

DECOMMISSIONING AND RELOCATION OF ACACIA AND PORT REX GAS TURBINES

COMMENTS AND RESPONSE REPORT

Scoping Phase

Issue	Raised by	Response
Air and Noise Pollution		
<p>Existing monitoring (noise and pollution) results should be included in the Scope document so that all I&APs can see where the current pollution levels stand at Die Ankerlig, as well as at Acacia Park and what the combined increase in all pollution categories will be.</p>	<p>Mrs. Mienie Wood, Dassenberg Residents Association, comment by e-mail, 1 July 2008</p>	<p>Comment noted. A detailed cumulative specialist air quality and noise study (i.e. considering the impacts from all the Ankerlig units and the Acacia units) will be undertaken as part of the detailed EIA phase of the process. This study will provide an indication of the current ambient air quality and noise pollution in the area.</p>
<p>When Eskom/Die Ankerlig increased their operation by 5 turbines, we objected on the basis that we could hear the noise from our premises and our concerns were, how it would affect the greater Atlantis community. After noise monitoring on our premises, consultation and assurance from both D Herbst and N Gewers that all pollution monitoring results would be sent to us either via email or mail, we withdrew our objection.</p> <p>Since the withdrawal of our objection, no monitoring results communication has been received from Eskom. The pollution generated is a concern.</p> <p>I also want to bring an article to your attention: Table Talk, Wednesday 18 June 2008 "Gas turbines in Edgemead to be relocated to Atlantis" ".....It would give relief to Edgemead residents</p>	<p>Mrs. Mienie Wood, Dassenberg Residents Association, comment by e-mail, 1 July 2008</p>	<p>Comment noted.</p> <p>A noise specialist was immediately contracted to investigate the concerns raised, and it was established that the concerns were unfounded. The results of this specific specialist' investigation were presented to the objector, and on the basis of these, she was requested to withdraw her objection. The issue around the ongoing noise monitoring must still be addressed though.</p> <p>The commercial process for the noise survey contract had been initiated some time, and it was expected that the contract would be in place by 1 September 2008. The contract has subsequently been placed on 15 September. The noise monitoring would be done as soon as all four units are operational (this might prove to be a challenge, since all the units don't run that often). As soon as the first noise monitoring is done, the results would be made available to Ms Wood.</p>

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living in the vicinity of the Acacia power station who have complained for some time about the air and noise pollution generated from the gas turbines".		
It is imperative that all pollution monitoring results are available for the community.	Mrs. Mienie Wood, Dassenberg Residents Association, comment by e-mail, 1 July 2008	Comment noted. Environmental results from the project will be discussed through the established forums.
Concerned that a holistic view of the development at the Ankerlig site is not being obtained due to the various processes which have been undertaken for this site (i.e. the OCGT, Gas 1, the conversion and the relocation of the Acacia and Port Rex units). Need a clear understanding of the cumulative noise and air quality impacts associated with all components of the development. Eskom must beware that all the expansion of development on this one site does not stress the environment.	Hans Linde, DEA&DP: Air Quality Meeting, 17 July 2008	The specialist noise and air quality studies being undertaken for the proposed relocation of the Acacia and Port Rex units will assess the cumulative impacts associated with all components of the development at Ankerlig. A worst-case scenario will be considered where all 9 units are converted and the Acacia and Port Rex units are relocated, and these are operational on a 24 hour basis. Where potentially significant impacts are identified, mitigation measures will be proposed to minimise these impacts to acceptable levels.
A number of issues/concerns regarding the Acacia Power Station air quality have been raised recently by the local communities and the City of Cape Town.	Hans Linde, DEA&DP: Air Quality Meeting, 17 July 2008	An air quality monitoring and modelling study was undertaken for the Acacia Power Station in response to issues/concerns raised. The project team will follow-up what these concerns are and how best these can be addressed.
The EIA needs to indicate the impact of the Acacia units only operating at Ankerlig.		The current emissions from the Acacia units will be used within the air quality modelling to be undertaken within the EIA in order to determine the potential impact of these units on the air quality around the Ankerlig site.
Strategic Environmental Assessment		
A Strategic Environmental Assessment should be carried out so that this project is not looked at in isolation.	Mrs. Mienie Wood, Dassenberg Residents Association, comment by e-mail, 1 July 2008	Comment noted. Strategic Environmental Assessments are not as yet a legal requirement in South Africa. Eskom's strategic planning processes around electricity have considered the bigger picture

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		in terms of power generation and supply, and have informed the need for this project.
Stakeholder Support		
<p>This is to place on record, that our Association has no objection to the decommissioning and relocation of the Acacia units. In fact, many residents who live in close proximity to the power station will welcome this move.</p> <p>Thank you for including our opinion in the EIA Scoping Process.</p>	<p>Gary Irlam, Chairperson, Edgemoor Ratepayers and Residents Association, by e-mail, 25 June 2008</p>	<p>Comment noted.</p>
Cumulative Effects – Biodiversity-Offsets		
<p>This department commented on 19 February 2008 as follow on the Ankerlig Power Station Conversion & Integration project [refer DEAT ref: E12/12/20/1014 and 12/12/20/1037]:</p> <p><i>“The Botanical Assessment (Nick Helme, letter dd 14 January 2008) concluded, amongst other, that:</i></p> <p><i>‘...It should be noted that some sort of biodiversity offset is likely to be recommended at the Impact Assessment stage in order to compensate for the unavoidable loss of existing biodiversity and habitat (Endangered vegetation type) on the site. This would be in addition to the standard basic mitigation such as Search and Rescue or various species...’</i></p> <p><i>However, the above is not included in Table 9.1: Summary of the issues that which require further investigation within the EIA phase and activities to be undertaken in order to assess the significance of these potential impacts (page 128). Kindly include the same to ensure that the Botanical Assessment identify suitable bio-diversity offset projects (e.g. expansion of the</i></p>	<p>Morne Theron and Pat Titmuss, Head; Environmental & Heritage Management Services, Districts B & C, City of Cape Town, comments by fax and e-mail</p>	<p>Comments noted.</p> <p>The gas turbines will be located within the existing Ankerlig Power Station site and therefore there will be no impact on biodiversity. No specialist studies will therefore be undertaken for this aspect at the power station site. Specialist input will, however, be obtained in terms of the potential impacts associated with the proposed 132 kV power line.</p> <p>Where needed and feasible, Eskom would consider on-site biodiversity off-sets on a case-by-case basis.</p>

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<p><i>Blaauwberg Conservation Area) during the EIA phase.</i></p> <p><i>Eskom's response, during our 21 November 2007 meeting, to biodiversity offset relating to this activity is that Eskom have established various environmental offset and ecological corridors along the <u>national</u> grid. However, the opinion is strongly held that an offset should be implemented <u>locally</u>. This, aforementioned opinion, is further strengthened by the fact that the other three proposed Eskom developments on Cape Farm 34 [i.e. New Training Complex (E12/12/20/997), Additional nuclear station (E12/12/20/944) and the Pebble Bed Reactor] will cumulatively lead to significant loss of Cape Flats Dune Strandveld.</i></p> <p><i>It is worthy to note that a similar bio-diversity offset recommendation, to be implemented locally, was made during the assessment processes of the OCGT units. At that stage biodiversity-offset relating to the loss of endangered vegetation type on the site, measuring 20ha, where recommended at a ration of 1:4. Yet the recommendation never translated into the Environmental Authorization. The opinion is held that this said bio-diversity off-set should now be formalized."</i></p> <p>The draft EIA for the above process has not been finalised for comment therefore it is not possible to ascertain whether Eskom has revisited its position on bio-diversity offsets. As such the same argument is re-iterated during this current process due to the fact that the relocation of 4 gas turbine units to Ankerlig will contribute to the cumulative negative impact on the biodiversity loss on a local level. This issue must be addressed in the report</p>		

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<p>Once more, Eskom need to consider Biodiversity Off-sets in the Blaauwberg Area. Yes, Eskom have done some conservation efforts, however Eskom current and future footprint would be much greater if all the new developments are calculated. Eskom should think of purchasing land from farmers to increase the Blaauwberg Conservation Area and link it via ecological corridors (network of transmission line survititudes) to the Koeberg Nature Reserve. Please apply your minds to this as the City of Cape Town will continue to raise this issue.</p>	<p>Morne Theron, Environmental & Heritage Management Services, Districts B & C, City of Cape Town, Focus Group Meeting 1 July 2008</p>	<p>Comment noted.</p> <p>The gas turbines will be located within the existing Ankerlig Power Station site and therefore there will be no impact on biodiversity. No specialist studies will therefore be undertaken for this aspect at the power station site. Specialist input will, however, be obtained in terms of the potential impacts associated with the proposed 132 kV power line.</p> <p>Where needed and feasible, Eskom would consider on-site biodiversity off-sets on a case-by-case basis.</p>
Transmission Line Alternatives		
<p>Kindly clarify that the additional transmission line will only require an extension from the existing Koeberg – Dassenberg 132kV lines to the HV yard. In order to limit the visual impact of the additional 132 kV transmission line the opinion is held that Option 2 (i.e. the 3,8km length) is the most desirable route.</p>	<p>Morne Theron and Pat Titmuss, Head; Environmental & Heritage Management Services, Districts B & C, City of Cape Town, comments by fax and e-mail</p>	<p>Comments noted. The proposed 132kV power line is to integrate the Acacia and Port Rex units at Ankerlig into the transmission/distribution network. It should be noted that the Koeberg-Dassenberg connection will have to be strengthened in future to accommodate load growth in the Dassenberg area. A new 132 kV double circuit line from Koeberg to Dassenberg is being planned for this purpose. A separate EIA will be undertaken when the new line becomes necessary</p>
Scoping Report Corrections		
<p>Page 10, paragraph 2.1.1 – Note the written text refers to Figure 3.1. It should read Figure 2.1.</p>	<p>Morne Theron and Pat Titmuss, Head; Environmental & Heritage Management Services, Districts B & C, City of Cape Town, comments by fax and e-mail</p>	<p>Comment noted.</p>
<p>1) P.3 Table, item 1(a): Quote - "The above-ground storage of a dangerous <i>good</i> - - - ". (My highlight). My English dictionary confirms that the use of the <i>noun goods</i> to refer to a collection of items, materials, liquids,</p>	<p>R Mike Longden-Thurgood, BSc, MINucE, CRadP, MSRP (Retired), Environment Representative, Institution of</p>	<p>Comment noted. These items are quoted directly from the legislation.</p>

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<p>etc, <i>is only valid in the plural form</i>. The word <i>good</i> is an <i>adjective</i>: it doesn't exist in <i>noun</i> form. The phrase needs to be reworded as follows: "<i>The above-ground storage of dangerous goods - - -</i>".</p> <p>Note that this comment also applies to item 7 in the same table.</p> <p>However, if this incorrect use of the adjective "<i>good</i>" to imply "<i>goods</i>" is actually used in the legislation, it is clearly quite wrong. As far as I am aware, legislation does not have the facility to invent new words and introduce them into the English lexicon. Therefore, in this circumstance, after any quote from the legislation the word <i>[sic]</i> needs be added (in italics and in brackets) after the quote in order to clearly indicate that there's something amiss with the original from which the quote has been made.</p>	<p>Nuclear Engineers, SA Branch Environment Communicator, National Association for Clean Air, comment by e-mail, 1 July 2008</p>	
<p><i>Ibid, 3rd para:</i> The last sentence in this paragraph has got seriously out of its proper order. Thus it says "<i>However, due to the industrial nature of the area within which the power station is located, this positive impact is expected to be limited</i>".</p> <p>This sentence comes <i>after</i> the comment about the <i>Acacia Power Station</i> whereas, of course, it relates to the <i>Port Rex Power Station</i>. The last two sentences, therefore, need to be reversed in their order.</p>	<p>R Mike Longden-Thurgood, BSc, MINucE, CRadP, MSRP (Retired), Environment Representative, Institution of Nuclear Engineers, SA Branch Environment Communicator, National Association for Clean Air, comment by e-mail, 1 July 2008</p>	<p>Comment noted.</p>
Fuel		
<p>This office is of the opinion that the decommissioning of the Acacia gas turbines abutting a residential area and its subsequent relocation to within the confines of one central location (i.e. Ankerlig abutting an industrial</p>	<p>Morne Theron and Pat Titmuss, Head; Environmental & Heritage Management Services, Districts B & C, City</p>	<p>Comment noted. Eskom is in the process of investigating alternative modes of fuel transportation and is currently busy with an EIA to this effect.</p>

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precinct) could be a positive step from a safety perspective. The afore-mentioned opinion is however based on the assumption that the transportation of fuel via road haul will be replaced by rail haul in the long-term.	of Cape Town, comments by fax and e-mail	
<p>What is the total Ankerlig site fuel footprint for:</p> <ul style="list-style-type: none"> • Phase 1, • Phase 2, • The Conversion; and, • Acacia/Port Rex Units? 	Morne Theron, Environmental & Heritage Management Services, Districts B & C, City of Cape Town, Focus Group Meeting 1 July 2008	A total of 61,4 million litres of diesel will be required to provide a back-up supply for all phases of the power station, including the relocated units. The current fuel footprint (Phases 1 & 2) is only 16.2 ML though.
What will the new fuel storage tanks for the Acacia and Port Rex units look like?	Cecelia De Bruyn, Environmental & Heritage Management Services, Districts B & C, City of Cape Town, Focus Group Meeting 1 July 2008	The units from Acacia and Port Rex would be serviced before they are relocated to the Ankerlig site. Fuel tanks will be designed to match the aesthetics of the Ankerlig site and comply with the highest industry standards for fuel storage. 2 x 1 million litre tanks are planned specifically for the Acacia units, which would remain an emergency back-up supply for Koeberg. These tanks would be smaller than the current diesel tanks at Ankerlig (which are 2.7 million litre tanks).
Would these new tanks be visible from the R307 Route?	Cecelia De Bruyn, Environmental & Heritage Management Services, Districts B & C, City of Cape Town, Focus Group Meeting 1 July 2008	It should not be visible due to the landscaped sand berm along the northern side of the site. A visual impact assessment of the proposed project will be undertaken as part of the detailed EIA phase of the process.
How far is Eskom's discussions with the City of Cape Town around the introduction of a fuel levy (proportional to Eskom's fuel haulage) between Caltex and Ankerlig? This need to be part of the Traffic Impact Assessment.	Morne Theron, Environmental & Heritage Management Services, Districts B & C, City of Cape Town, Focus Group Meeting 1 July 2008	No decisions have been made and follow-up work is being done in conjunction with the City of Cape Town: Roads & Stormwater to determine the best way forward on this. It is noted though that Eskom is not the only user of this haul route, hence any further discussions would have to be cognisant of this. It must further be borne in mind that taxes and levies are already paid via the fuel being purchased. A

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		follow-up meeting was held with CoCT: Roads & Stormwater on 17 September, and the appointed consultant (ARUP) would be looking at the various options that were put on the table by both parties.
How does the addition of turbines at Ankerlig affect fuel requirements/availability at Ankerlig?	Alvan Gabriel, DEA&DP E-mail, 17 July 2008	2 x 1 million litre tanks are planned specifically for the Acacia units, which would remain an emergency back-up supply for Koeberg. Hence dedicated fuel storage, independent of that of Ankerlig, is required for these units. These tanks would be smaller than the current diesel tanks at Ankerlig (which are 2.7 million litre tanks). Fuel tanks will be designed to match the aesthetics of the Ankerlig site and comply with the highest industry standards for fuel storage.
What happens to the fuel storage tanks at Acacia?	Alvan Gabriel, DEA&DP E-mail, 17 July 2008	The EMP will address the removal of all infrastructure components from site. In all probability, the tanks will be thoroughly cleaned, dismantled and sold-off as scrap metal (i.e. decommissioned).
Reasons for Decommissioning and Relocation		
What are the reasons for decommissioning and relocating the Acacia and Port Rex turbine units to the Ankerlig Power Station site?	Morne Theron, Environmental & Heritage Management Services, Districts B & C, City of Cape Town, Focus Group Meeting 1 July 2008	<ul style="list-style-type: none"> • An existing 400 kV constructed transmission line between the Acacia and Koeberg power stations that is currently operated at 132 kV to connect the Gas Turbines at Acacia to Koeberg for the Koeberg off site-supply is needed for network strengthening requirements. An alternative arrangement is therefore required for the Koeberg off site supply. • Two options to accommodate the Koeberg off site supply are being investigated by Eskom, namely, <ul style="list-style-type: none"> a) the relocation of the gas turbines that are currently installed at Acacia power station to Ankerlig power station and the associated the connection of the Koeberg – Dassenberg 132 kV line to Ankerlig.

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		<p>b) the installation of a new 132 kV line between the Acacia and Koeberg power stations. This initiative will be the subject of a separate environmental impact assessment study, to be initiated if necessary.</p>
<p>The turbines at Acacia are often seen operational – why is this? Do these turbines supply power to other areas aside from Koeberg? If so, how will this be accommodated?</p>	<p>Alvan Gabriel, DEA&DP E-mail, 17 July 2008</p>	<p>Although the main purpose of the gas turbines at Acacia is its function as the Koeberg off site supply, the units are also available to Eskom as a supply option, mainly for peak power and for emergency supply requirements. The units are connected to the Eskom grid and are therefore a supply option when supply constraints on the grid demands it (such as during the January 2008 power shortages). The units will remain to be connected to the grid if they are installed at Ankerlig power station and there will be no change to its availability as a supply option in addition to its function as the Koeberg off site supply. The availability of these units to Koeberg, is also being tested on a six-monthly basis (NNR requirement). It must also be borne in mind that for normal production purposes, these units are low on the merit order of generation supply options, due to the high operating (fuel) cost.</p>
Transmission Line		
<p>Were will the Acacia/Port Rex transmission line go?</p>	<p>Morne Theron, Environmental & Heritage Management Services, Districts B & C, City of Cape Town, Focus Group Meeting 1 July 2008</p>	<p>There will be no Acacia/Port Rex transmission line. The three units proposed to be re-located from Acacia and one from Port Rex at Ankerlig as the Koeberg off-site supply, would be linked into the grid by turning the existing Koeberg-Dassenberg 132 kV line into Ankerlig.</p>
<p>What is a double circuit line?</p>	<p>Cecelia De Bruyn, Environmental & Heritage</p>	<p>A double-circuit transmission line is a transmission line where two electrical circuits are carried on a tower</p>

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	Management Services, Districts B & C, City of Cape Town, Focus Group Meeting 1 July 2008	line. For a three-phase system, this implies that each tower supports and insulates six conductors.
Please ensure that your transmission line stays in the same corridors. Do not open new corridors. We prefer your option 2 for proposed transmission line.	Morne Theron, Environmental & Heritage Management Services, Districts B & C, City of Cape Town, Focus Group Meeting 1 July 2008	Comment noted.
Is it not possible to run a 132kV line between Koeberg and Acacia along the existing pylons (the existing 400 kV pylons between Koeberg and Acacia)?	Alvan Gabriel, DEA&DP E-mail, 17 July 2008	This option was considered, but was found to be not suitable because common failure with the 400kV circuit will be possible. A distinct requirement for the Koeberg off site supply is the elimination of common failure conditions with the 400kV network.
Does Eskom intend to link the 400 kV Acacia-Koeberg line to Ankerlig?	Alvan Gabriel, DEA&DP E-mail, 17 July 2008	No. The second Koeberg – Acacia 400 kV line is required to satisfy a Grid Code requirement whereby it must be possible to evacuate power generated by a power station with a generating capacity larger than 1 000 MW, such as Koeberg, for the worst single network contingency without overloading a line in the network.
Project Timelines		
What is the due date for the Ankerlig Conversion and Transmission Integration Project and the Decommissioning and Relocation of the Acacia and Port Rex units to Ankerlig.	Morne Theron, Environmental & Heritage Management Services, Districts B & C, City of Cape Town, Focus Group Meeting 1 July 2008	It would depend on how soon the EIAs are completed and the issuance of the Environmental Authorisation. Expected timeframes for obtaining Environmental Authorisation is December 2008/January 2009. It could take up to 42 months after the necessary environmental approvals have been obtained to re-locate the Acacia gas turbines to Ankerlig. In parallel, Eskom is busy with technical and financial feasibility.
Potential Impacts		
P.46, 1st para: Quote - "Potential impacts during the operational phase: The exhaust emissions	R Mike Longden-Thurgood, BSc, MINucE, CRadP, MSRP	Comment noted.

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<p><i>during normal operation, start-up and upset conditions, can have a negative impact on the air quality of residential townships in close proximity to the power station. Potential impacts are expected to be cumulative at local level. The extent of the potential impacts associated with all emissions from the Ankerlig Power Station site will need to be quantified and assessed in the EIA."</i></p> <p>I presume that considerable information and data about the pollution from the exhaust gases will already have been accumulated during the current operational phase of the Ankerlig Power Station, particularly in relation to the summer south westerly winds, and also during the infrequent winter inversion conditions. I presume that these data will be discussed in the EIR.</p> <p>However, in my opinion to suggest that Bothasig, Edgemead and Monte Vista are "<i>residential townships</i>" would be enough to make some of their residents feel somewhat 'uncomfortable'. They are, of course, long established formal suburbs of Cape Town.</p>	<p>(Retired), Environment Representative, Institution of Nuclear Engineers, SA Branch Environment Communicator, National Association for Clean Air, comment by e-mail, 1 July 2008</p>	<p>A specialist air quality study will be undertaken as part of the detailed EIA phase of the process. This study will provide an indication of the current ambient air quality and noise pollution in the area. This study will also consider the cumulative air quality and noise issues associated with the proposed relocation of the gas units from Acacia and Port Rex to Ankerlig, taking existing information for the power station into account.</p> <p>The discussion is under the heading "Nature and Extent of Impacts associated with the Relocation of the gas units to the Ankerlig Power Station site" and therefore, the townships being referred to are the residential townships of Atlantis and the informal township of Witzand (as listed on page 44, and not the residential areas around the Acacia power station site.</p>
Employment		
<p>P.57 Section 5.7.1, 2nd para: Quote - "<i>There may be limited employment opportunities associated with the decommissioning of the Acacia units. However, the majority of these employment opportunities are expected to require skilled personnel. Therefore, any benefits to local communities would be limited</i>".</p> <p>The only source of temporary personnel (not forgetting</p>	<p>R Mike Longden-Thurgood, BSc, MINucE, CRadP, MSRP (Retired), Environment Representative, Institution of Nuclear Engineers, SA Branch Environment Communicator, National Association for Clean Air, comment by e-mail, 1 July</p>	<p>Comment noted.</p>

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<p>the fact that recent legislation is intended to eliminate temporary employees) would be from the informal township alongside Jo Slovo, near Milnerton. The wording which relates to Bothasig, Edgemean and Monte Vista should describe them as suburbs. It is likely that already employed highly skilled personnel at Acacia Park are likely to be living in these three suburbs. There are no townships associated with these three suburbs.</p> <p>The employment opportunities normally understood for temporary work usually only require minimal skills. Perhaps this points needs to be emphasised.</p> <p>The situation should be clarified in order to prevent anyone in authority who is unfamiliar with the area asking what might be awkward questions.</p>	<p>2008</p>	
<p>P.58 Section 5.7.2, 2nd para: The same employment opportunity point arises here as for Section 5.7.1.</p>	<p>R Mike Longden-Thurgood, BSc, MINucE, CRadP, MSRP (Retired), Environment Representative, Institution of Nuclear Engineers, SA Branch Environment Communicator, National Association for Clean Air, comment by e-mail, 1 July 2008</p>	<p>Comment noted.</p>
Significance		
<p>P.70 Table - Activities to be undertaken in order to assess the significance of impacts: The wording of the first para seems to give an impression that absolutely nothing has been done to assess air quality across Atlantis arising from Ankerlig airborne emissions, despite all the concerns which were raised (I am sure during the first EIA process, in which I wasn't involved, and certainly</p>	<p>R Mike Longden-Thurgood, BSc, MINucE, CRadP, MSRP (Retired), Environment Representative, Institution of Nuclear Engineers, SA Branch Environment Communicator, National Association for Clean</p>	<p>Comment noted.</p> <p>Work has been carried out for the OCGT units. However, the studies referred to in this table relate to the Acacia and Port Rex units which are proposed to be relocated to the Ankerlig site. The impacts of operating these units (as well as the cumulative</p>

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<p>the second one in which I was involved). I trust that this impression is incorrect - surely work has already been carried out on air quality arising from emissions from the Ankerlig OCGT units?</p> <p>If it has, then perhaps a better impression would be given in this DSR that there will be a <i>continuation of work</i> currently being carried out, rather than give a misleading impression that nothing has been done so far. But if nothing <i>has</i> been done, then one might ask the question what on earth is going on? This would be unacceptable in any environment, especially considering the concerns that have been raised on this issue.</p> <p>However, there are sometimes aspects for which EIA processes should not be considered in total isolation, in this case being the extension of the facilities on the same site, Ankerlig, with aero-derivative OCGT units removed from elsewhere.</p>	<p>Air, comment by e-mail, 1 July 2008</p>	<p>impacts of all the units operating on the site) must be assessed in the detailed phase of the EIA process in order to determine the significance of any impacts on the surrounding areas.</p>
Site Decommissioning		
<p>There are two or three power line routes into this station running up the Electrical servitude and Nature Conservation area and over the mountain, are these to remain or will one or more be dismantled ?</p> <p>The grounds on which the Turbines stand what is going to be done there once the plant has been removed ?</p> <p>Is there any Asbestos lagging or other form of Asbestos on site and if so what precautions are being taken to contain this should there be any such materials?.</p>	<p>Gary Irlam, Chairperson, Edgemead Ratepayers and Residents Association, comment by e-mail, 25 June 2008</p>	<p>Comments noted.</p> <p>All transmission servitudes will remain in and out of the Acacia Substation site.</p> <p>The land is Eskom Transmission property as part of the bigger Acacia Substation site.</p> <p>The only asbestos-containing structure currently on-site at Acacia is the roof of the mechanical workshop, which is in a very good condition. No other asbestos cladding, etc. is being used on site. The EIA will determine what type of substances need to be removed, and Eskom has proven capabilities in the</p>

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<p>The fuel source / supply or Fuel container, how is this going to be removed and what precautions are to be taken to prevent contamination of the environment ?</p>		<p>removal of, for example asbestos from power stations (e.g. asbestos was successfully removed from all the old, return-to-service power stations such as Camden, Grootvlei and Komati). The site EMP for decommissioning will clarify all aspects of removing the Acacia Power Station components and substances.</p> <p>The EMP will address the removal of all infrastructure components from site.</p>
<p>Acacia currently appears to have more than 3 turbines – what happens to the rest? Why not remove 4 from here to Ankerlig? Why not remove all to Ankerlig?</p>	<p>Alvan Gabriel, DEA&DP E-mail, 17 July 2008</p>	<p>Acacia Power Station has only 3 gas turbine units, which are proposed to be relocated to Ankerlig. A fourth similar unit is proposed to be relocated from Port Rex to Ankerlig, to facilitate (phase) the relocation of the Acacia units.</p>
Request for Information		
<p>From the information it is assumed that the existing Ankerlig Power Station is located on the Remainder of Farm No 1395: Division Cape in the Atlantis Area.</p> <p>Please provide the following information to enable the Department of Agriculture: Western Cape to make a recommendation:</p> <ul style="list-style-type: none"> • Cadastral Map • Surveyors diagram • Aerial photography of the existing subject property with the cadastral lines indicated on it. • Current Zoning • Size of the property • Proposed Development and site development plan. • Possible impact on agricultural land and supporting biodiversity. • Clearly specify current land use of the area to be 	<p>A.Roux and Jan Smit, Western Cape Department of Agriculture, Elsenburg, comment by e-mail and mail, 26 June 2008</p>	<p>Comments noted. An electronic copy of the draft Scoping Report was sent to Western Cape Department of Agriculture. No comments were received on the DSR.</p>

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<p>developed.</p> <p>Please take note:</p> <ul style="list-style-type: none"> • That this is also a recommendation to the relevant deciding authorities in terms of the Subdivision of Agricultural Land Act 70 of 1970 and the Land Use Planning Ordinance 15 of 1985 and that the applicant must provide the local government as well as the National Department of Agriculture with copies of the application. • Kindly quote our reference number in any future correspondence in respect of the application. • The Department reserves the right to revise initial comments and request further information based on the information received. 		
Port Rex Power Station		
When was this power station built and is it still in use?	Roux Van Zyl, Business Editor, Daily Dispatch, comments by e-mail, 05 June 2008	The power station was built in 1976 and still in use.
If not, when was it decommissioned and what was the reason for this?	Roux Van Zyl, Business Editor, Daily Dispatch, comments by e-mail, 05 June 2008	There are no plans to decommission the Port Rex power station, only one gas turbine unit will be removed from the plant. The gas turbine from Port Rex will be used to facilitate the moving of the Koeberg-off-site supply to Ankerlig and a third gas turbine may be re-located at Port Rex when the move is complete, depending on Eskom's requirements at the time.
What is the exact location of this turbine?	Roux Van Zyl, Business Editor, Daily Dispatch, comments by e-mail, 05 June 2008	Port Rex Power Station is located close to East London Airport (in the Woodbrook Industrial Area).
What is the size and electricity output capacity of this turbine?	Roux Van Zyl, Business Editor, Daily Dispatch, comments by e-mail, 05 June 2008	The Power Station has 3 units, each with two Being 707 type engines. The units are rated at 57MW each, thus 171MW for the station.

Issue	Raised by	Response
I read through it and have one questions: what is the rationale behind removing one unit from East London and others in Cape Town to Ankerlig?	Roux Van Zyl, Business Editor, Daily Dispatch, comments by e-mail, 05 June 2008	The main aim is to relocate Acacia Power Station (duplicate of Port Rex) to the new Ankerlig site. However, as Acacia is linked to the Koeberg Nuclear Power Station as an off-site supply, a minimum of two gas turbine units must be available at all times to start when a signal is received from Koeberg. During the move one of the three gas turbine units will be out of commission for an extended period and the fourth gas turbine is required to manage the risk of a failure of one unit while one unit is out of commission. A condition where only one gas turbine unit is available for the Koeberg off site supply could result in a controlled shut down of the Koeberg generators.
Are these peaking power stations under-utilised at the present moment and could be of better use at Ankerlig?	Roux Van Zyl, Business Editor, Daily Dispatch, comments by e-mail, 05 June 2008	Eskom's Gas Turbine stations serve as peaking and emergency plant and therefore operate at low load factors. The units will remain available for peaking and emergency back-up purposes regardless of location.
No mention is made of a potential impact on East London if one unit is removed here - could this possibly reduce our peaking power back-up capacity?	Roux Van Zyl, Business Editor, Daily Dispatch, comments by e-mail, 05 June 2008	The exercise will reduce the peaking power back-up supply for the country by approximately 57 MW once the move process has commenced,. However Eskom has recently commissioned approximately 1 000 MW of gas turbine peaking plant at Atlantis and Mossel Bay and a further approximately 1 000 MW peaking capacity is scheduled to be commissioned before the winter of 2009. The installed peaking capacity is available for the country, including East London.
Or will added power at Ankerlig in effect secure our electricity supply indirectly?	Roux Van Zyl, Business Editor, Daily Dispatch, comments by e-mail, 05 June 2008	The establishment of a second 400kV transmission line between Acacia and Koeberg is a requirement for the integration the Open Cycle Gas Turbines installed and being installed at Ankerlig. The option to move the Acacia gas turbines to Ankerlig will facilitate the establishment of a second 400kV line between

Issue	Raised by	Response
		Koeberg and Acacia and hence ensure the optimal utilisation of the generation capacity installed at Ankerlig.
How will the removal of the turbine from Port Rex affect the requirements there?	Alvan Gabriel, DEA&DP E-mail, 17 July 2008	<p>The exercise will reduce the peaking power back-up supply for the country by approximately 57 MW for the duration of the project,. However Eskom has recently commissioned approximately 1000 MW of gas turbine peaking plant at Atlantis and Mossel Bay and a further approximately 1000 MW peaking capacity is scheduled to be commissioned before the winter of 2009. The installed peaking capacity is available for the country, including East London.</p> <p>The relocation of the gas units from Acacia and Port Rex will optimise the Transmission grid in the Western Cape and will improve on the reliability of the power being transmitted from the new Ankerlig Power Station, thus in effect securing the electricity supply further.</p>
I'm aware of the project. Our only concern would be our driveway being blocked by construction vehicles and equipment during the decommissioning and removal of the one gas turbine unit from the Port Rex Power Station. We would urge Eskom and the decommissioning team to be aware of our fuel tankers moving in and out of our facility and not to obstruct our driveways.	Peter Cotterell, Manger, Express Petroleum, East London, Comments by telephone, 17 July 2008	Comment noted.

DECOMMISSIONING AND RELOCATION OF ACACIA AND PORT REX GAS TURBINES

COMMENTS AND RESPONSE REPORT
Environmental Impact Assessment Phase

Issue	Raised by	Response
Changing Objectives		
<p>In our dealings with Eskom we were told that Ankerlig was merely there to be used for the 4-5 peak hours. I quote from a letter dated 20 August 2007 received from D L Herbst</p> <p>".....However, it is unlikely that the plant will run every day for extended hours. In the future, as the Return-to-Service power stations (previously mothballed power stations such as Camden, Grootveli and Komati that are currently being re-commissioned) and new coal fired power stations are built the plant would run infrequently for very few hours at a time...."</p> <p>In the long term, this seemed acceptable as one would not be exposed to the constant noise and pollution from Ankerlig.</p>	<p>Mrs. Mienie Wood, Woodlands Small Holding, Dassenberg, comment by e-mail, 05 September 2008</p>	<p>Comment noted. It is still Eskom's preference to operate these units as little as possible, due to the high operating (fuel) costs. All the gas turbines in Eskom are operated ("run") on a last resort basis (low merit order based on production cost and availability). However, in times of emergencies, Eskom will utilise all available generating capacity in order to meet the demand for electricity, considering the "cost of unserved energy". Therefore, the EIA process has been undertaken on a 'worst-case scenario' basis in order to predict the potential impact associated with the proposed units should they be required to operate on a 24-hour basis.</p>
Acacia & Port Rex Technology		
<p>So why then is Acacia Power Station relocating if Ankerlig will run infrequently? Acacia Power Station is old technology, with that comes numerous issues. Old technology can only mean greater fallout</p>	<p>Mrs. Mienie Wood, Woodlands Small Holding, Dassenberg, comment by e-mail, 05 September 2008</p>	<p>Comment noted. The Final Scoping Report deals extensively with the rationale for the relocation of the Acacia units. The Acacia units are a dedicated off-site supply to Koeberg in the event of emergencies (which is a NNR requirement as part of Koeberg's nuclear licence), and is completely independent from the number of Ankerlig OCGT units and/or the way the Ankerlig power station is being operated.</p> <p>It must be noted that the gas units from Acacia will be refurbished before being relocated to the Ankerlig</p>

Issue	Raised by	Response
<p>When we as the Dassenberg Residents Association originally agreed to the establishment of the Ankerlig Power Station, we were led to believe that the turbines and units will be of the newest possible technology.</p> <p>Considering the amount of experimenting that goes into the establishment of the newest technology, to have the least possible impact on the environment, we agreed upon the establishment of such technology. Now Eskom is looking into moving old technology into a power station that we were led to believe will only consist of new technology. Surely the impact of old technology will have a more negative impact on our communities and environment?</p> <p>Three immediate factors come to mind:</p> <ol style="list-style-type: none"> 1) Ignition and combustion of fuel. It doesn't take a scientist to see the difference of the turbines running in Acacia Power Station, compared to the turbines in Ankerlig, to see the difference between the old and new technology. The Acacia Power Station turbines emit much more pollution in the air, as can be seen when one drives past them, and as is evidence from the numerous complaints that has been reported by residents in Edgemead. That is not what we envisioned for Ankerlig! 2) Height of chimney (stacks) chambers: When Eskom approached us with the current turbines in Ankerlig, we were led to believe that the chimneys are of such a height and combustion of such power, that any gases that exit the chimney will be so high that it will 	<p>Tyron Williams, Chairperson: Dassenberg Residents Association, Geographical Representative: Ward 32 Subcouncil 7/Koeberg, comments by e-mail, 08 September 2008</p>	<p>Power Station site.</p> <p>Comment noted.</p> <p>The specialist noise and air quality studies being undertaken for the proposed relocation of the Acacia and Port Rex units assess the cumulative impacts associated with all components of the development at Ankerlig. A worst-case scenario will be considered where all 9 units are converted and the Acacia and Port Rex units are relocated, and these are operational on a 24-hour basis. Where potentially significant impacts are identified, mitigation measures will be proposed to minimise these impacts to acceptable levels.</p> <p>The current emissions from the Acacia units have been used within the air quality modelling undertaken within the EIA in order to determine the potential</p>

Issue	Raised by	Response
<p>have no impact on our community. Thus far, it seems to be accurate. Our concern is thus what impact the Acacia Power Station units will have. They have much lower chimney stacks and the burning of fuel of lower velocity. When passing the units when they are operational, one can see a clear haze when they are running, totally different than the Ankerlig Units.</p> <p>3) Height: As experienced by the residents of Edgemead, the turbines at Acacia Power Station are quite noisy. This is contrary to the units from Ankerlig. Another sign of old technology versus new.</p>		<p>impact of these units on the air quality around the Ankerlig site.</p>
Noise & Pollution		
<p>So why then is Acacia Power Station relocating if Ankerlig will run infrequently? Acacia Power Station is old technology, with that comes numerous issues.</p> <ul style="list-style-type: none"> • Residents of Edgemead have been complaining about the noise and fall out pollution for quite some time. • Noise levels will increase. • No monitoring reports have been forthcoming from Eskom as agreed upon, there is no baseline to measure by. 	<p>Mrs. Mienie Wood, Woodlands Small Holding, Dassenberg, comment by e-mail, 05 September 2008</p>	<p>Comment noted.</p>
Fuel		
<ul style="list-style-type: none"> • What about the fuel storage. Additional turbines indicates additional fuel storage. How much more fuel? • Where will the fuel be stored? • What type of fuel is and will be used. Can a fuel type 	<p>Mrs. Mienie Wood, Woodlands Small Holding, Dassenberg, comment by e-mail, 05 September 2008</p>	<ul style="list-style-type: none"> • 2 x 1 million litre tanks (dedicated tank storage) are planned specifically for the Acacia units, which would remain an emergency back-up supply for Koeberg. These tanks would be smaller than the current diesel tanks at Ankerlig (which are 2.7 million litre tanks). • Fuel will be stored in the area to the east of the existing Ankerlig Power Station. • The Acacia and Port Rex units currently utilise

Issue	Raised by	Response
<p>be switched, who monitors it?</p> <ul style="list-style-type: none"> • Transportation of additional fuel per road – an added hazard. 		<p>kerosene. However, these aero-derivative gas turbines are quite robust, and can be fired on a range of liquid fuels, including diesel. A decision has been taken by Eskom, due to logistical considerations, to switch the Acacia units to diesel as well.</p> <ul style="list-style-type: none"> • Eskom is in the process of investigating alternative modes of fuel transportation and is currently busy with an EIA to this effect.
<p>As is, with the total of 9 OCGT, the fuel storage on site will be a staggering 11 million liters of diesel! With the establishment of the Acacia Power Station turbines on site, they will add another 2 million liters of fuel! This is simply not acceptable! Having 13 million liters of diesel fuel on the verge of the Witsand Aquifer not only is extremely risky, but borders on negligence! Even with every mitigation measure in place, nothing will prepare Eskom in the event of a natural disaster such as an earthquake. In such a case, I fear for the natural disaster that will take place with 13 million liters of fuel on site! We therefore object to the establishment of more fuel storage tanks. As is, we think that storing 11 million litres onsite is preposterous.</p>	<p>Tyron Williams, Chairperson: Dassenberg Residents Association, Geographical Representative: Ward 32 Subcouncil 7/Koeberg, comments by e-mail, 08 September 2008</p>	<p>Comment noted.</p> <p>With the first two phases at Ankerlig (OCGT + Gas 1 expansion), a total of 16.2 MI will be stored on-site. However, a total of 61,4 million cubic litres of diesel will be required to provide a back-up supply for all phases of the power station, including the relocated units.</p> <p>Risk assessments were done for both the first and second phases of the project. A comprehensive risk assessment has recently been completed for the Ankerlig site (in its totality, inclusive of the risks associated with conversion, additional fuel storage and relocation of the Acacia units), looking at the cumulative risk impact from all of the operations at Ankerlig. This is included as part of this Draft Environmental Impact Report.</p>
Bigger Eskom Footprint		
<p>Eskom must be looked at holistically and not only each little project that is pushed through in isolation. Eskom must know what their intentions are on the large scale of things and this should be brought out in the open. There are currently various Eskom projects on the go.</p>	<p>Mrs. Mienie Wood, Woodlands Small Holding, Dassenberg, comment by e-mail, 05 September 2008</p>	<p>Comment noted. Various specialist studies are being conducted to determine the cumulative impact from the Ankerlig operations.</p>

Issue	Raised by	Response
<p><u>What will Eskom's footprint be at the end of the day on the ground, in the atmosphere and underground?</u></p>		
Relocation & Process Concerns		
<p>Firstly, we would like to thank your for the meeting held at Woodlands on Friday 22 August 2008. It was a very informative meeting. I must admit that it was disappointing that the meeting was not attended by any representative of Eskom. The apology from Mr Grewers is noted, but surely someone else could have attended in his place. Makes one wonder how serious Eskom takes our concerns.</p> <p>We have studied the information on the relocation of the Acacia Power Station turbines to Atlantis, and have the following concerns concerning the relocation and others:</p> <p>PROCESS: When we as the Dassenberg Residents Association were originally approached concerning the Ankerlig project, the project entailed 4 OCGT units on the premises. Before long, Eskom bulldozed ahead, and subsequently they are now in the process of construction and completion of another 5 OCGT units, totaling 9. Then the study was being done for the CCGT. Now Eskom is planning to move the Acacia Power Station turbines, as well as one Port Rex turbine to Ankerlig as well, totaling the amount of fuelled turbines to 13!</p>	<p>Tyron Williams, Chairperson: Dassenberg Residents Association, Geographical Representative: Ward 32 Subcouncil 7/Koeberg, comments by e-mail, 08 September 2008</p>	<p>Comments noted.</p> <p>Eskom has done 2 EIAs (first one for the first 4 OCGT units, and the second EIA for the expansion – additional 5 units at Ankerlig) and have received Environmental Authorisations for both. In both instances, an extensive public participation process had been held and comments elicited from various stakeholders.</p> <p>The Acacia relocation is necessitated by certain grid code requirements that Eskom must adhere to. By relocating these units to Ankerlig, the existing 400 kV transmission line (currently operated at 132 kV level) will then be freed-up to assist with the evacuation of power from Koeberg and/or Ankerlig, at the same time satisfying the grid code contingency requirement of N-</p>

Issue	Raised by	Response
<p>That is excluding the CCGT. When Eskom originally held public participation processes, we were not aware that Ankerlig was to grow to this size and this was also not what we as a community agreed upon! Surely Eskom knew about the possibility of moving the Acacia Power Station Complex to Ankerlig when they started the process? As far as we are concerned, Eskom is not transparent in their application and participation process!</p> <p>GENERAL: We as the Dassenberg Resident Association are very hesitant in agreeing to any suspect project that Eskom plans. As experienced by one of our members, Mrs. Mienie Wood and explained in her comment letter, regarding the withdrawal of her objection in one of the previous projects, we are careful for projects we feel might negatively influence our community.</p> <p>After Mrs. Woods withdrew her objection, she has not received any correspondence or promised material from Eskom. Considering the high risk the Acacia Power Station Units hold for our area, we are extremely careful to allow any project that can negatively influence our community. We fear that if Eskom gets to place the old Dinosaur in our community, they will not honour their responsibility. Considering they do not even keep to their meetings with us...</p>		<p>1-1.</p> <p>As part of its planning process Eskom is exploring new generating supply options on a continuous basis in response to the growing demand. The potential conversion of the OCGTs to CCGTs has been identified as a potential supply option that is currently being investigated. Although the potential of converting OCGTs to CCGTs was known at the time that the OCGTs were planned, the concept of converting them to CCGTs was not studied then.</p> <p>The need for a second 400 kV line between Acacia and Koeberg was identified during the investigations that were done for the implementation of the Gas 1 OCGT units at Ankerlig. Various options to accommodate the Koeberg off-site supply were identified. The re-location of the Acacia gas turbines at a different site was identified as a possible option, but the details had to be studied and were not known at the time of compiling this report.</p>

Issue	Raised by	Response
<p>We do not feel that the relocation of the Acacia Power Station units to our area is a good and well thought of idea. We therefore are against the relocation, as we feel there are other options available. Considering that Ankerlig will eventually consist of 14 turbines in total, we feel that Eskom can surely dedicate some of the current turbines to Koeberg, especially in the light that we were informed that the current turbines will only run peak hours, only if really necessary.</p> <p>I, the Chairperson of the Dassenberg Residents Association underwrite the letter submitted by our Secretarty, Mienie Woods.</p>		