the power station on the R330, does GIBB intend persisting with their recommendation that the R330 still be used as the access road? Considering the vehement opposition to this by the residents, is GIBB going to consider the feelings of the residents? | Due to the numerous concerns raised regarding the use of the R330 during construction, the Transportation Assessment Report was substantively amended and the feasibility of the western access road was re-assessed. The revised report recommends that a combination of both Oyster Bay Road (Route 1 to western access) and R330 (Route 2 to eastern access) be used for transportation during the construction phase, which will improve the impact on traffic congestion, noise and safety to low / medium. The construction vehicles (normal heavy loads) will utilise only the upgraded Oyster Bay Road (DR1763 - western access) to minimise the impact of construction traffic on the existing network and the infrequent abnormal loads will utilise the R330 (MR381) during the night time. Several bypasses have been recommended for construction traffic to avoid using the Humansdorp Main Street travelling between the N2 and the Oyster Bay Road, as well as to avoid the Humansdorp Main Street to travel between Voortrekker Road (R102) and the R330. |
| | 52 | John Hammond Pub Owner | I generally have a pro-nuclear attitude but I think it is a disgrace the way these consultants are ignoring the concerns of the residents of St. Francis Bay. This proposal of taking traffic through Humansdorp is ridiculous. The impact on people and children is a disgrace. We will toy-toying in | Due to the numerous concerns raised regarding the use of the R330 during construction, the Transportation Assessment Report was substantively amended and the feasibility of the western access road was re-assessed. The revised report recommends that a combination of both Oyster Bay Road (Route 1 to western access) and R330 (Route 2 to eastern access) be used for transportation |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|---|
| | | | the roads if need be, but we will not allow vehicles to come down the R330. We will stop them. | during the construction phase, which will improve the impact on traffic congestion, noise and safety to low / medium. The construction vehicles (normal heavy loads) will utilise only the upgraded Oyster Bay Road (DR1763 - western access) to minimise the impact of construction traffic on the existing network and the infrequent abnormal loads will utilise the R330 (MR381) during the night time. Several bypasses have been recommended for construction traffic to avoid using the Humansdorp Main Street travelling between the N2 and the Oyster Bay Road, as well as to avoid the Humansdorp Main Street to travel between Voortrekker Road (R102) and the R330. |
| | 53 | Hylton Thorpe Thyspunt Alliance and St. Francis Bay Residents Association | The road proposals are part of the social impact assessment in this EIA. Social impacts have been totally neglected as part of this EIA. It was not identified as one of the 8 or 9 key impacts identified. The Social Impact Report is the same pathetic document we saw a year ago. It is hypothetical and plays down everything. A recommendation from the Nuclear Site Investigation Programme reads: "small holiday resorts along the coast should be unaffected". Ha-ha. So we will be unaffected by all these hundreds of trucks coming right past us? Exactly the same problem in Humansdorp. I re-emphasise my proposal that no road access to Thyspunt should occur within 1km of any urban edge, including the R330 at Humansdorp and this end. The playing | GIBB has taken these comments back to the author of that specialist report. Regarding the social impacts not making it onto the list of eight key decision factors - that decision was made at the specialist integration meeting held on 25 May 2010, made together with all the 28?? specialists, including the social specialist himself. Please note that the Transportation Assessment Report was substantively amended and the feasibility of the western access road was re-assessed. The revised report will form part of the Revised Draft EIR Version 2. |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|---|
| | | | <p>down of social impacts is scandalous and it's one of the biggest concerns we have. There has been no mention this evening of the informal settlements that are likely to develop here if the road comes this way. We will have a situation where the population of informal settlements is greater than the population of the permanent residents here. They will be unemployed and living in squalor. The consequences are mind-blowing. Implications for Sea Vista are frightful. It will happen if this road comes this way. The mitigation plans proposed by the social impacts specialist are all just talk; they hold no teeth or power. It talks about the municipalities imposing bylaws on the informal settlements but municipalities do not have the ability to implement by-laws (if they exist). This social impact assessment is a non-starter and we really need to object strongly.</p> | |
| | 54 | Bridget Elton Interested and Affected Party | <p>You said Bantamsklip is too isolated, and the roads to access the site would cost too much. But you want to bring the transport right through St. Francis Bay. Why can't you built the roads away from us? If you are going to factor in that cost, then maybe Thyspunt is more expensive. Why can't you do us the courtesy of protecting us, our sense of place, and our lives, instead of directing all these trucks through our</p> | <p>Please note that the Transportation Assessment Report was substantively amended and the feasibility of the western access road was re-assessed. The revised report recommends that a combination of both Oyster Bay Road (Route 1 to western access) and R330 (Route 2 to eastern access) be used for transportation during the construction phase, which will improve the impact on traffic congestion, noise and safety to low / medium. The construction vehicles (normal heavy loads) will utilise only the upgraded Oyster Bay Road (DR1763 - western access) to minimise the</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|---|
| | | | <p>village? You have a social responsibility to those of us who live here to look at putting the road somewhere else and then factoring in that cost. Then maybe Bantamsklip might be cheaper; it is more remote and there are no villages on your doorstep.</p> <p>I think GIBB is just proposing this route because it is going to cost the client less, but maybe the client needs to look into this alternative road idea. Please look into this and don't just bulldoze us.</p> | <p>impact of construction traffic on the existing network and the infrequent abnormal loads will utilise the R330 (MR381) during the night time. Several bypasses have been recommended for construction traffic to avoid using the Humansdorp Main Street travelling between the N2 and the Oyster Bay Road, as well as to avoid the Humansdorp Main Street to travel between Voortrekker Road (R102) and the R330The revised report will form part of the Revised Draft EIR Version 2.</p> |
| | 55 | Mr Elwin Malgas Interested and Affected Party | <p>The consultant comes here every time with the same story; blatant lies! The farmer who spoke about meat prices: he spoke about his kids. Well I have three kids. Our children will have to walk on these roads with the 900 trucks. There is already a problem in the mornings around the schools; we are already battling to get kids over the roads. Eight hundred and forty five trucks in the morning! What will happen?</p> <p>I support Hylton Thorpe's recommendation that they have no road within 1 km from any town area. Who is this traffic specialist? He does not live here and does not know the conditions here.</p> | <p>Please note that the Transportation Assessment Report was substantively amended and the feasibility of the western access road was re-assessed. The revised report recommends that a combination of both Oyster Bay Road (Route 1 to western access) and R330 (Route 2 to eastern access) be used for transportation during the construction phase, which will improve the impact on traffic congestion, noise and safety to low / medium. The construction vehicles (normal heavy loads) will utilise only the upgraded Oyster Bay Road (DR1763 - western access) to minimise the impact of construction traffic on the existing network and the infrequent abnormal loads will utilise the R330 (MR381) during the night time. Several bypasses have been recommended for construction traffic to avoid using the Humansdorp Main Street travelling between the N2 and the Oyster Bay Road, as well as to avoid the Humansdorp Main Street to travel between Voortrekker Road (R102) and the R330The revised report will form part of the Revised Draft EIR Version 2.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|---|
| | 56 | Leanne Swanepoel Interested and Affected Party | Proposing a bridge or a walkover is not acceptable. People will walk under bridges or climb over fences etc. so that they don't have to walk over the bridge. | Comment noted. |
| | 57 | Greg Christy, SASMIA | <p>Regards the outflow and inflow pipes, are they the same as the spoil pipe, or are there 3 separate pipes going to be flowing out?</p> <p>Has there been an Engineering feasibility study on laying a 6 km pipe out into the ocean? Not sure if this will be over or under the sea bed. This would be a first for this country. If this hasn't been done, why?</p> <p>We are being asked to comment on the EIR when we don't yet know the type of nuclear technology to be used, and we don't have the engineering feasibility for one of the main aspects of the project, the pipelines out to sea. Yet we have a comment deadline of the 07 August 2011.</p> <p>So there has been no costing done on this pumping issue, because there is no engineering feasibility. How can one do a comparison if you don't have the costing on it yet?</p> | <p>The outflow pipelines will not be the same. There will be three types of pipelines: one for spoil³, an inflow line for cooling water and an outflow line for cooling water.</p> <p>The proposed inlet duct piping will be a physical, hard rock tunnel about 17 m below the main sea level going out. It is approximately 6 m diameter by 1 km long. The inlet point would be about 700 m off the coast. The outfall pipes will be about 500 m long pipes set into the seabed. They will be covered pipes, not tunnels, and will discharge the warm water well beyond the shore to avoid desalination and encourage dispersal. The spoil pipe will be a temporary pipe. This one will be a challenge; Eskom will have to build it to get it 5 km offshore. Eskom has looked at studies with the pumping organisations and believe they can get high enough pressure to pump in one stage. In normal conditions, a booster station at 1km intervals would be required. The present thought is that a big enough pump station to pump it 6 km out can be built on shore.</p> <p>The indicative costing has already been done. Eskom previously investigated some of the costs when the Nuclear-1 tender was offered, and obtained prices from two vendors; one to pump the sand to the Cape St. Francis Beach (over 11 km), and the other was to truck it on the site. Therefore,</p> |

³ To be used only during construction

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|---|--|
| | | | <p>Also, we were told earlier that the release depth would be 500 m, not 5 m.</p> <p>Jaana please confirm that your specialist has consulted with the squid working group, because the working group deny this. I sit on the scientific working group and that consultation hasn't happened.</p> <p>I spoke to Mr Hans Verwey². He is not a specialist on squid and he told the scientist involved that the people they have to speak to is the scientific working group. Jaana you have been misinformed.</p> | <p>Eskom does have indicative costs, but the true costs will only come out at the end of the process. The current view is that Eskom has adequate costing. It needs to be also emphasized that the proposed intake and outfall as described is common to all the 3 sites and not specifically to the Thyspunt site</p> <p>There was never any indication provided that the release depth would be 500m.</p> <p>GIBB's specialist has given GIBB a list of people with whom they have consulted, one of which is Hans Verwey.</p> <p>J</p> <p>The marine specialists have provided GIBB with a list of five or six people they consulted with, some of which were members of the Squid Working Group.</p> <p>The Marine Specialist Report (Appendix E15 of the Revised Draft EIR) indicates that the following squid specialists have been consulted in the preparation of this report:</p> <ul style="list-style-type: none"> • Dr. N. Downey, Bayworld Centre for Research and Education; • Ms. J. Mwicigi, Offshore Resources, Fisheries Branch, Department of Agriculture Forestry and Fisheries; • Dr. M. Roberts, Ocean Environment, Biodiversity and Research, Department of Environmental Affairs; and |

² The correct spelling is "Verheye", but for the sake of accuracy of the minutes, the pronunciation used during the meeting has been maintained.

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|---|
| | | | <p>You spoke to someone that is on the working group, but have not necessarily consulted the working group. There is a difference. Was it a consultation or a conversation?</p> | <ul style="list-style-type: none"> • Dr. H. Verheye, Ocean Environment, Biodiversity and Research, Department of Environmental Affairs. <p>All the above researchers are members of the Squid Working Group.</p> <p>Dr Verheye referred the marine specialist team via email to other members of the Squid Working Group, as he indicated that other members of the group would be better qualified and/or experienced to answer the issues.</p> <p>GIBB can confirm that it was a consultation.</p> |
| | 58 | Mike Kantey Coalition Against Nuclear Energy | <p>Regarding who owns the EIA process, the EIA procedure is regulated and falls under the NEMA. The NEMA process itself is subject to section 26 of the Constitution. The right to a healthy environment has been enshrined. The point that Dr Abrahams made about local concerns is valid e.g. the case of the petrol pump lady who challenged successfully, even though they tried to put a slap suite on her. She won the slap suite as well and they were forced to pay costs. So there is legal precedence as Dr Abrahams suggested for a challenge to an EIA process. Another example would be Roodefontein in Plettenbergbay Bay. This entire process is not owned by Eskom or</p> | <p>Comment noted.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|---|
| | | | <p>GIBB, it is owned by the public. Rest assured that we are governed by our constitution.</p> | |
| | 59 | <p>Trudi Malan Thyspunt Alliance and Cape St Francis Civics Representative</p> | <p>As a word of warning, go back to your marine ecology report, where it says “no sites of special biological significance occur within the designated area”. I don’t understand how two of the specialist studies can contradict each other. The Marine expert says that long term climate change indicates a decrease in water temperature, yet the oceanographic specialist says exactly the opposite, that temperatures along the coastline will increase.</p> <p>The marine specialists say following: “entrainment is not anticipated to have important ecological impacts”. You should research what has happened in US. Have submitted a paper (Californian Energy Commission) to you on how to determine ecological impacts of entrainment of biological species in the area of a nuclear power station. Don’t tell me that they have studies it at Koeberg, because comparing Koeberg and Thyspunt is like comparing apples and bananas. The US is now looking at phasing out Once Through Cooling systems. Why is Eskom not looking at any other alternatives for cooling their</p> | <p>All the reports were required to look at the impact of global warming. The marine report however indicated that contradictory to the general trend around the country, there has been a decrease in sea surface temperature at the Thyspunt site.</p> <p>The following is a quote from page 33 of the Marine Assessment (Appendix E15 of the Revised Draft EIR Version 1) with respect to the Thyspunt site): “... long-term climate change induced decreases in sea-surface temperatures along this section of coast (Rouault et al. 2009)”.</p> <p>GIBB has instituted the revision of the marine report and it will appear in the Revised Draft EIR Version 2. However it must be noted, the specialists have to base their studies on South African conditions, which is why the marine report has been based largely on the extensive monitoring that has been done at the Koeberg Nuclear Power Station over more than 20 years.</p> <p>While there is a move in the USA to do away with once-through cooling systems on both coastal and river based plants currently all the coastal nuclear power stations under construction in the world (in France, Finland, China, Taiwan, Russia, India and the UAE) are using once through systems as proposed for Nuclear-1.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|---|---|
| | | | <p>nuclear power station? In the US it is recognised that entrainment has a much bigger impact than previously thought. I have supplied the document to the EAPs twice now.</p> <p>Why in the EIA are there no references made to flight routes, while in the original Nuclear Site Investigation Programme, the following was noted: "All light aircraft must follow the coastline. They are not allowed to fly over the sea within 15 nautical miles from PE and must fly below 500 feet ... a nuclear power station in the Oyster Bay area, would have an inhibiting affect on light aircraft. They would be forced to fly inland, closure to the mountains. It would mean that they would have to increase their altitude to 1500 feet above the mountain ranges and then descend to sea level at PE airport. The traffic controller at the PE airport considered this to be dangerous". Why if the original site investigation pointed this out, is this now no longer a problem anymore?</p> <p>Regarding the marine specialists using long terms studies, he is referencing work done in 1984 and 1988. The 1988 study actually called for more information about the benthic environment. To date it has not been done because it was seen as being</p> | <p>The issue will be addressed in a revision of the Traffic Assessment.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---------------------------------|--|---|
| | | | <p>too costly. Your marine specialist based most of his information on desktop studies prior to the year 1988. I am warning you again, he should talk to us because we have since had a study done.</p> | |
| | 60 | Rene Royal Enviro Consultant | <p>Regarding the intake and piping. Can we not get a more detailed development plan, showing cross sections of cut and fill areas, and where roads will be, buffer zones on wetlands, where the plant will go etc. It is now a year further down the line. Surely more site specific detailed plans can be provided? Why can we not have a detailed development plan?</p> <p>But surely we can get a more detailed plan at this stage. The report says we need to a keep a 200 m corridor between the high watermark and the power plant. How are you going to achieve this; surely you will need to have fencing, pipes etc traversing this corridor? How do you know you can make this work if you haven't drawn it up on a plan?</p> <p>The cut and fill required to get foundations in also concerns me. Looking at the site, you have to move as far west as you can,</p> | <p>GIBB has recommended that should authorisation be given, detailed "walkdowns" of site be undertaken by the relevant specialists.</p> <p>Eskom has conceptual designs but are not able to do detailed site layouts until they have one of the three sites approved, and a footprint area assigned to them. Eskom has been moving the plant around the site many times because of the environmental constraints. The layout will also depend on the technology used, which hasn't been decided. Once Eskom knows what the final conditions are going to be from the EIA, Eskom can then start working.</p> <p>Eskom is working on the principle that there will be a temporary cut and fill of about 100 m wide, from the site to the coast, to get in to install the discharge pipe work, and possibly for the offshore sand discharge during construction. Apart from this, the coastal area will be left untouched. A fence will be built around it and Eskom will not be going on the ground outside the fenced area.</p> <p>Eskom is constrained by the area of least sensitivity given by the EIA consultants. The short answer is that the off-shore pumping is a function of how sand is removed off-site. The</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---------------------|---|---|
| | | | <p>where the difference between the rock and sand dune is at least 60m Have these calculations been taken into account for this western area?</p> <p>For the record, at this stage, one should have a good idea of what constraints are on the site, and hence should have more detailed designs available for a project of this magnitude and cost.</p> <p>So why can they not put a design on it then?</p> <p>But then what if it doesn't work? Why can't we see conceptual designs? At this far along in the process there should be at least a conceptual design.</p> | <p>terrace would have to be at least 15 m, required in terms of the tsunami study, but it may need to be as high as 18 m. This is why it is difficult to provide a drawing; it depends on the technology selected, even the tunnelling technology. Any drawings Eskom could provide would be confusing because they would change month by month.</p> <p>From an environmental perspective, GIBB has detailed mapping of constraints from specialists, for example the wetlands, flora and fauna.</p> <p>Detailed designs cost a lot, and Eskom only has the concept monies approved for this project. Government and Eskom's Board will have to give approval for detailed design. Until Eskom has definite approval for the plant to go ahead, Eskom will not get detailed design approval.</p> <p>Eskom has an idea of where the plant can be placed on the site, but the conceptual designs keep changing because of changing environmental constraints.</p> <p>At least five different PWR designs are being considered, with approximately six or seven layout options per design. Eskom is looking at commercially sensitive information which looks at what is the advantage of one type of technology over another. On a deal of this size, 1% is well over a billion rand. So if Eskom starts showing how the layout will be planned, the vendors will use that against them. Eskom has at least two solutions for each of the technical problems. For example, if construction goes</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|--|
| | | | | <p>offshore through rock, is a lined tunnel or a bare rock tunnel more suited? Should a machined tunnel be used, a boring machine or drill and blast? There are many options and Eskom can make many of them work.</p> |
| | 61 | Chris Barrett Thyspunt Alliance and St. Francis Kromme Trust | <p>Maybe we can minute that we are concerned about how an EIA report can be finalised without knowing these engineering options. Are they going to blast, or bore etc? The EIA has to look at these aspects and they haven't done this as yet.</p> <p>Jaana has come up with figures as to why Thyspunt is the desired site. She says that these are based on the specialist's get together. Can you tell us whether the specialists considered any change to those rating as a result of the revised EIA and specialist studies?</p> <p>So I take it they were not consulted at all?</p> | <p>The specialists take responsibility for their assessment and reports. They use a methodology that is prescribed by the DEA. GIBB provided the specialists with standard assessment tables to ensure they report in a uniform manner. GIBB had an integration meeting on 25 May 2010 where it, with all the specialists, discussed the significant impacts and recommendations of all the studies, at all the alternative sites. It was discussed which particular studies should be used in the assessment of the preferred site. It is GIBB's responsibility to do the overall assessment. So GIBB's specialists did not get involved in the various tables assessing the preferred site that are in Chapter 9 but these significance ratings for potential impacts come from the specialist reports.</p> <p>That is untrue. GIBB has not had a follow up integration meeting, but GIBB has interacted extensively with the specialists in terms of their revised reports.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|--|
| | | | <p>It is noted in the executive summary that the department in the Eastern Cape, DEDEA, have to comment on the report. When do their comments come into the public domain? Is it before or after it goes to DEA?</p> | <p>During the process, the authorities have a chance to comment on the report. There are minutes in the report of meetings GIBB has had with the DEA&DP⁴ on 03 August 2010 and the DEDEA⁵ (Eastern Cape) (07 June 2011). All comments that have already been provided are included in the report. If a commenting authority chooses not to comment, GIBB cannot force them to.</p> |
| | 62 | <p>Hylton Thorpe Thyspunt Alliance and St Francis Bay Residents Association</p> | <p>The problem at Fukushima was that the cooling system failed. I presume a modern PWR system would also require the same level of cooling? If so, can Eskom guarantee that the inlet system in the sea will function perfectly for the lifetime of the plant? If they get blocked or cracked will Thyspunt be just as vulnerable as the Fukushima plant?</p> <p>Will the cooling towers be like those we see at coal fired power stations?</p> | <p>Fukushima failed because the electrical supply failed. Some modern systems are passively cooled and do not require a separate cooling system. However if Eskom does not use such passive systems at Thyspunt, then it would be required to build separate cooling towers on site, which will allow Eskom to keep the plant cool without needing the sea e.g. if an oil tanker dumped oil on the beach and clogged the intakes. It will not function at full power, but will be sufficient to keep the plant cool for shut down. The reason for two tunnels is that one of the tunnels can be closed so that maintenance can be done on one while the other one operates.</p> <p>They will only be about 5 - 6 m high, and will only be use for cooling the essential systems for shut down, not for normal operations. They will not be visible from outside the power station.</p> |

⁴ Western Cape Department of Environmental Affairs and Development Planning

⁵ Now called "Department of Economic Affairs, Environment and Tourism"

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|---|
| | 63 | Mike Kantey Coalition Against Nuclear Energy | <p>A comment was made that someone was cited as being consulted by a specialists, but when that person was asked, they denied having been consulted. I think it was Mr Verwey that was mentioned.</p> <p>Similarly it was reported to me by Prof Johnny Meyers from UCT that his name was used in one of the health specialist reports after only having had a 2-3 minute telephone conversation. The question is put to GIBB; who judges the verity of the specialists reports? Who vets the content and accuracy of those reports? We've heard of the very big holes in the reports. One begins to question the authority of those specialists. Similarly Dr Reed in Cape Town asked how and by what external peer review process was this process of identifying the three candidate sites conducted. What scientific or mathematical process was used to get this - 5, +8? What is that, and does it have status in the peer review literature?</p> <p>When an issue of substance is dealt with in the report, it is always referred elsewhere. At no point do the genuine impacts arise in the report and are given substantive answers which can stand peer review.</p> | <p>GIBB has requested the public to be part of the review process from the beginning. GIBB is very glad that this community has appointed specialists to act on their behalf. That is one mechanism of peer review. GIBB also reviews the specialists reports; not from a technical point of view, but from a methodology point of view. Earlier on in the EIA process GIBB also had technical peer reviews of all specialist reports undertaken. These are the three types of review that have been done. The DEA has also appointed a panel of independent reviewers, with specific areas of expertise, to review the EIR and its specialist reports.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|--|
| | 64 | Andre Fouche Interested and Affected Party | When it comes to cost, we score very well here in Thyspunt. It is because we are providing an enormous subsidy in terms of existing infrastructure, e.g. a road which is about to be hijacked, which is getting Eskom in here on the cheap. Eskom mentioned they have budget constraints, and we are being used here unfairly because we have existing infrastructure. | Comment noted. |
| | 65 | Greg Christy SASMIA | Regarding the process review that has been done by SE Solution, and the recommendation thereon, are you going to be acting on this? | GIBB has already acted on it and hence some of the methodology has changed and Chapter 10 of the EIR has been amended. Please let us know if you feel we have not dealt with everything. GIBB has communicated the peer reviewer's recommendation as well as GIBB's subsequent changes to the DEA. |
| | 66 | Shaun Thyme Interested and Affected Party | How much will this project cost? You said that it would cost R 5 billion more to build it at the other sites. If you are spending R170 billion, what is an extra R 5 billion? | The capital costs of this project is approximately R170 billion. R5 billion sounds like a small sum but it equates to low cost housing in RSA for a whole year. |
| | 67 | Trudi Malan Thyspunt Alliance and Cape St Francis Civics Representative | Two things we would like to request. Firstly, the EIA should be revised and all references to the European Utility Requirements must be removed, because the European Utility Requirements, the group of companies themselves, state that they are not a statutory body. It is strange | References to the EUR requirements, as has been stated before, are one of the key assumptions of the EIA. If any of the assumptions in the consistent data set or regarding the 800 m and 3 km exclusion zones are incorrect, this EIA would have to be started again. |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|--|---|
| | | | <p>that the emergency planning document in this EIA only refers to the EURs. Those EURs are not accepted. I phoned the American Nuclear Regulator. The answer that I was given was that irrespective of whether it is Generation III, or Generation II, the exclusion zone in America will remain 16km and 80km, and they are now looking at revising it. So every study in this EIR that refers to the EURs must be rectified, because those exclusion zones are ungrounded. Finland is busy building Olkiluoto, a Generation III plant, which has a 20km exclusion zone. I also phoned France, and they have defined an internal 5km and a 10km external exclusion zone at the Flamanville plant. So why are we proposing 800 m and 3 km here in RSA? This is unacceptable if it is not in line with world standards.</p> <p>Secondly, I make the request again that we would like to have a focus group meeting with the specialists. I have been told by Deidre that they don't want to expose the specialists to the public again. But if a specialist makes a statement, he must be willing to defend it in front of the world. We are not asking for a public meeting; we are asking for a focus group meeting, like we had last time. Deidre said she would prefer one-on-one, but we don't want that,</p> | <p>Prof Ellery has not supplied GIBB with a study. He supplied a selection of photographs and referred the EIA Dune Geomorphology specialists to a number of related specialists in the Eastern Cape who may have similar information and evidence. Although Prof. Ellery indicated that a Masters' thesis was in preparation on the Oyster Bay dune fields, no such study, or background research for such a study, was supplied, despite attempts by the EIA team to obtain such information.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|---|--|
| | | | <p>because the public in this area has the right to know what's going on.</p> <p>When the specialist glibly states that there is no such thing as a debris flow, it has huge implications for the roads that you are going to put in. It is not mentioned anywhere in his reports on Prof Fred Ellery's study. We never said there were debris flows in only the Sand River; we referred to several other debris flows as well. The fire the Reuben was referring to happened on the other side of the R330 and had no implication on that flood.</p> <p>Lastly we would like to request that a full review of the Economic Impact Assessment and the Agricultural Impact Assessment be done immediately. We have done it; we've taken it to an actuary in JHB who looked at it and there are a huge number of costs that are not included for the Thyspunt site costing, which actually pushes the Thyspunt site to way beyond the costs of any of the other sites. We would prefer that the costs of every mitigation activity be included in the Thyspunt site costs. For example, the costs of the heritage mitigation, including the curation structure which Eskom will build, R25 million worth, should be added to the Economic Impact Assessment. We are asking for this because Arcus GIBB have</p> | |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|--|---|
| | | | <p>decided in their weighting that transmission lines and integration gets the number 1 rating, and secondly economic impact. The Agricultural Impact Assessment pushes the Thyspunt site into the preferred site position. That is one of the worst agricultural assessments I have ever seen and we've also taken that to an independent specialist. And it is an embarrassment when this independent specialist phones me back saying that the author of the original agricultural report probably never got up from behind his laptop. You cannot do that to a community. Eskom should bring those scientists here and let us put these questions to them and give this community opportunity to interrogate these people that have decided that we will be the preferred site, in spite of the fact that in all the ratings, this site is the most sensitive site. They have decided this because it suits Eskom because of the existing transmission lines here.</p> <p>We would like a key focus group meeting with the specialist, as per our email, to which we have had no response. This community will take all necessary steps to get what they want. We will not stop before the Constitutional court.</p> | <p>GIBB replied to Ms Malan's email on 12 July 2011 and agreed that the public needs answers. GIBB have asked people who do have questions for specialists to list their issues regarding the studies and then meetings with specialists can be considered. The points about the economic and agricultural studies are noted and will also be considered.</p> |

**PROPOSED ESKOM NUCLEAR POWER STATION
AND ASSOCIATED INFRASTRUCTURE**

ENVIRONMENTAL IMPACT ASSESSMENT (EIA: 12/12/20/944)

**COMMENTS ON
DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

(Volume 24 RDEIR IRR 14 July 2011)

Issues have been received from the following stakeholders:

| No | Name | Organisation |
|-----------|--------------------------------|--|
| 1 | Alison Vickery | Interested and Affected Party |
| 2 | Philimor Pote | Youth Forum |
| 3 | Michel Lucy Lorton | Interested and Affected Party |
| 4 | Hilton Thorpe | Thyspunt Alliance and St Francis Residence |
| 5 | C Rutledge | Interested and Affected Party |
| 6 | Sally Andrew and Bowen Boshier | Interested and Affected Parties |
| 7 | Miranda Middel | Interested and Affected Party |
| 8 | Dr Peter Inman | CDC |
| 9 | Byron Andrews | Pam Golding Properties – St Francis Bay |
| 10 | Bradley Stilwell | Interested and Affected Party |
| 11 | Anna-Marie Groenewald | Interested and Affected Party |
| 12 | Dr Klaus and Barbara Willand | Interested and Affected Parties |
| 13 | Cathy Rutledge | Interested and Affected Party |
| 14 | Geraldine Mouton | The Bomb Surf Petition |
| 15 | Byron Andrews | Pam Golding Properties – St Francis Bay |
| 16 | Herman Stoffberg | Interested and Affected Party |
| 17 | George Hardie | Interested and Affected Party |
| 18 | Brian van der Watt | Witzenberg Municipality – Manager Distribution and Client Services |
| 19 | Uvesh Gopichund and Thys Horak | ATNS |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|---|--|
| 1 | Mail | Alison Vickery Interested and Affected Party | <p>Western Construction Access Road:</p> <p>Where is it going to be exactly and what will the social impact be and noise factor be for Oyster Bay and Umzamuwethu. This was brought up in previous meetings.</p> <p>How serious will the exclusion zones be taken by Eskom as we need Oyster Bay to be in the exclusion zone so that property development remains at a minimum and agricultural land cannot be re-zoned?</p> <p>Who will finance the suggestion that a police force will be increased to handle extra crime or is this just "pie in the sky" to appease us.</p> | <p>The routes of the proposed Western Access Roads have been re-evaluated and a number of alternative alignments have been considered. Based on additional assessment undertaken in 2012, the recommended alignment is east of Umzamuwethu. This will ensure that potential social impacts that interested and affected parties were concerned about, associated with the possible split between Oyster Bay and Umzamuwethu, do not occur.</p> <p>The noise impact is assessed in the Noise Impact Assessment (Appendix E23 of the Revised Draft EIR).</p> <p>The Noise Impact Assessment states that the noise impact at Umzamuwethu is potentially significant and therefore recommends that following mitigation measures:</p> <ul style="list-style-type: none"> • Construction processes and machinery/vehicles with the lowest noise emission levels available are utilised; • A well planned and co-ordinated "fast track" procedure is implemented to complete the total construction process in the shortest possible time; and • Construction work near residences only takes place during normal daytime working hours. <p>As repeatedly indicated in Nuclear-1 public meetings at Oyster Bay, the proposed Emergency Planning Zones (EPZs) for Nuclear-1 will not include Oyster Bay. In any event, the appropriate means to control development and rezoning in Oyster Bay is through local planning legislation and zoning. Using emergency planning zones for the proposed Nuclear-1 would not be an appropriate or effective mechanisms to control development in Oyster Bay.</p> <p>Your comment is noted. The size of the police force, as with all other public services, must take account of the number of people it is required to serve.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|---|--|--|
| | | | <p>The western construction access road needs to be minuted and assessment done. I have raised this on a few occasions and we don't get a response regarding noise and social impact between Oyster Bay and Umzamuwethu. This was also raised by Laura Nixon.</p> | <p>In recognition of the significant public concerns regarding the Western Access Road, a re-assessment of this access route and consideration of a number of alternative alignments has been undertaken and will be provided, together with the EIR Version 2, for public comment.</p> |
| 2 | Mail | Philimor Pote Interested and Affected Party | <p>I support the Thyspunt Nuclear Power Station.</p> <p>Eskom have to develop skills of the people in Umzamuwethu.</p> <p>Eskom have to upgrade our school.</p> <p>We need a final date when Eskom going to start with the building of the Power Station.</p> <p>We need information of each stage of project.</p> <p>Special training required for unskilled people of Umzamuwethu.</p> | <p>Your comment is noted.</p> <p>Skills development for employees is one of the core human resources policies of Eskom and requirements for this are also included in contracts between Eskom and its contractors. Should Umzamuwethu residents be employed by Eskom, they will be provided with opportunities to improve their skills.</p> <p>Your comment is noted. Whilst Eskom remains committed to making contributions towards the upgrading of service infrastructure (proportional to the in-migration of contract staff and employees during construction and operation), Eskom cannot be expected to provide for the upgrading of all infrastructure, which it is the responsibility of government to construct and maintain.</p> <p>The date of construction cannot be accurately predicted as the environmental impact assessment process is only the first of more than 30 different authorisations that Eskom requires before its Board can make the business decision to construct the power station.</p> <p>Local Skills initiative discussions can only be further progressed once the EIA authorisation for a specific site has been issued.</p> <p>Please refer to the response above regarding skills development.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|--|---|---|
| 3 | Mail | Michele Lucy Lorton Interested and Affected Party | <p>We do not agree with the finding that Bantamsklip is a viable site. We feel that it is a very delicate ecological site (containing many Red Data species etc.) and should be protected.</p> <p>Besides the site, the damage to the environment through the infrastructure and transporting and waste is unjustifiable (for all sites).</p> <p>Europe is considering ending nuclear development and I am afraid we'll be buying their waste (or "trading" for it).</p> <p>The instability of the planet:</p> <p>What environmental impact report has been carried out as to the stability of the area in case of a Tsunami, tremors or earthquakes which are on the increase?</p> | <p>Your comment is noted. The wider area is indeed recognised as being sensitive in terms of botanical biodiversity. A comprehensive study of the vegetation of the site was carried out (Appendix E11) and it was found that the majority of the site does not have highly sensitive flora, but that there are pockets of limestone fynbos that have high botanical sensitivity. These pockets are one a number of sensitive features that have been avoided in the recommended position of the proposed power station.</p> <p>Your comment is noted.</p> <p>Certain European countries (e.g. Germany) have taken a decision to phase out nuclear power. However, other European countries such as France continue to rely heavily on nuclear power and will continue to provide the majority of their electricity from nuclear generation. The United Kingdom has recently (late October 2012) announced its decision to proceed with its extensive new build nuclear programme. Your comment regarding the purchase of nuclear waste is noted. Kindly provide a substantiation for this statement. The vast majority of nuclear waste worldwide continues to be stored on site at the nuclear power stations. It is only recently that geological storage of nuclear waste has become a reality (e.g. at Olkiluotu power station in Finland).</p> <p>The Nuclear-1 EIA includes a Seismic Risk Assessment and a Coastal Engineering Report (respectively Appendices E4 and E16 of the Revised Draft EIR) that consider seismic risks, tsunamis and earthquakes. There is no factual basis for your perception that tsunamis, tremors and earthquakes are on the increase. Southern Africa is located in a seismically stable part of the world, as we are located in the</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|-----------------------|--|--|--|
| | | | Not even "experts" know. Learn from Japan! One can't predict. | middle of a continental plate. Parts of the world such as Japan, which experienced the earthquake leading to tsunami and the nuclear incident at Fukushima Daiichi, are situated on the edge of a continental plate in a subduction zone, which is prone to frequent earthquakes. |
| 4 | 03 July 2011 Email | Hilton Thorpe Thyspunt Alliance and St Francis Residence Association | A week or so ago I had a phone call from Reuben Heydenrych to ask for a reference in DEIR 2 to Eskom's membership of the St Francis Conservancy. It has taken a while to find it - perhaps a reflection on the difficulty of finding responses on the CD! At the public meeting, Chris Barratt drew attention to an error in the Draft. Jaana-Maria had stated that Eskom was not a member of the St Francis Conservancy, whereas it assuredly is. Indeed the only reason why the Conservancy failed to join the Thyspunt Alliance was a threat by Eskom to withdraw if this happened. As a result of the failure to join the Alliance, a number of members of the Conservancy resigned! As I said to Reuben, it is not exactly a key issue, but he correctly said that they wished to correct any errors. It would be good if they would correct some of the more important ones, such as the continuing lie that the prevailing wind is from the north-west, contrary to all the evidence. The reference Reuben wants is contained in Jaana-Maria's response to the St Francis Kromme Trust, found in Item 26, Appendix D8 of the revised DEIR, ref IRR45n Long Submissions, and response 12 on p.15. | Your comment regarding the conservancy is noted. There is no inconsistency in terms of direction of wind reported in the Revised Draft EIR. In this respect, kindly refer to the attached comprehensive response to the issue of wind direction provided by the air quality specialist. |
| 5 | 5 July 2011 | C Rutledge | a. "The wetland on the site is | Your comment is noted. The Freshwater Ecology |

| NO | DATE | NAME & ORGANISATION | | |
|----|-------|-------------------------------|--|---|
| | Email | Interested and Affected Party | <p>considered as a "one-of-a-kind" wetland system. With interaction between the wind, sand dunes and water table.</p> <p>b. It is extremely risky to build a Nuke on a system that is so active that the scientist has still not figured out how the different elements interact."</p> <p>And yet, you want to propose that it is safe to build this nuclear power station within a 6 to 10 kilometre range of our main water supply the Mpofu Dam. We all know that corrosion takes place near the coast and that the pipes have to be replaced every so often. Who will do this? Our municipality?</p> <p>All of these power stations have leakages that appear after ten years or so let alone one built on a wetland. What guarantees have we as a community that the replacements will take place and that our water supply will not be affected.</p> | <p>Assessment (Appendix E12 of the Revised Draft EIR) notes the importance of the wetlands systems on the site and concluded that mitigation of the impacts on these systems is possible. It is to be noted that the development layout excluded development in the areas where wetland systems occur, such as in the mobile dune field and in the eastern portion of the site where the LangefonteinMei wetland is situated.</p> <p>It is not correct to state that "the scientist" has still not figured out how the different elements interact. From a hydrological perspective there is a very good understanding of the interaction between the geological formations, aquifers and different surface water sources such as LangefonteinMei. The movement of the sand in the Oyster Bay mobile dune system is also very well understood. Extensive monitoring of groundwater levels and wetlands has taken place since 2010 and continues to take place. Data collected through this programme have resulted in a high degree of certainty regarding groundwater quality and movement. The results of this monitoring are provided in the Wetlands Monitoring Report (Appendix E12 of the Revised Draft EIR).</p> <p>It is unclear how you link corrosion of pipes causally to the proposed nuclear power station. A nuclear power station cannot cause accelerated corrosion of pipes. The design of the proposed nuclear power station will ensure that corrosion-resistant materials are used.</p> <p>Kindly provide an independent study to motivate your claim that "all these power stations have leakages that appear after 10 years or so". No such factually-based sources are known to GIBB.</p> <p>Environmental monitoring is a global practise and all releases are monitored to ensure compliance with nuclear regulatory limits imposed by the National Nuclear Regulator.</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|-----------------------|--|---|--|
| | | | | These limits to the public are usually below normal background radiation levels, as has been the case at Koeberg Nuclear Power Station throughout its operational life. |
| 6 | 06 July 2011 Email | Sally Andrew and Bowen Boshier Interested and Affected Parties | All our previously stated objections have not been addressed and they still stand. | Your comment is noted. GIBB's previous responses remain valid. |
| 7 | 07 July 2011 Email | Miranda Middel Interested and Affected Party | Oh whoopee! What's the difference between a Democratic Government and Communist Mao? Zults. | Your comment is noted. |
| 8 | 07 July 2011 Email | Dr Peter Inman CDC | Thank you for taking my call just now. I confirm that the CDC will be responding formally to the Revised Draft EIR. With my colleagues to whom I have copied this e-mail, comments will prepare and forward to you next week. | Your comment is noted. The CDC's comments have been responded to in a separate Issues and Response Report. |
| 9 | 07 July 2011 Email | Byron Andrews Pam Golding Properties – St Francis Bay | With regards to the revised flawed EIA submitted, have you a contingency plan to deal with the high possibility of flooding affecting the entire area around Thyspunt? | Flooding has affected large portions of St. Francis Bay and has resulted in washing away of the R330 bridge over the Sand River. Comprehensive redesign of this bridge has been undertaken to ensure that the bridge is better able to handle regular floods in this river system. Even if the R330 bridge were to be washed away again, the Nuclear-1 power station would have two access routes, including a western access route from the Oyster Bay Road. In the event that both access routes are washed away, short-term repairs could be effected, as has been the case for the Sand River crossing. Even if all access is cut off, the power station could continue to operate for extended periods of time. Fuel and nuclear waste deliveries to and from the power station happen on an irregular basis at long intervals, thus the power station does not need daily or even weekly access. |

| NO | DATE | NAME & ORGANISATION | | |
|----|-----------------------|---|--|---|
| | | | Also, have you received the correct information from the South African Weather Bureau on what direction the prevailing wind direction is? | Your comment is noted. There is no inconsistency in terms of direction of wind reported in the revised Draft EIR. In this respect, kindly refer to the attached comprehensive response to the issue of wind direction provided by the air quality specialist. |
| 10 | 07 July 2011 Email | Bradley Stilwell Interested and Affected Party | <p>Thanks for taking the trouble to listen to the public and allow comment on this issue.</p> <p>I am aware of the challenges facing SA in the future but I think we should be focusing our efforts on clean energy like wind and solar energy.</p> <p>I know they are relatively low energy generators and the costs and logistics are not as practical as nuclear but with a long term vision and government backing I believe SA could place itself at the front of an innovation revolution. I firmly believe this is the time for a paradigm shift in terms of energy and if you guys play your cards right you could find yourself charging ahead into new and prosperous territory.</p> <p>Just think about it.</p> | It is not in the mandate of this EIA process to compare the costs and benefits of nuclear generation technology to renewable forms of electricity generation, since the EIA process is, by its very nature, a project-specific tool that focuses on a particular form of technology. However, government and Eskom are pursuing renewable technologies in parallel to nuclear generation. It is to be noted that the Integrated Resource Plan (government's strategy for security of energy supply over the next two decades) requires a balanced mix of generation technologies, including 9,600 MW of nuclear and 18,700 MW of renewables. The purpose of nuclear generation is to provide reliable base-load power, which most of the renewable technologies are not capable of providing on the same scale. It is also pointed out in the Revised Draft EIR that a mixture of generation technologies is required in order to meet South Africa's future energy needs and that we cannot place reliance on only a single form of technology or a limited number of technologies. Although the relative contribution of renewable technologies must increase over time, it is not a simple matter of replacing non-renewable technologies with renewable technologies. |
| 11 | 07 July 2011 Email | Anna-Marie Groenewald Interested and Affected Party | I object strongly to Nuclear development anywhere in South Africa. Where do I send my objections too? Your mail is not very clear on this. | The GIBB Nuclear-1 Public Participation Office sent an email reply to Ms Groenewald on 13 July 2011 confirming the details of where she can send her comments. |
| 12 | 07 July 2011 | Dr Klaus and Barbara Willand Interested and Affected Parties | We like to point out, that we are against any erection of a Power Station at the southernmost tip of the African continent. | Your comment is noted. |

| NO | DATE | NAME & ORGANISATION | | |
|----|-----------------------|--|---|--|
| | | | <p>The temperature changes caused environment damages (CO2, NOX, etc.) are already an unsolved problem.</p> <p>In the name of our children and grandchildren: NO!</p> | <p>With respect to the change in temperature as a result of the release of warmed cooling water, extensive and detailed oceanographic modelling was carried out to determine how far the warmed water would disperse. The results of this modelling are reflected in the Marine Ecology Assessment (Appendix E15 of the Revised Draft EIR). It is stated here that warmed cooling water is dissipated quickly and that the impacts thereof would be minimal and of very limited spatial extent.</p> <p>With regards to Bantamsklip, the impact of warmed cooling water was particularly critically assessed due to the temperature sensitivity of the threatened abalone at this site.</p> <p>Abalone is able to tolerate a maximum temperature increase near the sea bottom of 7°C. It was found that a nearshore release of warmed cooling water at Bantamsklip would result in an unacceptable risk to abalone but that with an offshore release of warmed cooling water at a depth of 25 m, the mean increase in temperature near the seabed would not exceed 1° C. An offshore release of warmed cooling water is therefore recommended at Bantamsklip.</p> |
| 13 | 07 July 2011 Email | Cathy Rutledge Interested and Affected Party | Nooooooooo! (syc) | Your comment is noted. |
| 14 | 05 July 2011 Email | Geraldine Mouton The Bomb Surf Petition | <p>Has no one learned from the disaster in Japan??</p> <p>Oh yes right, it was a month ago, forgotten already!</p> <p>Or is it that South Africa's technologies are so much more advanced than Japan's?</p> <p>... oh yes, right, earthquakes and tsunamis won't happen in Cape Town...</p> | <p>The design of the Fukushima Daiichi nuclear power station dates from the late 1960s and does not incorporate the substantial lessons in nuclear power station design that have been learnt in the decades since its construction.</p> <p>One of the major differences between the design of the Fukushima Daiichi power station and later power stations in terms of spent fuel storage is that the Fukushima design includes the spent fuel pool in the containment structure, whereas in later designs (e.g. at Koeberg Nuclear Power Station), the spent fuel pool is separate from the containment structure and contamination in the containment</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|---|---|
| | | | <p>That is what the Japanese also said (at least of that scale). But they were wrong!</p> <p>But money and success comes before the health of the people and the environment.</p> <p>One question: imagine Cape Town in all its glorious beauty, with its blue skies and gorgeous beaches, totally empty, no people, no animals, no plants, no life whatsoever on land or in the water.....and dead, poisonous beauty...</p> <p>How tragic that would be.</p> <p>It is the reality of Chernoby!</p> <p>With every Nuclear Power Station, the possibility of that outcome gets bigger and bigger.</p> <p>I hope I never have to say "i told you so" but can you take the responsibility and say "yes let's risk everything?"</p> <p>I can't!</p> | <p>structure does not impact access to, and operation of, spent fuel cooling systems. Several other major differences in nuclear power station design and operation have been implemented in the decades since Fukushima was built, including passive cooling.</p> <p>There are inherent dangers in nuclear technology (as with many other forms of technology) but if these are responsibly managed the risk to the public is negligible. The release of radioactivity from the Fukushima Daiichi plant is a regrettable incident that could have been avoided with proper planning. Unfortunately planning for the Fukushima Daiichi plant in terms of catering for tsunami events was poor, in that a very low tsunami was assumed than should be the case for a country like Japan, which is prone to frequent earthquakes. In contrast, emergency planning for the Koeberg Nuclear Power Station assumed a tsunami of 4 m, even though no tsunami has ever been recorded on the West Coast, and in spite of the fact that Southern Africa is seismically stable. In addition to planning for a tsunami, planning for the KNPS assumes that a tsunami may coincide with a spring tide and major storm surges (a so-called meteo-tsunami event), and thus the terrace for the KNPS is built at a height of 8 m above sea level. Backup generators to supply power to the cooling systems has also been placed at heights of 12 m above sea level, besides the backup power that can be supplied from two gas-fired peaking power stations in proximity to the Koeberg Nuclear Power Station. Similar planning is in place for Nuclear-1, in that a combined tsunami and an exceptional storm surge has been assumed in deciding on the height of the nuclear island and the location of backup power supplies.</p> <p>Whilst the Fukushima Daiichi incident is without a doubt a tragic event, as it could have led to loss of life, some perspective is also required on this event. The tsunami was responsible for the loss of approximately 20 000 lives, the evacuation of approximately 450 000 people and the complete destruction of several coastal towns. On the other</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|---------------------------|--|--|--|
| | | | | <p>hand, not a single death or serious injury due to the radiation release from the power station has been recorded to date. This is not mentioned to minimise the significance of the nuclear incident, but to provide some perspective regarding the public perception of what is regarded as a significant risk. In the wake of the Fukushima incident, very critical attention has been focused on the nuclear power station. However, the everyday risk of living in vulnerable low-lying coastal areas prone to flooding seems to be tacitly accepted or at least not treated with nearly the same level of concern.</p> <p>If a tsunami does happen in an area like Cape Town (bearing in mind that there are no sources of tsunamis like seismically active zones such as those off the coast of Japan and that no tsunami has even been recorded in the Western Cape), the scale of human tragedy directly attributable to the tidal wave itself would be colossal.</p> |
| 15 | 08 July 2011 Email | Byron Andrews Pam Golding Properties – St Francis Bay | <p>This is the only way out of St Francis. What will happen if we need to evacuate?</p> <p>In holiday season 30 000 people will be nuked.</p> <p>Eskom could be responsible for the biggest disaster in Nuclear history.</p> | <p>Mr Andrew's attached photos two emails regarding the St Francis Sand River flood (Only one email had text content.). A third email pointed to this link: http://stfrancischronicle.wordpress.com/2011/07/07/motorists-stranded-as-sand-river-bridge-is-demolished/</p> <p>Similar concerns from the public around Humansdorp area up to St Francis have been raised and the Transport Specialist study was revised accordingly. The report notes that a section of R330 across the Sand River was destroyed by flood and debris flow in July 2011. The box culvert was severely damaged and inhibited traffic flow between Humansdorp and St. Francis Bay while it was being repaired for a few days. Bridges and culvert are generally designed for 1:100 year floods. The flood experienced in 2011 was, however, considered to be a flood with much greater scale than designed for. Construction and operation of Nuclear-1 may be affected should the flood occur again during the construction and operations phase of the proposed nuclear plant. It is, therefore, suggested that a Stormwater</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|---------------------------|---|--|---|
| | | | | <p>Assessment Plan should be undertaken for the flooding situations of Sand River at the R300 crossing. Design specification of the bridge should be reviewed and mitigation measures, such as embankment protection, should be implemented. As of October 2013, such redesign was in progress.</p> <p>Site safety issues are also considered in the Emergency Response and Site Control Reports (Appendix E26 and E27 of the Revised Draft EIR) and will also be dealt with in the NNR process.</p> |
| 16 | 10 July 2011 Email | Herman Stoffberg | <p>MAJOR CONCERN</p> <p>The Western Access road cut through the dunes behind Oyster Bay as I see it, it cut over the water fountains that supply Oyster Bay of water.</p> <p>This is a major flaw in your placing of the road. The road will have to move more to the east. I have seen nobody fiscally (sic) inspect the land.</p> | <p>The fountains that supply water to Oyster Bay are important life-support systems and it is agreed that impacts on these features should be avoided at all costs.</p> <p>The routes of the proposed Western Access Road have been re-evaluated and a number of alternative alignments have been considered. Extensive fieldwork for this re-evaluation was undertaken in late 2012. Based on this additional assessment, the recommended alignment is east of Umzamawethu. The primary motivation for such an alignment is to avoid social impacts on Umzamawethu, but it would also avoid potential impacts on the springs that provide Oyster Bay with water.</p> |
| 17 | 10 July 2011 Email | George Hardie Interested and Affected Party | <p>It is interesting to hear the various conjectures as to why the Sand River flooded.</p> <p>My family came to St Francis Bay originally in the mid 1950s and I can remember regular flooding of the Sand River from that time.</p> <p>I look back particularly to 30/40 years ago when I was very often trapped in St Francis Bay and unable to get our sons back to</p> | <p>Your comments are noted. Similar concerns from the public around Humansdorp area up to St. Francis have been raised and the Transport Specialist study was revised. The report notes that a section of R330 across Sand River was destroyed by flood and debris flow in July 2011. The box culvert was severely damaged and inhibited traffic flow between Humansdorp and St. Francis Bay while it was being repaired for a few days. Bridges and culvert are generally designed for 1:100 year floods. The flood experienced in 2011 was, however, considered to be a flood with much greater scale than designed for. Construction and operation of Nuclear-1 may be affected should the flood occur again</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|-----------------------|--|--|---|
| | | | <p>school - because the Sand River was in flood.</p> <p>It is so easy to look for a scapegoat when natural disasters occur, but I thought your readers should understand that this phenomenon has occurred with regularity and was happening long before The Links was developed.</p> <p>For me the frightening concern should be a possible nuclear disaster and residents of St Francis Bay trapped in the village because of the Sand River flooding.</p> <p>Flooding will happen again no matter man's intervention.</p> | <p>during the construction and operations phase of the proposed nuclear plant. It is, therefore, suggested that a Stormwater Assessment Plan should be undertaken for the flooding situations of Sand River at the R300 crossing. Design specification of the bridge should be reviewed and mitigation measures, such as embankment protection, should be implemented. As of October 2013, such redesign was in progress.</p> <p>Site safety issues are also considered in the Emergency Response and Site Control Reports (Appendix E26 and E27 of the Revised Draft EIR) and will also be dealt with in the National Nuclear Regulator process.</p> |
| 18 | 11 July 2011 Email | Brian van der Watt Witzenberg Municipality Manager – Distribution and Client Services | Can you please let me know to whom the Revised Draft EIR was sent at Witzenberg Municipality and when? | The GIBB Nuclear-1 Public Participation Office couriered a DVD with the Revised Draft EIR to the Witzenberg Municipality, 54 Voortrekker Street, Ceres, 6835 on 12 July 2011. |
| 19 | 01 July 2011 Email | Uvesh Gopichund and Thys Horak ATNS | <p>From documentation previously provided and located on your web site it appears that a study is currently in place regarding this Nuclear facility.</p> <p>In view of the fact that ATNS is an Interested and possibly an affected party you are respectfully requested to provide ATNS with as much information on this proposed facility – Exact location (Geographical position Degrees, Minutes, Seconds and decimals of a second in WGS-84 format) etc.</p> | <p>The GIBB Nuclear-1 Public Participation Office sent an email to ATNS on 12 July 2011. The email included a footprint map indicating the co-ordinates. (footprint map received from Gert Greeff who received it from Stephen Ekermans - Draughtsman / Eskom)</p> <p>24°42'20.68"E, 34°10'56.41"S</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|---|--|
| | | | The establishment of such a facility normally goes hand in hand with the establishment of a Restricted area as is the case with the "Koeberg Nuclear Power Station" – FAR36 GND/2,000 FT AGL See SA Aeronautical Information publication (SA AIP) ENR 5-11. | |

5 August 2015

Our Ref: J27035 / J31314
Your Ref: Email dated 08 July 2011

Interested and Affected Party

Email: zuri@isat.co.za

Dear Zuretha Roos



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:

We have taken note of the revised Draft EIR. However, right now, it may be in the interest of GIBB to note that the same scenario which has played out many times now has happened again.

Take note that what I'm reporting here happens every few years and not that it can be forecast but it is a feature of local weather patterns. We have had a week of on and off rain resulting in very heavy downpours and lots of damage.

At the moment the entire St Francis area is cut off from the outside world. We cannot get out of the area towards Humansdorp. The notorious Sand River (which often looks more like a desert than a river, and may therefore fool outside observers) came down in flood and washed away its bridge. It has also broken our water pipeline to the Churchill Dam.

This flood scenario is one of the dangers to your nuclear power station -- water damage. A bridge may wash away as has happened before, and in the case of a small nuclear accident there would be no way the residents of the area can evacuate. There is but one road out of these towns.

Let me explain further, and I ask your bosses to take careful note of this, no matter how "insignificant" my information might sound to them.

My family and I have lived in the area -- in the Langkloof -- for far more than a century. And this is the pattern: there are periodic droughts. You experienced one such drought while doing your EIR. * It is also a known fact that droughts in this part of the Eastern Cape (Kouga) are always broken by a flood.

(Currently, housing for your workers are planned for the southern side of the Sand River Dune System. Use your imagination as to what will happen to such a settlement when (not if ... when) such a flood hits again).

Response 1:

Your comments are noted and GIBB and the Nuclear-1 Specialist Team welcome local knowledge. The Dune Geomorphology Assessment (Appendix E2 of the Revised Draft EIR Version 1) describes the river and its floods and the effects on infrastructure are further dealt with extensively in the Geomorphology Debris Flow Addendum Report (Appendix E30 of the Revised Draft EIR Version 1).

The Addendum Report describes the November 2007 flood that damaged the R330 as a 1:200 year event. The main erosional damage resulted from erosion of sediments by floodwaters flowing down



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.



the steep V-drain along the R330. Damage was also caused by the deposition of sediment in the area from the R330 along Lyme Road into the adjacent part of the St. Francis Bay Golf Course.

Extensive damage to the R330 was also recorded related to the flood of November 1996, when the wing walls on either side of the culvert were damaged and there was some erosion of the tarred surface by water flowing over the road. The road was still wide enough to accommodate two directions of traffic flow.

The Traffic and Transportation Report (Appendix E25 of the Revised Draft EIR Version 2) further reports that the section of R330 across Sand River was destroyed by flood and debris flow in July 2011. The box culvert was severely damaged and inhibited traffic flow between Humansdorp and St. Francis Bay while it was being repaired for a few days. Bridges and culvert are generally designed for 1:100 year floods. The flood experienced in 2011 was, however, considered to be a flood with much greater scale than designed for. Construction and operation of Nuclear-1 may be affected should the flood occur again during the construction and operations phase of the proposed nuclear plant. It is, therefore, suggested that a Stormwater Assessment Plan should be undertaken by the local authority for the flooding situations of Sand River at the R300 crossing. Design specification of the bridge should be reviewed and mitigation measures, such as embankment protection, should be implemented. Should this site be approved it would also be necessary for Eskom to evaluate the risk and to engage with the relevant authorities to ensure that appropriate infrastructure is in place.

Comment 2:

Hopefully you are also aware that a couple of months back there was an earth tremor, presumably along the Plettenbergbay Fault which seems to run to within a few kilometres of Thyspunt.

Also be aware that the faults in this area (including the Cape St Francis Fault) have not been properly surveyed, seeing that in This South Africa we do not seem have a Geological Survey Department any longer. Such a tremor might be nothing or could be a precursor of a worse quake.

No-one can predict what could happen, taking into account the various global catastrophes over the last years.

Response 2:

Thank you for the information provided.. Please note that the mandate of the “Geological Survey Department” now fall under the auspices of the Council for Geoscience. The Geological survey will be done as part of the nuclear safety submission to the NNR National Nuclear Regulator.

Comment 3:

We keep saying -- move the entire plan to the Coega area.

Response 3:

Your comments are noted however the site selection process and the assessment of alternative sites do not include the consideration of Coega as an alternative site and does not fall within the scope of the current EIA process. 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.

Yours faithfully
for GIBB (Pty) Ltd

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

The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314
Your Ref: BBHEV 17/2011 (Letter dated 05 July 2011)
Email received 14 July 2011



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

The Chairperson
Baardskeerdersbos Home Owners' Association
PO Box 1014
Gansbaai
7220

Email: Tolbos@orcawireless.co.za
Tel: 028 381 9206

Dear Ms Swart

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

Background:

Baardskeerdersbos is a unique and unspoilt rural village and as such a gem in the Western Cape. It retains a Cape heritage with small Overberg cottages, orchards, meadows, green pastures, furrows, ponies, sheep and cattle set against a backdrop of sweeping views of mountains and fynbos. This is a heritage which must not be destroyed by the visual impact of huge power lines in or at the outskirts of the village. The beauty of the area will be spoilt forever for future generations.

The farm Baardscheerders Bosch is clearly marked on the attached map Annexure A. The original farm is subdivided in 199 portions with a total size of 1794 hectares. There is a line drawn around the village, but it is for administrative municipal purposes only. The Overstrand municipality delivers certain services to properties inside the village but not to properties outside this line. The village consists of 127 properties with 50 dwellings and 90 permanent residents. The number of residents increases to about 110 during certain holiday periods. The size of properties in the village varies from 719m² to 3,5 hectares and the total area is 47 hectares in extent. Properties inside the village are zoned agricultural and the municipality is presently considering adopting an overlay zone for the village to protect the historical rural character and heritage value of Baardskeerdersbos.

The properties around the village which are part of the main farm Baardscheerders Bosch consist of 72 portions with a total area of 1747 hectares. Eight (8) of these portions are larger than 50 hectares and may be regarded as commercial farming units. The rest are smallholdings of between 1 and 25 hectares where small scale farming activities take place. The map in Annexure B clearly indicates the portions of land. Some of the residents inside the village are farming on some of the surrounding portions. Many of the properties in and around the village belong to people from elsewhere in the country; these properties have been bought for retirement and other purposes and were mainly bought for the country lifestyle the area offers. There are approximately 46 dwellings with 200 residents on these farms and smallholdings. Although Baardskeerdersbos can be regarded as a low density population area, the density is significantly higher than the rest of the Strandveld area and the construction of power lines through Baardskeerdersbos would thus affect many more people.



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.



The fertile Baardskeedersbos valley and village in the heart of the Overberg is one of the most undisturbed and natural settings in the Cape.

Comment 1: Baardskeedersbos Home Owner's Association:

The Baardskeedersbos Home Owners' Association membership is restricted to landowners in Baardskeedersbos village. Currently we have 100 members representing 85% of all landowners in Baardskeedersbos. The main objective of our association is to further and protect the interests of its members. The Baardskeedersbos Home Owners' Association also endeavours to manage and regulate development in order to retain the rural village character and heritage assets of Baardskeedersbos.

The Baardskeedersbos Home Owners' Association is of the opinion that the proposed Bantamsklip Nuclear Power Station and Bacchus Alternative 2 power lines route will have a severe negative impact on several interests of our members in the area. As indicated on the attached map the route clips the edges of the farm Baardscheeders Bosch having the most negative impact. The Bacchus Alternative 3 route is further away from Baardskeedersbos and will have the least negative impact. We strongly recommend that the routes which cross Baardskeedersbos farm be planned to avoid the area and village. It is of great concern to our members that the construction of the lines will have a detrimental impact on our area and interests as set out below. The fact that the corridors are up to 5 km in width would result that a substantial part of the farm Baardscheeders Bosch and even the village itself falling within these corridor.

Response 1:

Your comments regarding the proposed routes of the Transmission Lines are noted and will be forwarded to the EIA team for the Bantamsklip Transmission Lines. Please note that this EIA process is currently inactive. Since the Bantamsklip site for the Nuclear-1 EIA is not the recommended site, the completion of the Bantamsklip Transmission EIA has been postponed until further notice. As indicated in Chapter 5 of the revised Draft EIR version 2, Bantamsklip is no longer considered feasible for Nuclear-1. However, please note that Bantamsklip may be considered as an alternative site for future nuclear power projects as part of the cabinet approved IRP (2010).

Comment 2: Social Impact:

The Agricultural Research Council of the University of Stellenbosch was appointed by the Overstrand Local Municipality to undertake a study in the Strandveld area with Baardskeedersbos as one of the focal points for their research. Their findings were recently handed over to the municipality. The studies are Development of a Spatial Planning Database and Analysis of Agriculture and Tourist Potential in the Strandveld region of Overstrand Local Municipality and consist of Parts 1 to 3. In Part 2 (Agricultural Development Plans) a report is made of a survey which was conducted on the socio-economic conditions in and around Baardskeedersbos and it contains valuable information which is applicable to this assessment. It can be noted that the DSR report contains very little background information on Baardskeedersbos; for instance, the table on Profiles of potential towns or settlements contains no information on Baardskeedersbos at all.

A large number of households in and around the village may be regarded as poor and falling within a low income bracket. Many residents in the village try to earn something extra by keeping a few livestock on the surrounding smallholdings, which are later sold. The harvesting of fynbos on a small

scale is also undertaken. Most residents work in the agriculture sector and tourist-related industries. A large percentage of the rural population has moved into surrounding towns due to lack of work opportunities. Promising inroads into the improvement of education and upliftment of the rural population have been made by the efforts of the Flower Valley Trust and the Baardskeedersbos Community Development Project.

The growth potential for nature-based tourism activities and related businesses and the wine-making industry are vast. The tourism resource potential (particularly eco tourism) and the importance of the area as an agriculture backbone is highlighted in the study carried out by Stellenbosch University (refer Part 3). The importance of the Strandveld's natural resources like landscape attractions, linearly-supported landscape activities like mountain bike riding, hiking trails etc., water-based landscape activities, wildlife attractions and Strandveld cultural resources are highlighted in this research. The Baardskeedersbos Art Route offers an interesting and valuable tourism attraction. Some ten artists in and around the village have joined together to form an art route open to visitors on set dates. The route has been functioning for two years and has proven to be a great success.

Baardskeedersbos is unique also as a village set in nature surrounded by fynbos which makes it valuable as part of the Agulhas Plain. The gravel road DR1205 connecting Gansbaai (via the R43) to Baardskeedersbos, Elim, Bredasdorp and Cape Agulhas is in the process of being tarred (the tarring of the section between Bredasdorp and Elim has been completed and 8km from Phase 2.)

The Western Cape Province has taken the decision to tar this road mainly on the strength of opening up the area for tourism and thus providing employment. The properties alongside the main road through Baardskeedersbos are earmarked in the Overstrand Spatial Development Framework for tourist-related businesses. The proposed completion of the tar road from Gansbaai to Bredasdorp will not only inevitably result in the establishment of tourist-related businesses in the main road of Baardskeedersbos but also in the building of more dwellings on vacant plots and smallholdings in and around the village. The flourishing of tourism enterprises will lead to job creation and the social upliftment of the community in general.

The infrastructure of the proposed Nuclear Power Station and power lines through Baardskeedersbos valley may have an adverse effect on the number of tourists visiting our area, or on the investment in tourist-related businesses and have the potential to stall growth in this area with an adverse effect on job creation and skills development.

Response 2:

Your comments are noted. The Tourism Impact Assessment (Appendix E22 of the Revised Draft EIR) focused on the entire tourism region and the main tourism attractions in proximity to the proposed power station position. It also focused specifically on the closest settlements to the Bantamsklip site such as Gansbaai and Pearly Beach and the associated tourism assets such as shark cage diving, whale watching and associated coastal activities, as these are the tourism assets about which most concern were expressed by stakeholders. However, the report also acknowledges the value of the terrestrial nature-based tourism assets. Considering that the Tourism Impact Assessment focuses on the potential regional impacts of the proposed power station, it does not discuss the tourism assets of each town in detail. We therefore acknowledge with thanks the information you have provided on the developing tourism market in and around Baardskeedersbos.

Comment 3: Flora, Fauna and Avifauna:

The Baardskeerdersbos village and surrounding areas form part of the lowland fynbos ecosystem. This system consists of both sand and limestone fynbos and Strandveld fynbos, both of which have a high occurrence of “rare and regionally endemic plant species ... many of which are very localised” (De Villiers *et. al.*, 2005: 40). For example, the Kraaltolbos (*L. Platyspermum*) is restricted to low-lying areas on the Agulhas Plain, particularly the area inland of Pearly Beach and to the south-west of Elim (Overberg District Municipality, 2004). Low and Desmet (2007) classify the fynbos inland of Pearly Beach as highly irreplaceable.

The vegetation that occurs on the hill slopes of the area is fairly well preserved and recognised as being of a high value for biodiversity conservation” (Geostratics cc, 2007: 4). It has therefore been recommended that the crests of hills (such as those in the Baardskeerdersbos area) be maintained in order to conserve the aesthetic quality of the area and its importance for conservation (Geostratics cc, 2007). Most limestone fynbos types are slow growing and vulnerable to trampling and should therefore be disturbed as little as possible (De Villiers *et al.*, 2005). As is the case with many areas of Agulhas limestone fynbos, the indigenous vegetation occurring on the hills of Baardskeerdersbos has been prioritised for conservation by the Cape Action Plan for the Environment (CAPE). Routing high-voltage powerlines across these hills would detract from the conservation goals of this Plan.

According to Cape Nature, only a third of the original lowland fynbos remains. Already 41 lowland fynbos species have become extinct, and another 173 species are threatened with extinction. Less than 2% of the original lowland fynbos is conserved in provincial nature reserves and national parks. The rest is on private land; the preservation of lowland fynbos is therefore largely dependent on the actions of property owners and developers. The erection of massive power lines across the hills of Baardskeerdersbos will undoubtedly accelerate this loss of rare species of fynbos. Experts are of the opinion that if this occurs, countless animal species will disappear along with the fynbos and the habitat which it provides. The rare and endangered Geometric Tortoise is but one example.

Furthermore, wetlands (such as the wetland area created by the Boesman River which runs through the Baardskeerdersbos valley) are important water sources and support a diversity of plant, animal and bird life and as such, are critical drivers of biodiversity (Geostratics cc, 2007). In this respect, wetlands facilitate animal movement and plant dispersal for the sustainability of species peculiar to the area. The area around the river is a well-known area for the endemic red listed Blue Crane.

Another important threat presented by massive power lines and one of which Eskom is well aware is the danger they pose to avian life. The threat stems from birds either colliding with the power lines, or through electrocution. Thus, in terms of Cape Nature’s environmental impact assessment regulations, the erection of power lines above 33kV is a listed avifauna activity. Habitat loss is recognised as one of the biggest threats facing avifauna in the Western Cape.

The richness and importance of the fynbos in the Baardskeerdersbos area has been recognised by the inclusion of the village and surrounding areas in the official “Fynbos Road”, a route which stretches from Stanford to Agulhas. This route is a huge tourist draw card.

The presence of a Nuclear Power Station nearby and power lines across the Baardskeerdersbos hills, or running through its valleys, would undoubtedly mark the pristine nature of the route created by the unspoiled silhouette of the hills.

References:

De Villiers, C.C., Driver, A., Clark, B., Euston-Brown, D.I.W., Day, E.G., Job, N., Helme, N.A., Holmes, P.M., Brownlie, S. and Rebelo, A.B. 2005. *Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape*. Kirstenbosch: Fynbos Forum and Botanical Society of South Africa.

Eskom, 2009. *Environmental Impact Assessment for the Proposed Bantamsklip Nuclear Transmission Integration Project: Application 1. Draft Environmental Scoping Report*. Eskom Holdings Ltd.

Geostratics, cc. 2007. *Local area context: Klein Paradijs. Draft report*. Somerset West.

Low, B and Desmet, P. 2007. *Nuclear 1 Environment Impact Assessment and Environmental Management Programme. Specialist Study for Scoping Report: Botany*. Eskom Holdings Ltd.

Overberg District Municipality, 2004. *Overberg District Municipality Spatial Development Framework*

Response 3:

Your comments are noted and will be considered in the EIA process for the Bantamsklip power lines.

Comment 4: Visual Impact:

Baardskeerdersbos valley is surrounded by mountains to the north and steep hills to the south. The skyline is undisturbed with panoramic views over the valley and surrounding mountains. "Sweeping views", "panoramic vistas" and "endless plains and rolling hills" are the slogans used by the tourist industry to describe the Baardskeerdersbos area. In Chapter 11 p.14 of the DSR it is said that "Historic hamlets on this coastal plain such as Baardskeerdersbos, Wolvengat and Elim survive on heritage tourism based on the beauty of their rural setting" which is absolutely correct. Some of the General Recommendations on p.17 Chapter 11 of the DSR are particularly applicable to the Baardskeerdersbos hamlet and surrounding area.

The scenic views, country and serene lifestyle are the most important factors attracting people to this area; these factors also determine real estate prices in this area.

As already mentioned in this report the Bantamsklip-Bacchus Alt. 2 route will have a severe negative impact on Baardskeerdersbos. The fact that the corridors are up to 5 km in width would result in a substantial part of the farm Baardscheerders Bosch and even the village itself falling within these corridors potentially having the most negative impact. The Bantamsklip-Bacchus line Alt. 2 also crosses the farm Baardscheerders Bosch and the lines will be visible from some of the properties in the village and will have a definite negative impact not only on the properties being crossed but also on the surrounding smallholdings.

It is however a great concern to us that no mention is made in the Visual Impact Assessment Study report Annexure Q of the DSR of the negative impact the Bantamsklip-Bacchus Alt. 2 route will have on Baardskeerdersbos. The report mentions on page 29 the negative impact which the line will have on Tesselaarsdal. Surely what has been said about Tesselaarsdal is especially applicable to Baardskeerdersbos. It is requested that the sensitivity of the visual impacts the proposed lines will have on Baardskeerdersbos village and valley be examined in more detail during the EIA phase.

Response 4:

Your comments are noted and will be considered in the EIA process for the Bantamsklip power lines , if and when it is resumed.

Comment 5: Land Capability

As indicated above, the Agricultural Research Council of the University of Stellenbosch was appointed by the Overstrand Local Municipality to perform a study in the Strandveld area with Baardskeerdersbos as an important focal point for their studies and research. Their findings were recently handed over to the municipality. The studies are the Development of a Spatial Planning Database and Analysis of Agriculture and Tourist Potential in the Strandveld region of Overstrand Local Municipality and consist of Part 1 – Soil Survey Report, Part 2 – Agricultural Development Plans and Part 3 – Agri-Rural Tourism Potential.

On face value the impact that the proposed transmission line alternatives will have on traditional agricultural enterprises is low. However farmers are increasingly looking to rural eco-tourism to diversify their business and to earn a profitable income. The research work mentioned above addresses this and also the farming potential for the future in the area. It may be worthwhile to have look at the most important findings of the above studies.

The main farming activities currently are dairies, fynbos export, livestock, olives, vineyards and Agri-Tourism.

It would be correct to conclude that the percentage of land currently used for agriculture that would be lost due to the transmission lines would be minimal. Should the lines however cross the farm Baardscheerders Bosch the loss and market value of the land involved will be much higher. See attached map Annexure A where the outer border line of the farm is clearly indicated. The farm Baardscheerders Bosch no. 213 consists of 199 portions of land with separate title deeds for each one. One hundred and twenty-seven (127) of these portions are within the “urban edge” of the village and although they are still zoned agricultural they can mainly be used for residential purposes.

There are 72 properties outside the village border but which are still part of the farm Baardscheerders Bosch. Only eight (8) of these portions are larger than 50 hectares and may be counted as commercial farming units. The rest are smallholdings of 1 to 25 hectare in size, on some of which small scale farming activities take place. Many of these properties are vacant land where no farming activities take place. Many of the owners are from elsewhere in the country and bought the property for retirement and other purposes, but mainly for the country lifestyle the area offers in this beautiful rural environment. Although many of these properties will be zoned agriculture-smallholding in terms of the new proposed zoning scheme of the Overstrand Local Municipality, they may be regarded as rural-residential with very little agricultural possibilities. The impact of transmission lines on very small “residential” properties will have a considerably more negative consequence and the construction of lines crossing the farm Baardscheerders Bosch should be avoided.

References

Bennie Schloms, Jan Lamprechts and Freddie Els. Development of a Spatial Planning Database and Analysis of Agriculture and Tourist Potential in the Strandveld region of the Overstrand Local Municipality.2009. Part 1 – Soil Survey Report. The Agriculture Research Council. Stellenbosch University.

Odette Beukes, Johan Carstens, Annisa de Vos, Marlise Joubert, Lucienne Mansvelt, Emmy Reinten, Johan van Heerden, Danie van Schalkwyk, Johan van Zyl, Terry Walsh and John Wooldridge. Development of a Spatial Planning Database and Analysis of Agriculture and Tourist Potential in the Strandveld region of the Overstrand Local Municipality.2009. Part 2 – Agricultural Development Plans. The Agriculture Research Council. Stellenbosch University.

Hannes van der Merwe. Development of a Spatial Planning Database and Analysis of Agriculture and Tourist Potential in the Strandveld region of the Overstrand Local Municipality.2009. Part 3 – Agri-Rural Tourism Potential. The Agriculture Research Council. Stellenbosch University.

Response 5:

Your comments are noted and will be considered in the EIA process for the Bantamsklip power lines , if and when it is resumed.

Comment 6: Heritage:

The Overstrand Heritage Landscape Group has been appointed by the Overstrand Municipality to conduct a heritage survey to identify buildings, streetscapes, landscape features and heritage areas that contribute to the heritage significance and character of the Overstrand so that these features can be preserved and enhanced for future generations. What follows is an extract of the first draft of the survey of Baardskeedersbos:

Baardskeedersbos Heritage Survey

The Heritage survey on the Baardskeedersbos area was completed and adopted by the Overstrand Municipality. An Overstrand Heritage Committee was appointed to oversee the Overstrand area including Baardskeedersbos

Description

“Baardskeedersbos is located alongside the Boskloof River, a tributary of the Boesmans River, which has several springs. The abundance of water and good grazing in the valley would have made it a good place for temporary Khoe stock settlements. In the Overberg area at this time there were a number of loan farms given to wealthy Cape families such as the Cloetes of Groot Constantia, Van Bredas and Van Reenens, who subsequently bought up more of the farms and linked them together to form extensive grazing areas for horses, cattle and Merino sheep (Walton, 1989:142). Baardskeedersbos was initially granted as a loan farm to Jan Cloete, a heemraad of Drakenstein, between 1725 and 1730 but was not linked to other farms. It changed hands several times and was probably first permanently occupied by Philip Fourie and his descendants from 1778. The natural resources available in the area would have informed the location of the dwellings marked on the 1831 quitrent survey (which do not remain intact). This gave rise to the location of the current town which

was populated by the descendants of Fourie's son and son-in-law in the nineteenth century. The village layout is not in a grid pattern, unlike many drostdy towns (VASSA, 2005:24), demonstrating the organic nature of its development as a series of family smallholdings during the 19th century and into the 20th. The urban form of the village is characterised by cottages lining the street edges, relative absence of hard boundary treatments such as high walls, variable plot sizes and orientations, and stands of poplar and gum trees. There is a furrow lei water system, probably dating back to the 19th century, using water that comes from the spring in the kloof above Baardskeerdersbos, and which remains in use today (Benade, 2006: 289). These water resources are now under pressure from the expansion of the settlement during the 20th century.

Most of the historical dwellings are late 19th and 20th century white-plastered mud-brick rectangular buildings of modest dimensions, with poplar beams, pitched roofs (originally thatch, now iron or asbestos), usually a single window on each side of the front door, loft doors, an external stone chimney stock, and sometimes a simple veranda. Rounded end gables were common but are no longer characteristic of Baardskeerdersbos once iron roofs were used with square end gables (interview Barney Otto 07.07.2008). The gable styles seem consistent with the examples from other loan farm settlements in the Bredasdorp vicinity (Walton, 1989:144-145). Walton notes that most of the Overberg stock farmers especially in the Strandveld used ferricrete (koffieklip) and sandstone that were roughly squared and laid in courses (Walton, 1989:141). However, although they often have a stone base, the Baardskeerdersbos houses tend to be built from mud bricks above the plastered koffieklip foundation layer.

Significance

Baardskeerdersbos is a rural settlement of historical significance, illustrating the expansion of a town from a modest family settlement on a VOC loan farm, based on subsistence farming and the exploitation of coastal resources. It has architectural significance as a late 19th and early 20th farming settlement, with much of its modest vernacular architecture intact. It also has still intact the organic town layout of the original farming settlement, without street names or numbers (although that is changing now). It has visual and environmental significance relating to its sympathetic location within the surrounding farming environment. Baardskeerdersbos is characterised by its setting in the rural landscape, and its topographical containment. It is a rare example of a village that has undergone relatively little development during the mid to late 20th century, where a *lei water* system is still in use, and where street addresses have not traditionally been used. Street names and numbers are currently being assigned.”

The DSR clearly emphasizes the importance of historic hamlets on this coastal plain such as Baardskeerdersbos and others and notes that these hamlets survive on heritage tourism which is based on the beauty of their rural setting. We are however of the opinion that the specialist author of the report does not take cognisance of the devastating visual intrusive impact the Bantamsklip-Bacchus Alt. 2 will have on Baardskeerdersbos. The line is clearly visible from each and every property in the village.

In paragraph 5.1.1 (p. 28) of Appendix P of the DSR, under Conclusions and Recommendations, the following is stated regarding the Bacchus Alt 2 line: “It does not impact on our knowledge of the archaeology of the area; it does not pass over significant villages or hamlets (with the exception of Tesselaarsdal) and will have the least intrusive visual impact. During the mitigation studies as part of the EIA process, it may be possible to move the lines in Alternative 2 to avoid Tesselaarsdal. There is a section of the line which passes approximately 5 km south of the mission of Genadendal and the

village of Greyton, and this should be examined closely to ensure that the pylons and lines are not visible from these communities.” Our request is then that the visual intrusion the lines will have on Baardskeerdersbos like in the case of other communities and areas should be thoroughly investigated and that the possibility of moving Alt. 2 within the 5 km corridor in order to avoid Baardskeerdersbos completely be considered to ensure that the lines are also not visible to the community.

Response 6:

Your comments are noted and will be considered in the EIA process for the Bantamsklip power lines , if and when it is resumed.

ASPECTS REGARDING BAARDSKEERDERSBOS WHICH NEED TO BE CONSIDERED AND INVESTIGATED DURING THE EIA PHASE (comments 7-19)

Comment 7:

This historical hamlet on the coastal plain survives on heritage tourism which is based on the beauty of their rural setting.

The DR1205 route through Baardskeerdersbos will when completed be an important scenic route. Visual impact of transmissions lines will be highly intrusive through the closed valley of Baardskeerdersbos.

The heritage importance and significance of the village and its surroundings should be carefully considered.

A greater number of permanent households, dwellings and farmsteads will be affected by the construction of lines in Baardskeerdersbos and surrounding smallholdings than in adjacent areas.

A more direct physical impact assessment is necessary during the EIA phase to determine the negative visual and social impacts the lines will have on Baardskeerdersbos.

The scenic views, country and serene lifestyle are the most important factors which attract people to this area and which also determine real estate prices in the area. The visual intrusion of power lines will negatively influence tourist inflow and future investments in this area.

The Baardskeerdersbos village and surrounding areas form part of the lowland fynbos ecosystem. Furthermore, wetlands (such as the wetland area created by the Boesman River which runs through the Baardskeerdersbos valley) are important water sources and support a diversity of plant, animal and bird life and as such, are critical drivers of biodiversity. The ABI and Bantamsklip-Bacchus Alt. 2 cross the wetlands and Boesman River.

Baardskeerdersbos consists of 199 properties with separate title deeds (127 portions fall within the village and 72 surround the village). Most of the smallholdings are less than 5 hectare. This means that a relatively larger number of land owners would be negatively affected and the negative impact on neighbouring properties will also be much higher. Compensation of owners will be much higher due to current high market valuation of property in the area involved.

Baardskeerdersbos is a well-known agricultural area and has tremendous rural Agri-Tourism potential.

Should it be determined during the EIA phase that the line through Baardskeedersbos is the most viable option, we recommend that the line should be installed underground.

The proposed Bantamsklip-Bacchus Alt. 2 line will have the most negative impact, while the proposed Bantamsklip-Bacchus Alt. 3 will have the least negative impact on the Baardskeedersbos community.

Response 7:

Your comments are noted and will be considered in the EIA process for the Bantamsklip power lines if and when it is resumed.

Comment 8: Conclusion

No evidence is found of any impact study done on Baardskeedersbos town, community, immediate surroundings etcetera, and as such the RDSR is found to be flawed. In summary, the proposed Bantamsklip nuclear power station, transmission lines & infrastructure will have tremendous negative impacts on the area.

Response 8:

Your comments are noted and will be considered in the EIA process for the Bantamsklip power lines (if and when it resumes) and, to the extent that the proposed power station and power lines will result in cumulative impacts, in the EIA process for Nuclear-1. Furthermore, as indicated in Chapter 5 of the revised Draft EIR version 2, Bantamsklip is no longer considered feasible for Nuclear-1. However, please note that Bantamsklip may be considered as an alternative site for future nuclear power projects as part of the cabinet approved IRP (2010).

Yours faithfully
for GIBB (Pty) Ltd



The Nuclear-1 EIA Team

5 August 20155

Our Ref: J27035 / J31314

Your Ref: Email received 18 July 2011

Mr DA Whitelaw
Kleine Perle
Kleinhagelkraal
Nr Pearly Beach

Email: amsterdam@new.co.za

Tel: 082 646 1024



GIBB

ENGINEERING & SCIENCE

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

Dear Mr Whitelaw

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

Comment 1:

No-go option:

It is unfortunate that this option has not been explored. The government/ ESKOM appear to have altered its stance on solar and wind generated energy by making it a less attractive to potential investors. This is manifest by changes to pricing structures. This change has been attributed to legal niceties. If government/ESKOM is sincere about alternative energy supplies, the legislature needs to be approached to allow suppliers to receive more reliable remuneration.

We would urge ESKOM to initiate this approach:

There are indications that a number of countries are becoming more dependent on these energy sources. Several countries are moving away from Nuclear energy most notably Germany/Switzerland. The USA is making considerable strides in increasing its renewable resources. A recent article in National Geographic quoted work which suggested that solar power could supply the entire electrical demands of the USA. It also noted the significantly increased funding be directed to solar and wind generated electricity in the USA.

Response 1:

Your comments are noted. South Africa's energy landscape is changing, the IRP 2010 which provides for a more diverse energy mix. The fact that Eskom intends to develop a nuclear power station does not imply that it opposes renewable technologies Eskom is also pursuing renewable technologies.



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.



Comment 2:

Seismic Activity:

It is noted that expert opinion is of the opinion there is little chance of any seismic disturbance. There are a number of interesting points to this issue; not least that low levels of seismic activity does not necessarily mean there is no possibility of damage to a potential nuclear plant. As noted in a paper from Dais and Kikjo low level activity is more common and damage in this situation is still possible

Data from an internet site on seismic activity in South Africa documents a number of seismic events in the Western Cape.

The data in the recent EIA update does little to explore this aspect. It simply states figures related to the 3 sites. These figures may be significant to individuals who are au fait with this field. This is followed by the cryptic comment "in the light of the uncertainty relating to the revised PSHA following the SSHAC procedure, it is recommended from a seismic perspective that the site with the biggest seismic margin (Thyspunt) be selected as the preferred site".

Are we to infer that there is uncertainty about seismic activity, and the attitude adopted is that "we'll take a chance because Thyspunt seems to be the safest? The general public deserves more information and clarity on this important safety aspect.

Response 2:

Your comments and your acknowledgement of the expert nature of the input given into the Nuclear-1 EIA are acknowledged. We acknowledge that the technical nature of some of the information included in the EIA may at times be overwhelming but please note that the Geotechnical Report comes to the conclusion that there are no disqualifiers at any of the sites. Although the Peak Ground Acceleration (PGA) values of the alternative sites differ, it is concluded that it is technically possible to build a nuclear power station at any of the three alternative sites. However, the engineering design may have to be adapted for sites with higher PGA values (e.g. for Duynefontein).

The regulatory studies to be undertaken for licensing by the National Nuclear Regulator are required for detailed engineering design and are not required for EIA-level decision making on the feasibility of constructing a nuclear power station.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

In addition to the given response it must be noted that IAEA requirements are informed by an extensive Body of Knowledge and where necessary derived from extensive scientific discourse and expert opinion from a variety of sources a range of complementary scientific publications and international Standards, Requirements and Best Practices which are evolutionary in nature and informed by international experience. It is therefore natural to expect standards to evolve over time - and it is unwise to be absolutist in these matters however any practices at any particular time must be based on the prevailing standards noting that the fundamental safety objective of the IAEA enshrines a common purpose that any designer operator or regulator is ultimately bound by and where necessary and guided by principles such as ALARP additional measures are considered for adoption.

Comment 3:

Sea Temperature and Nuclear plant at Bantamsklip/Thyspunt:

Effects of coolant sea water returned to Walker Bay. It was noted in the original assessment that the sea water temperature of both Bantamsklip and Thyspunt was at the upper level of acceptability in terms of temperature for a nuclear plant. Would even a small increase in temperature of the sea at these sites have any effect on the safety and efficacy of any plant which might be constructed?

It has been stated that the effect of the water returned to the sea was very site specific and no definite measurements had been conducted at Bantamsklip.

Have these investigations taken place?

These could be critical for 2 reasons:

The African (Jackass) Penguin colony at Dyer Island is declining at a rapid rate. One reason is the diminishing food supply. An increase in temperature of the sea could have a deleterious effect of fish stocks which could have serious implications for the penguin population. Similarly a decline in fish stocks could have negative effect on the flourishing shark/whale watching tourism industry based at Klein Baai.

Response 3:

Your comments are noted

Section 4.2.3 of the recently revised Marine Ecology Report confirms that impacts of releasing thermal effluent remain untested for the Bantamsklip site. However comprehensive oceanographic modelling has demonstrated that the effects of elevated temperature are expected to be focused on the open water habitat. This is of particular relevance at Bantamsklip as it would help to mitigate impacts on abalone and chokka squid egg capsules respectively. It is strongly recommended that at Bantamsklip an offshore tunnel outfall be utilised for the release of warmed water in an effort to mitigate impacts on abalone. Importantly a nearshore release system at this site is considered to pose an unacceptable risk to abalone populations.

The reports further continues to state that the release of warmed cooling water is not expected to have a dramatic impact on nearshore fish species, as excess heat will be focused around a small area at the point or points of release and the warmed water will hence rise towards the surface. Many species currently caught by anglers at this site in fact breed in the warm waters of KwaZulu-Natal and so, while they may avoid the immediate point of release, where water temperatures will be highest, they are very unlikely to experience thermal stress.

Lastly the report confirms that Oceanographic modelling of the warm water plume has indicated that the temperature around Dyer Island will not be affected and that none of the marine mammals that occur in the vicinity of Bantamsklip are expected to be negatively impacted by the warmed water. This is due to the localised extent of the warmed water relative to the extensive ranges of these large species, combined with their mobility and ability to avoid undesirable conditions. As such, these species are likely to avoid the elevated temperatures immediately around the outfall, but are not expected to avoid the area in general. A similar response is likely to be demonstrated by some coastal

fish, but no species are expected to be lost to the area. In fact, exploited fish species may benefit from the development. Pelagic fisheries will not be affected by the release of warmed water, as they are focused further offshore than the outfall plume will reach.

The revised Marine Ecology Report will be made available for public comment and review as part of the Revised Draft EIR Version 2.

Comment 4:

Public Participation:

The revelation by Mr. John Williams that a small community in the immediate vicinity of Bantamsklip had not been consulted and could be seriously compromised by the construction suggests a serious blot on the entire public participation process. I trust that this will be remedied and the implications for this community, of the possible construction of a nuclear plant at this site be thoroughly investigated.

Response 4:

We believe that the author is referring to the community of Buffelsjag. As stated at the Gansbaai Public Meetings held on 23 Amy 2011, GIBB is aware of the Buffelsjag community and has met with members of this community during the Bantamsklip Transmission Lines EIA public meetings. The community is considered within the Nuclear-1 EIA and as further stated at the meeting no recommendations to move any of the communities situated within the vicinity of any of the three sites.

Also, as part of the comprehensive Public Participation process undertaken in terms of the EIA process, the progress on the project, the availability of reports for public comment and review as well as the dates of public meetings have been advertised not only in local papers in the vicinity of the community but also regional and national newspapers. As such please see Appendix D1 of the Revised Draft EIR Version 1 for proof of advertisements sent during the last round of public participation and Chapter 7 of the same report for a full description of the public participation process throughout the history of the project.

Comment 5:

Coastal Setback Lines:

The province is in the process of developing these lines in view of possible rising sea levels. Can the public be assured that these concerns were taken into account in deliberations on the siting of the potential power plants?

Response 5:

Your comments are noted. Coastal setback lines were considered in all specialist reports and in a report entitled "Estimating the 1:100 Year Floodline from the Sea" which is attached as Appendix E9 of the Revised Draft EIR Version1.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke that ends in a small hook.

The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314
Your Ref: Email received 26 July 2011



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

Ms Tamara Manton
PO Box 741
St Francis Bay
6312

Email: tamara_lynne@hotmail.com

Dear Ms Manton

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

Comment 1:

Firstly I would like to bring to your awareness that you have not added me to your list of interested and affected party. My details are Miss Tamara Manton PO Box 741 St Francis Bay 6312 and if you have I never received any email notification that I have been added.

Response 1:

Your comments are noted. The address details as given above had previously been included on the Stakeholder Database under Miss Samantha Manton with e-mail address sammanton@gmail.com and as such all written and e-mail correspondence have been forwarded in terms of these details. Your name and e-mail details have also been added to the address entry and GIBB confirms that you are a registered Interested and Affected party in terms of the Environmental Impact Assessment process.

As such Draft and Final Minutes for the St Francis Bay Public Meeting were sent to the address via mail and as a soft copy on 28 July 2011 (please see attached).

Comment 2:

I attended the meeting at The Links 31 May 2011 and I would like to state that I am deeply unhappy with the revised EIA report.

My objections are as follow:

The access road you are planning on using Saffery Road is totally unsuitable this is a residential area, firstly have these property owners been informed that you are planning on sending +- 950 trucks per day through their residential area. This road is already in a terrible state full of potholes and is a very narrow road so how can it be possible for trucks to use this as access. The road does not even have a shoulder or pavement on. There will be a huge pedestrian risk and there are three schools along your planned access route namely St Francis College, Sea Vista Primary and Humansdorp Secondary I fear for the safety of these children. Also the Sandriver Bridge is consistently being flooded and it has

washed away twice in the last month leaving us stranded with no evacuation route to leave the village in any event of an accident at the proposed plant.

Response 2:

Your comments are noted. Similar concerns from the public around Humansdorp area up to St Francis have been raised and acknowledged regarding the use of Saffery Road. As such the Transport Specialist study was revised to consider other alternative routes. The revised report recommends that the main street through Humansdorp and Saffrey Street be bypassed. New transport roads for abnormal load vehicles were therefore considered and three alternate bypasses were investigated, as shown in the figure attached. All three alternatives are proposed new roads that run along existing land boundaries between farmland.

Alternative A directly links between Voortrekker Road (MR389) and Park Street (MR381) and is 850m in length. The beginning of Alternative A crosses the Boskloof Valley and the rest of the route will be constructed on Municipality land.

Alternative B is connects between Voortrekker Road (MR389) and Park Street (MR381) along the east of the Boskloof area, and crosses privately owned farmlands and is 1.3km in length. The topography of Alternative B is considered acceptable, except for the section of the route where it crosses the Boskloof Stream at a deep vertical alignment. Additional cost will be required for the construction of a bridge to cross the stream at an acceptable grade.

Alternative C is located the furthest east from Humansdorp and is the longest of all three alternatives (2.7 km). This route also crosses privately owned farmlands. Similar to Alternative B, Alternative C crosses two relatively deep valleys, which will require additional cost for the construction of bridge structures to achieve acceptable grade crossings.

Alternative A is therefore considered as the most viable option as it is the shortest and most economical route to construct, and it has a good alignment for the transportation of abnormal loads. Once the route is constructed, it will also alleviate the traffic congestion in Humansdorp.

The revised Transport specialist study therefore acknowledges that the Thyspunt site requires significant transport infrastructure upgrades. The R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed to be surfaced to provide improved east-west connectivity.

The report further notes that a section of R330 across Sand River was destroyed by flood and debris flow in July 2011. The box culvert was severely damaged and inhibited traffic flow between Humansdorp and St. Francis Bay while it was being repaired for a few days. Bridges and culvert are generally designed for 1:100 year floods. The flood experienced in 2011 was, however, considered to be a flood with much greater scale than designed for. Construction and operation of Nuclear-1 may be affected should the flood occur again during the construction and operations phase of the proposed nuclear plant. It is, therefore, suggested that a Stormwater Assessment Plan should be undertaken for the flooding situations of Sand River at the R300 crossing. Design specification of the bridge should be reviewed and mitigation measures, such as embankment protection, should be implemented.

Comment 3:

Also we heard during the meeting that you are planning on moving hazardous nuclear waste through this route this is totally unacceptable and irresponsible and you cannot move nuclear waste past countless schools and the Humansdorp Hospital all the way to George where the Consultant said it would be dumped. This is very dangerous for all people living from St Francis to George.

Response 3:

Your comment is noted. The transfer and associated transport of the waste to Vaalputs will be done according to the appropriate provisions of the IAEA Regulations for the Safe Transport of Radioactive Material, subject to a graded approach. The objective of the Regulations is to protect persons, property, and the environment from the effects of radiation during the transport of radioactive material. In terms of the Regulations, the transport process is subject to radiation protection, emergency response, quality assurance, and compliance assurance programmes

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

The IAEA transport regulations are well established and form the basis for international transport of all radioactive materials including medical and industrial isotopes and nuclear fuel cycle components of which the former account for by far the majority of transport operations globally.

Comment 4:

The proposed site is also being planned on being turned into a World Heritage Site; we need to preserve this site it is of importance to all South Africans and especially the Khoi San people we need to respect their heritage.

Response 4:

Your comment is noted however additional test excavations at Thyspunt that were approved by the South African Heritage Resource Agency and conducted in 2011 (after the release of the Revised Draft EIR Version 1), have confirmed that the heritage sites in the recommended footprint of the power station at Thyspunt are few in number and of low quality. This implies that direct impacts on heritage resources can be mitigated. Nevertheless Chapter 9 and 10 of the Revised Draft EIR Version 1 recommends that Environmental Authorisation in terms of the current application is granted only if approval is received from the South African Heritage Resources Agency

Comment 5:

I believe that the site should be revised as it was chosen over 30 years ago when there was very low human population, this has changed now and we have a fast growing town.

Response 5:

Eskom's Nuclear Site Investigation Programme (NSIP) in the mid-1980s investigated the technical feasibility of five alternative sites, namely Thyspunt (Eastern Cape), Bantamsklip and Duynefontein (Western Cape), Brazil and Schulpfontein (Northern Cape). During this EIA all these alternative sites were found to be technically feasible for the construction, operation of a conventional nuclear power station. The technical criteria that were applied for the selection of the sites identified in the NSIP

remain valid and although the investigation was undertaken during the 1980s, the outcome of the NSIP is still applicable and credible as was confirmed by Gibb for the purpose of this EIA.

Comment 6:

The proposed site is also prone to earth tremors and earthquakes there was a 4.3 magnitude earthquake on 14 May 2011 and reached the Thyspunt site, this needs to be taken into serious consideration.

Response 6:

The Seismic Risk Assessment (Appendix E4 of the Revised Draft EIR Version 1) found that based on the current state of knowledge there are no disqualifiers for this site. At Thyspunt the onshore regional pre-Quaternary-age geology and tectonics are well understood. Several fault sources (or fault systems) were identified as being potentially capable of generating significant seismic events. Some of the key sources are located offshore, which complicates characterization of these structures. Some of these are only inferred from geophysical exploration, while none of these faults have any correlation with seismicity nor any evidence for reactivation.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

In addition to the given response it must be noted that IAEA requirements are informed by an extensive Body of Knowledge and where necessary derived from extensive scientific discourse and expert opinion from a variety of sources a range of complementary scientific publications and international Standards, Requirements and Best Practices which are evolutionary in nature and informed by international experience. It is therefore natural to expect standards to evolve over time - and it is unwise to be absolutist in these matters however any practices at any particular time must be based on the prevailing standards noting that the fundamental safety objective of the IAEA enshrines a common purpose that any designer operator or regulator is ultimately bound by and where necessary and guided by principles such as ALARP additional measures are considered for adoption.

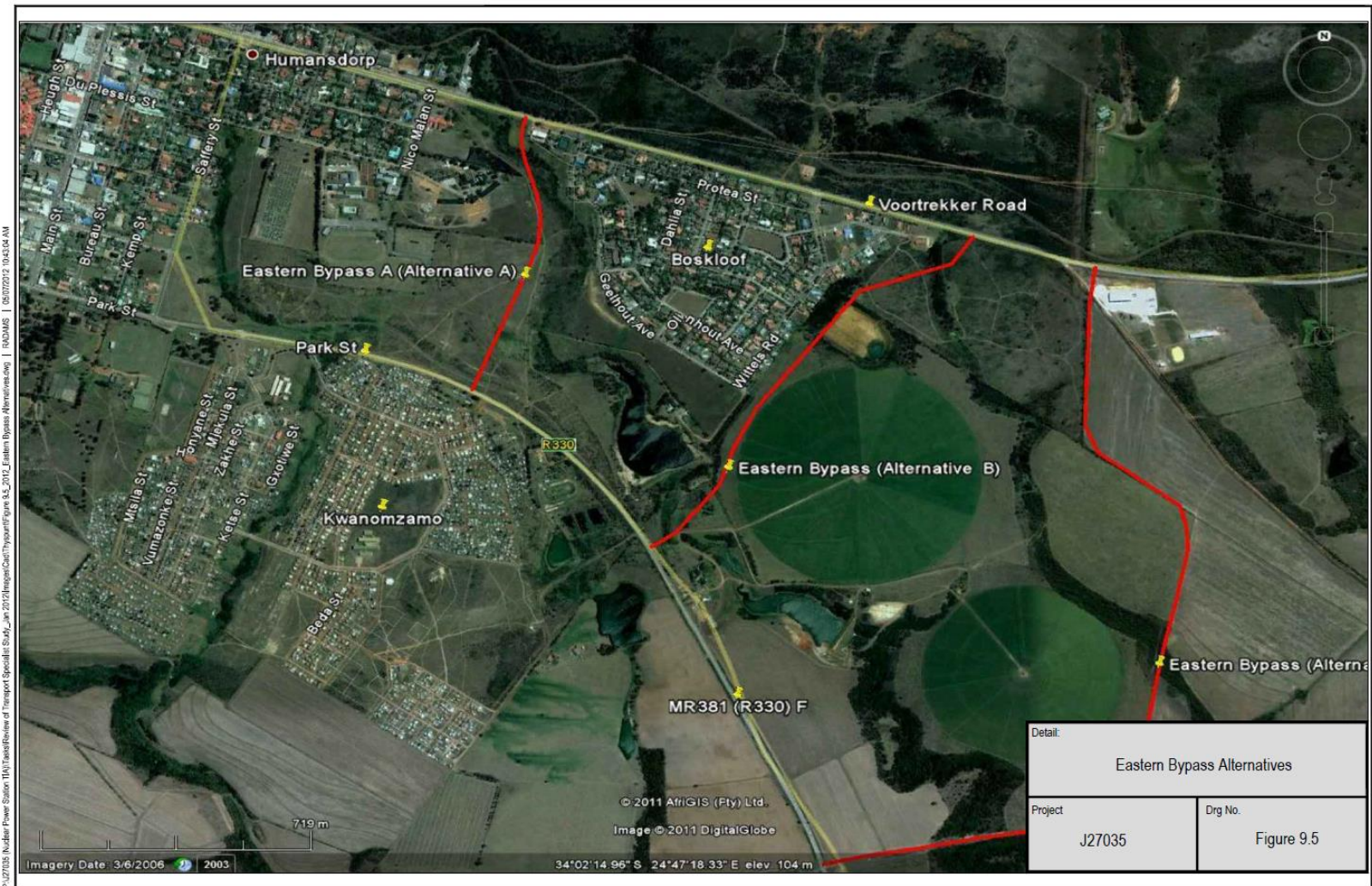


Figure 1: Thyspunt Proposed Bypasses

Comment 7:

No nuclear energy is safe - what compensation is Eskom going to give us as property owners should something go wrong at the Power Station how properties will be devalued.

Response 7:

In terms of the National Nuclear Regulatory Act, the operator of a nuclear facility is obliged to take out insurance. The amount that is stipulated by the NNR is R3 billion. The NNR is however currently reviewing the amount of insurance that the nuclear power operator has to take out

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

In addition in terms of Chapter 4 of the NNR Act the Minister is required to Gazette the proposed level of financial security and the manner in which it is to be provided

Comment 8:

There will be negative effects on the groundwater supply and the soil in the surrounding areas this will contaminate our milk, drinking water, vegetable production and negatively affect our strong dairy farming community.

Response 8:

Your comment is noted. The specialist studies conducted as part of this EIA have identified no fatal flaws in terms of the release of radiological emission or other releases during the normal operation of the Nuclear Power Station and its associated infrastructure. The Geohydrological Assessment (Appendix E7 of the Revised Draft EIR Version 1) found that in terms of contamination of the groundwater with radioactive material the impact is Low-Medium without mitigation and Low with mitigation.

Assessment of the radiological emissions during emergency events and the readiness of the relevant role players to deal with such events is clearly within the ambit of the NNR owing to its legal mandate in terms of the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999). As with many different forms of development, construction is dependent on authorisations from a number of different legal entities, including local, provincial and national authorities. Construction of such developments is reliant on all these authorisations being obtained from entities with vastly different legal mandates. Reporting requirements to satisfy all these authorisations vary hugely, and it cannot reasonably be expected that information relevant to all these authorisations should be contained in an EIR.

Also, as indicated in public forums and in EIA documentation, the separation between the EIA process and the NNR licensing process is based on the legislative provisions of the relevant Acts, namely the National Environmental Management Act, 1998 and the National Nuclear Regulator Act, 1999, as well as the DEA / NNR co-operative agreement, which governs the consideration of radiological issues in EIA processes and the interaction between the DEA and the NNR in terms of their respective mandates for environmental protection and radiological safety (See Appendix B4 of the Revised Draft EIR). The agreement clearly stipulates that issues of radiological safety are within the mandate of the NNR.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

As stated, the overall authorisation and licensing processes are conducted independently and therefore deal with different specific aspects and details at different times and through different methodologies processes and regulations subject of course to any co-operative arrangements between the respective authorising bodies.

Comment 9:

Destruction of a very sensitive Dune system, natural wetlands countless bird and animal species habitat, this is totally unacceptable and needs to be preserved for the future of all South African citizens.

Response 9:

Your comment is noted however the impact on the physical and biophysical environment has been thoroughly investigated by a number of specialist studies and although a number of significant impacts have been identified, not fatal flaws have been identified by the Nuclear-1 Specialist Teams in terms of the project. Indeed the construction of the Power Station may have a positive impact on conservation. For example as indicated in the Revised Draft EIR Version 1, a maximum area of approximately 280 ha is required for the power station. Thus, only a small portion of the site will be developed. The land currently owned by Eskom at Thyspunt is 1638 ha. Thus, if 280 ha is used for development, it would leave approximately 83% of the site undeveloped. At Duynfontein, where the Eskom owned property is 2849 ha, even a larger proportion of the site is undeveloped and dedicated to nature conservation. Indeed the indiscriminate development of industrial zones would be a threat to ecological systems. However, every EIA process must examine the merits of the particular project, which in this instance do not involve indiscriminate development across the entire site. Development of the nuclear power station is proposed to be focused on a specific concentrated footprint, which has been defined for its low environmental sensitivity, leaving more than 80% of the property free for conservation. In the absence of any significant efforts to establish conservation areas along the affected stretch of coastline (with the exception of the Rebelrus conservancy) and the vigorous alien vegetation encroachment throughout the St. Francis region, the possibility of the development of a *de facto* nature reserve is indeed considered to be a significant offset benefit for conservation.

Comment 10:

Excess sand removal and being pumped to sea is going to affect the sensitive squid breeding ground which is directly in front of the proposed power station, this is going to negatively effect the squid population and cause job losses and a huge loss of income to the town. Also the consultant mentioned during the meeting that sand will also be pumped into Cape St Francis beach this will disrupt the sensitive marine eco system there and impact the surf break. A no fish zone is being planned and this is their major fishing area, also contaminated fish will negatively affect our exports. Change in sea water temperature will not allow the squid to breed there anymore.

Response 10:

The Marine Ecology Assessment (Appendix E15 of the Revised Draft EIR Version1) has assessed the impact of spoil release and the release of warm water used for cooling purposes on the marine environment. In terms of the release of warm water comprehensive oceanographic modelling has

demonstrated that the effects of elevated temperature are expected to be focused on the open water habitat. This is of particular relevance at Bantamsklip and to a lesser degree at Thyspunt, as it would help to mitigate impacts on abalone and chokka squid egg capsules respectively. While chokka squid at the Thyspunt site are expected to avoid water temperatures elevated above their thermal tolerance range, the area predicted to be affected represents less than one percent of the coastal spawning ground.

In terms of spoil release disruption to the marine environment is significant with high consequence and significance. When mitigated by disposing spoil offshore (and by using only a medium pumping rate and undertaking the activity during winter at Thyspunt), the impact is minimised. The impacts associated with the disposal of spoil on chokka squid at Thyspunt will have limited impact on the overall squid stock, with 13.43% of catches by the inshore jig fishery being displaced as adult squid move to other spawning grounds.

Comment 11:

A planned 3 km evacuation zone is totally unacceptable and the whole village needs to be included in the evacuation zone.

Response 11:

As indicated in the Revised Draft EIR Version 1 & 2, one of the assumptions of the Nuclear-1 EIA process is that the Emergency Planning Zones of the European Utility Requirements (EUR) will apply to the Nuclear-1 power station. These zones are a maximum of 3 km and hence, no restrictions would apply on St. Francis, which is situated more than 10 km from the proposed nuclear power station site at Thyspunt. However, even if a 16 km Urgent Protective Zone (UPZ) were to be applied to a nuclear power station at Thyspunt, it would not rule out development of a power station at this site. Private development is only restricted within the inner (smaller) Protective Action Zone (PAZ), which in the case of Koeberg Nuclear Power Station (KNPS) is 5km. The 16 km UPZ imposes evacuation planning restrictions but does not prevent private development.

Initial indications provided by the NNR are that it is likely that the EPZ will be reduced, even for the Koeberg Nuclear Power Station. For instance, in a presentation to the Parliamentary Select Committee on Economic Development on 1 June 2010, the Chief Executive Officer of the NNR stated the following: *“One major outcome of these new designs is that the emergency planning zones, specifically the Urgent Planning Zone, which is the zone within which evacuation of the public has to be catered for, would in all likelihood be reduced from 16 km in the case of Koeberg, to a much smaller radius which could fall within the property owned by the holder ...”*.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

Whilst the responsibility of emergency planning rests with the licence of the facility (i.e. identification of potential accidents and the assessment of potential consequences) - the responsibility for disaster management (i.e. emergency responses outside of the licensed site) lies with the relevant local authority.

Comment 12:

You are planning on storing High Radiation Nuclear Waste on the site of the power station, this is not safe as nuclear energy has a life span of 200 000 years to degrade, what are your plans of keeping this from the ocean and the groundwater and soil.

Response 12:

Your comments are noted. It is acknowledged that the issues of radioactive waste management is important and integral to debate surrounding nuclear energy and as stated the only alternative currently available in South Africa is long-term storage of the spent fuel in the nuclear power station.. However please note that a radioactive Waste Management Institute is in the process of being established. One of the functions of this institute will be to identify a repository for high level waste in South Africa.

Radioactive waste management practices envisaged for Nuclear-1 are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal. Nuclear Power Station strives to minimise production of all solid, liquid and gaseous radioactive waste, both in terms of volume and activity content, as required for new reactor designs. This is being done through appropriate processing, conditioning, handling and storage systems. In addition, production of radioactive waste is minimised by applying latest technology and best practices for radiological zoning, provision of active drainage and ventilation, appropriate finishes and handling of solid radioactive waste. Where possible, the Nuclear-1 power station will reuse or recycle materials.

All forms of radioactive wastes are strictly controlled and numerous specialised systems and management practices are in place to prevent uncontrolled contact with these substances. These controls and practices differ for the different forms of radioactive waste. South Africa still has to formally release a strategy for the long-term management of HLW, including spent fuel. Until such time, all spent fuel is stored temporarily either in spent fuel pools (wet storage), or in dry cask storage facilities (dry storage). This allows the shorter-lived isotopes to decay before further handling, a management strategy that is acceptable from a safety perspective. It must be noted however that as per the Department of Energy's Media Statement on Nuclear Procurement Process Update as released on 14 July 2015 strategies are complete to develop an approach for South Africa to deal with Spent Fuel/High Level Waste disposal.

Disposal of radioactive waste at an authorised facility is being done according to an approved disposal concept, defined and developed with due consideration of the nature of the waste to be disposed of and the natural environmental system, collectively referred to as the disposal system. The disposal system developed for this purpose makes provision for the containment of radionuclides until such time that any releases from the waste no longer pose radiological risks to human health and the environment. The safety assessment process used as basis for this purpose considers both intentional (as part of the design criteria) and unintentional (natural or human induced conditions) releases of radionuclides. Unintentional releases include consideration of unintentional human or animal intrusion conditions, which might lead to direct access and external exposure to radiation.

Once released into the environment, radionuclides might migrate through the environmental system along three principle pathways: atmospheric, groundwater and surface water. Due to the physical nature of L&ILW and HLW disposal concepts, migration along the atmospheric pathway is highly

unlikely. The principle environmental pathway of concern is thus the groundwater pathway, with the surface water pathway of secondary concern as an extension of the groundwater pathway. Disposal systems are designed so that releases to groundwater or surface water are highly unlikely as further explained in Chapter 10 of this EIR.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

The proposed arrangements are in line with international best practice. Liquid and gaseous effluents will be controlled within defined and regulated limits as per license conditions and as assessed through the plant safety case. The arrangements for solid waste management are also in accordance with international best practice. i.e. either storage and disposal at Vaalputs for low and intermediate wastes or on site wet or dry storage for spent fuel pending provision of a centralised or dispersed long term storage facility are all in accordance with internationally accepted practices. It must be understood that the social discourse on radioactive waste disposal has become largely a socio-political one rather than a rigorous debate on the technical merits of particular options.

Comment 13:

Lastly the negative social impacts this is going to have on the population and the future generations.

Response 13:

Your comments are noted. As mentioned previously the specialist studies conducted as part of this EIA have identified no fatal flaws in terms of the construction and operation of a Nuclear Power Station at any of the three sites under investigation. This is not to say that there are no impacts on the Social Environment. These impacts can however be sufficiently mitigated as described in Chapters 9 and 10 of the Revised Draft Environmental Impact Assessment Report Version 1.

Yours faithfully
for GIBB (Pty) Ltd



The Nuclear-1 EIA Team

5 August 2015

Our Ref: J31314
Your Ref: Email received 26 July 2011

Mr Jayson Webster
PO Box 741
St Francis Bay
6312

Email: jaysonwebster@hotmail.com

Dear Mr Webster

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

Comment 1:

My details are Mr. Jason Webster PO Box 741 St Francis Bay 6312 I attended the meeting at The Links 31 May 2011 and I would like to state that I am deeply unhappy with the revised EIA report.

My objections are as follow:

The access road you are planning on using Saffery Road is totally unsuitable this is a residential area, firstly have these property owners been informed that you are planning on sending +- 950 trucks per day through their residential area. This road is already in a terrible state full of potholes and is a very narrow road so how can it be possible for trucks to use this as access. The road does not even have a shoulder or pavement on. There will be a huge pedestrian risk and there are three schools along your planned access route namely St Francis College, Sea Vista Primary and Humansdorp Secondary I fear for the safety of these children. Also the Sandriver Bridge is consistently being flooded and it has washed away twice in the last month leaving us stranded with no evacuation route to leave the village in any event of an accident at the proposed plant.

Response 1:

Your comments are noted. Similar concerns from the public around Humansdorp area up to St. Francis have been raised and acknowledged. As such the Transport Assessment has been revised to consider other alternative routes. The revised report recommends that the main street through Humansdorp and Saffrey Street be bypassed. New transport roads for abnormal load vehicles were therefore considered and three alternate bypasses were investigated, as shown in the figure below. All three alternatives are proposed new roads that run along existing land boundaries between farmland. Furthermore, please note that bypass roads to the east and west of Humansdorp are also now proposed to be constructed to reduce the traffic impact on central Humansdorp.

Alternative A directly links between Voortrekker Road (MR389) and Park Street (MR381) and is 850 m in length. The beginning of Alternative A crosses the Boskloof Valley and the rest of the route will be constructed on Municipal land.

Alternative B is connects between Voortrekker Road (MR389) and Park Street (MR381) along the east of the Boskloof area, and crosses privately owned farmlands and is 1.3 km in length. The topography



People • Expertise • Excellence

Cape Town

14 Kloof Street
Cape Town 8001
PO Box 3965
Cape Town 8000

Tel: +27 21 469 9100
Fax: +27 21 424 5571
Web: www.gibb.co.za

of Alternative B is considered acceptable, except for the section of the route where it crosses the Boskloof Stream at a deep vertical alignment. Additional cost will be required for the construction of a bridge to cross the stream at an acceptable grade.

Alternative C is located the furthest east from Humansdorp and is the longest of all three alternatives (2.7 km). This route also crosses privately owned farmlands. Similar to Alternative B, Alternative C crosses two relatively deep valleys, which will require additional cost for the construction of bridge structures to achieve acceptable grade crossings.

Alternative A is therefore considered as the most viable option as it is the shortest and most economical route to construct, and it has a good alignment for the transportation of abnormal loads. Once the route is constructed, it will also alleviate the traffic congestion in Humansdorp.

The revised Transport specialist study further acknowledges that the Thyspunt site requires significant transport infrastructure upgrades. The R330 is now proposed to be used for passenger vehicle traffic (cars and buses) and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. The DR1762, which links the R330 and the Oyster Bay Road, is now proposed to be surfaced to provide improved east-west connectivity.

Lastly the revised Transportation Assessment notes that a section of R330 across Sand River was destroyed by flood and debris flow in July 2011. The box culvert was severely damaged and inhibited traffic flow between Humansdorp and St. Francis Bay while it was being repaired for a few days. Bridges and culverts are generally designed for 1:100 year floods. The flood experienced in 2011 was, however, considered to be a flood with much greater scale than designed for. Construction and operation of Nuclear-1 may be affected should the flood occur again during the construction and operations phase of the proposed nuclear plant. It is, therefore, suggested that a Stormwater Assessment Plan should be undertaken for the flooding situations of Sand River at the R300 crossing. Design specification of the bridge should be reviewed and mitigation measures, such as embankment protection, should be implemented. As of October 2013, redesign of the Sand River bridge to a higher design standard was in progress.

Comment 2:

Also we heard during the meeting that you are planning on moving hazardous nuclear waste through this route this is totally unacceptable and irresponsible and you cannot move nuclear waste past countless schools and the Humansdorp Hospital all the way to George where the Consultant said it would be dumped. This is very dangerous for all people living from St Francis to George.

Response 2:

Your comments are noted. Please refer to our Response 1. Also the independent Waste Assessment undertaken by Mr J van Blerk of Aquisim Consulting (Pty) Ltd, as appended to the Revised Draft EIR (Appendix 27), clarifies that the transport of radioactive waste, both domestically and internationally, is subject to the national and international model regulations for the safe transport of radioactive materials. National and international model transport regulations are generally based on the IAEA Regulations for the Safe Transport of Radioactive Material (IAEA, 2009). The means (road, rail, or air) for the transport of radioactive waste should be considered at an early stage and its transport should

comply with the appropriate regulations. The preparation of waste packages for the transport of radioactive waste should be carried out in accordance with written, approved operating procedures. Generally, waste will therefore be handled similarly to the successful handling of operational waste generated at the Koeberg Nuclear Power Station to date. Transport is undertaken with a normal heavy delivery vehicle and the containment is such that, even if a container were to be lost along the route due to an accident or other eventuality, there would be no risk to the public.

The consultant did not state that the waste will be “dumped” at George. As has been stated in countless public meetings and in the Environmental Impact Assessments Reports Low and Medium Level Waste will be transported to Vaalputs in the Northern Cape for long-term storage. The long-term safety of the facility, which complies with international best practices for the disposal of low and intermediate level waste, has been demonstrated for a national inventory of radioactive waste. The inventory derived for this purpose, included waste of the proposed Nuclear-1 Nuclear Power Station. Vaalputs has more than enough capacity to dispose of the solid waste estimated to be generated by Nuclear-1. High Level Waste will be stored on site for the lifespan of the plant and until a suitable repository has been developed.

Comment 3:

The proposed site is also being planned on being turned into a World Heritage Site; we need to preserve this site it is of importance to all South Africans and especially the Khoi San people we need to respect their heritage.

Response 3:

Your comments are noted. However, there are no formal plans to turn Thyspunt into a World Heritage Site. The only reference to a World Heritage Site is the opinion expressed in the heritage Impact Assessment (Appendix E20 of the Revised Draft EIR of 2011) that the Thyspunt site has qualities that may qualify it as a World Heritage Site. Further trial excavations of archaeological sites at Thyspunt were authorised by the South African Heritage Resource Agency (SAHRA) in 2011. These trial excavations took place during the second half of 2011 and are therefore not yet reflected in the Revised Draft EIR Version 1. These trials found that there are very few archaeological sites within the proposed footprint of the power station and that these sites are of poor quality compared to the concentration of well-preserved archaeological sites along the coastline, which will be conserved through a 200 m zone along the coast that will be kept free of development.

Although some excavation will be required in the recommended footprint of the power station, the findings of the trial excavations confirm that in-situ conservation of the most valuable heritage sites (the concentration of heritage sites along the coastline) will be possible.

Although the Thyspunt site has wilderness value, the creation of a de facto nature reserve around the power station, as is the case at Koeberg Nuclear Power Station (KNPS) will ensure that the natural resources of the site, which are currently inaccessible to the public, can become a public nature conservation asset.

A statement by the Minister of Arts and Culture against development at Thyspunt was made prior to any formal application by Eskom for excavation of the heritage sites at Thyspunt. SAHRA can only make a formal declaration on the issue of the heritage value of the Thyspunt site once all the relevant facts, including the results of the trial excavations, have been placed at its disposal. The details of the

results will be made available for public comment and review as part of the Revised Draft EIR Version 2.

Comment 4:

I believe that the site should be revised as it was chosen over 30 years ago when there was very low human population, this has changed now and we have a fast growing town.

Response 4:

Your comments regarding the site selection process are noted. Whilst the limitations of the Nuclear Site Investigation Programme (NSIP) that was undertaken during the last two decades of the 20th century have been acknowledged, seismic and geological factors that were used in the identification of the sites have not changed since the NSIP. Furthermore, the distribution of the main population centres in the Eastern Cape and Western Cape that act as load centres (centres of electricity demand) have also not changed.

Project planning for large construction projects typically includes a pre-feasibility and feasibility assessment prior to detail planning and environmental impact assessment. Considering that the NSIP was focused on initial identification of potential nuclear power station sites, it should be regarded as an initial feasibility or even pre-feasibility study. Given this focus of the NSIP, it is reasonable that it would not have addressed associated infrastructure, environmental impacts, emergency planning and economic considerations. As indicated above, 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.

Comment 5:

The proposed site is also prone to earth tremors and earthquakes there was a 4.3 magnitude earthquake on 14 May 2011 and reached the Thyspunt site, this needs to be taken into serious (sic)

Response 5:

Your comments are noted. However, the site is hardly prone to earth tremors which would imply a repetitive occurrence of seismic activity in the area over a prolonged period of time. Areas such as Japan or Turkey or areas located on the San Andreas Fault in California are areas of high tectonic activity and are prone to earth tremors.

An earth tremor of 4.3 on the Richter Scale is actually an incident of relatively low significance. The Richter Scale is a logarithmic scale, meaning that every increase of 1 unit on the scale implies an amplitude 10 times greater than the previous value. Therefore, an earthquake measuring 5 on the Richter Scale has an amplitude 10 times greater than an earthquake measuring 4 on the Richter Scale. Standard designs for nuclear power stations cater for 0.3g Peak Ground Acceleration, which is approximately equivalent to an earthquake of magnitude 7 on the Richter Scale.

Comment 6:

No nuclear energy is safe what compensation is Eskom going to give us as property owners should something go wrong at the Power Station how properties will be devalued.

Response 6:

Your comments are noted. Eskom as the owner of the Power station is a contributor to the Nuclear Liability fund estimated at 2.4 Billion. This Rand value changes regularly as the insurance is held in US\$ denomination. The costs of the economic impacts of a nuclear power station incident are determined by the NNR Act. Section 29 of the National Nuclear Regulatory Act, 1999 requires Eskom to make financial provision for insurance purposes. Any shortfall will be covered by the government

Comment 7:

There will be negative effects on the groundwater supply and the soil in the surrounding areas this will contaminate our milk, drinking water, vegetable production and negatively affect our strong dairy farming community.

Destruction of a very sensitive Dune system, natural wetlands countless bird and animal species habitat, this is totally unacceptable and needs to be preserved for the future of all South African citizens.

Response 7:

Your comments are noted and similar concerns have been addressed in responses to Interested and Affected Parties (I&APs) in the Draft Environmental Impact Assessment and the Revised Draft Environmental Impact Assessment Version 1. The Nuclear-1 team of specialists (including the independent Agriculture, Groundwater, Botany and Wetland specialists) have assessed the entire spectrum of impacts of the construction and operation of the proposed Nuclear-1 Power Station on not only the Thyspunt site but also the Bantamsklip and Duynefontein sites. Whilst the specialists identified a multitude of impacts and proposed mitigation measures no fatal flaws, from an environmental perspective, were identified.

There is no factual basis for your claim that milk, drinking water and food products would be contaminated. In the event that any form of contamination of groundwater does occur (nuclear or non-nuclear), groundwater flow on the Thyspunt property is towards the coast. Thus, contamination would not spread to inland areas. Furthermore, dose limits for radioactive releases from nuclear power stations set by the National Nuclear Regulator in South Africa are very low compared to international standards. Doses imposed by Koeberg Nuclear Power Station (KNPS) have been consistently below these regulated levels and have been at or below natural background radiation levels at the KNPS throughout its operational life span.

In terms of preserving the site for future generations it should be noted that highly significant potential offsets are possible at Thyspunt if undeveloped land is declared a nature reserve. On the other hand, if Eskom were to dispose of the land and land use were to change to, for example, residential or resort at the coast, and agriculture on the inland portion, massive negative impacts could potentially occur. It is apparent from existing developments on site, and the spread of new holiday residences from the Cape St. Francis side, that the trend is decidedly towards creeping development sprawl into this

important nature area. The inland portion is already used for agriculture, but further degradation of natural habitats is certainly possible. Eskom ownership, must, therefore, be viewed as an important positive factor for nature conservation.

Comment 8:

Excess sand removal and being pumped to sea is going to affect the sensitive squid breeding ground which is directly in front of the proposed power station, this is going to negatively affect the squid population and cause job losses and a huge loss of income to the town. Also the consultant mentioned during the meeting that sand will also be pumped into Cape St. Francis beach this will disrupt the sensitive marine eco system there and impact the surf break. A no fish zone is being planned and this is their major fishing area, also contaminated fish will negatively affect our exports. Change in sea water temperature will not allow the squid to breed there anymore.

Response 8:

Your comments are noted. The Marine Impact Assessment states that when considering the discarding of spoil, disruption to the marine environment is significant with high consequence and significance. When mitigated by disposing spoil offshore (and by using only a medium pumping rate and undertaking the activity during winter at Thyspunt), the impact is minimised. The impacts associated with the disposal of spoil on chokka squid at Thyspunt will have limited impact on the overall squid stock, with 13.43% of catches by the inshore jig fishery being potentially displaced as adult squid move to other spawning grounds (based on a worst case scenario assessment).

No proposal for pumping sand to St. Francis Beach exists in the Nuclear-1 proposal. Such pumping has been suggested as a potential solution to the eroding beach at St. Francis, but is not proposed by Eskom or GIBB.

In terms of the release of warm water used for cooling purposes a tunnelled design of the release system will mitigate potential negative impacts, through multiple points of release. This aids dissipation of excess heat, by releasing cooling water above the sea bottom to minimise effects on the benthic environment and by utilising a very high flow rate at the point of release to maximise mixing with cool surrounding water. While chokka squid at the Thyspunt site are expected to avoid water temperatures elevated above their thermal tolerance range, the area predicted to be affected represents less than one percent of their coastal spawning ground.

Comment 9:

A planned 3 km evacuation zone is totally unacceptable and the whole village needs to be included in the evacuation zone.

Response 9:

Please note that it is unclear which village you are referring to for inclusion in the evacuation zone.

The proposed emergency zones are based on European Utility Requirements (EUR) standards. However the application of the EUR requirements to Nuclear-1 is assumed and if this assumption proves to be incorrect, the environmental impacts may need to be reassessed.

Comment 10:

You are planning on storing High Radiation Nuclear Waste on the site of the power station, this is not safe as nuclear energy has a life span of 200 000 years to degrade, what are your plans of keeping this from the ocean and the groundwater and soil.

Response 10:

Your comments regarding the impacts of radioactive waste disposal are noted. These impacts have been assessed in the Waste Assessment (Appendix E29 of the Revised Draft EIR) and in Chapter 9 of the Revised Draft EIR. The impacts of on-site storage of HLW may indeed be regarded as significant if no mitigation is applied. However, the on-site storage of HLW is subject to very strict controls that is monitored by the NNR. After the application of these mitigation measures, and based on the experience with the application of these measures at Koeberg (where long-term storage of HLW has not resulted in any health impacts), the impacts of this activity are assessed to be of low significance.

Comment 11:

Lastly the negative social impacts this is going to have on the population and the future generations.

Response 11:

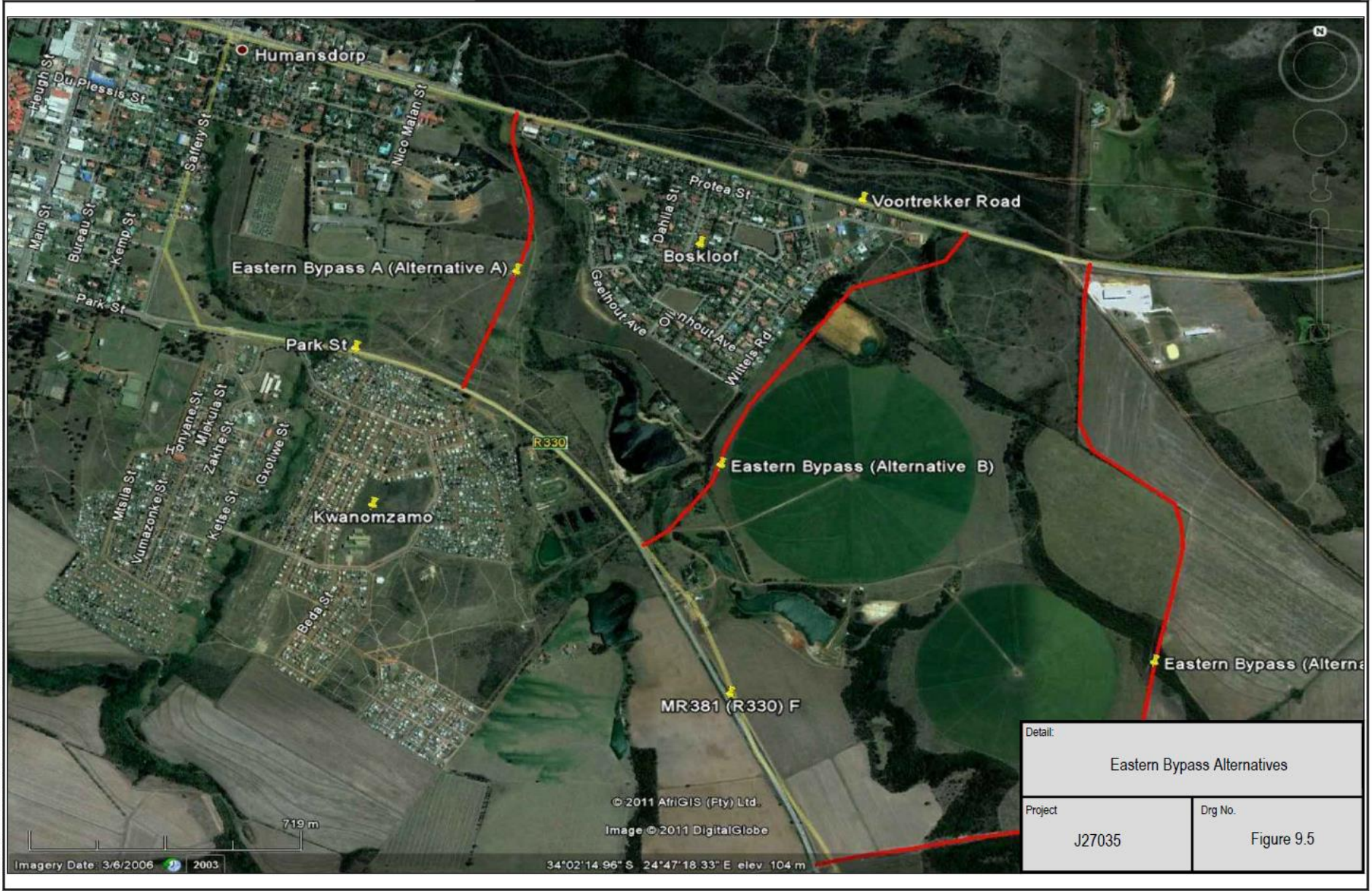
Your comments are noted and we request that you present us with a detailed list of negative social impacts so that your concerns may be adequately captured.

Yours faithfully



For GIBB (Pty) Ltd
The Nuclear-1 EIA Team

P:\J27035 Nuclear Power Station (TA)\TasseilReview of Transport Specialist Study\Jan 2012\Images\Coast\Thyourn\Figure 9.5_2012_Eastern Bypass Alternatives.dwg | RADNMS | 05/07/2012 10:43:04 AM



**PROPOSED ESKOM NUCLEAR POWER STATION
AND ASSOCIATED INFRASTRUCTURE**

ENVIRONMENTAL IMPACT ASSESSMENT (EIA: 12/12/20/944)

**COMMENTS ON
DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

(Volume 30 RDEIR IRR 29 July 2011)

Issues have been received from the following stakeholders:

| No | Name | Organisation |
|-----------|-----------------------|-------------------------------|
| 1 | Juline Prinsloo | Kouga Tourism |
| 2 | Ivan Copeland | Interested and Affected Party |
| 3 | Jo Millar | The Bomb Surf |
| 4 | Samantha Leigh Manton | Interested and Affected Party |

| NO | DATE | NAME & ORGANISATION | | |
|----|---------------------------|---|---|---|
| 1 | 21 July 2011 Email | Juline Prinsloo Kouga Tourism | On another note I was informed by other parties that yourselves and Eskom had a meeting in the Kouga with Tourism and Chief Williams etc. I am so disappointed as Kouga Local Tourism has not been invited. Please revert back to me. | Jaana Ball telephonically explained to her on 21 July 2011 that no meeting was held with tourism only with Chief Williams and the Gamkwa Khoisan Council. The meeting with Chief Williams did not discuss tourism it dealt with issues specific to the Gamkwa Khoisan Council |
| 2 | 22 July 2011 Email | Ivan Copeland Interested and Affected Party | Sort out those wind turbines! | <p>Please note that renewable energy (wind and solar) is not considered in this application. However, in terms of present alternative energy solutions renewable forms of energy (e.g. wind and solar), are unable to provide viable large scale base load power , or ease of integration into the existing power network in South Africa due to the intermittent supply and lower load factors of these renewable technologies. See for instance, EPRI (2010) referred to in Chapter 5 of the Revised Draft EIR Version 1.</p> <p>In some countries, Internationally, natural gas and hydro power are also used for base-load electricity supply. However, South Africa does not have sufficient quantities of indigenous natural gas and does not have the large rivers required for base load hydro-electric power stations.</p> <p>In light of the above, coal-fired and nuclear power stations are currently the only feasible options in South Africa for base load electricity generation.</p> |
| 3 | 25 July 2011 | Jo Millar The Bomb Surf | I object to Thyspunt being chosen as the location of Nuclear 1 because: | Thank you for comment and your input and participation in the Environmental Impact Assessment process. Please see |

| NO | DATE | NAME & ORGANISATION | | |
|----|-------|---------------------|---|---|
| | Email | Petition | <ol style="list-style-type: none"> 1. The EIA itself acknowledges that Thyspunt would experience environmental impacts of higher significance (particularly biophysical impacts) than the other shortlisted site, Duynefontein. 2. The negative impact on local flora, wetlands, dunes, ocean and tourism during construction and operation and the danger to local communities in the event of a radioactive incident. 3. One of the EIA's main arguments in favour of choosing Thyspunt being that it would be beneficial to the conservation of the area is completely devoid of logic. 4. Why develop a Nuclear Power Station in one of SA's windiest regions, when a wind farm could be easily constructed there instead. A quicker, | <p>our response to your comments below.</p> <p>1 - 3. The impact assessment as part of the Environmental Impact Assessment did indeed identify significant potential impacts (neutral, negative and positive) on the flora, dune, wetland, tourism and marine environments amongst others at the Thyspunt site. There are however some impacts of potentially higher significance at Duynefontein, for example the impact on the Atlantis Mobile Dunefield (from a botanical point of view).</p> <p>In terms of wetlands, development of the Thyspunt site, in the absence of mitigation measures, will impact significantly on the wetland system. The following facts need be considered however:</p> <ul style="list-style-type: none"> • a number of mitigation measures have been suggested and included in a draft Environmental Management Plan in order to mitigate the impact of the Nuclear Power Station on the Environment; • the proposed footprint of the plant is situated to avoid the wetlands; and • although the cumulative impacts of the proposed development of a Nuclear Power Station at the Thyspunt site, without implementation of mitigation measures, have been assessed as of high negative significance, offset mitigation is possible and would involve conservation of areas that include both the Eastern Valley Bottom wetlands and the Oyster Bay |

| NO | DATE | NAME & ORGANISATION | | |
|----|------|------------------------|--|---|
| | | | <p>cheaper option that would give clean, safe, renewable energy.</p> | <p>dunefield itself, as far as the impacted area at the upstream boundary of The Links golf estate.</p> <p>Oceanographic impacts related to the construction phase are considered to be of low significance,</p> <p>Therefore although it is acknowledged that Thyspunt would experience environmental impacts of high significance especially in terms of the impact on the cultural landscape, we still maintain that the conservation of the remainder of the site through access control and responsible long-term conservation management are significant positive impacts associated with this site. This is confirmed by the Botany and Dune Ecology Assessments, which conclude that a key positive impact would be the creation of a nature reserve for the non-developed portion of the site, thus improving conservation of sensitive habitats. In the event that full mitigation as well as offset measures were implemented, the net impact to wetlands on the Thyspunt site is also likely to be one of positive significance, and a preferable scenario to the “no-go” alternative.</p> <p>4. As determined in the Draft IRP released for public comment in October 2010, nuclear and renewable technology is an important component of South Africa’s future energy mix. You are referred to the Draft Integrated Resource Plan; the levelised cost of renewable technology is higher than that of nuclear.</p> <p>The assessment of nuclear safety risks are outside the</p> |

| NO | DATE | NAME & ORGANISATION | | |
|----|---------------------------|--|---|---|
| | | | | scope of the EIA process and will be considered in the National Nuclear Regulator's licensing process. Please refer in this regard to the Co-operative Governance Agreement included in Appendix B4 of the Revised. |
| 4 | 26 July 2011 Email | Samantha Leigh Manton Interested and Affected Party | I object to the development of the Nuclear power station in Thyspunt. | Thank you, your comment is noted. |

5 August 2015

Our Ref: J27035 / J31314

Your Ref: Email received 26 July 2011



Ms Gayle Ritchie
32 Siesta Sands
Port Elizabeth
6070

Email: gesritchie@googlemail.com

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

Dear Ms Ritchie

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

I, Gayle Ritchie would like to register as an Interest and Affected party to the proposed nuclear site at Thyspunt nuclear site. My address is 32 Siesta Sands, Port Elizabeth.

The revised EIA is flawed and my reasons are as follows:

Comment 1:

Thyspunt is a very sensitive ecosystem system and believe that it needs to be protected. There is a variety of animals, birds, plants, a moving dune system, wetlands, other breeding grounds and squid breeding grounds.

This is their habitat and we cannot take it away.

Response 1:

Your comment is noted. However, specialist ecological assessments that investigated the impacts on dunes, flora and fauna have concluded that the significance of the ecological impacts at Thyspunt would be low enough to permit the construction of a power station at this site. A key element of this outcome is the mitigation measures proposed by the specialists which Eskom will be required to implement if approval is received. This includes the creation of a nature reserve around the power station which will result in the formal protection of the property excluding the footprint which will be impacted by the construction and operation of the plant. This includes key ecological communities like wetlands in this nature reserve. A similar nature reserve currently exists at the Koeberg Nuclear Power station at Dynefontein in the Western Cape.

Comment 2:

Thyspunt is about to be declared a World Heritage Site, and you need to respect Khoisan and their ancestral home ground. This area needs to be protected and preserved.



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.



Response 2:

It was indicated in the Heritage Impact Assessment in the revised Draft EIR (Appendix E20) that Thyspunt has the potential to qualify as a World Heritage Site. However, there are currently no plans to turn the site into a World Heritage Site. Such declaration is subject to nomination by the Department of Environmental Affairs and acceptance by the United Nations Educational Scientific and Cultural Organisation (UNESCO) according to strict criteria. No such nomination has been lodged by the South African government. It is also required in terms of the National Heritage Resources Act that if there is an intention to register the site formally the land owner should be notified. To date Eskom has not been notified of any such intention.

The vast majority of the Khoi / San heritage sites, and especially those of high quality and a good state of preservation, occur along the coastline on the Thyspunt site. An intensive investigation into heritage sites undertaken in 2011 revealed that the central portion of the site, where the power station is proposed to be placed, contains very few heritage sites. The coastal sites will be conserved through maintaining a 200 m undeveloped zone from the coastline. Any sites within the footprint of the power station will be properly excavated prior to the commencement of construction.

Comment 3:

I am deeply concerned about the nuclear waste been removed passing residential and numerous schools from St Francis to George where it will be dumped.

We cannot put our present and future generation at risk.

Response 3:

Only Low Level Waste (LLW) and Intermediate Level Waste (ILW) will be transported from the nuclear power station to the Vaalputs nuclear waste disposal site in the Northern Cape. George will not be a final destination of these wastes. LLW and ILW will be transported in sealed drums (metal drums and concrete drums, respectively) that prevent the escape of radiation into the environment. This is an internationally acceptable practice that will be undertaken in terms of the conditions of the National Nuclear Regulator and the IAEA Regulations for the Safe Transport of Radioactive Material. In terms of the Regulations, the transport process is subject to radiation protection, emergency response, quality assurance and compliance assurance programmes. Such waste transport to Vaalputs has continued to take place from Koeberg Nuclear Power Station since it was commissioned more than 20 years ago without major incidents.

Radioactive waste management practices envisaged for Nuclear-1 are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal. Nuclear Power Station strives to minimise production of all solid, liquid and gaseous radioactive waste, both in terms of volume and activity content, as required for new reactor designs. This is being done through appropriate processing, conditioning, handling and storage systems. In addition, production of radioactive waste is minimised by applying latest technology and best practices for radiological zoning, provision of active drainage and ventilation, appropriate finishes and handling of solid radioactive waste. Where possible, the Nuclear-1 power station will reuse or recycle materials.

All forms of radioactive wastes are strictly controlled and numerous specialised systems and management practices are in place to prevent uncontrolled contact with these substances. These controls and practices differ for the different forms of radioactive waste. South Africa still has to

formally release a strategy for the long-term management of HLW, including spent fuel. Until such time, all spent fuel is stored temporarily either in spent fuel pools (wet storage), or in dry cask storage facilities (dry storage). This allows the shorter-lived isotopes to decay before further handling, a management strategy that is acceptable from a safety perspective. It must be noted however that as per the Department of Energy's Media Statement on Nuclear Procurement Process Update as released on 14 July 2015 strategies are complete to develop an approach for South Africa to deal with Spent Fuel/High Level Waste disposal.

Disposal of radioactive waste at an authorised facility is being done according to an approved disposal concept, defined and developed with due consideration of the nature of the waste to be disposed of and the natural environmental system, collectively referred to as the disposal system. The disposal system developed for this purpose makes provision for the containment of radionuclides until such time that any releases from the waste no longer pose radiological risks to human health and the environment. The safety assessment process used as basis for this purpose considers both intentional (as part of the design criteria) and unintentional (natural or human induced conditions) releases of radionuclides. Unintentional releases include consideration of unintentional human or animal intrusion conditions, which might lead to direct access and external exposure to radiation.

Once released into the environment, radionuclides might migrate through the environmental system along three principle pathways: atmospheric, groundwater and surface water. Due to the physical nature of L&ILW and HLW disposal concepts, migration along the atmospheric pathway is highly unlikely. The principle environmental pathway of concern is thus the groundwater pathway, with the surface water pathway of secondary concern as an extension of the groundwater pathway. Disposal systems are designed so that releases to groundwater or surface water are highly unlikely as further explained in Chapter 10 of this EIR.

Comment 4:

The highly toxic waste has been proposed to be stored on site and it takes 200 thousand years to decompose. The proposed site has a 60 year life span and to leave the responsibility of such waste to future generations who have no say this moment.

Response 4:

The practise of storing of high level radioactive waste on a Nuclear Plant site is an international global acceptable practise. The same practise is applied at the current operating Koeberg plant. The South African government, Department of Energy, is in the process of establishing the radioactive Waste Management Institute . One of the functions of this institute will be to identify a repository for high level waste in South Africa.

Kindly refer to response 3 above for further information regarding the radioactive waste management practices to be followed.

Comment 5:

This area is prone to tremors and earthquakes; there is no guarantee that we will not have an earthquake that is larger than 6 magnitudes.

Response 5:

The Seismic Risk Assessment (Appendix E4 of the Revised Draft EIR) found that based on the current state of knowledge there are no disqualifiers for this site.

All three alternative sites for this nuclear power station are the subject of intensive seismic monitoring. Of the three alternative sites, Thyspunt was found to present the lowest seismic risk. A nuclear power station designed for peak ground acceleration (PGA) of 0.3g can withstand an earthquake of approximately 7 on the Richter Scale approximately 8 km away from the location of the earthquake. In this respect, it must be remembered that the Richter Scale is a logarithmic scale, This implies that an earthquake measuring 7 on the Richter Scale has a magnitude 10 times higher than one measuring 6 on the Richter Scale.

Comment 6:

I have a constitutional right to clean green energy. Nuclear is not sustainable and hugely expensive and not green.

Response 6:

Your comment is noted. It is the South African government's prerogative to determine the mixture of energy resources that are to be used to cater for future electricity demands. Government embarked on an extensive consultative process, the Integrated Resource Plan (IRP) to determine the future mixture of energy sources for electricity generation. As determined in the Draft IRP released for public comment in October 2010, nuclear and renewable technologies are both important components of the future energy mix.

Yours faithfully
for GIBB (Pty) Ltd



Jaana-Maria Ball
Nuclear-1 EIA Manager

5 August 2015

Our Ref: J27035 / J31314
Your Ref: Email received 25 July 2011

The Project Coordinator
Thyspunt Alliance
PO Box 102
St Francis Bay
6312

Email: dolphin@intekom.com

Dear Ms Malan



GIBB
ENGINEERING & SCIENCE

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:

Your correspondence dated 21 July 2011 has reference.

We made a timeous request (see correspondence 12 May 2011) for Key Focus Group meetings. In this first request, we specifically asked that the Key Focus Group Meetings take place within the first 45 days, as this would allow us the next 45 days of the comment period to prepare our responses.

You replied to this request on 31 May stating the following: *“With respect to the Alliance’s request for additional meetings GIBB will be facilitating Specialist Meetings during June/ July, where required.”*

You requested that we provide you with a detailed list of issues related to the specialist’s studies. You also stated that you would discuss the matter with us at the Public Meeting.

This unfortunately did not happen.

You followed-up with an e-mail on 15 June 2011 stating that you have not yet receive the list of issues. We responded on 20 June 2011 and when no reply was forthcoming from GIBB, we enquired again on the 12 July 2011. We find your reply dated 21 July 2011 unacceptable.

Response 1:

Your comments are noted. As stated in our letter dated 21 July 2011 GIBB is considering the Thyspunt Alliance’s request. GIBB wanted to wait for the expiry of the comment period for the Revised Draft EIR and the expected comments from the Department of Environmental Affairs (DEA) before making a final decision. This would enable the EIA Team to collate all issues (including those submitted by the Alliance and the DEA) related to the various specialist reports and determine whether additional issues have been raised since the meeting, which was held in 2010 with specialists in St. Francis Bay, and whether there is still a need for a Key Focus Group Meeting with the specialists. GIBB is to date still awaiting comment from the DEA. As you are also aware meetings have been held



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.



between specialists to obtain further resolution on the squid and the debris flow issues. Specialists representing the Thyspunt Alliance attended these meetings.

Comment 2:

We requested Key Focus Group Meetings to allow the specialist that we have approached to comment on the report, the opportunity to engage directly with the specialists that produced the various reports. We were certainly not aware that the second round of public participation focused only on the so-called changes. It was clear from the Public Meeting in St. Francis Bay that the majority of the audience was of the opinion that nothing has changed since your previous Public Meeting.

Response 2:

We refer you to response 1. All I&APs and stakeholders have had the opportunity to interact with the EIA and specialist team throughout the review period of both the Draft EIR and Revised Draft EIR via post, e-mail and telephone. The Thyspunt Alliance and other key stakeholders also engaged directly with specialists subsequent to the release of the Draft EIR, the issues raised at this intervention have been addressed in the Revised Draft EIR Version 1. To date the Thyspunt Alliance has not provided a detailed list of issues which substantiate the need for additional interaction with specialists. The invitation to the second round of public meetings clearly stated that the aim of these meetings was to discuss the changes between the first Revised Draft EIR and the revision (Revision 1).

Comment 3:

We also fail to understand how you could yet again ignore the request for a Key Focus Group Meeting with the Scientific Squid Working Group before you published the second draft. The first meeting with this group only took place on 20 June 2011 with a second meeting on 8 July 2011. Why did you have to wait until after the second draft was published if you were informed about the industry as far back as the original scoping phase of the study?

Response 3:

Your comments are noted. Meetings with the Squid Scientific Working Group took place in 2011, at which the SASMIA was a participant. The Marine Impact Assessment has subsequently been revised in accordance with the outcome of these meetings and will be made available for public comment and review.

Comment 4:

You refer to a technical specialist meeting to be held to discuss in detail the debris flow and geo-hydrology issues related to the Eastern Access. We were alerted to this meeting by two of the specialists involved with the Thyspunt Alliance.

We would like to record our objection to the following:

1. We were not notified of the meeting; and
2. We have not been given the opportunity to request the attendance of some of the other specialists involved in reviewing this specific issue. Please note that three representatives from the Thyspunt Alliance will be attending this meeting as observers.

Response 4:

Your comment is noted. Professors Fred Ellery and Richard Cowling, as well as three observers from the Thyspunt Alliance, including yourself, attended this meeting held on 29 July 2011.

Comment 5:

Furthermore we would like to strongly disagree with the following statement in your letter:

“during the round of public meetings GIBB was able to respond to all queries raised and will further expand on these explanations where necessary in the Issues & Response Report.”

There is still a very large amount of outstanding issues that were not dealt with at the Public Meetings; answers were also not forthcoming in the post meeting comments.

The Public Meetings allowed I&AP's the opportunity to raise even more issues, but as you yourself state, technical issues were not discussed or addressed in detail. We requested Key Focus Group meetings exactly for that reason.

We went out of our way to involve local specialists in the review of the reports. They were all awaiting the opportunity to ask the relevant questions, not just for the sake of the Alliance, but also so that the independent consultants can be sure to provide the Department of Environmental Affairs with a comprehensive document.

Response 5:

Please see our response 1 and we trust that as requested previously the Thyspunt Alliance has submitted their comments on these outstanding issues.

Comment 6:

As matters stand at the moment we cannot but question the independence of the consultants.

Response 6:

As the Environmental Impact Assessment Practitioner, GIBB is indeed charged with the task to act as independent consultant. We act as independent practitioner in relation to the Applicant as well as I&APs and stakeholders in order to most objectively assess the impact of the proposed development on the receiving environment. By waiting until expiry of the Revised Draft EIR Version 1 comment period and for comments from the DEA, to schedule any additional meetings, GIBB will ensure that neither the Applicant nor any other I&APs, stakeholders or interest groups are prejudiced.

Comment 7:

We were advised that the consultants have had a Key Focus Group meeting with some members of the KhoiSan community. We would like to request that the minutes of this meeting be forwarded to us as soon as possible.

Response 7:

Your request is noted. The EIA Team met with the Chief of the First Nation on 07 June 2011. Minutes of all meetings held are attached in Appendix D of the RDEIR version 2.

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 and a horizontal line extending to the right.

The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314
Your Ref: Email received 27 July 2011

The South African Squid Management Industrial Association (S.A.S.M.I.A)
PO Box X13130
Suite 196
Humewood
6013

Email: gregchristy@intekom.co.za

Dear Mr Christy



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:

SASMIA was a participant in the Key Focus Group meetings in Cape Town with Arcus Gibbs and the Squid Scientific Working Group. It became evident at the meeting and is reflected in the *Aide Memoires* that there are going to be some fundamental and significant changes and additions to this report. SASMIA is of the opinion that this is going to necessitate that the report be resubmitted for comment and that the comment on the present Draft report will not be of any relevance.

We hereby respectfully submit that Arcus Gibb is bound to grant an extension of the comment period so that the revised Marine Report which will have to be submitted to be commented upon.

We thank you for your urgent attention to this matter and await your response.

Response 1:

As discussed during the second Squid Working Group Meeting (Friday, 08 July 2011) and as per our letter to yourself dated 22 July 2011, SASMIA and the Squid Working Group were requested to forward comments on the Revised Draft EIR and its specialist reports by close of the comment period on 07 August 2011. As such comments on this issue were received from SASMIA and others as follows:

- IRR 19 of the Revised Draft EIR Version 1 received from Mr Greg Christy on 04 July 2011;
- IRR 33 of the Revised Draft EIR Version 1 received from Mr Greg Christy on 22 July 2011;
- IRR 74 of the Revised Draft EIR Version 1 received from Dawson, Edwards and Associates on 10 August 2011; and
- IRR 136 of the Revised Draft EIR Version 1 received from Dr K Prochazka of the Department of Agriculture, Forestry and Fisheries and Dr Hans Verheye from Department of Environmental Affairs on 11 May 2012

The Marine Impact Assessment has subsequently been revised and will be made available for public review at date to be announced.

Yours faithfully
for GIBB (Pty) Ltd

The Nuclear-1 EIA Team



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.



5 August 2015



People • Expertise • Excellence

Our Ref: J31314

Your Ref: Email received 28 July 2011

Email: janda@ecocreate.co.za

Dear Ms McDonald

Cape Town

14 Kloof Street
Cape Town 8001
PO Box 3965
Cape Town 8000

Tel: +27 21 469 9100
Fax: +27 21 424 5571
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:

As I read these words out word for word from the document attached I do need you to please correct the minutes where you see fit.

I think there may have been some additional points there which have not been added for example.

In this report, the ICRP linear no threshold model is used to assess risk due to radiation.

Research on "non-(DNA)-targeted" radiation effects prove the inaccuracy of a simplistic linear relationship[i] [ii] especially at low doses.

These effects include radiation-induced bystander effects (Morgan, 2003a; Morgan, 2003b), genomic instability (Wright, 1998; Wright, 2000), adaptive response (Wolff, 1998) and low dose hyper-radio sensitivity (HRS) (Joiner, et al., 2001).[iii] Radiation-induced bystander effect (RIBE), which was found in the 1990s, showed radiation effects to cells which had not been targeted resulting in an affected area that was much larger than anticipated.

Thus scientists are well aware that current risk assessment models such as those employed to assess risks associated with nuclear plant emissions are inadequate for low doses.

Again, the author of this report needs to look a little further than in-house industry literature.

I have attached the document I read from herewith.

Response 1:

Bystander effects are not new. As referenced in EU (2009)¹, there is extensive literature on clastogenic factors and other "compounds" that stimulate or modify responses in cells that were not

¹ EU. 2009. Radiation Protection No 151. EU Scientific Seminar 2005. Alpha Emitters: Reliability of Assessment of Risk for Radiation Protection. Proceedings of a scientific seminar held in Luxembourg on 21 November 2005. Working Party on Research Implications on Health and Safety Standards of

damaged. The relevance of bystander effects to carcinogenic risk has not been determined and acknowledgement of this effect does not “*prove the inaccuracy*” of the current linear-no-threshold hypothesis that is used in radiation protection practice. Research in this field is continuing and findings are interesting. However, these are not sufficient to support a new and completely different paradigm of radiological risk assessment. It must be acknowledged that there is a large volume of radiobiological and epidemiological evidence that is in line with the classical paradigm.

The radiological protection recommendations are accepted and implemented via the South African radiological protection statutes and regulations. The International Commission on Radiological Protection (ICRP) has been functioning since 1928 when it was established. The ICRP is an advisory body that offers its recommendations to regulatory and advisory agencies, mainly by providing guidance on the fundamental principles on which appropriate radiological protection can be based. Since its inception the ICRP has regularly issued recommendations regarding protection against the hazards of ionising radiation. International organisations and national authorities responsible for radiological protection, as well as the users have adopted these recommendations and principles issued by the ICRP as a key basis for their protective actions. As such, virtually all international standards and national regulations addressing radiological protection are based on the ICRP recommendations. Currently, the South African Regulations on Safety Standards and Regulatory Practices R.388 which contains statutory requirements for radiological protection are based on the ICRP 1990 Recommendations in Publication 60.

Compliance to all South African statutes and regulations relating to radiological protection are mandatory and the radiological protection information contained in the EIA relating to ICRP risk models are aligned to provisions and requirements addressed in relevant South African statutes and regulations.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

It should be noted that a fundamental principle of the nuclear and radiological safety is that over and above meeting specific limits the license applicant demonstrate the incorporation of ALARA principles and this reinforces that existing approach.

Epidemiological studies do indicate a statistical link between high level radiation exposure and the risk of excess "cancers" within a study population. Indeed the ongoing studies of survivors of the second world war Japanese atomic weapons continue to inform the basis of radiation protection risk factors and associated exposure limits based on the assumption of the existence of "the linear no threshold" relationship between exposure and risk. However at low exposures associated with occupational and environmental exposure to sources originating from man-made radioactivity this relationship is unproven and remains the subject of intense scientific debate and in particular no direct causality between specific elements such as caesium or their isotopes has been established. However the Radiation Protection community continues to adopt a conservative approach in assuming the linear no threshold model applies in these situations. There have been a number of epidemiological studies undertaken around various industrial facilities including for example studies undertaken around nuclear fuel reprocessing sites which historically had enhanced Cs discharges and also around non-nuclear facilities and which have in some instances indicated statistical "clusters" of excess "cancers" however in general the results and causality remain inconclusive and various theories have been

the Article 31 Group of experts. Director-General for Energy and Transport, Directorate H – Nuclear Energy. Unit H.4 – Radiation Protection. European Commission.

proposed including those relating to the migratory nature of the workforce and genetic interaction with other non-radiological environmental stressors.

The protection standards and arrangements proposed are not determined by "the industry" - bodies like the ICRP, IAEA, and NNR are independent of "the industry" and base their recommendations and regulations on the best available scientific evidence following extensive discussion and consultation to reach a consensus view and moreover constantly review and update these as new scientifically based information becomes available.

Comment 2:

I am being forced to ask again how any Human health impact assessment can possibly be valid without an assessment of any data.

It is not enough to know that the NNR has done monitoring studies around the existing Koeberg facility. These studies if they have been done need to be analysed independently from the NNR.

These studies should be in the public domain and if they are not the question begs asking - why not?

Response 2:

Thank you, your comment is noted. Please note that the Koeberg annual Radiological Environmental Survey report is available and can be requested in the Koeberg Public safety forums.

Comment 3:

If no independent or peer reviewed studies have been done then how can it be assumed that compliance with the NNR levels will be protective of nearby residents?

Response 3:

Predictions of radiations emissions are based on proven and published sources of radiation emissions from existing nuclear power station in South Africa (Koeberg Nuclear Power Station) and internationally, where it has been demonstrated that radiation doses can be expected from particular designs with particular protective measures having been put in place. Typical radiation dose rates from these technologies are known and are provided in the Nuclear-1 Consistent Dataset (Appendix C of the Revised Draft EIR).

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

Again this will be determined definitely as part of the design specific radiological impact assessment, safety case and licensing process - the proposed design will not be a first of a kind technology and therefore there will be a reference design upon which the proposed safety case will be based and which can already demonstrate compliance with international standards.

Comment 4:

Understanding also that emissions both gaseous and liquid are sometimes unavoidable and that the actual levels are difficult to control, on what basis is it assumed that plants will in fact comply with NNR emission levels set?

Response 4:

The basis is set on Eskom's experience and continuous successful operation of Koeberg Nuclear Power Station (KNPS), over the past 28 years. The Eskom KNPS has consistently kept its radiation emissions far below legal limits set by the NNR and other nuclear power stations using similar technology around the world. The NNR published the KNPS's radiation monitoring results in its annual reports.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

Agreed and whilst the Koeberg experience is important as the proposed design will not be first of a kind technology and will be based on established technology there is likely to be a reference plant design and safety case upon which any assumptions would be based.

Emissions from Nuclear Power Plants (NPP's) are not difficult to control as NPP's are designed to keep levels of radioactive material in liquid and/or gaseous effluents as low as is reasonably achievable. Liquid and gaseous effluent discharge pathways are designed for effluents to be collected, stored, processed and filtered, sampled, assessed and monitored prior to discharge in accordance with authorised standards and procedures.

Comment 5:

The EIA is passed then on the assumption that NNR levels will be held on the assumption that these levels are safe.

There is no data to provide any evidence or either of these two assumptions.

An assumption on top of another assumption does not seem like solid ground for an infallible argument.

2. (p 5 in reference to Nagasaki and Hiroshima victims) I would like to ask why more recent literature critically appraising the IRCP standards has not been examined?

Response 5:

Kindly refer to response 4 above. The assumption that NNR levels are safe is based on international benchmarks and peer-reviewed nuclear science that has been established, tried and tested over almost a century. To provide a full explanation of the reasons why nuclear science has determined what are regarded to be safe levels of radiation would require an explanation starting with the very fundamentals of nuclear science. Secondly, as indicated repeatedly in public forums and in EIA documentation, the separation between the EIA process and the NNR licensing process is based on the legislative provisions of the relevant Acts, namely the National Environmental Management Act, 1998 and the National Nuclear Regulator Act, 1999, as well as the DEA / NNR co-operative

agreement, which governs the consideration of radiological issues in EIA processes and the interaction between the DEA and the NNR in terms of their respective mandates for environmental protection and radiological safety (See Appendix B4 of the Revised Draft EIR). The agreement clearly stipulates that issues of radiological safety are within the mandate of the NNR.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

The protection standards and arrangements proposed are not determined by "the industry" - bodies like the ICRP, IAEA, and NNR are independent of "the industry" and base their recommendations and regulations on the best available scientific evidence following extensive discussion and consultation to reach a consensus view and moreover constantly review and update these as new scientifically based information becomes available.

Comment 6:

The EIA report provides absolutely no review of the contemporary discursive peer reviewed literature. On what basis does a review that cites in-house nuclear industry literature from solely the IAEA and ICRP comply with the requirements for an independent EIA?

An example of this literature would be an article by Jacob and colleagues, in the journal Occupational and Environmental Medicine in 2009 present findings that confirm that the cancer risk per dose for low-dose exposures is NOT NECESSARILY lower than for the atomic bomb survivors. They conclude "This result challenges the cancer risk values currently assumed for occupational exposures."

In this report, the ICRP linear no threshold model is used to assess risk due to radiation.

Research on "non-(DNA)-targeted" radiation effects prove the inaccuracy of a simplistic linear relationshipⁱ ⁱⁱ especially at low doses.

These effects include radiation-induced bystander effects (Morgan, 2003a; Morgan, 2003b), genomic instability (Wright, 1998; Wright, 2000), adaptive response (Wolff, 1998) and low dose hyper-radio sensitivity (HRS) (Joiner, et al., 2001).

ⁱⁱⁱ Radiation-induced bystander effect (RIBE), which was found in the 1990s, showed radiation effects to cells which had not been targeted resulting in an affected area that was much larger than anticipated.

Thus scientists are well aware that current risk assessment models such as those employed to assess risks associated with nuclear plant emissions are inadequate for low doses.

Again, the author of this report needs to look a little further than in-house industry literature.

Response 6:

Kindly refer to response 1 and 5 above. Furthermore, as we have pointed out in the DEIR, *the Emergency Response (Appendix E26) and Site Access Control Report (Appendix E27) and Human Health Risk Assessment (Appendix E24), which have been prepared on a high level,, are appended to this EIR for information only. Further details on these reports will be prepared as part of the NNR nuclear licensing process, as their findings will be evaluated by the NNR."*

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

The protection standards and arrangements proposed are not determined by "the industry" - bodies like the ICRP, IAEA, and NNR are independent of "the industry" and base their recommendations and regulations on the best available scientific evidence following extensive discussion and consultation to reach a consensus view and moreover constantly review and update these as new scientifically based information becomes available.

Comment 7:

I question again the legitimacy of this EIA. Does this EIA seek to present unbiased findings both negative and positive or does it seek to prove Nuclear-1 compliant on all counts?

Response 7:

Compliance to all South African statutes and regulations relating to radiological protection are mandatory and the radiological protection information contained in the EIA relating to ICRP risk models are aligned to provisions and requirements addressed in relevant South African statutes and regulations.

Comment 8:

Turning from health to the small issue of high level waste.

I enjoyed the touchingly optimistic view that the government should investigate the best long term options for disposing of spent fuel, including

1. reprocessing, conditioning and recycling;
2. geological disposal and
3. "transmutation" however on this the author say that 'transmutation' was unproven and rather unlikely.

Rudimentary research into reprocessing shows it to be very unsatisfactory also - la Hague in France has been found to be extremely costly and far from solving the nuclear waste problem has amplified it; with discharges from this plant significantly more than dry or wet storage would have been over this period.

We know the difficulties with regard to geological disposal with reference to the experiences of various countries, even though the report refers to several national programs that are I quote "within a decade" of operating a geological repository for HLW and spent fuel, notably Finland, Sweden, and the USA.

To put that in perspective I read an IAEA report from 2000 saying the same thing.

On pg 47 we are told that High level waste at Koeberg is in racks which are designed to hold the HLW for the life of the station plus ten years i.e. 60 (or possibly 40 I am not sure?) plus 10 years = 70 years - so that's 10 000 years of toxicity less 70 so we still need to cover 9 930 years.

The fact that the containers have been designed for an additional ten years over and above the operational period was generous but doesn't quite cover it.

Perhaps this gives an indication of when Eskom feels its responsibilities will have come to an end.

Response 8:

On site storage of high level nuclear waste has been shown to be a safe practice internationally and will continue to be the first option for disposal of high level nuclear waste. Development of geological disposal options or other storage (e.g. development of a surface-based high level disposal site) remains an option.

Should no other disposal site for high level nuclear waste be established within 10 years of the decommissioning of Nuclear-1, Eskom's responsibility for on-site management of the high-level nuclear waste would continue.

Furthermore, please note that radioactive waste management practices envisaged for Nuclear-1 are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal. Nuclear Power Station strives to minimise production of all solid, liquid and gaseous radioactive waste, both in terms of volume and activity content, as required for new reactor designs. This is being done through appropriate processing, conditioning, handling and storage systems. In addition, production of radioactive waste is minimised by applying latest technology and best practices for radiological zoning, provision of active drainage and ventilation, appropriate finishes and handling of solid radioactive waste. Where possible, the Nuclear-1 power station will reuse or recycle materials.

All forms of radioactive wastes are strictly controlled and numerous specialised systems and management practices are in place to prevent uncontrolled contact with these substances. These controls and practices differ for the different forms of radioactive waste. South Africa still has to formally release a strategy for the long-term management of HLW, including spent fuel. Until such time, all spent fuel is stored temporarily either in spent fuel pools (wet storage), or in dry cask storage facilities (dry storage). This allows the shorter-lived isotopes to decay before further handling, a management strategy that is acceptable from a safety perspective. It must be noted however that as per the Department of Energy's Media Statement on Nuclear Procurement Process Update as released on 14 July 2015 strategies are complete to develop an approach for South Africa to deal with Spent Fuel/High Level Waste disposal.

Disposal of radioactive waste at an authorised facility is being done according to an approved disposal concept, defined and developed with due consideration of the nature of the waste to be disposed of and the natural environmental system, collectively referred to as the disposal system. The disposal system developed for this purpose makes provision for the containment of radionuclides until such time that any releases from the waste no longer pose radiological risks to human health and the environment. The safety assessment process used as basis for this purpose considers both intentional (as part of the design criteria) and unintentional (natural or human induced conditions) releases of radionuclides. Unintentional releases include consideration of unintentional human or animal intrusion conditions, which might lead to direct access and external exposure to radiation.

Once released into the environment, radionuclides might migrate through the environmental system along three principle pathways: atmospheric, groundwater and surface water. Due to the physical nature of L&ILW and HLW disposal concepts, migration along the atmospheric pathway is highly unlikely. The principle environmental pathway of concern is thus the groundwater pathway, with the surface water pathway of secondary concern as an extension of the groundwater pathway. Disposal

systems are designed so that releases to groundwater or surface water are highly unlikely as further explained in Chapter 10 of this EIR.

Comment 9:

So the report flounders on:

I quote "The National Radioactive Waste Management Policy and Strategy recognises that the storage of spent fuel is not sustainable indefinitely. Government should thus ensure that investigations are conducted within set timeframes to consider the various options for safe management of spent fuel and high-level radioactive waste in South Africa."

In other words, the author tells us that South Africa will solve a problem that no-one in the world has yet been able to solve and not only that but within a set timeframe.

Response 9:

Kindly refer to the National Radioactive Waste Disposal Institute Act No 53. Part of their functions are to conduct research and develop plans for the long-term management of radioactive waste storage and disposal. This is similar to what countries such as Finland, Sweden and others are doing.

Comment 10:

What the nuclear industry and government has realised, cunningly, that the best way to get rid of these unpleasant problems is to create a highly paid organisation who remove all these issues from the public arena and file it away with useless legislations which are ultimately meaningless because they are created and "enforced" by the same industry that uses them.

So we can sleep easy now knowing we have a National Radioactive Waste Disposal Institute.

We've given this tricky problem to them and they will sort it out.

Response 10:

Far from removing the issue from the public arena, the issue of finding a long-term repository for nuclear waste in South Africa is a process that would need to be conducted in the public domain.

The functions of the National Radioactive Waste Disposal Institute (NRWDI) in terms of Section 5 of the NRWDI Act of 2008 is to "provide information on all aspects of radioactive waste disposal to the public in general, living in the vicinity of radioactive waste disposal facilities". Furthermore, the functioning of the NRWDI would, like that of all other public institutions, be governed by the Promotion of Administrative Justice Act, 2000 (Act No. 3 of 2000) and the Promotion of Access to Information Act, 2000 (Act No. 2 of 2000).

Furthermore, the establishment of any nuclear waste management facility would be subject to an environmental impact assessment process and a waste management license in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008). Both of these application processes require extensive public participation.

Your comment about the legislation being meaningless because it is created and enforced by the same industry that uses it is noted. Would the respondent prefer that the legislation should instead be created and administered by people who are not experts at nuclear science?

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

Agreed - and again it must be emphasized that these arrangements are in line with international best practice - however it should also be noted that in appointing member to the board of the NRWDI the minister through the media and by notice in the Gazette, invite nominations of suitable persons from members of the public as candidates for the relevant positions on the board.

Comment 11:

If they are anything like the NNR they will deal with all issues by coming up with new ways to market themselves and Build Public Confidence.

Response 11:

Your comment is noted.

Comment 12:

It would seem that GIBB has not sought to accurately present all data, both positive and negative, in a truly unbiased environmental assessment demonstrating the impact of a new nuclear plant. Instead they have considered as their mandate to seek to mitigate (seemingly against all odds) all concerns and issues with relation to the many negative impacts of this plant.

I would like to state that this EIR is fundamentally flawed in this respect.

References:

Lehnert, B.E., Goodwin, E.H. Cancer Res. (1997), 57, 2164-71.

Wei Han and K. N. Yu Ionizing Radiation, DNA Double Strand Break and Mutation Advances in Genetics Research. Volume 4 City University of Hong Kong, Hong Kong (2010) Nova Science Publishers, Inc.

Oleg V. Belyakov, Heli Mononen and Marjo Perälä; Radiation Effects Studies of Non-Targeted Effects of Ionising Radiation STUK - Radiation and Nuclear Safety Authority, Helsinki, Finland

Response 12:

Your comment is noted. It is to be noted that the EIA process as defined by South African environmental legislation, is by its very nature a project-specific process dealing with a specific technology on defined geographical area and is not designed to deal with strategic issues such as the debate whether or not nuclear technology is safe, in principle, and whether it is an appropriate power supply option for South Africa. The strategic in principle questions of whether nuclear electricity generation should be developed in South Africa is, therefore, not a question that can be answered by the EIA process.

The majority of your comments question the very fundamentals of nuclear science, such as how safe levels of exposure to radiation have been determined. It is not within the mandate of an EIA process to re-evaluate fundamental questions of nuclear science that has been accepted by the vast majority of nuclear scientists across the world.

Yours faithfully

A handwritten signature in black ink, appearing to be a stylized 'E' or similar character.

For GIBB (Pty) Ltd
The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314

Your Ref: Email received 27 July 2011

Mr Roy Seeney
Pennisand Farms CC
Tel: 042-2952332

Email: pennisands@igen.co.za

Dear Mr Seeney



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)

I am an interested and affected party, in that I am a milk producer, and own dairy farms close to Oyster Bay.

Comment 1:

On Monday, the 30th May 2011, I attended the public meeting at the Oyster Bay Hall.

I initially filled out my particulars in the attendance register, but thereafter I put a line through them, indicating my non-attendance. I did this for the under mentioned reasons, namely:

1. When I stood up to speak, the chairman interrupted me and effectively stopped me from speaking. I was not given a proper opportunity to make my input.

Response 1:

Your comment is noted. The chairman attempted to provide all participants at the meeting with a fair opportunity to make their viewpoints known. No one is excluded from participating at a public meeting as part of an EIA process. However, at times when several participants try to make their points or ask questions at the same time, the chairman needs to limit the number of speakers and place them in a queue during the meeting. The chairman must also at times make a decision to give preference to other speakers if the question or point is similar to other ones that have already been raised earlier in the same meeting, in order to ensure that all issues are heard. We urge you to submit your comments to the Nuclear-1 GIBB Public Participation Office. Any feeling that you were interrupted is apologised for.

Comment 2:

2. I pointed out that the standard of minute taking was poor, because the minutes of a previous meeting misquoted me. The chairman's response was to arrogantly enquire why I had not corrected it.



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.



Response 2:

Your comment is noted. GIBB depends on I&APs and stakeholders to review the draft minutes of meetings to ensure that their points are accurately captured. All attendants of meetings are provided with draft minutes for review prior to finalisation of such minutes. We urge you to liaise with the Gibb PP office regarding the correctness of the minutes.

Comment 3:

3. The interpreter did not interpret correctly.

Response 3:

Your comment is noted. Please provide GIBB with specific instances of incorrect translation so that we may investigate the matter.

Comment 4:

You are being paid a substantial sum of money for the EIA. The public who attend the meetings do it without payment. They deserve to be given an adequate and fair hearing. It is clearly in the public interest, and the government's interest that public participation is adequate, and meaningful, and that any translation that must be done is accurate, and minutes of meetings are precise. Based on my experience at the meeting, I am of the view that, at your cost, the public participation process, and meetings must be repeated with the following additions. They must be properly recorded, with adequate recording equipment, and the recordings must be transcribed by competent transcribers. You must employ competent interpreters. The recordings and transcripts must be made available to interested and affected parties, who wish to hear, and read them.

Response 4:

Your comment is noted. The public, I&APs and stakeholders have been given ample and adequate opportunity since 2006 to participate in the EIA process through multiple Public Meetings, Public Open Houses, Key Stakeholder Workshops, Focus group Meetings and through advertisements, e-mails, letters, faxes and via telephone. We urge you to please contact the GIBB PP office with respect to correctness of minutes, transcripts and any other information associated with the proceedings of these meetings.

Comment 6:

I have an open mind on the proposed nuclear power station. My experience at your public meeting was not good and I submit that if you ignore my comments herein you may be exposing yourself, and any decisions, and recommendations that you make, not only to media criticism, but possibly to legal challenge for biased and token conduct.

Response 6:

Your comments have been noted and you are reminded to please liaise with the GIBB PP office.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, consisting of a large, stylized 'S' shape with a small dot above it.

Nuclear-1 Project Team

5 August 2015

Our Ref: J27035 / J31314
Your Ref: Email received 27 July 2011

The Chief Project Manager
Hitachi-GE Nuclear-1 Energy, Ltd
18-13 Soto-Kanda 1-chome
Chiyoda-ku
Tokyo
Japan

Email: masahiro.hamamoto.dn@hitachi.com

Dear Mr Hamamoto

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

Comment 1:

(Please refer to page number where possible.)

On condition that Eskom expects BWR (Boiling Water Reactor) technology as one of the candidate technology for Nuclear-1, some Chapters/Paragraphs as follows, but not limited to, should be modified.

Because reactor type for Nuclear-1 and preference of Eskom are directly or indirectly described exclusively within PWR (Pressurized Water Reactor) technology even its plant type is not fixed yet.

- a) 3.2 Principles of producing heat for electricity generation
- b) 3.5 Nuclear technology for the proposed power station (Nuclear-1)
- c) 3.6 Operation of a typical nuclear power station
- d) 4.3.1 (Pages 4-9) Pressurized Water Reactor (PWR) Technology
- e) 5.4 (Pages 5-13 to 5-19) Nuclear plant types
- f) 9.33.11 (Pages 9-334) Nuclear Plant types

Would that the applicable reactor type is described as "LWR (Light Water Reactor)" instead of "PWR (Pressurized Water Reactor)" and related descriptions are modified accordingly. Eskom can expand its selection of candidate reactor technology for Nuclear-1 inclusive of "BWR (Boiling Water Reactor)".

Given same consideration to be necessary for the flexibility of selecting reactor type and plant type of Nuclear-1, some Chapters/Paragraphs of **FINAL SCOPING REPORT** issued in December, 2007 as follows, but not limited to, may require to be revised.

- a) 4.6 (Page 4-9 to 4-10) Proposed Technology
- b) 4.7.1 (Page 4-11) Pressurised Water Reactor Design
- c) 8.6 (Page 8-20 to 8-21) Pressurized Water Reactor (PWR) Technology
- d) 8.7 (Page 8-21 to 8-26) Pressurized Water Reactor Types



GIBB
ENGINEERING & SCIENCE

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



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.



Response 2:

Your comment is noted however it is not the purpose of the Environmental Impact Assessment (EIA) process to act as a selection mechanism or to drive procurement in terms of the nature of the technology to be used in the construction and operation of the Nuclear-1 Power Station. It is the purpose of the EIA to assess the impacts of the construction and operation of a Generation III type (as described by an envelope of criteria) reactor on three proposed sites in the Western and Eastern Cape Provinces of South Africa. The procurement process will be led by Government. The start of procurement has not as yet been officially announced. The PWR technology is premised on the Nuclear Energy policy of RSA.

We therefore note your comments in terms of making changes to certain sections of the Revised Draft EIR Version 1, however the suggested changes will not be made to the report.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, appearing to be a stylized 'G' or similar character, positioned below the typed name.

The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314

Your Ref: Email received 28 July 2011

The Oysterbay Shop

Mr Rowan Jackson

Email: oysterbayshop@igen.co.za

Dear Mr Jackson



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)

I am the owner of the one and only shop in Oyster Bay. Other than a small tourist season over Christmas and Easter, my shop relies almost entirely on local support from Umzamuwethu and Oyster Bay to keep our doors open and, in return, we offer a vital service to the communities - but especially to black and coloured residents of Umzamuwethu who do not have transport to travel to Humansdorp, St Francis or Jeffery's Bay to do their shopping. As they cannot afford the extortionate cost of taxis, we are the lifeblood for this community, serving as their supermarket, post office and bank (as we also provide postal and ATM services).

However both the Oyster Bay and Umzamuwethu communities are so small, we make just enough to survive during out of season months.

I rely on the shop for my income and to support my family and pay my expenses, and without this income I would not be able to repay my bond or my vehicle.

Comment 1:

My concern is that the W4 entrance will have a hugely negative effect on the trading of the shop, and may force us to close our doors, as it will cut off the villages of Oyster Bay and Umzamuwethu from each other.

It was said in the public meetings that a walk-over or walk-under foot path would be built to allow access. This is clearly not suitable as there are a lot of older people from Umzamuwethu who would no longer be able to come to the shop as they would struggle with lots of steps up and down, if a walk-over was built. And if a walk-under path was built, it would in no time become a place where people sleep, take drugs, drink and will provide an out-of-sight place to attack pedestrians, carrying money, who are coming to shop.

Furthermore, with a nursery school, church, pub and many houses only metres from the road, it will be a matter of time before young children excited by the large vehicles, or drunken revellers trying to short-cut across the road, get hurt. Even if you fence the road, you're creating an ugly symbolic barrier between our two communities that hark back to apartheid days and are out of keeping with our times.



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.



This plan is going to ruin the nature of both our villages and an alternative route should be considered as the W4 entrance will have a dire negative impact socially and economically on the community and on my business.

Who will take responsibility for damages caused if the W4 entrance goes ahead (particularly as there are good alternative options for the construction entrance)?

If the W4 entrance proceeds and impacts my shop negatively, will I be compensated for this loss and who will compensate me?

I wish to register my protest and look forward to receiving your answers to my queries.

Response 1:

Due to the numerous concerns raised regarding the use of the R330 during construction, the Transportation Assessment Report was substantively amended and the feasibility of the western access road was re-assessed. The revised report recommends that a combination of both Oyster Bay Road (Route 1 to western access) and R330 (Route 2 to eastern access) be used for transportation during the construction phase, which will improve the impact on traffic congestion, noise and safety to low / medium. The construction vehicles (normal heavy loads) will utilise only the upgraded Oyster Bay Road (DR1763 - western access) to minimise the impact of construction traffic on the existing network and the infrequent abnormal loads will utilise the R330 (MR381) during the night time. Several bypasses have been recommended for construction traffic to avoid using the Humansdorp Main Street travelling between the N2 and the Oyster Bay Road, as well as to avoid the Humansdorp Main Street to travel between Voortrekker Road (R102) and the R330. The study will form part of the Revised Draft EIA Version 2 which will be made available in due course.

Yours faithfully
for GIBB (Pty) Ltd



Nuclear-1 EIA Project Team

5 August 2015

Our Ref: J27035 / J31314
Your Ref: Email received 21 July 2011



GIBB
ENGINEERING & SCIENCE

The Oysterbay Residents
C/o Mr Rowan Jackson
Oysterbay Shop
Oysterbay

Email: oysterbayshop@igen.co.za

Dear Oysterbay Residents

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)

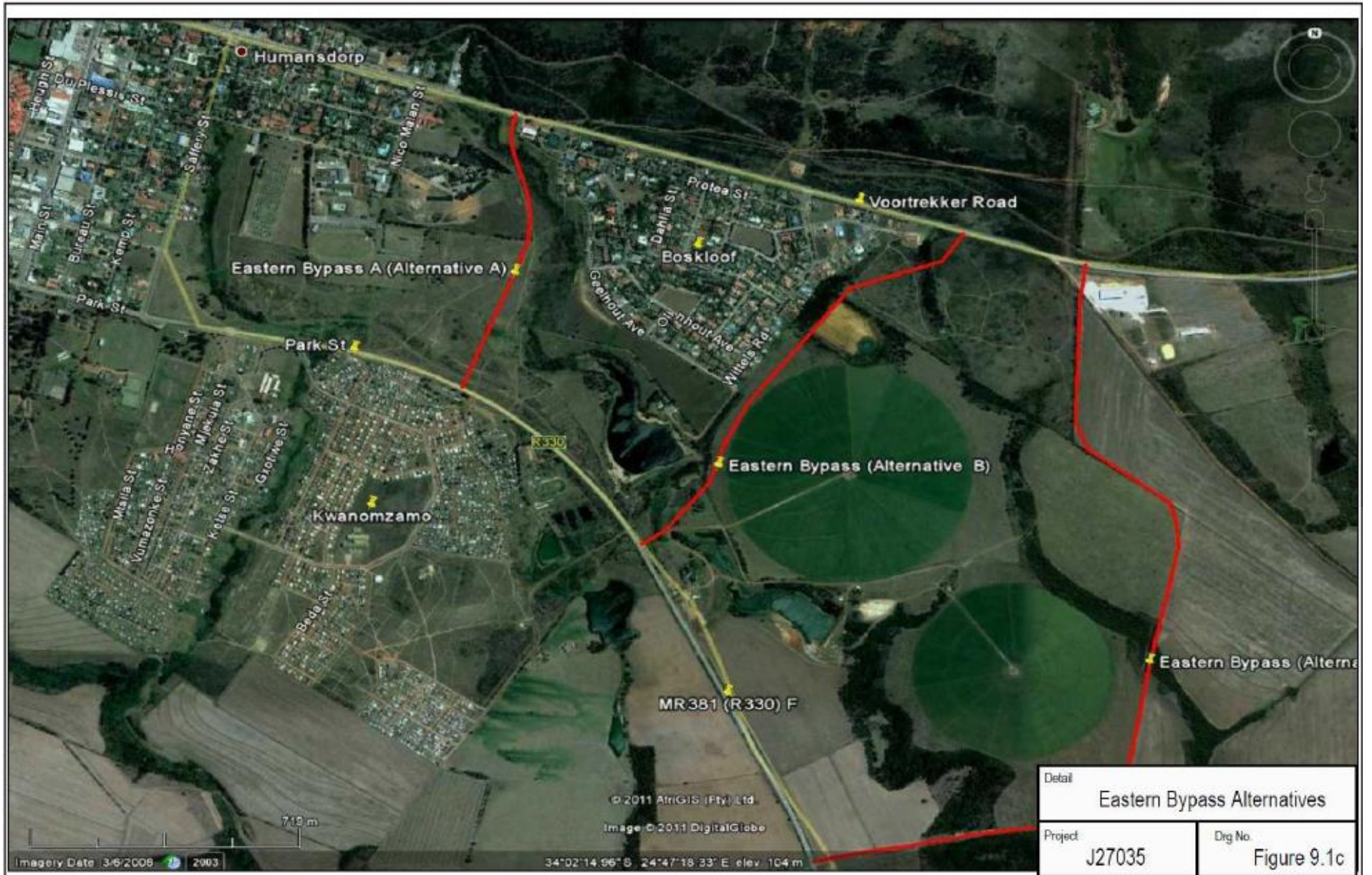
Comment 1:

Oysterbay petition against W1 Construction Entrance: It was said that walk overs or an under road tunnel will be made available for pedestrians. What about the elderly who would then have to use stairs up and down, if an under road passage is used, people will land up sleeping, drinking and taking drugs as is done in various parts of the world all ready.

Response 1:

Thank you for your comments. The Transport specialist study was revised and the western access route alternatives have been revised. The R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, and heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road, is now proposed to be surfaced to provide improved east-west connectivity. Several bypasses have been proposed to avoid construction traffic using the Humansdorp Main Street travelling between the N2 and the Oyster Bay Road; as well as to avoid general traffic using the Humansdorp Main Street to travel between Voortrekker Road (R102) and the R330. The Revised Transportation specialist study will form part of the Revised EIR Version 2 and will be made available for public review.

Kindly refer to the figure below.



Comment 2:

PETITION

ALL RESIDENTS OF OYSTER BAY/ UMZAMAWHETU

Eskom plans a western access road to Thyspunt that will have a huge impact to all residents of Oyster Bay and Umzamuwethu.

The preferred road W1 (pink on attached map) will cut off Umzamuwethu from Oyster Bay and run very close to houses in both villages.

During the construction phase (could be 7-9 years) they estimate up to 600 trucks, busses and other vehicles using this route daily!

If you are against the pink route and for the blue route, please sign this petition so that we can send it to Arcus GIBB (Eskom consultants) thereby showing them our opposition to the planned road once built, we cannot change it and it will affect all of us for the next 10-15 years.

Eskom beplan om 'n westerlike toegangspad te bou tot by Thyspunt wat ons almal op Oesterbaai en Umzamuwethu gaan beïnvloed.

Die voorgestelde pad W1 (pink op begevoegde kaart) sal nie net Umzamuwethu van Oesterbaai afsny nie, maar ook baie naby aan huise in beide Oesterbaai en Umzamuwethu loop.

Gedurende die konstruksiefase (kan van 709 jaar duur) kan daar tot 600 trokke, busse en ander voertuie die pad daagliks gebruik!

Daar is 'n alternatiewe pad W4 (blou op die kaart) wat 400 m oos van Umzamuwethu sal loop en verder van huise op Oesterbaai sal wees.

Indien u teen die beplande pink roete en vir die alternatiewe blou roete is, teken asseblief die petitie sodat ons dit vir Arcus GIBB (Eskom Konsultante) kan stuur en hulle daardeur ons teenkanting teen die beoogde pad kan wys. As die pad eers gebou is, kan ons niks meer daaraan doen nie en dit sal mense op beide Oesterbaai en Umzamuwethu vir die volgende 10-15 jaar beïnvloed.

Names on Oysterbay Petition Against W1 Construction Entrance

| | | | | | |
|---|-----------------|----|-------------------|----|------------------|
| 1 | Gert Bassie | 27 | O Cilliers | 53 | Leanne Oates |
| 2 | Rowan Jackson | 28 | G Summer | 54 | Marybeth Hansen |
| 3 | Roy Vickery | 29 | A Vickery | 55 | Ryan Austin |
| 4 | Marinus Meyer | 30 | LS grobler | 56 | Donovan Austin |
| 5 | Marie Brits | 31 | Manda van Eyk | 57 | Christ Pittaway |
| 6 | Marizamm Thandi | 32 | AJ Goosen | 58 | Keith Belling |
| 7 | Marie Rollison | 33 | Jaen Smit | 59 | Jeanne Belling |
| 8 | Kelly Blow | 34 | Charlotte Bredell | 60 | Andre Deyzel |
| 9 | Elsie Bles | 35 | H Oosthuizen | 61 | Megan van Tonder |

| | | | | | |
|----|--------------------|----|------------------|------------------------|----------------------|
| 10 | Ragel Kgarbe | 36 | JH Nel | 62 | Colleen Whitehead |
| 11 | Johannes Alexander | 37 | E Goos | 63 | Kurt Dietrich |
| 12 | Brenda | 38 | WJ Kurten | 64 | JJ Sevenster |
| 13 | Anna Settley | 39 | PJ Jooste | Second Petition | |
| 14 | Sanna Louw | 40 | RT Brooks | 1 | Nick Bornman |
| 15 | Ria Barry | 41 | SE Terblanche | 2 | Rumius Dreyer |
| 16 | Hendrike Koort | 42 | JM Koen | 3 | Lizeue Els |
| 17 | Johanna Alexander | 43 | MM Koen | 4 | Esther Franzsen |
| 18 | Piet Alexander | 44 | Herman Stoffberg | 5 | M Pienaar |
| 19 | Golden Mbopa | 45 | S Brown | 6 | Erna roux |
| 20 | Elodrow Scheepers | 46 | M Beeney | 7 | Leon Roux |
| 21 | Martha Rollison | 47 | W Pieteron | 8 | Sally Bredell |
| 22 | Francis Michaels | 48 | M Smit | 9 | Mona |
| 23 | R Meintjies | 49 | JC Smit | 10 | Vuyolwethu Ronaldo |
| 24 | MD Stander | 50 | PM Rabe | 11 | Vivian Scholtz |
| 25 | OB | 51 | Z Rabe | 12 | Rivavino Greef Barry |
| 26 | HC Marx | 52 | L Erasmus | | |

Response 2:

Kindly refer to our response 1 above.

Yours faithfully
for GIBB (Pty) Ltd

Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314

Your Ref: Email received 01August 2011

Email: p.m.b@intekom.co.za

Dear Mr Bosman



GIBB

ENGINEERING & SCIENCE

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:

I have the following further comments on TRANSPORT for the revised Nuclear 1 EIA.

The recommendation of the Transport consultant was that the route for transporting materials and equipment through Humansdorp (some 900 vehicles a day during the construction phase of several years) should be changed from the Main Street to Saffrey Street.

It is patent from this recommendation that a mere desk top study is not sufficient to obtain the best solutions to the many problems that will arise with the building of the Nuclear 1 power station.

Response 1:

Your comments are noted. Similar concerns from the public around Humansdorp area up to St. Francis have been raised and acknowledged regarding the use of Saffrey Road. As such the Transport Specialist study was revised (through both desktop and fieldwork studies) to consider other alternative routes. The revised report recommends that the main street through Humansdorp and Saffrey Street be bypassed. New transport roads for abnormal load vehicles were therefore considered and three alternate bypasses were investigated, as shown in the figure below. All three alternatives are proposed new roads that run along existing land boundaries between farmland.

Alternative A directly links between Voortrekker Road (MR389) and Park Street (MR381) and is 850 m in length. The beginning of Alternative A crosses the Boskloof Valley and the rest of the route will be constructed on Municipality land.

Alternative B connects between Voortrekker Road (MR389) and Park Street (MR381) along the east of the Boskloof area, and crosses privately owned farmlands and is 1.3 km in length. The topography of Alternative B is considered acceptable, except for the section of the route where it crosses the Boskloof Stream at a deep vertical alignment. Additional cost will be required for the construction of a bridge to cross the stream at an acceptable grade.



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.



Alternative C is located the furthest east from Humansdorp and is the longest of all three alternatives (2.7 km). This route also crosses privately owned farmlands. Similar to Alternative B, Alternative C crosses two relatively deep valleys, which will require additional cost for the construction of bridge structures to achieve acceptable grade crossings.

Alternative A is therefore considered as the most viable option as it is the shortest and most economical route to construct, and it has a good alignment for the transportation of abnormal loads. Once the route is constructed, it will also alleviate the traffic congestion in Humansdorp.

Lastly we also refer the author to Appendix C of the revised Transportation specialist study which shows the number of estimated vehicle numbers per day through the eastern and western access road to the Thyspunt site. As can be seen the maximum vehicle numbers through the eastern access road is 684/day in year 6 with an average of 385/day over the entire construction period and therefore not 900 as is stated.

Annexure C9: Thyspunt Construction Phase Yearly Trips

| Description | Unit | Volume | Load | Number of loads | Estimated Daily Transport Distribution | | | | | | | | | |
|---|--------|-----------|-------|-----------------|--|------------|------------|------------|------------|--------------|------------|------------|----------|------------|
| | | | | | 1st Year | 2nd Year | 3rd Year | 4th Year | 5th Year | 6th Year | 7th Year | 8th Year | 9th Year | |
| Vendor staff / day | | | | | | | | | | | | | | |
| General worker numbers | | | | | 90 | 200 | 230 | 1000 | 3800 | 4150 | 2110 | 650 | | 0 |
| Buses vendor general workers | person | 4 150 | 60 | 69 w | 2 | 4 | 4 | 17 | 64 | 70 | 36 | 11 | | 0 |
| Vendor staff numbers | | | | | 55 | 130 | 150 | 460 | 1550 | 1895 | 1000 | 505 | | 20 |
| Vendor staff vehicles | | 1 980 | 5 | 396 e | 11 | 26 | 30 | 92 | 310 | 379 | 200 | 101 | | 4 |
| Total vendor | | | | 465 | 13 | 30 | 34 | 109 | 374 | 449 | 236 | 112 | | 4 |
| Eskom staff / day | | | | | | | | | | | | | | |
| Project staff numbers | | | | | 40 | 50 | 70 | 120 | 140 | 140 | 140 | 80 | | 10 |
| Cars (Project staff) | person | 220 | 2.00 | 110 e | 20 | 25 | 35 | 60 | 70 | 70 | 70 | 40 | | 5 |
| Operational staff numbers | | | | | 10 | 10 | 100 | 250 | 550 | 950 | 1250 | 1350 | | 1350 |
| Buses (Operational staff) | person | 800 | 20 | 40 e | 1 | 1 | 1 | 4 | 10 | 19 | 29 | 31 | | 31 |
| Cars (Operational staff) | person | 550 | 1.30 | 423 e | 7 | 7 | 62 | 145 | 275 | 439 | 529 | 572 | | 572 |
| Total Eskom | | | | 573 | 28 | 33 | 98 | 209 | 355 | 528 | 628 | 643 | | 608 |
| Waste and Spoil (Totals for power station construction) | | | | | Estimated Annual Transport Distribution | | | | | | | | | |
| Sand spoil (20m-8m) | m³ | 6 372 044 | | | | | | | | | | | | |
| Spoil for HV yard | m³ | 637 204 | 10 | 63 720 w | 25 488 | 19 116 | 19 116 | | | | | | | |
| Spoil pumped to sea | m³ | 5 734 840 | | | | | | | | | | | | |
| Rock from excavation | m³ | 671 071 | | | | | | | | | | | | |
| Rock to HV yard | m³ | 134 214 | 10 | 13 421 w | 5 369 | 4 026 | 4 026 | | | | | | | |
| Rock used on site | m³ | 335 536 | | | | | | | | | | | | |
| Rock transport outside site | m³ | 201 321 | 10 | 20 132 w | 8 053 | 6 040 | 6 040 | | | | | | | |
| Rock from outlet tunnel | m³ | 12 428 | 10 | 1 243 w | | 249 | 497 | 373 | 124 | | | | | |
| Rock from inlet tunnel | m³ | 37 285 | 10 | 3 729 w | | 746 | 1 491 | 1 119 | 373 | | | | | |
| Waste | m³ | 15 000 | 10 | 1 500 w | 75 | 150 | 225 | 300 | 375 | 300 | 100 | 150 | | 150 |
| Construction Resources | | | | | | | | | | | | | | |
| Bricks | ea | 3 750 000 | 5 000 | 750 w | 75 | 150 | 150 | 150 | 150 | 75 | | | | |
| Finished Concrete | m³ | 795 320 | | | | | | | | | | | | |
| Concrete aggregate | m³ | 596 490 | 10 | 59 649 w | | 5 965 | 11 930 | 11 930 | 11 930 | 11 930 | 5 965 | | | |
| Concrete fines | m³ | 397 660 | 10 | 39 766 w | | 3 977 | 7 953 | 7 953 | 7 953 | 7 953 | 3 977 | | | |
| Cement | t | 357 894 | 10 | 35 789 e | | 3 579 | 7 158 | 7 158 | 7 158 | 7 158 | 3 579 | | | |
| Concrete reinforcing | t | 6 766 | 20 | 338 e | | 34 | 68 | 68 | 68 | 68 | 34 | | | |
| Structural steel | t | 1 299 | 20 | 65 e | | 6 | 13 | 13 | 13 | 13 | 6 | | | |
| Small bore pipe | m | 12 836 | 200 | 64 e | | 6 | 13 | 13 | 13 | 13 | 6 | | | |
| LB Pipe | m | 163 914 | 50 | 3 278 e | | 328 | 656 | 656 | 656 | 656 | 328 | | | |
| Conduit | m | 381 256 | 5 000 | 76 e | | 8 | 15 | 15 | 15 | 15 | 8 | | | |
| Cable | m | 906 884 | 1 800 | 504 e | | 50 | 101 | 101 | 101 | 101 | 50 | | | |
| Terminations | ea | 22 025 | | 100 e | | 10 | 20 | 20 | 20 | 20 | 10 | | | |
| Light delivery vehicles | ea | 80 000 | 1 | 80 000 e | 4 000 | 4 000 | 16 000 | 16 000 | 16 000 | 16 000 | 10 000 | 10 000 | | 10 000 |
| Ultra heavy loads (x > 100t) | ea | 63 | | 63 e | | 6 | 13 | 13 | 13 | 13 | 6 | | | |
| Heavy loads (10t < x > 100t) | ea | 201 | | 201 e | | 20 | 40 | 40 | 40 | 40 | 20 | | | |
| Equipment | ea | 6 000 | | 6 000 e | | 600 | 1 200 | 1 200 | 1 200 | 1 200 | 600 | | | |
| Total annual construction vehicles | | | | | 43 060 | 49 066 | 76 725 | 47 120 | 46 201 | 45 554 | 24 689 | 10 150 | | 10 150 |
| Total daily construction vehicles | | | | | 190 | 216 | 338 | 208 | 204 | 201 | 109 | 45 | | 45 |
| LIFECYCLE TRAFFIC (ONE WAY) | | | | | | | | | | | | | | |
| Vehicles per annum | | | | 246 202 | 58 025 | 72 061 | 124 905 | 163 190 | 312 286 | 402 159 | 340 049 | 285 725 | | 233 530 |
| Vehicles per month | | | | | 4 835 | 6 005 | 10 409 | 13 599 | 26 024 | 33 513 | 28 337 | 23 810 | | 19 461 |
| Total vehicles per working day (Construction and staff) | | | | | 159 | 198 | 342 | 447 | 856 | 1 102 | 932 | 783 | | 640 |
| Totals if all external material deliveries are transported via eastern access road | | | | | | | | | | | | | | |
| Estimated vehicle numbers / day through eastern access | | | | | 40 | 68 | 165 | 295 | 568 | 750 | 661 | 585 | | 486 |
| Estimated vehicle numbers / day through northern / western access | | | | | 119 | 130 | 177 | 152 | 288 | 353 | 271 | 198 | | 154 |
| Totals if all external material deliveries are transported via western access road | | | | | | | | | | | | | | |
| Estimated vehicle numbers / day through eastern access | | | | | 29 | 46 | 99 | 229 | 502 | 684 | 623 | 558 | | 459 |
| Estimated vehicle numbers / day through northern / western access | | | | | 130 | 152 | 243 | 218 | 354 | 419 | 309 | 225 | | 181 |

Comment 2:

It appears also that the Transport consultant decided that the Eastern Route was preferable and that thereafter Noise Impact and Social Impact consultants assessed the respective impacts and suggested steps to mitigate these impacts. This is also not the best way to find the best solutions. All three consultants should sit down together after visiting the site and jointly find the best solution to the many problems.

The Transport consultant originally identified three possible routes, Northern, Western and Eastern for the transportation of the materials and equipment from the N2 to the Thyspunt site. He apparently did

not consider, nor was he required to, the noise and social impacts of his recommendation and both of these impacts are very significantly different on the respective routes.

The Eastern route (R330) travels through or alongside two populated urban areas for a total distance of four or five kilometers and will have both noise and social impacts in both areas. In the Humansdorp area it travels through the town and between Kwanomzamo and the town and residents of Kwanomzamo who have to get to the town to work or to attend school or to shop or for any other purpose have to cross the road to get there and back.

In the St Francis Bay area the route passes through or alongside residential areas and two primary schools. In one place a primary school is on the opposite side of the road from the houses in which the children live. Most of the people who work at the Links development live on the other side of the road.

At the meeting held in St Francis Bay to discuss the 1st Draft report the consultants said that underpasses or bridges would be built for people to use when they wish to cross the road.

We all know that underpasses tend to degenerate very quickly into damp, gloomy passages which are often used for purposes for which they were not intended and sometimes even become dangerous. Any pedestrian bridge will have to be unusually high to accommodate the highest of the loads which will have to use the road. This will discourage people from using them as will the fact that the bridges or underpasses will often not be at the places where pedestrians want to cross the road.

In practice people will not use the bridges or the underpasses most of the time and the additional danger of the huge increase of traffic will not be abated by these mitigating measures neither is there any way that they will mitigate the danger of the increased traffic to the livestock that regularly and constantly crosses the road from Kwanomzamo to the grazing on the other side.

These problems do not, of course, show up in a desktop study.

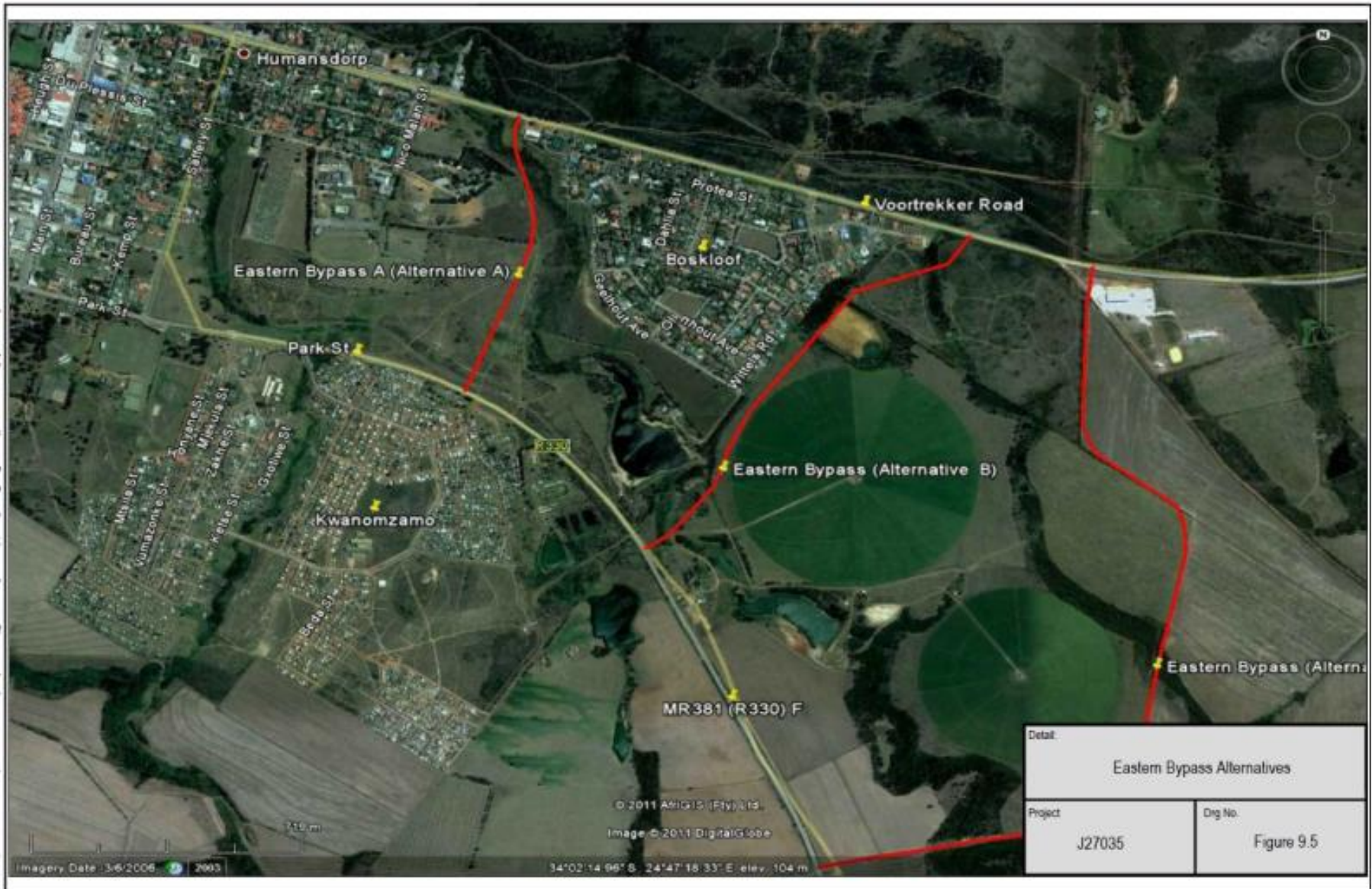
Response 2:

Your comments are noted and whilst it is acknowledged that potential access alternatives were determined prior to the assessment of impacts all specialists (including the noise, social and transportation specialists) appointed in terms of the Nuclear-1 EIA assessed impacts related to both the western and eastern access routes to the Thyspunt site. The author is therefore referred to sections 3.6.1 and 3.9 of the Noise Assessment (Appendix E23) and Social Impact Assessment (Appendix E18) of the Revised Draft EIR Version 2 respectively.

The findings and recommendations from all specialist studies were subsequently considered in the context of one another and of the preferred and recommended options for access to Thyspunt are thus discussed in Chapter 9 and 10 of the Revised Draft EIR Version 1.

Lastly as mentioned above the Transportation specialist study has been revised and confirms that the R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed to be surfaced to provide improved east-west connectivity. The recommendation that a combination of both Oyster Bay Road

(Route 1 to western access) and R330 (Route 2 to eastern access) be used for transportation during the construction phase, will improve the impact on traffic congestion, noise and safety impacts to a low / medium significance.



Comment 3:

This serious impact on people living alongside the proposed route will not occur on the Northern or the Western Routes nor will the impact of noise which will also be serious for the many hundreds, if not thousands, of people living within earshot of the Eastern Route.

For these people the drone of heavy vehicle traffic will be constant and unmitigated and the damage that the heavy vehicles will inevitably do to the road, which was not built to take them, will be an added impact and inconvenience.

The Eskom plan contemplates in any event the building of a road on the Northern or Western Route and it seems to make sense that that road should be constructed and used as the main supply route during the construction period.

It is worth repeating and emphasizing that all of the impacts on people that are mentioned above will be avoided by the use of that road.

Other victims of the increased traffic will be the many cyclists that use the road not only to get to and from work but for leisure purposes, on the whole distance between Humansdorp to St Francis.

Response 3:

Your comments are noted. Please refer to our responses 1 and 2 in terms of the revised Transportation specialist study and its new recommendations. Again please note that significant upgrades will be made to the R330 it is now demarcated for use in terms of light vehicle traffic and abnormal load transport. The remainder of the traffic (staff access, light vehicle traffic, heavy vehicle traffic) will be routed via the Oyster Bay road. Lastly the Northern access road to the Thyspunt site is not considered suitable due to significant impacts in terms of dune ecology and wetland sensitivity.

Yours faithfully
for GIBB (Pty) Ltd



The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314
Your Ref: Email received 01 August 2011

Email: lldandbdg@mweb.co.za

Dear Ms Davies



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:

Thank you for the opportunity to make my objections known on the above matter. I do hope that objections like mine are actually read and not simply pushed aside.

I am appalled that a Nuclear Plant is zoned for this pristine area. It is not in fact the Nuclear Plant itself which upsets me as much as the fact that it will take years to construct and the fact that the heavy duty vehicles will be travelling from Port Elizabeth to Thyspunt - (possibly 140km) every second of every day and night for years on end.

How on earth will that have little or no impact on the lives of the local population and on tourism?

Response 1:

Your comments are noted. The current state of the Thyspunt property is not entirely pristine and although the property is largely undeveloped, its categorisation as “natural” does not imply by any means that it is unimpacted.

Further the assessment of the significance of the impacts as a result of the proposed development of the Nuclear-1 Power Station has at no point stated that there will be “little or no impact”. Indeed many impacts have been identified, described and assessed, some of them of high significance. However a number of measures have been proposed to mitigate the impacts but the acceptability of these measures and the decision of the suitability of any of the proposed sites still fall within the ambit of the Competent Authority – the Department of Environmental Affairs.

Electricity supply is essential for economic development which in turn has a positive impact on the regional and local economy. Nuclear power stations are best placed along the coast so that they can use sea water for cooling and not the scarce water resources required for drinking and other life giving purposes. Coastal sites are generally sensitive; these sites have been selected subsequent to a rigorous process. According to the various specialists the building of a nuclear power station will be beneficial for South Africa.



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.



Furthermore, please refer to the revised transportation assessment in Appendix E25 of the RDEIR version 2. The Thyspunt site requires transport route upgrades with regard to public roads, access and emergency evacuation during the construction phase. The recommended routes in Version 9 of Transport Report were revised after the Revised Draft EIR was provided for public comment in May 2011. Based on this revision, the R330 is now proposed to be used only for passenger vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access and heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. The DR1762, which links the R330 and Oyster Bay Road is now proposed to be surfaced to provide improved east-west connectivity. Bypass roads to the east and west of Humansdorp are also now proposed to be constructed to reduce the traffic impact on central Humansdorp.

We do recognise that impacts will be experienced due to the increased traffic volumes during the construction period of the Nuclear-1 power plant. However, various mitigation measures have been incorporated (with input from the transportation specialist) into the Environmental Management Programme (EMP) for the proposed development in order to address and mitigate the increased traffic volumes.

Comment 2:

Surely the plant - if it has to be built at all in light of the Japanese disaster - should be built where transport to and from the site is kept to the minimum.

Response 2:

Your comment is noted. The Japanese disaster is indeed a stark reminder of the unpredictability of the natural environment. However it is well known that South Africa is located on a vastly more stable tectonic environment than that of Japan which is situated close to a major subduction zone within the Pacific Ocean.

Kindly refer to our response 1 provided above. Please note that various mitigation measures have been incorporated into the EMP for the proposed development in order to address and mitigate increased traffic volumes.

Comment 3:

The fact that we have not had a bridge for access to this area for the best part of 3 weeks is surely an indication that there is NO WAY a Nuclear Plant can be built in the vicinity. The mass exodus of the population should there be a Nuclear incident would not be possible.

Response 3:

Thank you for your comments. Site safety issues are considered on a high level in the Emergency Response and Site Control Reports (Appendix E26 and E27 of the Revised Draft EIR) and will also be dealt with in the NNR process. The revised Transport specialist study (which will be made available for public comment and review as part of the Revised EIR Version 2) acknowledges that the Thyspunt site requires significant transport upgrades with regard to public transport, access and emergency evacuation, during the construction phases. The R330 is now proposed to be used for light vehicle

traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road, is now proposed to be surfaced to provide improved east-west connectivity. Bypass roads to the east and west of Humansdorp are also now proposed to be constructed to reduce the traffic impact on central Humansdorp.

The report further noted that a section of R330 across Sand River was destroyed by flood and debris flow in July 2011. The box culvert was severely damaged and inhibited traffic flow between Humansdorp and St. Francis Bay while it was being repaired for a few days. Bridges and culvert are generally designed for 1:100 year floods. The flood experienced in 2011 was, however, considered to be a flood with much greater scale than designed for. Construction and operation of Nuclear-1 may be affected should the flood occur again during the construction and operations phase of the proposed nuclear plant. It is, therefore, suggested, subject to project approval from Government, that a Stormwater Assessment Plan should be undertaken for the flooding situations of Sand River at the R300 crossing. Design specification of the bridge should be reviewed and mitigation measures, such as embankment protection, should be implemented.

Comment 4:

Access to the proposed site will severely impact on all the Residential areas in the vicinity of the proposed Nuclear Plant at Thyspunt. How on earth are mere mortals supposed to get from this area to Humansdorp, Jeffrey's Bay or Port Elizabeth on a daily basis with the number of Plant based vehicles using the roads -quite astounding as there would be wall to wall heavy vehicles! The accident rate would be horrendous.

Response 4:

Your comments are noted. Kindly refer to our Response 3 above.

Comment 5:

The fact that other countries are giving considerable thought to maintaining their nuclear plants while yet others are closing down plants since the disaster in Japan is surely indication enough that South Africa should not be attempting to build a nuclear plant.

Response 5:

Thank you for your comment. The South African government through the Integrated Resource Plan process has considered various alternative technologies. To meet the increasing demand of electricity all available energy sources are required, Nuclear has the benefit of being a low carbon technology which would lower the carbon intensity of South Africa's energy supply.. The national justification for nuclear has been undertaken under the public process leading to the gazetting of the IRP2010. However, as indicated above and in in previous responses, the decision whether or not nuclear generation should form a part of South Africa's electricity future is not a decision taken in this EIA process, but is a decision that was taken at a strategic level. The Nuclear-1 EIA has no mandate to bring into question the strategic government decisions and hence, the potential impacts on electricity

prices brought about by an in principle decision to include nuclear in the generation mix is outside the scope of this EIA process

Comment 6:

Agriculture will be adversely impacted. This is a dairy producing area and cows are not inclined to give a good milk supply when disturbed - which they will be.

Tourism will most certainly be severely affected - who on earth would want to attempt to travel on roads which are clogged with huge trucks every 90 seconds.

Even the rest of the Garden Route will be affected with overseas tourists travelling that route to visit our local game parks etc.

Response 6:

Your comments are noted. The Agricultural Assessment (Appendix E21 of the Revised Draft EIR) states that at Thyspunt there will be a short term negative impact on agriculture in terms of dust during the construction phase. However, there is potential for a positive impact on production by increasing the size of the local market for fresh produce as a result of the influx of population (Nuclear-1 employees and their families as well as construction workers) to the area.

The Tourism Assessment found that at Thyspunt there will be a small-scale, short-term, negative discernible impact on tourism with no overall discernible long-term impact on tourism.

GIBB however welcomes any independently researched scientific documentation to the contrary.

Comment 7:

The noise level in the entire area will be incredible with the drone of hundreds of heavy duty vehicles going up and down the roads.

Response 10:

Your comments are noted. The Noise Assessment report (Appendix E23 of the Revised EIR Version 1) found that no noise impact associated with the construction of new roads to the alternative sites (Thyspunt, Bamtamskip or Duynefontein) was anticipated, excepting the western access road to the Thyspunt site that would pass within 230 m of the Umzamowethu Township. In the latter instance the following recommendations are made:

- Construction processes and machinery/vehicles with the lowest noise emission levels available are utilised;
- A well planned and co-ordinated "fast track" procedure is implemented to complete the total construction process in the shortest possible time; and
- Construction work near residences only takes place during normal daytime working hours.

The report further found that the transportation of materials and equipment to site would impact on a small number of residences in the nearest informal settlements along the R330 at Sea Vista near the

Thyspunt site would be medium. In all instances no noise mitigation would be required in terms of the Noise Control Regulations (NCR).

The transportation of heavy machinery on extra-heavy-duty vehicles travelling very slowly on roads within 1000 m of residences is likely to result in a noise impact of medium intensity but of very short duration. Little can be done to reduce the levels of noise emitted by extra-heavy-duty vehicles. In order to minimize the noise impact on affected communities it is recommended that they be informed prior to any such transportation taking place.

Comment 11:

The housing for the hundreds of drivers and their families is simply not available and once the plant is completed nor will the jobs then required, be available. This will lead to an increase in burglaries and an un-safe neighbourhood.

Response 11:

Influx of large numbers of unemployed and unskilled workers would definitely pose challenges if not managed properly. The focus is not on the prediction of an accurate number of possible job seekers, or at what point it will become unmanageable, but on the management of the realities before the development starts, at the beginning and throughout the construction period. Job seekers will flow into the area. Those who do not find employment will move on or some will stay behind hoping to find work in time. The focus of the proposed mitigation measures is to limit and manage growth in informal settlements and the prevention of any illegal squatting by unemployed job seekers. The social report is clear about the additional pressure placed on social and community services to address growth in population numbers. Clear mitigation measures are recommended to address these inadequate services and facilities. Different role players must take responsibility for the challenges including Eskom as stated in the report.

Comment 12:

Please take note of the pleas of the “man on the street” – we should matter!

Response 12:

Your comments and concern are noted and will and be added to the Issues and Response Report which will form part of the Final EIR to be submitted to the Department of Environmental Affairs for decision making purposes.

Should you have any queries with respect to the above please do not hesitate to contact GIBB.

Yours faithfully
for GIBB (Pty) Ltd



The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035

Your Ref: Email received 01 August 2011

Email: lldandbdg@mweb.co.za

Dear Mr Gooch



GIBB

ENGINEERING & SCIENCE

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:

Objection to Nuclear plant at Thyspunt - does anyone actually know where this is?

Response 1:

Your comment is noted. The position of the Thyspunt site and the footprint of the nuclear facility on the site are well documented within the Revised Draft EIR and its associated specialist reports.

Comment 2:

It absolutely amazes me that the powers that be are even considering a situation where thousands of heavy vehicles are going to be using one of the main traffic routes in the country for years on end. Just astounding!

No bridge - No access - No way can we have a Nuclear Plant. Nowhere to escape should there be a disaster

Wall to wall heavy vehicles – day and night – night and day!

The accident rate would be horrendous.

Response 2:

Thank you for your comments. Site safety issues are considered in the Emergency Response and Site Control Reports (Appendix E26 and E27 of the Revised Draft EIR version 1) and will also be dealt with in the NNR process. The EIA further recognises the impact of proposed development on transport infrastructure around the Thyspunt site. The recently revised Transport Assessment confirms that the Thyspunt site requires significant transport upgrades with regard to public transport, access and emergency evacuation, during the construction phases. The recommended routes in the previous version of the Report were revised as a result of public input and recommendations received between 29 May 2011 and 2 June 2011. Based on the feedback received, the R330 is now proposed to be



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.



used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, and heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road, is now proposed to be surfaced to provide improved east-west connectivity. Bypass roads to the east and west of Humansdorp are also now proposed to be constructed to reduce the traffic impact on central Humansdorp. The revised specialist assessment will be made available for public comment and review as part of the Revised Draft EIR Version 2.

Comment 3:

Germany is taking their plants out of circulation. England and other countries are reconsidering. Why does South Africa have to act as though a disaster could never happen here?

Response 3:

Thank you for your comment. Europe electricity grid is very integrated, Germany has taken such a decision with the certainty that they can continue to supply electricity through the importation from neighbouring countries such as France. This decision influences the carbon footprint of Germany due to their continued reliance of coal fired power stations which in turn contributes negatively to climate change. The South African government through the Integrated Resource Plan process has considered various alternative technologies. To meet the increasing demand of electricity all available energy sources are required, Nuclear has the benefit of being a low carbon technology which would lower the carbon intensity of South Africa's energy supply. Lastly, South Africa is certainly not acting as though a nuclear disaster could not happen here. It is however well known that South Africa is located on a vastly more stable tectonic environment than that of Japan for instance which is situated close to a major subduction zone within the Pacific Ocean.

Comment 4:

Agriculture will be adversely impacted. Cows hate disturbance when being milked. Did you not know that? Tourism and trucks do not travel well together.

Even overseas tourists travelling the Garden Route will be affected.

Response 4:

Your comments are noted. The Agricultural Assessment (Appendix E21 of the Revised Draft EIR) states that at Thyspunt there will be a short term negative impact on agriculture in terms of dust only during the construction phase. However, there is potential for a positive impact on production by increasing the size of the local market for fresh produce as a result of the influx of population (Nuclear-1 employees and their families as well as construction workers) to the area.

The Tourism Assessment found that at Thyspunt there will be a small-scale, short-term, negative discernible impact on tourism with no overall discernible long-term impact on tourism. GIBB however welcomes any independently researched scientific documentation to the contrary.

Comment 5:

Can you imagine the noise with the drone of hundreds of heavy duty vehicles going up and down the roads?

Response 5:

Your comments are noted. Please note that the Noise specialist report found that no noise impact associated with the construction of new roads to the alternative sites (Thyspunt, Bamtamskip and Duynefontein) was anticipated, excepting the western access road to the Thyspunt site that would pass within 230 m of the Umzamowethu Township. In the latter instance the following recommendations are made:

- Construction processes and machinery/vehicles with the lowest noise emission levels available are utilised;
- A well planned and co-ordinated “fast track” procedure is implemented to complete the total construction process in the shortest possible time; and
- Construction work near residences only takes place during normal daytime working hours.

It should be noted that an alternative to the current western access route to the Thyspunt is being investigated. The results of which will be made available for public comment and review.

The report further found that the transportation of materials and equipment to site would impact on a small number of residences in the nearest informal settlements along the R330 at Sea Vista near the Thyspunt site would be medium. In all instances no noise mitigation would be required in terms of the Noise Control Regulations (NCR).

The transportation of heavy machinery on extra-heavy-duty vehicles travelling very slowly on roads within 1000 m of residences is likely to result in a noise impact of medium intensity but of very short duration. Little can be done to reduce the levels of noise emitted by extra-heavy-duty vehicles. In order to minimize the noise impact on affected communities it is recommended that they be informed prior to any such transportation taking place.

Comment 6:

The housing for the hundreds of drivers and their families are simply not available and once the plant is completed nor will the jobs then required, be available. Back to living in an unsafe environment – burglaries and the treat of a nuclear disaster!

Response 6:

Influx of large numbers of unemployed and unskilled workers would definitely pose challenges if not managed properly. The focus is not on the prediction of an accurate number of possible job seekers, or at what point it will become unmanageable, but on the management of the realities before the development starts, at the beginning and throughout the construction period. Job seekers will flow into the area. Those who do not find employment will move on or some will stay behind hoping to find work in time. The focus of the proposed mitigation measures proposed within the Revised Draft EIR Version 1 and Draft Environmental Management Plan is to limit and manage growth in informal settlements

and the prevention of any illegal squatting by unemployed job seekers. The Social Impact Assessment is clear about the additional pressure placed on social and community services to address growth in population numbers. Clear mitigation measures are recommended to address these inadequate services and facilities. Different role players must take responsibility for the challenges including Eskom as stated in the report.

Comment 7:

This site was proclaimed by the previous government and at that stage there were very few people living in the area permanently. There are now thousands of families in the vicinity. Our voices should be taken into account.

Response 7:

Your comments and concerns are noted and will be added (whether it be one or thousands of comments) to the Issues and Response Report which will form part of the Final EIR to be submitted to the Department of Environmental Affairs for decision making purposes.

Should you have any queries with respect to the above please do not hesitate to contact GIBB.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, appearing to be a stylized 'S' or similar character.

The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314

Your Ref: Email received 02 August 2011

Email: francois.bekker@safrich.com

Dear Mr Bekker



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:

On previous occasions I have requested information about the Milnerton geotechnical fault line that the current Nuclear reactor is built upon. You did not provide any information to us!

Response 1:

Your comment is noted. Information on the tectonic environment at all three sites is available in both the Geological Hazard and Seismic Risk Assessments (Appendix E3 and E4 of the Revised Draft EIR).

The Seismic Risk Assessment reports as follows on the **postulated** Milnerton fault: "*Dames and Moore (1976) concluded that enough circumstantial evidence exists to postulate the presence of a northwest striking fault offshore of Duynefontein but that it does not come closer than 8 km to the site. It is however possible that such a postulated fault could pass anywhere between 7 and 10 km offshore of Duynefontein (the inferred Melkbos Ridge Fault passes 7.5 km from the Koeberg Nuclear Power Station). No new research has been performed to confirm or refute the presence of the postulated fault or its point of closest approach to the site. The inference that the event happened closer to Milnerton than to Duynefontein is based on the reported damage to the farmhouse at Jan Biesjes Kraal.*"

Comment 2:

What would be the result of a similar strength earthquake happens in the region of the current plant?

Response 2:

Your comment is noted. We assume you refer to the earthquake that occurred in 1809.

The Seismic Risk Assessment referred to above indicates that "*Evidence for a large earthquake with a maximum intensity of VIII, and ML 6.3 (Brandt et al., 2005) having occurred in 1809 within 25 km of Duynefontein comes from historical records of its secondary effects. The closest position to Duynefontein where liquefaction features were reported is at Bloubergsvlei (De Beer, 2007b).*" No



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.



measurement of the magnitude of this earthquake was undertaken at the time, so it is impossible to accurately predict the impact if a current day occurrence of similar magnitude would occur. Due to the relatively high peak ground acceleration at the Duynefontein site, The Koeberg Nuclear Power Station was constructed on a "seismic raft" to protect it against earthquakes. Koeberg has been designed to withstand an earthquake of approximately 7 magnitude on the Richter Scale occurring 8 km from the Koeberg site.

Comment 3:

We have a farm adjacent to Koeberg Nature reserve and would like to know urgently what the exclusion zones, or planned exclusion zones are, as it would severely affect what we could do on the land, and it would also affect the price of the land.

Response 3:

When Eskom developed their specifications for the design for the PWR (Pressurized Water Reactor) power station, they had specified that it must comply with the EUR (European Utilities Requirements) . This requirements specification stipulates an 800 m Protective Action Zone (within which no private development is allowed) and a 3 km Urgent Protective Zone (within in which certain emergency measures will be applicable). These zones are smaller than the current Emergency Planning Zones (EPZs) for the Koeberg Nuclear Power Station, for which the corresponding radii of the EPZs are 5 km and 16 km respectively. The NNR is currently in the process of proposing draft regulations on the development in the formal emergency planning zone (16km) of the Koeberg nuclear power station

ADDITIONAL COMMENTS FROM INDEPENDNT NUCLEAR SPECIALIST

As stated this would then be one of the design criteria for any proposed new technology to be deployed in future

Comment 4:

I do not approve of the current processes you are following as you do not consult with adjacent landowners whose land prices could be severely affected if another plant is built nearby the current nuclear plant.

Response 4:

Your comment is noted. All surrounding landowners have been consulted during the EIA process in terms of the requirements of the National Environmental Management Act. A potential decrease in property values has not been assessed. Based on experience with Koeberg Nuclear Power Station, there may be an initial negative perception regarding properties located in close proximity to a nuclear power station. However, over time this changes. In fact, the restrictions on densities within a 16 km radius of Koeberg have led to an increase in property prices.

Comment 5:

What is the expected lifespan of the current plant?

Response 5:

The projected operating life of the planned Nuclear-1 plant is up to 60 years. The Koeberg design life is 40 years this may be extended for 60 years subject to being economically viable and all safety requirements being met. The first unit of Koeberg was commissioned in April 1984.

Comment 6:

Please provide the requested information on an urgent basis, and I would like to discuss the matter with the head of GIBB or Eskom.

Response 6:

The requested information is provided in this letter and reference to more detailed information in the Draft Environmental Impact Report. .

Comment 7:

I do not approve of the extension of the plant at Koeberg, as we would be affected by it.

Response 7:

The plant at Koeberg is not being extended. This application is for an additional power station. Your comment is noted and has been documented.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, appearing to be a stylized 'E' or similar character, located below the typed name.

Nuclear-1 EIA Project Team

5 August 2015



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

People • Expertise • Excellence
Cape Town

Email: vandervelden@hermanus.co.za

14 Kloof Street
Cape Town 8001
PO Box 3965
Cape Town 8000

Dear Mr. van der Velden

Tel: +27 21 469 9100
Fax: +27 21 424 5571
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)

My comments are still the same as before.

Comment 1:

The proposed nuclear reactors are proposed to be at hopelessly the wrong places. The electricity is needed where the industrial growth is. That is in the Durban, Richards bay area. The coal in that area is slowly running out because it is exported to China and Europe instead of being used for our own industries and by the time that happens, it will be the time that the proposed nuclear reactors come on line – many, many miles from where it is needed, necessitating long lines and wastage of electricity due to resistance in the cables.

Look where the industrial growth is and where there will be more of in the future. Not only are the aluminium smelters there, there is the Mosel (sic)¹ smelter across the border as well. They need massive amounts of electricity. In fact, half the price of an aluminium pot is the electricity to smelt it.

Response 1:

Your comments are noted. As previously stated the current application for Environmental Authorisation does not preclude the application for Environmental Authorisation for additional nuclear facilities in other areas experiencing high energy demand. The proposed nuclear power station at Thyspunt is located close to Port Elizabeth, which is recognised as a growth node where additional electricity is required. As indicated in the Nuclear-1 EIA presentations at public meeting, this development node and the Western Cape are the two areas where Eskom has identified the need for additional generation capacity. In this respect, see also Response 3.

It is important to note that the power that will be generated by the Nuclear-1 power station will be fed into the national electricity grid in order to strengthen its capacity and also alleviate pressure currently experienced due to the high electricity demand. Furthermore, several announcements by the South African government in the 1st quarter of 2012 have indicated its commitment to the development of additional nuclear electricity generation capacity besides Nuclear-1.

¹ Presumably this is a reference to Mozal in Mozambique

Comment 2:

The proposed sites are smack in the middle of not one, but two environmental hotspots - one on land and one in the sea. The terrestrial one is in a world natural heritage site to boot. The marine one is a hotspot of marine habitats and species as well. The current assessment and proposed mitigating measures are, in my opinion, inadequate. The Algulhas (sic) Bank and fisheries should be much better researched. With the long proposed power lines, it will take only a decade or two, to electrocute the entire Overberg blue crane population, as that is exactly the height that these birds fly.

Response 2:

Your comments are noted. The Thyspunt site is not a World Heritage Site. It was indicated in the Heritage Impact Assessment in the revised Draft EIR (Appendix E20) that Thyspunt has the potential to qualify as a World Heritage Site. However, there are currently no plans to nominate the site for World Heritage status. Such declaration would be subject to nomination by the Department of Environmental Affairs and acceptance by the United Nations Educational Scientific and Cultural Organisation (UNESCO) according to strict criteria. No such nomination has been lodged by the South African government.

The sensitivities of each site are well documented in the Environmental Impact Assessment and its associated specialist's studies. These sensitivities together with technical requirements, transmission integration factors as well as current demand were all taken into account when identifying potential sites for a nuclear power station. However, the impact of the proposed power lines does not form part of this application for Environmental Assessment. The proposed power lines are being addressed in separate EIA for Thyspunt.

Comment 3:

The whole mindset that the nuclear reactors should be here in the southern part of the country, is still the old mindset of the P.W. Botha era, when all the "sensitive" installations, should be as far away as the swart gevaar from the north. Like the missile engine factory in three Kogelberg areas, the missile guidance systems research centres in Hermanus and at Houwtec in Grabouw, the missile fuel manufacturing and research at Somchem in Somerset west and missile test range at Bredasdorp, to name the well known ones. The new planners just did not think any further and just followed up on what P.W. started

Response 3:

Eskom's focus is to provide power as close as possible to the areas where there is the greatest need to power. The stretch of coastline that was included in the NSIP includes the two most important growth areas where the greatest increase in electricity demand occurs and is due to continue for the foreseeable future, namely Port Elizabeth and the Cape Town metropole. In this regard, it is important to note that one of the reasons why the two Northern Cape sites were no longer regarded as reasonable and feasible for the EIA phase is the long distance to the Western Cape load center and others that the transmission lines would have to traverse.

Comment 4:

Countries like Germany decided to phase out nuclear reactors all together. Do they perhaps know something that we don't?

Response 4:

The BBC (<http://www.bbc.co.uk/news/world-europe-13592208>) reports that Germany's decision to close down its nuclear power stations will most probably lead to an increase in the import of nuclear energy from France. Phasing out nuclear power will also result in increased dependence on fossil fuels, which result in proportionately larger releases of greenhouse gases into the atmosphere than nuclear power, which has a greenhouse gas footprint similar to some renewable technologies (see Section 4.2.2 of the Revised Draft EIR). There is a further risk that Germany will not manage to quickly halt its dependency on fossil fuels, especially coal-based energy, which creates unintended negative environmental impacts of its own.

Comment 6:

The nuclear reactor that is being built in Finland is running in massive problems and cost overruns, because the Finns are not going to allow anything unsafe on their soil. They found, too late, that the design was inherently unsafe. If they could invent Nokia cell phones, they cannot be so dumb.

Response 6:

We agree that there are cost overruns at the plants mentioned above. However, it must be borne in mind that the Finland site was the first site where the new EPR unit was constructed. The French site was the second and a considerable number of lessons learnt in Finland were implemented at the French site (Flamenville), hence the much reduced delay times. The Chinese plants used these lessons and are on time and within cost. Eskom never intended to build a first of a kind plant type, which will reduce the risk of overruns and the subsequent excessive cost mentioned above.

Comment 7:

The geology assessment is mostly based on old research done with old technology. It is certainly not adequate for future planning. It should be re-evaluated. If the World did not sit up and take notice of Fukushima, then at least the South Africans should.

Response 7:

Your comment is noted. The Japanese disaster is indeed a stark reminder of the unpredictability of the natural environment. However, it is well known that South Africa is located on a vastly more stable tectonic environment than that of Japan, which is situated close to a major subduction zone within the Pacific Ocean. The descriptions and facts reported in the Geological Hazard and Seismic Risk Assessment stem from published data and work undertaken by the Council for Geoscience and others. In terms of the identification of faults and seismic risk, the information represents the current knowledge and understanding based on a regional picture. New evidence of neotectonic² movements

² The study of tectonic movements in current or recent geological time

may be discovered in the more detailed investigations that still have to be undertaken for the design of the power station. However, based on current knowledge, the site has been found to have no seismic disqualifiers. Information obtained during more detailed studies will be used to refine the design of the power station, but will not change the siting decision.

Furthermore, the safety of the KNPS has recently been checked following the events at the Fukushima nuclear power plant. The evaluation by the NNR on the safety assessment done by Eskom concluded that KNPS is able to withstand these events from Fukushima.

Comment 8:

If the politicians think the building of the reactors are going to bring jobs due to construction, think again. The Medupi coal fired station is built, not by South Africans, but by Chinese. Virtually no jobs were created for South Africans. Besides, nuclear power plants are built in overseas countries in a modular design and just put together where they want them, like a Lego set. That point was incidentally, also in your own report.

Response 8:

Your comment is noted. However, please note that employment opportunities will not only be created in the construction phase but also the operational phase of the nuclear power station. It is projected that 7700 jobs will be available during construction, of which 25% need to be employed locally. The contractor must comply with this requirement and the required training stipulated by Eskom. It is widely reported in the media of the Medupi Project spinoffs in terms of creating jobs and developing skills and local supplier industries, as well as boosting the economies of the local community.

Yours faithfully



For GIBB (Pty) Ltd
Nuclear-1 EIA Team

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 tail that curves back to the right.

The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314

Your Ref: Email received 03 August 2011

Email: murphy.toby@goolgemail.com

Dear Mr Murphy



GIBB
ENGINEERING & SCIENCE

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:

I'm writing in response to the Revised Draft EIR for the proposed Nuclear-1 Power Station (NPS).

There are a number of concerns with the DEIR listed below. The EIAR fails to consider the economic impacts that the construction of the NPS will have on broader South Africa (rather than the economic impacts on the local communities that was submitted by the EAP).

Response 1:

Your comments are noted. The Environmental Impact Assessment and Application for Environmental Authorisation for the proposed Nuclear-1 Power Station is not a strategic assessment of the energy requirements of South Africa and the future energy mix proposed to address these requirements or an investigation into the pros and cons of the use of Nuclear Power versus Renewable Energy or indeed a site selection process. It is a tool used to assess the possible positive or negative impact which the proposed project may have on a specific receiving environment which in this case is the Duynefontein, Bantamsklip and Thyspunt sites. Despite the site specific nature of the EIA process the Economic Report (Appendix E17 of the Revised Draft EIR Version 1 – Section 3.3) prepared by Conningarth Economists and Imani Development (SA) (Pty) Ltd nevertheless conducts a macroeconomic equilibrium analysis in order to quantify the macroeconomic impact associated with the possible construction and operation of the Nuclear-1 Power Station.

The report acknowledges that as the nuclear power station is such a large capital investment (equivalent to that of six times the capital investment in Gautrain) that the economic ripple effects will go far beyond its direct boundaries. For this purpose the Eastern Cape was used as the economic service and support area for Thyspunt, and the Western Cape for the proposed nuclear facilities of Bantamsklip and Duynefontein. Macroeconomic impacts have been measured in terms of the following standard macroeconomic performance criteria:

- GDP (in order to assess the contribution to economic growth);
- capital formation (as an indicator of the demand for scarce production resources);
- employment creation (as an indicator of the impact on income distribution);
- low-income household income (as an indicator of the impact on poverty relief; and



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.



- a series of social indicators.

We refer the author to section 3.3 of the report for an expanded discussion.

Comment 2:

The EIA fails to assess worst-case scenario impacts, a particularly important point in light of what has happened at Fukushima.

Response 2:

It is acknowledged that the incident at Fukushima as a result of this unpredicted natural disaster has highlighted many important safety factors in terms of the future of nuclear energy and is indeed a stark reminder of the unpredictability of the natural environment. However it is also well known that South Africa is located on a vastly more stable tectonic environment than that of Japan which is situated close to a major subduction zone within the Pacific Ocean.

Nevertheless please note that addressing site safety and issues are integral to the success of the proposed development and one of the important issues which will be placed in front of both the Department of Environmental Affairs (DEA) and the National Nuclear Regulator (NNR) for their consideration. Site safety issues are therefore discussed in the Emergency Response and Site Control Reports (Appendix E26 and E27 of the Revised Draft EIR) and will also be dealt with during the NNR process.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

In terms of each of the above; TMI whilst causing some reactor core damage had only minor actual radiological consequences. However significant lessons have been learned from the event. Similarly Chernobyl whilst having significant off site impact occurred due to a unique combination of reactor design (of a type no longer considered for commercial application) and a particular combination of operational circumstances underpinned by a poor safety culture. Apart from the proposed technology for any reactors in South Africa being not capable of exhibiting the sort of reactor kinetic behaviour, displayed at Chernobyl, the industry as a whole has learned significant lessons from the event - particularly in terms of Safety Culture which has since become an embedded characteristic of nuclear operators worldwide. With respect to Fukushima this was due to a unique combination of external events and a reactor design neither of which would specifically feature in the South African context - notwithstanding this industry has undertaken stress tests of all facilities against the type of challenges a Fukushima type event would pose and where necessary and as far as reasonably practicable implemented necessary changes. Over and above this reactor operators are required to make appropriate provisions in terms of mitigating beyond design base events and to provide the necessary decision making tools to assist even in the remote event of such occurrences in the form of for example severe accident management guides.

Comment 3:

It does not consider the impacts and costs of waste and its disposal, and additionally, there is no long term solution for the waste.

Response 3:

Thank you. Your comments are noted. It is acknowledged that the issues of radioactive waste management is important and integral to debate surrounding nuclear energy and as stated the only alternative currently available in South Africa is long-term storage of the spent fuel in the nuclear power station.. However please note that the radioactive waste management practices envisaged for Nuclear-1 are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal. Nuclear Power Station strives to minimise production of all solid, liquid and gaseous radioactive waste, both in terms of volume and activity content, as required for new reactor designs. This is being done through appropriate processing, conditioning, handling and storage systems. In addition, production of radioactive waste is minimised by applying latest technology and best practices for radiological zoning, provision of active drainage and ventilation, appropriate finishes and handling of solid radioactive waste. Where possible, the Nuclear-1 power station will reuse or recycle materials.

All forms of radioactive wastes are strictly controlled and numerous specialised systems and management practices are in place to prevent uncontrolled contact with these substances. These controls and practices differ for the different forms of radioactive waste. South Africa still has to formally release a strategy for the long-term management of HLW, including spent fuel. Until such time, all spent fuel is stored temporarily either in spent fuel pools (wet storage), or in dry cask storage facilities (dry storage). This allows the shorter-lived isotopes to decay before further handling, a management strategy that is acceptable from a safety perspective. It must be noted however that as per the Department of Energy's Media Statement on Nuclear Procurement Process Update as released on 14 July 2015 strategies are complete to develop an approach for South Africa to deal with Spent Fuel/High Level Waste disposal.

Disposal of radioactive waste at an authorised facility is being done according to an approved disposal concept, defined and developed with due consideration of the nature of the waste to be disposed of and the natural environmental system, collectively referred to as the disposal system. The disposal system developed for this purpose makes provision for the containment of radionuclides until such time that any releases from the waste no longer pose radiological risks to human health and the environment. The safety assessment process used as basis for this purpose considers both intentional (as part of the design criteria) and unintentional (natural or human induced conditions) releases of radionuclides. Unintentional releases include consideration of unintentional human or animal intrusion conditions, which might lead to direct access and external exposure to radiation.

Once released into the environment, radionuclides might migrate through the environmental system along three principle pathways: atmospheric, groundwater and surface water. Due to the physical nature of L&ILW and HLW disposal concepts, migration along the atmospheric pathway is highly unlikely. The principle environmental pathway of concern is thus the groundwater pathway, with the surface water pathway of secondary concern as an extension of the groundwater pathway. Disposal systems are designed so that releases to groundwater or surface water are highly unlikely as further explained in Chapter 10 of this EIR.

ADDITIONAL COMMENTS FROM INDEPENDNT NUCLEAR SPECIALIST

In addition to the given response it must be noted that IAEA requirements are informed by an extensive Body of Knowledge and where necessary derived from extensive scientific discourse and expert opinion from a variety of sources a range of complementary scientific publications and

international Standards, Requirements and Best Practices which are evolutionary in nature and informed by international experience. It is therefore natural to expect standards to evolve over time - and it is unwise to be absolutist in these matters however any practices at any particular time must be based on the prevailing standards noting that the fundamental safety objective of the IAEA enshrines a common purpose that any designer operator or regulator is ultimately bound by and where necessary and guided by principles such as ALARP additional measures are considered for adoption.

Comment 4:

It does not adequately assess project alternatives (such as renewable energy) and a no-go option.

Response 4:

Your comments are noted. Please refer to our Response 1 in terms of the role of the EIA as a project specific tool for assessing the impacts of the proposed Nuclear-1 Power Station on the Duynfontein, Bantamsklip and Thyspunt sites and not a tool to investigate the future energy mix for South Africa or the viability of Nuclear Energy versus Renewable Energy. The use of Renewable Energy is therefore not considered to be a project alternative in the context of this EIA. The author is referred to Chapter 5 of the Revised Draft EIR Version 1 for the complete discussion on alternatives.

Comment 5:

There is no final project design, making any assessment of the actual impacts impossible.

Response 5:

It is common practice in EIA processes, especially for installation of industrial plants, to consider the performance of the systems and type of technology proposed to be installed, without referring to specific suppliers or manufacturers of this technology, of which there may be a range available in the market. As long as the inputs and outputs of the proposed technology are known and the environmental impacts can be predicted or deduced from these inputs and outputs with reasonable certainty, it is not necessary to know the brand name of the technology.

As has been done in other issues and response reports, it may be appropriate to explain the envelope of criteria in colloquial terms, as has been done in public meetings during the Nuclear-1 EIA process. If the envelope of criteria is compared to the specifications for buying a vehicle, this envelope may contain requirements with respect to top speed, fuel type, fuel efficiency, catalytic convertor performance, type of tyres and wheels, fuel tank size, effective range, CO₂ emission limits, cruise control, numbers and positions of airbags and a number of other safety systems such as ABS and EBD. The only thing that isn't specified is the brand of vehicle. Providing such a list of criteria would ensure that only a luxury vehicle with certain characteristics could qualify, but that a base model (entry-level vehicle) would not qualify. Similarly, if a vendor proposes a power station design that fails to comply with the criteria established in the Consistent Dataset, that design will not qualify for consideration.

Assuming that an authorisation is granted by the DEA, a power station design that deviates significantly from that specified in the Consistent Dataset in the Nuclear-1 EIR (Appendix C of the Revised Draft EIR) would render the design incapable of meeting the requirements of the EIR and the authorisation. Hence such a non-confirming design could not be considered for construction.

Comment 6:

I suggest that these revisions be added to the report so that decision-makers have all the relevant information to make their decision.

Response 6:

Your comments are noted. Your submission will be included in the Revised Draft EIR Version 2 and Final EIR reports which will be submitted to the Competent Authority for its review.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, appearing to be a stylized 'S' or 'G' followed by a horizontal line.

The Nuclear-1 EIA Team

5 August 2015



People • Expertise • Excellence

Our Ref: J31314

Your Ref: Email received 03 August 2011

Email: cgainer@saol.com

Dear Ms Gainer

Cape Town

14 Kloof Street
Cape Town 8001
PO Box 3965
Cape Town 8000

Tel: +27 21 469 9100
Fax: +27 21 424 5571
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:

There are a number of concerns with the DEIR which I would like to raise:

The EIAR fails to consider the economic impacts that the construction of the NPS will have on broader South Africa (rather than the economic impacts on the local communities that was submitted by the EAP).

Response 1:

Your comment is noted. Although the Environmental Impact Assessment for the Nuclear-1 Power Station is a site-specific assessment tool, the Economic Report (Appendix E17 of the Revised Draft EIR Version 1 – Section 3.3) prepared by Conningarth Economists and Imani Development (SA) (Pty) Ltd nevertheless conducts a macroeconomic equilibrium analysis in order to quantify the macroeconomic impact associated with the possible construction and operation of the Nuclear-1 Power Station.

The report acknowledges that, as the nuclear power station is such a large capital investment (equivalent to that of six times the capital investment in the Gautrain), the economic ripple effects will go far beyond its direct boundaries. We refer the author to section 3.3 of the report for an expanded discussion.

Comment 2:

The EIAR fails to assess worst-case scenario impacts, a particularly important point in light of what has happened at Fukushima.

Response 2:

Thank you for your comment. It is acknowledged that the incident at Fukushima as a result of this natural disaster has highlighted many important safety factors in terms of the future of nuclear energy and is indeed a stark reminder of the unpredictability of the natural environment. However it is also well known that South Africa is located on a vastly more stable tectonic environment than that of Japan, which is situated close to a major subduction zone within the Pacific Ocean.



Nevertheless, the Revised Draft EIR Version 2 will include an analysis of “Beyond Design Basis Accident” scenarios like Fukushima to assess the implications for Nuclear-1. This assessment will consider the differences in technology between Fukushima Daiichi, which is based on a late 1960’s design, and the Generation III nuclear power generation technology to be used for Nuclear-1. Based on the newer nuclear technology, the probability and consequence of meltdown incidents, such as happened at Fukushima, is greatly reduced, if not eliminated, if the same events were to take place at a Generation III nuclear power station.

ADDITIONAL COMMENTS FROM INDEPENDNT NUCLEAR SPECIALIST

In terms of each of the above; TMI whilst causing some reactor core damage had only minor actual radiological consequences. However significant lessons have been learned from the event. Similarly Chernobyl whilst having significant off site impact occurred due to a unique combination of reactor design (of a type no longer considered for commercial application) and a particular combination of operational circumstances underpinned by a poor safety culture. Apart from the proposed technology for any reactors in South Africa being not capable of exhibiting the sort of reactor kinetic behaviour, displayed at Chernobyl, the industry as a whole has learned significant lessons from the event - particularly in terms of Safety Culture which has since become an embedded characteristic of nuclear operators worldwide. With respect to Fukushima this was due to a unique combination of external events and a reactor design neither of which would specifically feature in the South African context - not withstanding this industry has undertaken stress tests of all facilities against the type of challenges a Fukushima type event would pose and where necessary and as far as reasonably practicable implemented necessary changes. Over and above this reactor operators are required to make appropriate provisions in terms of mitigating beyond design base events and to provide the necessary decision making tools to assist even in the remote event of such occurrences in the form of for example severe accident management guides.

Comment 3:

It does not consider the impacts and costs of waste and its disposal, and additionally, there is no long term solution for the waste.

Response 3:

Your comment is noted. The nature and impacts of construction waste is discussed and assessed in Chapters 3, 5, 9 and 10 of the Revised Draft EIR Version 1 and in its associated Specialist Studies (Appendix E). The nature and impact of radiological waste is described and assessed in Chapters 3, 9 and 10 of the Revised Draft EIR Version 1 and in the Nuclear Waste Assessment (Appendix E29)

Issues of radioactive waste management are important and integral to the debate surrounding nuclear energy and as stated the only alternative currently available in South Africa is long-term storage of the spent fuel in the nuclear power station. It should be noted that the radioactive waste management practices envisaged for Nuclear-1 are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal. Nuclear Power Station strives to minimise production of all solid, liquid and gaseous radioactive waste, both in terms of volume and activity content, as required for new reactor designs. This is being done through appropriate processing, conditioning, handling and storage systems. In addition, production of radioactive waste is minimised by applying latest technology and best practices for radiological zoning,

provision of active drainage and ventilation, appropriate finishes and handling of solid radioactive waste. Where possible, the Nuclear-1 power station will reuse or recycle materials.

All forms of radioactive wastes are strictly controlled and numerous specialised systems and management practices are in place to prevent uncontrolled contact with these substances. These controls and practices differ for the different forms of radioactive waste. South Africa still has to formally release a strategy for the long-term management of HLW, including spent fuel. Until such time, all spent fuel is stored temporarily either in spent fuel pools (wet storage), or in dry cask storage facilities (dry storage). This allows the shorter-lived isotopes to decay before further handling, a management strategy that is acceptable from a safety perspective. It must be noted however that as per the Department of Energy's Media Statement on Nuclear Procurement Process Update as released on 14 July 2015 strategies are complete to develop an approach for South Africa to deal with Spent Fuel/High Level Waste disposal.

Disposal of radioactive waste at an authorised facility is being done according to an approved disposal concept, defined and developed with due consideration of the nature of the waste to be disposed of and the natural environmental system, collectively referred to as the disposal system. The disposal system developed for this purpose makes provision for the containment of radionuclides until such time that any releases from the waste no longer pose radiological risks to human health and the environment. The safety assessment process used as basis for this purpose considers both intentional (as part of the design criteria) and unintentional (natural or human induced conditions) releases of radionuclides. Unintentional releases include consideration of unintentional human or animal intrusion conditions, which might lead to direct access and external exposure to radiation.

Once released into the environment, radionuclides might migrate through the environmental system along three principle pathways: atmospheric, groundwater and surface water. Due to the physical nature of L&ILW and HLW disposal concepts, migration along the atmospheric pathway is highly unlikely. The principle environmental pathway of concern is thus the groundwater pathway, with the surface water pathway of secondary concern as an extension of the groundwater pathway. Disposal systems are designed so that releases to groundwater or surface water are highly unlikely as further explained in Chapter 10 of this EIR.

ADDITIONAL COMMENTS FROM INDEPENDNT NUCLEAR SPECIALIST

In addition to the given response it must be noted that IAEA requirements are informed by an extensive Body of Knowledge and where necessary derived from extensive scientific discourse and expert opinion from a variety of sources a range of complementary scientific publications and international Standards, Requirements and Best Practices which are evolutionary in nature and informed by international experience. It is therefore natural to expect standards to evolve over time - and it is unwise to be absolutist in these matters however any practices at any particular time must be based on the prevailing standards noting that the fundamental safety objective of the IAEA enshrines a common purpose that any designer operator or regulator is ultimately bound by and where necessary and guided by principles such as ALARP additional measures are considered for adoption.

Comment 4:

It does not adequately assess project alternatives (such as renewable energy) and a no-go option.

Response 4:

GIBB confirms that it is a legal requirement in terms of the National Environmental Management Act to assess feasible alternatives, which is defined to mean *different means of meeting the general purpose and requirements of the activity* – in the case of this EIA, the activity is the construction and operation of a Nuclear Power Station at either the Duynefontein, Bantamsklip or Thyspunt sites to provide base load electricity generation. As such Chapters 5, 9 and 10 of the Revised Draft EIR Version 1 discusses alternatives which include:

- Location of the power station;
- Nuclear plant types;
- Layout of the nuclear plant;
- Fresh water supply and utilisation of abstracted groundwater;
- Management of brine;
- Intake of sea water;
- Outlet of water and chemical effluent;
- Management of spoil material;
- Access to the proposed sites; and
- The no-development alternative.

The choice of technologies, described in Chapter 5 of the Revised Draft EIR and the implications or alternative technologies such as wind generation to addressing South Africa's energy requirements is provided for information but does not fall within the ambit of this Environmental Impact Assessment (EIA). It falls within the ambit of strategic government initiatives such as the Integrated Resources Plan 2010. The IRP and process was subject to an extensive public participation process. Carrying out such a debate during the EIA process would be duplication. .

This EIA and application for environmental authorisation is therefore not a strategic assessment of South Africa's energy requirements or the make-up of The future energy mix proposed to address these requirements. The EIA is also not an investigation into the pros and cons of the use of nuclear power vs. renewable/ alternative energy. The EIA is a tool used to assess the possible positive or negative impact that the proposed project may have on a specific receiving environment, which in this case includes the Duynefontein, Bantamsklip and Thyspunt sites.

Comment 5:

There is no final project design, making any assessment of the actual impacts impossible.

Response 5:

Your comment is noted. We assume that you are referring to design detail in terms of the reactor type/manufacturer to be used as you have not defined the lack of design detail in your statement above.

It is common practice in EIA processes, especially for installation of industrial plants, to consider the performance of the systems and type of technology proposed to be installed, without referring to specific suppliers or manufacturers of this technology, of which there may be a range available in the market. As long as the inputs and outputs of the proposed technology are known and the

environmental impacts can be predicted or deduced from these inputs and outputs with reasonable certainty, it is not necessary to know the brand name of the technology and makes the assessment of impacts very possible.

As has been done in other issues and response reports, it may be appropriate to explain the envelope of criteria in colloquial terms, as has been done in public meetings during the Nuclear-1 EIA process. If the envelope of criteria is compared to the specifications for buying a vehicle, this envelope may contain requirements with respect to top speed, fuel type, fuel efficiency, catalytic convertor performance, type of tyres and wheels, fuel tank size, effective range, CO2 emission limits, cruise control, numbers and positions of airbags and a number of other safety systems such as ABS and EBD. The only thing that isn't specified is the brand of vehicle. Providing such a list of criteria would ensure that only a luxury vehicle with certain characteristics could qualify, but that a base model (entry-level vehicle) would not qualify. Similarly, if a vendor proposes a power station design that fails to comply with the criteria established in the Consistent Dataset, that design will not qualify for consideration.

Assuming that an authorisation is granted by the DEA, a power station design that deviates significantly from that specified in the Consistent Dataset in the Nuclear-1 EIR (Appendix C of the Revised Draft EIR) would render the design incapable of meeting the requirements of the EIR and the authorisation. Hence such a non-confirming design could not be considered for construction.

Comment 6

In light of these concerns, I suggest that these revisions be added to the report so that decision-makers have all the relevant information to make their decision.

Response 6:

Your comments have been noted and revisions to the report will be made available where deemed necessary. Your comments will be added to the Revised Draft EIR Version 2 and Final EIR, which will be placed before the Competent Authority for decision-making.

Yours faithfully
For GIBB (Pty) Ltd



The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314
Your Ref: Email received 03 August 2011



Louis de Villiers Attorney, Conveyancer & Notary
4 Nuttall Road
Observatory
Cape Town
8001

Email: Louis@villiers.co.za

Cape Town

14 Kloof Street
Cape Town 8001
PO Box 3965
Cape Town 8000

Tel: +27 21 469 9100
Fax: +27 21 424 5571
Web: www.gibb.co.za

Dear Mr de Villiers

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

Comment 1:

I wish to raise a number of concerns with the DEIR:

The DEIR fails to consider the economic impacts that the construction of the NPS will have on broader South Africa (rather than the economic impacts on the local communities that was submitted by the EAP).

It remains a concern that government and Eskom continues on a path of propagating nuclear without proper public debate about this dangerous and seriously compromised technology;

Response 1:

Your comment is noted. Although the Environmental Impact Assessment for the Nuclear-1 Power Station is a site specific assessment tool, the Economic Report (Appendix E17 of the Revised Draft EIR Version 1 – Section 3.3) prepared by Conningarth Economists and Imani Development (SA) (Pty) Ltd nevertheless conducts a macroeconomic equilibrium analysis in order to quantify the macroeconomic impact associated with the possible construction and operation of the Nuclear-1 Power Station.

The report acknowledges that, as the nuclear power station is such a large capital investment (equivalent to that of six times the capital investment in Gautrain), the economic ripple effects will go far beyond its direct boundaries. We refer the author to section 3.3 of the report for an expanded discussion.

In terms of public debate the government has, through a consultative process, already taken a decision on the mix of generation technologies required to supply South Africa's future electricity needs for the next two decades. The environmental application for Nuclear-1 is for a single nuclear power station, as has been the case with other power stations such as the gas-fired power stations that have been constructed at Mossel Bay and Atlantis and the Medupi and Kusile coal fired power stations currently under construction. In all these previous instances, the scope of the EIA was



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.



restricted to a specific power station on a specific site or sites within a defined geographical area. It cannot reasonably be expected that each application for a power station must revisit strategic government decisions that have been taken on the mix of generation technologies that are necessary to meet South Africa's electricity needs. The EIA process, which is a project-specific environmental management tool, does not have any mandate to revisit the strategic analysis of power generation alternatives that was completed in the Integrated Resource Plan 2010.

Comment 2:

The DEIR fails to assess worst-case scenario impacts, a particularly important point in light of what recently happened at Fukushima.

Response 2:

It is acknowledged that the incident at Fukushima as a result of this natural disaster has highlighted many important safety factors in terms of the future of nuclear energy and is indeed a stark reminder of the unpredictability of the natural environment. However it is also well known that South Africa is located on a vastly more stable tectonic environment than that of Japan which is situated close to a major subduction zone within the Pacific Ocean.

South African legislation mandates nuclear and radiological safety considerations to the National Nuclear Regulator and environmental considerations to the relevant Environmental Authorities. There is some overlap in responsibilities and hence the NNR and the Environmental Authorities signed a cooperative agreement to govern their respective responsibilities with regard to radiological impacts on the environment. The exclusion of the detailed assessment of nuclear safety aspects from the EIA is thus in keeping with South African legislation. The final decision for South Africa to proceed with a nuclear power station will not only have to obtain approval from the NNR from a safety perspective but would also require approval from the National Electricity Regulator of South Africa who is compelled to consider the economic and socio-economic aspects of such a project. Both the NNR and NERSA process require public hearings and provide an opportunity for the country to consider all relevant aspects.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

In terms of each of the above; TMI whilst causing some reactor core damage had only minor actual radiological consequences. However significant lessons have been learned from the event. Similarly Chernobyl whilst having significant off site impact occurred due to a unique combination of reactor design (of a type no longer considered for commercial application) and a particular combination of operational circumstances underpinned by a poor safety culture. Apart from the proposed technology for any reactors in South Africa being not capable of exhibiting the sort of reactor kinetic behaviour, displayed at Chernobyl, the industry as a whole has learned significant lessons from the event - particularly in terms of Safety Culture which has since become an embedded characteristic of nuclear operators worldwide. With respect to Fukushima this was due to a unique combination of external events and a reactor design neither of which would specifically feature in the South African context - notwithstanding this industry has undertaken stress tests of all facilities against the type of challenges a Fukushima type event would pose and where necessary and as far as reasonably practicable implemented necessary changes. Over and above this reactor operators are required to make appropriate provisions in terms of mitigating beyond design base events and to provide the necessary

decision making tools to assist even in the remote event of such occurrences in the form of for example severe accident management guides.

Comment 3:

It does not consider the impacts and costs of waste and its disposal, and critically, there is still no long term solution for the high level waste.

Response 3:

Your comment is noted. The nature and impacts of construction waste is discussed and assessed in Chapters 3, 5, 9 and 10 of the Revised Draft EIR Version 1 and in its associated Specialist Studies (Appendix E). The nature and impact of radiological waste is described and assessed in Chapters 3, 9 and 10 of the Revised Draft EIR Version 1 and in the Radiological Waste Assessment (Appendix E29)

It is acknowledged that the issues of radioactive waste management are important and integral to debate around nuclear energy and as stated the only alternative currently available in South Africa is long-term storage of the spent fuel in the nuclear power station. However please note that the radioactive waste management practices envisaged for Nuclear-1 are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal. Nuclear Power Station strives to minimise production of all solid, liquid and gaseous radioactive waste, both in terms of volume and activity content, as required for new reactor designs. This is being done through appropriate processing, conditioning, handling and storage systems. In addition, production of radioactive waste is minimised by applying latest technology and best practices for radiological zoning, provision of active drainage and ventilation, appropriate finishes and handling of solid radioactive waste. Where possible, the Nuclear-1 power station will reuse or recycle materials.

All forms of radioactive wastes are strictly controlled and numerous specialised systems and management practices are in place to prevent uncontrolled contact with these substances. These controls and practices differ for the different forms of radioactive waste. South Africa still has to formally release a strategy for the long-term management of HLW, including spent fuel. Until such time, all spent fuel is stored temporarily either in spent fuel pools (wet storage), or in dry cask storage facilities (dry storage). This allows the shorter-lived isotopes to decay before further handling, a management strategy that is acceptable from a safety perspective. It must be noted however that as per the Department of Energy's Media Statement on Nuclear Procurement Process Update as released on 14 July 2015 strategies are complete to develop an approach for South Africa to deal with Spent Fuel/High Level Waste disposal.

Disposal of radioactive waste at an authorised facility is being done according to an approved disposal concept, defined and developed with due consideration of the nature of the waste to be disposed of and the natural environmental system, collectively referred to as the disposal system. The disposal system developed for this purpose makes provision for the containment of radionuclides until such time that any releases from the waste no longer pose radiological risks to human health and the environment. The safety assessment process used as basis for this purpose considers both intentional (as part of the design criteria) and unintentional (natural or human induced conditions) releases of radionuclides. Unintentional releases include consideration of unintentional human or animal intrusion conditions, which might lead to direct access and external exposure to radiation.

Once released into the environment, radionuclides might migrate through the environmental system along three principle pathways: atmospheric, groundwater and surface water. Due to the physical nature of L&ILW and HLW disposal concepts, migration along the atmospheric pathway is highly unlikely. The principle environmental pathway of concern is thus the groundwater pathway, with the surface water pathway of secondary concern as an extension of the groundwater pathway. Disposal systems are designed so that releases to groundwater or surface water are highly unlikely as further explained in Chapter 10 of this EIR.

ADDITIONAL COMMENTS FROM INDEPENDNT NUCLEAR SPECIALIST

In addition to the given response it must be noted that IAEA requirements are informed by an extensive Body of Knowledge and where necessary derived from extensive scientific discourse and expert opinion from a variety of sources a range of complementary scientific publications and international Standards, Requirements and Best Practices which are evolutionary in nature and informed by international experience. It is therefore natural to expect standards to evolve over time - and it is unwise to be absolutist in these matters however any practices at any particular time must be based on the prevailing standards noting that the fundamental safety objective of the IAEA enshrines a common purpose that any designer operator or regulator is ultimately bound by and where necessary and guided by principles such as ALARP additional measures are considered for adoption.

Comment 4:

It fails to adequately assess project alternatives (such as renewable energy) and a no-go option.

Response 4:

It is indeed a legal requirement in terms of the National Environmental Management Act to assess feasible alternatives, which is defined to mean *different means of meeting the general purpose and requirements of the activity* – in the case of this EIA, the activity is the construction and operation of a Nuclear Power Station at either the Dufnefontein, Bantamsklip or Thyspunt sites. As such Chapters 5, 9 and 10 of the Revised Draft EIR Version 1 discusses alternatives which include:

- Location of the power station;
- Nuclear plant types;
- Layout of the nuclear plant;
- Fresh water supply and utilisation of abstracted groundwater;
- Management of brine;
- Intake of sea water;
- Outlet of water and chemical effluent;
- Management of spoil material;
- Access to the proposed sites; and
- The no-development alternative.

The choice of technologies, described in Chapter 5 of the Revised Draft EIR Version 1 and the weighting to be given to each in terms of addressing South Africa's energy requirements is provided for information but does not fall within the ambit of this Environmental Impact Assessment (EIA). It falls within the ambit of strategic government initiatives such as the Integrated Resources Plan 2010. Further, the affordability to South Africa is assessed through the National Energy Regulator of South

Africa tariff process. Both the IRP and NERSA tariff process are subject to an extensive public participation process. Carrying out such a debate during the EIA process would be duplication.

This EIA and Application for Environmental Authorisation is therefore not a strategic assessment of South Africa's energy requirements and the future energy mix proposed to address these requirements or an investigation into the pros and cons of the use of Nuclear Power versus Renewable/Alternative Energy. It is a tool used to assess the possible positive or negative impact which the proposed project may have on a specific receiving environment, which in this case are the Duynefontein, Bantamsklip and Thyspunt sites.

Comment 5:

There is no final project design, making any assessment of the actual impacts impossible.

Response 5:

Your comment is noted. We assume that you are referring to design detail in terms of the reactor type/manufacturer to be used as you have not defined the lack of design detail in your statement above.

It is common practice in EIA processes, especially for installation of industrial plants, to consider the performance of the systems and type of technology proposed to be installed, without referring to specific suppliers or manufacturers of this technology, of which there may be a range available in the market. As long as the inputs and outputs of the proposed technology are known and the environmental impacts can be predicted or deduced from these inputs and outputs with reasonable certainty, it is not necessary to know the brand name of the technology and makes the assessment of impacts very possible.

As has been done in other issues and response reports, it may be appropriate to explain the envelope of criteria in colloquial terms, as has been done in public meetings during the Nuclear-1 EIA process. If the envelope of criteria is compared to the specifications for buying a vehicle, this envelope may contain requirements with respect to top speed, fuel type, fuel efficiency, catalytic convertor performance, type of tyres and wheels, fuel tank size, effective range, CO2 emission limits, cruise control, numbers and positions of airbags and a number of other safety systems such as ABS and EBD. The only thing that isn't specified is the brand of vehicle. Providing such a list of criteria would ensure that only a luxury vehicle with certain characteristics could qualify, but that a base model (entry-level vehicle) would not qualify. Similarly, if a vendor proposes a power station design that fails to comply with the criteria established in the Consistent Dataset, that design will not qualify for consideration.

Assuming that an authorisation is granted by the DEA, a power station design that deviates significantly from that specified in the Consistent Dataset in the Nuclear-1 EIR (Appendix C of the Revised Draft EIR) would render the design incapable of meeting the requirements of the EIR and the authorisation. Hence such a non-confirming design could not be considered for construction.

Comment 6:

In light of these concerns, I suggest that these revisions be added to the report so that decision-makers have all the relevant information to make their decision.

Response 6:

Your comments have been noted and revisions to the report will be made available where deemed necessary. Your comments will however be added to the Revised Draft EIR Version 2 and Final EIR which will be placed before the Competent Authority for decision making.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, appearing to be a stylized 'S' or similar character.

The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314

Your Ref: Email received 03 August 2011

PO Box 92
Storms River
6308

Email: forestgranny@telkomsa.net

Dear Mr and Mrs Reed



GIBB
ENGINEERING & SCIENCE

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:

We have a number of concerns regarding the proposed development as we and family spend our holidays in close proximity at Rebelsrus.

Our biggest concern is the fact that there is very little final project design and in fact the type of reactor is not even finalised yet, which means that the decisions about future developments cannot be made now.

Response 1:

Your comment is noted. It is common practice in EIA processes, especially for installation of industrial plants, to consider the performance of the systems and type of technology proposed to be installed, without referring to specific suppliers or manufacturers of this technology, of which there may be a range available in the market. As long as the inputs and outputs of the proposed technology are known and the environmental impacts can be predicted or deduced from these inputs and outputs with reasonable certainty, it is not necessary to know the brand name of the technology.

As has been done in other issues and response reports, it may be appropriate to explain the envelope of criteria in colloquial terms, as has been done in public meetings during the Nuclear-1 EIA process. If the envelope of criteria is compared to the specifications for buying a vehicle, this envelope may contain requirements with respect to top speed, fuel type, fuel efficiency, catalytic convertor performance, type of tyres and wheels, fuel tank size, effective range, CO2 emission limits, cruise control, numbers and positions of airbags and a number of other safety systems such as ABS and EBD. The only thing that isn't specified is the brand of vehicle. Providing such a list of criteria would ensure that only a luxury vehicle with certain characteristics could qualify, but that a base model (entry-level vehicle) would not qualify. Similarly, if a vendor proposes a power station design that fails to comply with the criteria established in the Consistent Dataset, that design will not qualify for consideration.

Assuming that an authorisation is granted by the DEA, a power station design that deviates significantly from that specified in the Consistent Dataset in the Nuclear-1 EIR (Appendix C of the



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.



Revised Draft EIR) would render the design incapable of meeting the requirements of the EIR and the authorisation. Hence such a non-confirming design could not be considered for construction.

Comment 2:

We don't believe that enough investigation has taken place around the importance of archeological sites throughout the area and we cannot allow them to be destroyed.

Response 2:

Your comments are noted however please note that extensive field surveys were conducted during 2011 to confirm the occurrence of heritage features within the proposed EIA corridor for the power station. These studies confirmed, that the sensitivity of these features is low. This confirms that the heritage impacts at Thyspunt can be mitigated. Specific mitigation measures have been stipulated by the specialist which Eskom is legally required to implement.

Comment 3:

The proposed disposal of sand/soil 5-6km's out to sea is to us wishful thinking as it is a wild coastline and seldom does one see a calm sea, so where will it all settle, in the rock pools and gullies so loved by our children and grandchildren?

Response 3:

Your comments are noted and the disposal of spoil material is not an issue that is taken lightly. The Marine Ecology Assessment acknowledges that the disruption to the marine environment may be significant with high consequence and significance if no mitigation measures are implemented. The specialist therefore proposes the following in order to minimise the impact:

- disposing spoil offshore (6 km from the shore);
- using only a medium pumping rate and
- undertaking the activity during winter.

When the mitigation measures listed above are implemented then following disposal on the seafloor, roughly 3m of sediment will cover an area of 1.5 or 3 km², depending on whether only half or the full volume of sediment is disposed of. Subsequently, local water movement will result in shifting of the spoil in a north-easterly direction towards Seal Point. Within the first five years following disposal the sediment is likely to spread to cover an area of between 8.3 km² (with sediment to a depth of between 0.5 and 1 cm). In the next five years loose sediment originally placed on the disposal site is expected to continue to spread towards Seal Point.

Comment 4:

And what about all the marine life that will be suffocated? Remember also the Tsitsikamma Coastal National Park is very close and is an important Marine Reserve.

Response 4:

Although the Marine Ecology Reports states that disruption to the marine environment may be significant (refer to Response 3) In terms of fish species, some show site fidelity and may be displaced from their home ranges during the construction phase, but these species are widely dispersed along the South African coast. Thus while individuals may be affected, the species concerned will not be compromised and recovery is expected once the benthic community re-establishes. Another issue of concern looked into extensively is the impact on the overall squid stock. With 13.43% of catches by the inshore jig fishery being displaced as adult squid move to other spawning grounds. It is however recommended that prior to disposal of spoil at sea, benthic communities at the disposal site, and in the areas predicted to be affected by spoil over the first ten years following disposal should be sampled for at least two years. Following disposal of spoil, these sites should be sampled at the same time of the year as the initial samples for at least ten years. Importantly, communities establishing on the actual spoil site should be monitored to establish to what extent these communities recover through time.

Lastly the disposal of spoil is unlikely to affect the cetacean species using the area. Bottlenose dolphins, humpback dolphins and southern right whales all use very coastal and often murky waters as part of their natural habitat range, while the more offshore species move over large spatial scales and area likely to avoid any plumes if needed.

We refer the author to Section 3.3.1 of the Marine Ecology Assessment for a more detailed discussion.

Comment 4:

Why is it that when the rest of the world are cutting back on Nuclear Power we are going ahead, and in an area that is so sensitive as well as being an important dairy farming area, which produces 10% of South Africa's milk. We cannot risk contamination of the countryside.

Response 4:

Your comment regarding a cutting back on Nuclear-1 Power is noted. However the BBC (<http://www.bbc.co.uk/news/world-europe-13592208>) reports that Germany's decision for instance to close down its nuclear power stations will most probably lead to an increase the import of nuclear energy from France and there is a risk they will not manage as quickly to halt the dependency on fossil fuels, especially coal-based energy making your statement not as clear cut as it seems.

Further although the Agricultural Impact Assessment discusses the effect of radionuclides on livestock (section 3.3.1) it has not identified a significant impact in terms of the contamination of milk in the area due to the construction and operation of the Nuclear Power Station. Issues related to the impact on health and nuclear safety will also be dealt with in detail as part of NNR licensing process.

ADDITIONAL COMMENTS BY INDEPENDENT NUCLEAR SPECIALIST

In addition to what has been said - the issue of competing technologies and preferred energy mix scenarios in the context of demand side and economic growth trajectories are clearly in the ambit of the IRP. IRP 2010 remains the formal IRP adopted by government. The regulatory regime is as stated and nuclear facilities are in general required to consider a range of "design basis security threats" as part of the design assessment process - however the exact nature of these threats and the

preventative or mitigative provisions which may be put in place are for obvious reasons restricted in accordance with a "need to know" principle.

Comment 5:

We believe greater emphasis should be placed on developing solar, wind generated and hydro-electric power throughout the country before any potentially dangerous nuclear plants are erected.

Response 5:

Your comments are noted. There are indeed many technologies (including alternative/renewable energy sources as you listed above) which could be employed to generate energy to meet South Africa's current and future energy demand. The choice of technologies (although described in Chapter 5 of the Revised Draft EIR Version 1) and the weighting to be given to each in terms of addressing South Africa's energy requirements however does not fall within the ambit of this Environmental Impact Assessment (EIA) to address. It falls within the ambit of strategic government initiatives such as the Integrated Resources Plan 2010.

This EIA and Application for Environmental Authorisation is therefore not a strategic assessment of South Africa's energy requirements and the future energy mix proposed to address these requirements or an investigation into the pros and cons of the use of Nuclear Power versus Renewable/Alternative Energy. It is a tool used to assess the possible positive or negative impact which the proposed project may have on a specific receiving environment, which in this case are the Duynefontein, Bantamsklip and Thyspunt sites.

Comment 6:

What about potential seismic events, such as that in Japan and closer to home the recent one earlier this year on the South coast which was felt as close by as Plettenbergbay?

Response 6:

Your comment is noted. It is acknowledged that the incident at Fukushima as a result of this natural disaster has highlighted many important safety factors in terms of the future of nuclear energy and is indeed a stark reminder of the unpredictability of the natural environment. However it is also well known that South Africa is located on a vastly more stable tectonic environment than that of Japan which is situated close to a major subduction zone within the Pacific Ocean and the two cannot, in all fairness, be compared to one another.

Please note that the Seismic Risk related to each site was assessed as part of the Seismic Risk Assessment (Appendix E4 of the Revised Draft EIR Version1) and we refer the author to Sections 4 and 5 of the report for a more detailed discussion on the assessment of the significance of the impacts and proposed mitigation measures. Site safety issues will also be dealt with in the NNR process which will be open for public scrutiny and comment.

ADDITIONAL COMMENTS BY INDEPENDENT NUCLEAR SPECIALIST

In terms of each of the above; TMI whilst causing some reactor core damage had only minor actual radiological consequences. However significant lessons have been learned from the event. Similarly

Chernobyl whilst having significant off site impact occurred due to a unique combination of reactor design (of a type no longer considered for commercial application) and a particular combination of operational circumstances underpinned by a poor safety culture. Apart from the proposed technology for any reactors in South Africa being not capable of exhibiting the sort of reactor kinetic behaviour, displayed at Chernobyl, the industry as a whole has learned significant lessons from the event - particularly in terms of Safety Culture which has since become an embedded characteristic of nuclear operators world wide. With respect to Fukushima this was due to a unique combination of external events and a reactor design neither of which would specifically feature in the South African context - not withstanding this industry has undertaken stress tests of all facilities against the type of challenges a Fukushima type event would pose and where necessary and as far as reasonably practicable implemented necessary changes. Over and above this reactor operators are required to make appropriate provisions in terms of mitigating beyond design base events and to provide the necessary decision making tools to assist even in the remote event of such occurrences in the form of for example severe accident management guides.

Comment 7:

This coastline is prone to abnormal sea conditions which are extremely powerful and could create potentially dangerous wash-a-ways.

Response 7:

Your comment is noted however please note that the physical characteristics of the proposed site will be taken into account in terms of the placement of the nuclear power plant (within the context of identified sensitivities on site). The nature of the coastline has furthermore been investigated in the Oceanographic Assessment and its associated Coastal Engineering report. As such the author is referred to Appendix E16 of the Revised Draft EIR Version 1 for a more detailed discussion.

Comment 8:

We do not want to see the problem of disposal of nuclear waste increased even further.

Response 8:

Thank you. Your comments are noted. It is acknowledged that the issues of radioactive waste management is important and integral to debate surrounding nuclear energy and as stated the only alternative currently available in South Africa is long-term storage of the spent fuel in the nuclear power station. However please note that the radioactive waste management practices envisaged for Nuclear-1 are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal. Nuclear Power Station strives to minimise production of all solid, liquid and gaseous radioactive waste, both in terms of volume and activity content, as required for new reactor designs. This is being done through appropriate processing, conditioning, handling and storage systems. In addition, production of radioactive waste is minimised by applying latest technology and best practices for radiological zoning, provision of active drainage and ventilation, appropriate finishes and handling of solid radioactive waste. Where possible, the Nuclear-1 power station will reuse or recycle materials.

All forms of radioactive wastes are strictly controlled and numerous specialised systems and management practices are in place to prevent uncontrolled contact with these substances. These

controls and practices differ for the different forms of radioactive waste. South Africa still has to formally release a strategy for the long-term management of HLW, including spent fuel. Until such time, all spent fuel is stored temporarily either in spent fuel pools (wet storage), or in dry cask storage facilities (dry storage). This allows the shorter-lived isotopes to decay before further handling, a management strategy that is acceptable from a safety perspective. It must be noted however that as per the Department of Energy's Media Statement on Nuclear Procurement Process Update as released on 14 July 2015 strategies are complete to develop an approach for South Africa to deal with Spent Fuel/High Level Waste disposal.

Disposal of radioactive waste at an authorised facility is being done according to an approved disposal concept, defined and developed with due consideration of the nature of the waste to be disposed of and the natural environmental system, collectively referred to as the disposal system. The disposal system developed for this purpose makes provision for the containment of radionuclides until such time that any releases from the waste no longer pose radiological risks to human health and the environment. The safety assessment process used as basis for this purpose considers both intentional (as part of the design criteria) and unintentional (natural or human induced conditions) releases of radionuclides. Unintentional releases include consideration of unintentional human or animal intrusion conditions, which might lead to direct access and external exposure to radiation.

Once released into the environment, radionuclides might migrate through the environmental system along three principle pathways: atmospheric, groundwater and surface water. Due to the physical nature of L&ILW and HLW disposal concepts, migration along the atmospheric pathway is highly unlikely. The principle environmental pathway of concern is thus the groundwater pathway, with the surface water pathway of secondary concern as an extension of the groundwater pathway. Disposal systems are designed so that releases to groundwater or surface water are highly unlikely as further explained in Chapter 10 of this EIR.

ADDITIONAL COMMENTS BY INDEPENDENT NUCLEAR SPECIALIST

In addition it must be noted that the EIA process and Nuclear Licensing process for any off site waste storage facilities will be the subject of separate applications and are outside the scope of this submission. It must be noted that on site storage of spent fuel in ponds, vaults, or casks is a widely practiced and demonstrated technology which has been used to store fuels for many decades.

Comment 9:

It is our opinion that the whole project is being rushed through without due consideration of the long term effects.

We think that the proposal will only satisfy the few people driving the project and that it will be to the detriment of far greater portion of the population who will be negatively affected, as well as the environment.

Response 9:

Your comment is noted. This application for Environmental Authorisation was submitted to the DEA (then DEAT) in 2007. It can therefore hardly be said that this process has been rushed though without due consideration of the effects of the proposed development of any of the three alternative sites. The process is indeed still on-going and as stated in communication from GIBB to registered I&APs on 14

June 2012 GIBB is currently preparing the Revised Draft EIR Version 2 which will likely be available for public comment and review only on early 2013.

In the event that no substantive changes need to be made to the report subsequent to the review of the Revised Draft EIR Version 2, the Final EIR will be prepared and submitted to the Department of Environmental Affairs for their review and decision making.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, appearing to be a stylized 'S' or 'G' followed by a horizontal line.

The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314

Your Ref: Email received 03 August 2011

Amanda Jephson and Charl Laubscher
Klein Tierfontein Farm & Assegaai Bosch Farm
P.O.Box 291
Stanford
7210

Email: topiary@whalemail.co.za

Dear Ms Jephson and Mr Laubscher

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

Comment 1:

Our position remains unchanged with regard to our objection to the proposed nuclear power station at Bantamsklip. All our previous comments are still applicable including that below.

Comments Regarding the Revised Plan of Study for Nuclear Power Station Bantamsklip.

Regarding the siting of Nuclear 2 at Bantamsklip

Eco-tourism impact: It is completely unacceptable to have a nuclear power station in the middle of an eco-tourism hot spot area, which constitutes a major portion of the economy of the Southern Overberg. This is not an industrial area and as such is completely unspoilt by any form of industrial activity. The area has spent millions over the past 30 years establishing itself as the whale, shark and fynbos eco-tourist destination as well as wine and heritage tourist destination of national and international renown. It relies on natural beauty and the unspoilt openness of the landscape and coast in its appeal. According to the Scoping Report a nuclear power station here will have little to modest impact on tourism. This is a completely erroneous supposition, which has no basis in fact, and the EIA is urged to properly assess the tourism impact thoroughly.

Response 1:

Please note that this application is for Nuclear-1, not Nuclear-2 as indicated by your comment.

Your comments regarding the findings of the Tourism Impact Assessment (Appendix E22 of the Revised Draft EIR) are noted. Should you have any evidence to support your comment that the findings of the tourism assessment are erroneous and not based on factual research, kindly provide such evidence. Whilst the establishment of a power station may have a negative impact on nature-based tourism, the Tourism Impact Assessment assesses the positive and negative impacts on tourism, including the expected increase in business tourism associated with the construction and



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



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.



operation of the proposed power station. The Tourism Impact Assessment therefore assessed the net impact that Nuclear-1 is likely to have on the tourism industry.

Comment 2:

Food production impact: The Overberg in addition to being a tourist hot spot is also a major food producing area with beef, lamb, dairy, wheat, canola, grapes being some of its main agricultural activities. Of major concern is the health of plant, animal and human life with Strontium-90 and Cesium-137 emissions, which are released by nuclear fission into the air, water (both fresh and sea), by deposition to land and thus into the human food chain. Some farms within a radius of 20 km of Bantamsklip or more will not be able to continue marketing their food crops because of this danger. Since we live in a world where food crops are becoming less and less available and there is a dire need to encourage farming to meet human food needs it is completely unacceptable that a nuclear facility is being positioned within a food-farming zone, thereby rendering the area non-agriculturally sustainable. The agricultural soils of this area are some of the cleanest, being free of fertilizer and herbicide chemicals. Many meat and dairy farmers practise organic farming activities, with free range, grass-fed cattle and sheep. Certification for organic farming would be rendered impossible as a consequence of a nuclear facility nearby.

Response 2:

Your comments that organic farming would no longer be able to occur in proximity of a nuclear power station are not supported by fact. The Agricultural Impact Assessment (Appendix E21 of the Revised Draft EIR) assessed whether proximity to a nuclear power station would preclude organic certification. Certification bodies for such organic certification schemes confirmed that proximity to a nuclear power station would have no impact on the certification. This is borne out by farming activities that continue around Koeberg Nuclear Power Station, including organic wine farming that takes place within sight of the KNPS.

Your comments regarding Strontium-90 and Cesium-137 are noted. The exact source of radiation (i.e. the isotopes that give rise to radiation) is not material to health effects. Rather, the effective cumulative dose of radiation from all possible sources determines whether or not impacts can be expected to occur in the food chain. To isolate specific isotopes of Strontium-90 and Cesium-137 is therefore immaterial to the question of whether or not health impacts could be expected. Experience with the KNPS, which uses much older technology than will be employed for Nuclear-1, indicates that the effective cumulative dose from all sources of radiation is negligible.

Comment 3:

Export cut-flower impact: In addition to eco-tourism and food farming, cut-flower harvesting constitutes a third major economic force in the area. The Southern Overberg and the Agulhas Plain, which has its own Agulhas National Park, is the fynbos eco-destination of the world and cut-flower production is practised in addition to eco-tourism as a means of generating an income on fynbos farms. These farms form a complement to the food-producing farms and often have more mountainous areas than arable land with 'virgin fynbos' protected by government legislation. Incentives are given to farmers to develop protea/fynbos orchards for the cut-flower export market and to remove alien vegetation to protect and preserve the natural fynbos veld. To meet the stringent European Union cut-flower import regulations, all flowers have to be tested and proved free of harmful chemicals. It is then highly questionable as to whether any export flowers from this region will be

acceptable by the EU or the USA, when they are found to have been contaminated by radioactivity. This is another flourishing and important economy of the area which would be rendered un-viable by the negative impact of a nuclear power station at Bantamsklip. One only has to look at the devastation caused by the Overberg fire of 2006 to see how it collapsed the cut-flower market and caused untold people to lose their jobs.

Response 3:

Please refer to our response above regarding organic farming.

Comment 4:

Human health impact: The lack of any major industry in the Southern Overberg means the area is free of associated water and airborne pollutants. Building a nuclear power station within this 'pollution free zone' – with all its associated radioactive waste activities and emissions is completely unacceptable. The negative impact on human health will be critical and it is a well-proven fact that radioactive emissions cause various forms of cancer. Of particular concern are the long-lived isotopes Strontium-90 and Cesium-137, which both have half lives of up to 30 years and which attack the bone and tissue cells. In support of this argument please find attached with this letter, various articles, which – contrary to Eskom's claim that Nuclear Energy is safe – say exactly the opposite. The [United States] NRC publishes values of radionuclides that should not be exceeded by ingestion or inhalation in the course of a year to minimize any biological effects from radiation doses absorbed by tissues. The annual limit of intake (ALI) for Cs-137 is 100 micro-Curies or 3.7 million Bequerels for ingestion and 200 micro-Curies or 7.4 million Bequerels for inhalation.

http://www.uspharmacist.com/index.asp?show=article&page=8_1324.htm

Response 4:

Please refer to our Response 2 above regarding the emission of Strontium-90 and Cesium-137.

Radioactivity can cause cancer at high doses. A measure of the risk of biological harm is the dose of radiation that the tissues receive. The unit of absorbed radiation dose is the sievert (Sv). Since one sievert is a large quantity, radiation doses normally encountered are expressed in millisievert (mSv) or microsievert (μ Sv) which are respectively one-thousandth or one millionth of a sievert. The public dose limit for radiation in South Africa is defined by Regulation 388 of April 2006 under the NNR Act, 1999 (Act No. 47 of 1999) at 1 mSv (1000 μ Sv) per year. This is a limit applied internationally for the protection of human health from exposure to ionizing radiation.

On average, human radiation exposure due to all natural sources amounts to about 2.4 mSv per year. This is called natural background radiation. This figure can vary, depending on the geographical location, by several hundred percent. By far the largest source of natural radiation exposure comes from varying amounts of uranium and thorium that occur naturally in soil. The average background radiation dose in the United States is 3 mSv per year and the average dose for airline crews (due to increased exposure to cosmic radiation at high altitudes) is between 2 and 4 mSv per year.

The graphic on the next page illustrates the effects that a range of radiation doses can have on the public and from which levels health effects can be expected. As indicated by this graphic, the United States Environmental Protection Agency's guideline for lifesaving is 0.25 Sv and there is evidence that

health impacts from radiation can occur from 0.1 Sv (100 times greater than the general public dose limit). However, given the public's exposure to radiation doses of less than 1 mSv around nuclear power stations, there is no evidence to suggest that the public living in proximity to nuclear power stations is exposed to an increased risk of cancer.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

Radiation risks are assumed to be stochastic in nature the associated causality and nuclide specific characteristics are secondary to the received dose and target tissue sensitivity and hence the adoption of the linear no threshold principle to radiation protection and the adoption of dose limits as opposed to nuclide limits - adoption of nuclide specific discharge limits are secondary limits to ensure the achievement of the primary dose limits everything which is proposed is in line with international best practice and scientific evidence and recommendations.

Comment 5:

Economic impact: Most of the local communities and the labour force of the Southern Overberg are involved in tourism (marine and terrestrial), farming and/or cut-flower production. Should this nuclear power station be erected, all these economies will suffer, and the very basis for the Overberg's existence will be wiped out. Job losses, loss of sustainable livelihoods and loss of property values will be just a few of the ramifications, which will destabilise the area. In short the Overberg will no longer have a value. To quote from your own document:

"It is possible that the normal operation of a reactor at Thyspunt and Bantamsklip could limit future tourism development with significance for the local and provincial economies. A substantial nuclear incident could have significant economic costs for tourism and the associated Eastern Cape and Western Cape economies." (NUCLEAR 1 ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PROGRAMME SPECIALIST STUDY FOR SCOPING REPORTSPECIALIST STUDY: TOURISM Page 16.)

Ionizing Radiation Dose Ranges (Sievert)



Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

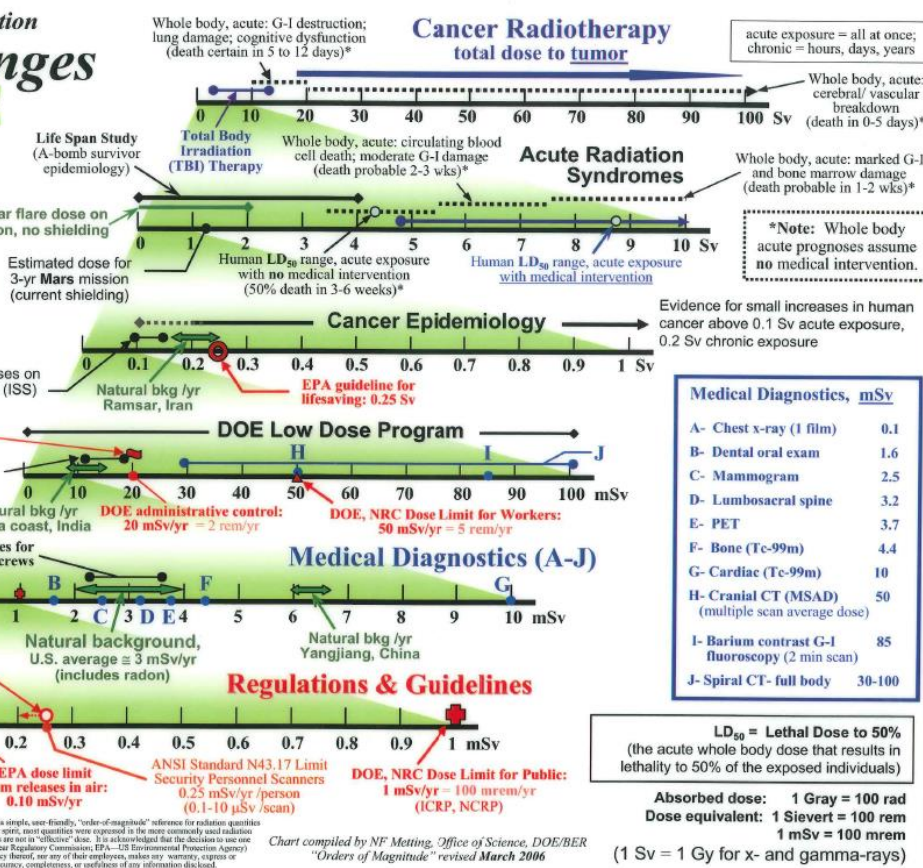
Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY

Office of Science
U.S. DEPARTMENT OF ENERGY



Response 5:

Your comment is noted. The Tourism Impact Assessment (Appendix E22 of the Revised Draft EIR) concluded that there would be a net benefit to tourism in the Bantamsklip area of around 5% during the construction phase of Nuclear-1 and a net benefit of around 8.5% during operation. As indicated in Response 1, this prediction takes into account the potential negative impact on nature-based tourism and the potential positive impact of business-based tourism.

Comment 6:

Health and Safety of Nuclear Power: We would like to analyze some answers which Eskom gave regarding questions at the original scoping phase of this EIA. The blue text represents Eskom's answers; the red text represents the response of the Coalition against Nuclear Energy (CANE). Reading these responses, one is not at all reassured that Eskom in fact knows what they are talking about.

ESKOM: "Eskom will not construct and operate a nuclear power station if it is not safe."

CANE: the very concept of what constitutes safety and who decides what constitutes a reasonable risk is what the argument is all about.

Response 6:

Your comment is noted. Please refer to Response 4 above regarding the internationally agreed measures of radiation safety. As indicated by this response, the public dose limit for radiation in South Africa is 1 mSv (1000 µSv) per year. Records indicate that the Koeberg Nuclear Power Station has consistently remained below this dose limit throughout its operation.

Comment 7:

ESKOM: "In addition, the nuclear safety of, and the risk of a nuclear accident at the proposed power station will be independently assessed by the National Nuclear Regulator. The NNR will only issue a nuclear installation license for the proposed power station if it is satisfied that the risk of an accident is acceptable low."

CANE: This delays the argument to another occasion, while the integrity and independence of the NNR is also under question. ESKOM must answer the question.

Response 7:

Your comment is noted.

Information about radiological emissions under normal operating conditions is provided in the EIR and the environmental impacts of these emissions are assessed. However, assessment of the radiological emissions during emergency events and the readiness of the relevant role players to deal with such events is clearly within the ambit of the NNR owing to its legal mandate in terms of the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999).

As with many different forms of development, construction is dependent on authorisations by a number of different legal entities, including local, provincial and national authorities. Construction of such developments is reliant on all these authorisations being obtained from entities with vastly different legal mandates. Reporting requirements to satisfy all these authorisations vary hugely, and it cannot reasonably be expected that information relevant to all these authorisations should be contained in the EIR.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

This is a statement of the requirements upon which such processes are based - until such time as a licence application is made the specific licence requirements cannot be established.

Comment 8:

ESKOM: "Experience gained internationally is that people do not become ill or die from living in close proximity to a nuclear power station."

CANE: This is a blatantly false answer. See the response of Dr Leslie London with regard to the original PBMR EIR. See also Elizabeth Cardis et al, Ernest Sternglass, Rosalie Bertell, etc. etc

Response 8:

Your comment is noted. Should an interested party be able to provide scientifically verifiable evidence of proven health impacts for people who live in proximity to a nuclear power station, then such claims can be considered. However, the overwhelming consensus of scientific judgment is that the radiation dose limits applied to populations around nuclear power station provides more than sufficient safety.

Comment 9:

ESKOM: "Taking Koeberg as an example: Koeberg has operated for the past 23 years within very close proximity of wheat, cattle and dairy farms. The nearest farms are within 10 km of Koeberg"

CANE: No independent epidemiological studies have been done on the cancer rates before and after Koeberg was switched on.

Response 9:

Your comment is noted. It stands to reason that if health impacts from the Koeberg Nuclear Power Station (KNPS) were being experienced, it would have been highlighted by the public or by the National Nuclear Regulator. However, there is no evidence of such deleterious health effects having occurred.

Comment 10:

ESKOM: "Everybody is exposed to natural background radiation everyday from, for example, the earth itself, the materials from which buildings are constructed, the sun, and on a less regular basis from medical exposures (X-rays)."

CANE: This is a red herring, designed to obscure the scientific facts. We are NOT talking about background or external radiation: we are talking about man-made, INTERNAL DOSES of ionizing radiation.

Response 10:

Should you have any scientifically verifiable evidence to suggest that background radiation does not exist, we would welcome the opportunity to interrogate such evidence. As indicated in Response 4, natural background radiation accounts for a greater portion of radiation to the general public than radiation from power generation sources.

Comment 11:

ESKOM: "The quantity of radiation exposure and what is absorbed by the body is measured in micro Sieverts (μSv) per annum. The National Nuclear Regulator (NNR) sets the limit of exposure arising from operations at nuclear installations. Hence the limit for Koeberg is set at 250 μSv per annum, far below the exposure from natural background radiation (which is about 2500 - 3000 μSv per annum), and less than the international standard of 1000 μSv per annum. The Koeberg Nuclear Power Station has been in operation for over 23 years - the public exposure to radiation as a result of Koeberg's operations has been less than 20 μSv per annum in general and less than 6 μSv per annum in 2005/6

- reference NNR Annual Report 2005/6 tabled in Parliament - available off the NNR website www.nnr.co.za), far below the limit set by the NNR."

CANE: This is a completely irrelevant red herring. We would like to know about the projected output of Strontium-90 and Cesium-137 in Becquerels per annum INDEPENDENTLY VERIFIABLE by reference to an EXISTING technology such as the proposed AP1000 and EPR reactors. We cannot accept any other irrelevant references, since we have no SCIENTIFICALLY VERIFIABLE EVIDENCE on what is expected to come out of THESE SPECIFIC, NAME-BRAND reactors. You cannot measure exhaust fumes from a new BMW Z4 by using a 1976 VW Beetle as a reference! Nor can you refer to lead poisoning from pencils as a reference with regard to bird droppings in the garden! Let's have the actual facts, not obfuscation and technical garbage.

Response 11:

As indicated in Response 2 above, the origin of the radiation is immaterial to but the total cumulative dose (the "radiation output") is important.

To use CANE's vehicle analogy, the mechanics of a vehicle's drive train are unimportant, as long as its exhaust emissions remain below the legal limit. The brand name of the proposed nuclear power station is therefore not required. All the commercially available Generation III nuclear power station designs being considered are designed to limit radiation emissions to below the public dose limit.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

Whilst what is said is correct it will be a requirement of the nuclear license application that the design specific situation be assessed and it is likely that this will be done against a reference design - what appears to be being stated not unreasonably is that the operating envelope of any new technology will be well within that of the existing technology - in any event the regulatory requirement will be that doses must be below limits and ALARA and that there is no reason not to expect that the potential designs under consideration will not meet this requirement.

Comment 12:

ESKOM: "Samples of fish, meat, vegetables, milk, water, etc are regularly collected from the area around Koeberg and analyzed to determine any possible effects on the food chain. Samples are also sent overseas for independent analysis and proof that Eskom is operating within the required limits."

CANE: And the results show what? How many Becquerels per kilogram (or per litre) per annum? We're not interested in microSieverts, or whether unnamed "overseas experts" may be considered by definition to have integrity and independence. Show us the unadorned facts.

Response 12:

As indicated in the Marine Ecology Assessment (Appendix E15 of the Revised Draft EIR), human activity has resulted in varying degrees of contamination of the world's marine environment with anthropogenic radionuclides since the 1940s. Globally, the primary source of this contamination is fallout from over 520 atmospheric nuclear weapons tests (Friedlander et al. 2005). These radionuclides now occur alongside naturally occurring radioactive compounds at varying concentrations throughout the world's oceans. In a recent review of radionuclides in the marine

environment Friedlander et al. (2005) report the occurrence of a number of these compounds in marine organisms. Specifically, Cesium (Cs-137) and Strontium (Sr-90) have been found in bivalves along the west and east coast of America, in fish, mollusks, algae, seawater and sediment in Japan, in fish, seawater and sediments from the Arctic and related seas, and in fish, mollusks and crustaceans in the north Atlantic region. Equivalent data are not available for the southern hemisphere.

Comment 13:

ESKOM: "Although the risk of an accident is very low, the National Nuclear Regulator (NNR) nevertheless requires emergency planning to be undertaken."

CANE: We are not interested whether the risk is high or low. All we are interested in is an honest and scientifically verifiable example of the impact of a major accident on the INES-7 Scale. Give us the facts.

Response 13:

INIS (the International Nuclear and Radiological Event Scale) is a worldwide tool for communicating to the public in a consistent way the safety significance of nuclear and radiological events. Just like information on earthquakes or temperature would be difficult to understand without the Richter or Celsius scales, the INES scale explains the significance of events from a range of activities, including industrial and medical use of radiation sources, operations at nuclear facilities and transport of radioactive material.

Events are classified on the scale at seven levels: Levels 1-3 are called "incidents" and Levels 4-7 "accidents". In this case level 7 is a major accident, similar to Chernobyl in 1986 with widespread health and environmental effects and external release of a significant fraction of the reactor core inventory.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

This is the internationally accepted standard - the description of the types of events covered by each category are covered in the scale definitions themselves - generally events of INES level 4 and above are within the ambit of the emergency planning arrangements - the IAEA factsheet in this regard can be found at <http://www.iaea.org/Publications/Factsheets/English/ines.pdf>

Comment 14:

ESKOM: "For the proposed nuclear power station Eskom is considering the latest design of Pressurized Water Reactor (PWR) technology. Internationally, these designs have formal emergency planning zones less than 16 km."

CANE: We are indifferent to "international" standards. What does INES-7 tell us about the scale of a major accident? How far will the radioactivity from Cesium-137 stretch in kilometers, using that event of April 1986 as a benchmark? Why were all foodstuffs taken off the market for many thousands of kilometers away? What was the measurable impact on the reindeer economy of Northern Scandinavia? What was the impact on lamb and mutton production in Wales? How far afield were wild

mushrooms and berries affected? Let us use this verifiable and scientifically testable data and apply the answers logically and without obfuscation to the impact of a major accident at Bantamsklip.

Response 14:

EPZs for the new nuclear power station are considered 800 m and 3 km respectively. The reduced EPZs are based on European Utility Requirements (EUR) standards, which prescribe that modern nuclear power plants should have no or only minimal need for emergency interventions (e.g. evacuation) beyond 800 m from the reactor.

The basis for adopting the EUR by Eskom is that the EUR aims at ensuring that the design that is adopted has minimal impact on the man and environment. This has been developed by utilities who will, in any case, have their design studied and endorsed by the relevant regulatory body. If the final design does not conform to the assertions made, the design will not be accepted and might have to be modified accordingly until it conforms to these requirements.

Thus, the key emphasis of this requirement is to minimise the impact on man and environment. Eskom has chosen the EUR as this specification is sound and robust. It also allows for alignment with the international nuclear community.

The Emergency Plan boundary allow for minimal restrictions around the site, while also providing for safer designs

Comment 15:

ESKOM: "The NNR will however determine the emergency plan requirements and the extent of the required zone based on a safety assessment of the design of the proposed nuclear power station and the proposed site and surrounds."

CANE, MK: Irrelevant. We are not interested in what NNR has to say. What do Eskom and Arcus Gibb have to say?

Response 15:

Please refer to our Response 7 and 14 above. Emergency Planning is within the ambit of the NNR's nuclear licensing process and is not required to be addressed in detail in the EIA process.

Comment 16:

In Conclusion: we wish to say that a nuclear power station at Bantamsklip is not at all acceptable and we totally oppose it. We would urge Eskom to look at clean, renewable forms of energy that will do the minimum of harm to human and animal health and have the least impact on all aspects of the environment and tourism. Clearly a nuclear power station will have the opposite, having a major, dirty, unsafe and prolonged damaging impact.

Response 16:

Your comment is noted.

The IRP 2010 evaluated several energy mix options and concluded that all forms of energy were required to meet the electricity demand in the future. Eskom is investing in renewable energy.

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 horizontal line extending to the right.

The Nuclear-1 EIA Team

5 August 2015

Our Ref: J27035 / J31314

Your Ref: Email received 03 August 2011

Email: kimchris@telkomsa.net

Dear Ms Kruyshaar



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:

I have a number of concerns with the DEIA as follows:

Economic impacts: I have major concerns about the economic impacts of the NPS and believe that the EIAR fails to consider the economic impacts that the construction of the NPS will have on South Africa. Typical of the development of Nuclear Power Stations worldwide are the massive cost overruns – I do not believe that this will not happen in RSA. As a tax payer, and a committed South African I believe that I have a right to veto the financial investments that my country makes and the debt incurs for to me and my children. The economic assessment does not encourage me that nuclear is a responsible investment in energy or energy security. In addition, nuclear power stations take many years, often exceeding 10 years to develop which has significant economic implications for potential energy users. Non Nuclear alternative energy would provide faster, safer and cheaper power long before the NPS is completed.

I do not support the NPS programme on the grounds that it is economically undesirable for a number of reasons and will place the people of South Africa in an unacceptable debt situation.

Alternative Energy generation options are not adequately assessed. Neither is a no-go option. I understand that it is a legal requirement to assess alternative options, not just sites as well as a no go option. The benefits of non-nuclear alternative energy need to be included in the DEIA if this is to be an honest and professional decision-making tool.

Response 1:

Your comments are noted. There are indeed many technologies (including alternative/renewable energy sources) which could be employed to generate energy to meet South Africa's current and future energy demand. The choice of technologies, described in Chapter 5 of the Revised Draft EIR Version 1 and the weighting to be given to each in terms of addressing South Africa's energy requirements is provided for information but does not fall within the ambit of this Environmental Impact Assessment (EIA). It falls within the ambit of strategic government initiatives such as the Integrated Resources Plan 2010. Further, the affordability to South Africa is assessed through the National Energy Regulator of South Africa tariff process. Both the IRP and NERSA tariff process are subject to



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.



an extensive public participation process. Carrying out such a debate during the EIA process would be duplication.

This EIA and Application for Environmental Authorisation is therefore not a strategic assessment of South Africa's energy requirements and the future energy mix proposed to address these requirements or an investigation into the pros and cons of the use of Nuclear Power versus Renewable/Alternative Energy. It is a tool used to assess the possible positive or negative impact which the proposed project may have on a specific receiving environment, which in this case are the Duynefontein, Bantamsklip and Thyspunt sites.

Despite the site specific nature of the EIA process the Economic Report (Appendix E17 of the Revised Draft EIR Version 1 – Section 3.3) prepared by Conningarth Economists and Imani Development (SA) (Pty) Ltd nevertheless conducts a macroeconomic equilibrium analysis in order to quantify the macroeconomic impact associated with the possible construction and operation of the Nuclear-1 Power Station.

The report acknowledges that, as the nuclear power station is such a large capital investment (equivalent to that of six times the capital investment in Gautrain), the economic ripple effects will go far beyond its direct boundaries. We refer the author to section 3.3 of the report for an expanded discussion.

Lastly we confirm that it is a legal requirement in terms of the National Environmental Management Act to assess feasible alternatives, which is defined to mean *different means of meeting the general purpose and requirements of the activity* – in the case of this EIA, the activity is the construction and operation of a Nuclear Power Station at either the Duynefontein, Bantamsklip or Thyspunt sites. As such Chapters 5, 9 and 10 of the Revised Draft EIR Version 1 discusses alternatives which include:

- Location of the power station;
- Nuclear plant types;
- Layout of the nuclear plant;
- Fresh water supply and utilisation of abstracted groundwater;
- Management of brine;
- Intake of sea water;
- Outlet of water and chemical effluent;
- Management of spoil material;
- Access to the proposed sites; and
- The no-development alternative.

Comment 2:

Risk not adequately dealt with: Japan is ample proof of the crippling impact socially, environmentally and economically of a worst case scenario. The EIAR fails to assess worst-case scenario impacts and generally fails to convince me that even a serious incident will be openly, responsibly and adequately addressed. For the sake of the citizens today and in the future, South African decision makers must learn from the lessons of Fukushima and reject a nuclear option.

I do not support the NPS programme on the grounds that it places an unacceptable risk on the people and environment of South Africa in the possible event of a serious accident or natural disaster.

Response 2:

Your comment is noted. It is acknowledged that the incident at Fukushima as a result of this natural disaster has highlighted many important safety factors in terms of the future of nuclear energy and is indeed a stark reminder of the unpredictability of the natural environment. However it is also well known that South Africa is located on a vastly more stable tectonic environment than that of Japan which is situated close to a major subduction zone within the Pacific Ocean.

Please note that site safety issues are considered on a high level in the Emergency Response and Site Control Reports (Appendix E26 and E27 of the Revised Draft EIR) and will also be dealt with in the NNR process. This process will also be open for public scrutiny and comment.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

The international nuclear power community, and international nuclear representative organisations, are looking at what recommendations they will be formulating to be implemented to ensure the guaranteed safety of nuclear plants at all nuclear power stations around the world. As at the time of my preparing this brief report, Dr Mike Weightman of the Health & Safety Executive's Office for Nuclear Regulation - ONR - in Britain would appear to have been the first to prepare an interim report. (See UK HSE's ONR website url: <http://www.hse.gov.uk/nuclear/fukushima/interim-report.htm>)

It should be noted that a fundamental principle of the nuclear and radiological safety is that over and above meeting specific limits the licence applicant demonstrate the incorporation of ALARA principles and this reinforces that existing approach

Comment 3:

Nuclear Waste not adequately dealt with. There is no long term solution for the waste. The issue of the costs of managing the waste and its disposal is not adequately addressed.

Response 3:

Thank you. Your comments are noted. It is acknowledged that the issues of radioactive waste management is important and integral to debate surrounding nuclear energy and as stated the current global practice is long-term storage of the spent fuel at the nuclear power station. However please note that the radioactive waste management practices envisaged for Nuclear-1 are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal. Nuclear Power Station strives to minimise production of all solid, liquid and gaseous radioactive waste, both in terms of volume and activity content, as required for new reactor designs. This is being done through appropriate processing, conditioning, handling and storage systems. In addition, production of radioactive waste is minimised by applying latest technology and best practices for radiological zoning, provision of active drainage and ventilation, appropriate finishes and handling of solid radioactive waste. Where possible, the Nuclear-1 power station will reuse or recycle materials.

All forms of radioactive wastes are strictly controlled and numerous specialised systems and management practices are in place to prevent uncontrolled contact with these substances. These controls and practices differ for the different forms of radioactive waste. South Africa still has to

formally release a strategy for the long-term management of HLW, including spent fuel. Until such time, all spent fuel is stored temporarily either in spent fuel pools (wet storage), or in dry cask storage facilities (dry storage). This allows the shorter-lived isotopes to decay before further handling, a management strategy that is acceptable from a safety perspective. It must be noted however that as per the Department of Energy's Media Statement on Nuclear Procurement Process Update as released on 14 July 2015 strategies are complete to develop an approach for South Africa to deal with Spent Fuel/High Level Waste disposal.

Disposal of radioactive waste at an authorised facility is being done according to an approved disposal concept, defined and developed with due consideration of the nature of the waste to be disposed of and the natural environmental system, collectively referred to as the disposal system. The disposal system developed for this purpose makes provision for the containment of radionuclides until such time that any releases from the waste no longer pose radiological risks to human health and the environment. The safety assessment process used as basis for this purpose considers both intentional (as part of the design criteria) and unintentional (natural or human induced conditions) releases of radionuclides. Unintentional releases include consideration of unintentional human or animal intrusion conditions, which might lead to direct access and external exposure to radiation.

Once released into the environment, radionuclides might migrate through the environmental system along three principle pathways: atmospheric, groundwater and surface water. Due to the physical nature of L&ILW and HLW disposal concepts, migration along the atmospheric pathway is highly unlikely. The principle environmental pathway of concern is thus the groundwater pathway, with the surface water pathway of secondary concern as an extension of the groundwater pathway. Disposal systems are designed so that releases to groundwater or surface water are highly unlikely as further explained in Chapter 10 of this EIR.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

Whilst the proposed facility is not yet the subject of a specific licence application and the exact safety case requirements that may be set by the NNR are not yet determined the NNR does currently require assessment of external events as stated and as such any assessment methodology can only at this stage be based upon international best practice and as stated in general the NRC requirements are widely used in this regard elsewhere - as such our nuclear safety process is not prescriptive and requires the applicant to demonstrate the safety of the proposed facility - part of the safety case will inevitably entail and adequate demonstration of the robustness of the methodology in the context of international best practice

Comment 4:

Final project design is lacking which makes an assessment of the direct impacts impossible.

Response 4:

Your comments are noted. We assume that you are referring to design detail in terms of the reactor type/manufacture to be used as you have not defined the lack of design detail in your statement above.

It is common practice in EIA processes, especially for installation of industrial plants, to consider the performance of the systems and type of technology proposed to be installed, without referring to

specific suppliers or manufacturers of this technology, of which there may be a range available in the market. As long as the inputs and outputs of the proposed technology are known and the environmental impacts can be predicted or deduced from these inputs and outputs with reasonable certainty, it is not necessary to know the brand name of the technology.

As has been done in other issues and response reports, it may be appropriate to explain the envelope of criteria in colloquial terms, as has been done in public meetings during the Nuclear-1 EIA process. If the envelope of criteria is compared to the specifications for buying a vehicle, this envelope may contain requirements with respect to top speed, fuel type, fuel efficiency, catalytic convertor performance, type of tyres and wheels, fuel tank size, effective range, CO2 emission limits, cruise control, numbers and positions of airbags and a number of other safety systems such as ABS and EBD. The only thing that isn't specified is the brand of vehicle. Providing such a list of criteria would ensure that only a luxury vehicle with certain characteristics could qualify, but that a base model (entry-level vehicle) would not qualify. Similarly, if a vendor proposes a power station design that fails to comply with the criteria established in the Consistent Dataset, that design will not qualify for consideration.

Assuming that an authorisation is granted by the DEA, a power station design that deviates significantly from that specified in the Consistent Dataset in the Nuclear-1 EIR (Appendix C of the Revised Draft EIR) would render the design incapable of meeting the requirements of the EIR and the authorisation. Hence such a non-confirming design could not be considered for construction.

Comment 5:

I believe that in its current form, the DEIA is not adequate as a decision-making tool. In view of the seriousness of the development and the potential long term consequences and risks should it be approved, it is essential that all the concerns raised above are comprehensively addressed and added to the report.

Response 5:

The Environmental Impact Assessment is only one part of the decision making process, as referred to above there are high level planning processes that inform the technology mix for South Africa, the NERSA process to evaluate and approve tariff increases, Eskom has internal processes which evaluate the business case and various detailed studies for the nuclear safety issues. This EIA assesses the environmental aspects of the project and the project could not proceed based only on the EIA approval.

All your comments are noted and will be added to the Revised Draft EIR Version 2 and Final EIR which will be placed before the Competent Authority for decision making.

Yours faithfully
for GIBB (Pty) Ltd



The Nuclear-1 EIA Team