

# **Environmental Impact Assessment and Waste Management License Application for a proposed 60 year ash disposal facility and associated infrastructure for Kusile Power Station**

(NEAS Ref: DEA/EIA/0000514/2011) (Ref: 12/12/20/2412)

## **Issues and Responses Report**

**Version 2**

This Issues and Responses Report (Version 2) captures the issues raised by stakeholders during the Scoping Phase of the Environmental Impact Assessment (EIA) process and Waste Management License Application for the proposed extension of ash disposal facilities and associated infrastructure for Kusile Power Station.

As part of the announcement process, a Background Information Document (BID), with a comment and registration sheet was posted and distributed by hand during October 2011. Letters of notification were also sent out by registered mail in October 2011 to affected landowners. An advertisement was placed in various newspapers and site notices were also put up in the area of the proposed development during October 2011.

Two public meetings were held on 15 February 2012 at the El Toro Conference Centre near Kendal Power Station to discuss the findings of the Draft Scoping Report. Focus group meetings were also held on 20 July 2012, 26 July 2012 and 3 August 2012 in the Eskom conference room at Wilge Village to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project. Issues and comments raised at all these meetings have been captured in this report.

This report will be updated as the EIA process unfolds.

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| <b>1. PROCESS COMMENTS</b>       |  |  |  |   |
| <b>1.1. Public Participation</b> |  |  |  |   |
| 1                                | How can we comment and to whom?  | Mr Zweli Mpfu,<br>Bravo Cooperative,<br>Hartbeestfontein.  | Public meeting on<br>15 February 2012<br>at 14:00 to<br>discuss and<br>review the Draft<br>Scoping Report. | Send all comments to Zitholele Consulting. The contact details can be found on all documentation available here at the meeting.                       |
| <b>1.2. Site alternatives</b>    |  |  |  |   |
| 1                                | <p>We would like to point out that the proposed site "B" is in Gauteng, whereas the power station is being built in Mpumalanga. Apart from the obvious administrative challenges that this cross-border operation may face, we also believe that your consultation process as proposed, will not comply with Government Notice R.543 of June 2010, Chapter 2. In the Background Information Document of September 2011, mention is made only of the relevant government departments in Mpumalanga, for instance the Mpumalanga Department of Economic Development, Environment and Tourism. No mention is made of the same authority in Gauteng.</p> <p>We believe that, especially in the light of the serious economic impact this facility will have on agriculture and the environment in Gauteng, as will be discussed in more detail later, failure to consult with the relevant departments in Gauteng, will render the process defective and therefor invalid.</p> | Van Rensburg<br>Jordaan & Olivier<br>Attorneys on behalf<br>of Hans van<br>Rensburg Boerdery<br>cc | Email on 11<br>January 2012  | The Gauteng Department of Agriculture and Rural Development is a commenting authority on this assessment and have been included in all communication. |
| 2                                | Although we did not have access to information about the other proposed sites for the ash disposal facility, it is   | Van Rensburg<br>Jordaan & Olivier  | Email on 11<br>January 2012  | Noted. The potential impact on agriculture and all water resources will be fully  |

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|          | <p>evident that the cost of this facility at site B will be substantially higher than that of the other proposed sites. This conclusion is based both on the high value of the land on which the site is located, and on the fact that a corridor will have to be created and maintained if this site is chosen, as is evident from your map. This site is the furthest from the power station and that alone indicates a much higher operating cost than, say, Sites “A” and “C” which is right next to the site. This should be a major concern as the project already seems to be more costly than anticipated. We hope that a study will be done to calculate the additional cost over the lifespan of the power station, should this site be chosen, and that this will be taken into account when deciding on the viability of site “B”. To us, this site simply does not make economic sense.</p> <p>Furthermore we are concerned about the impact on the local farming community, and especially the irrigation and chicken component thereof. Gauteng has relatively little irrigation land and food production is paramount to the survival of the country. It is, in our opinion, even more important than the provision of electricity.</p> <p>Lastly, it would be disastrous if the Gauteng water supply is affected by the proposed facility, and this alone should be reason enough to abandon this site as a possible choice.</p> | <p>Attorneys on behalf of Hans van Rensburg Boerdery cc</p> |  | <p>investigated during the EIA phase of this study. Please see and comment on the proposed Terms of Reference for these studies to ensure all elements of concern will be addressed. At completion of the specialist studies, the public will be given an opportunity to confirm acceptability of proposed mitigation strategies and plans.</p> <p>In addition to the specialist studies mentioned above, the engineering team will undertake a cost comparison of the various scenario’s including the cost of the conveyor, roads and pipelines to the proposed facility.</p> |
| <p>2</p> | <p>What will happen if all four proposed alternative sites for the ash disposal facility are given restrictive conditions and the approved area becomes too small for a 60 year lifespan?</p>   | <p>Dr James Meyer, Water Research Commission, Pretoria</p>  | <p>Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report.</p> | <p>This could shorten the lifespan of the power station or the ash disposal facility will be spread over more than one site.</p>  |
| <p>3</p> | <p>Can we ask that Site C be removed from the list of alternative sites as there are people currently residing on</p>   | <p>Mr Zweli Mpfu, Bravo Cooperative,</p>                    | <p>Public meeting on 15 February 2012 at 14:00 to</p>  | <p>Unfortunately all the sites will have some form of impact to the local residents, and a particular site cannot be left out at this</p>   |

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|   | the property?  | Hartbeestfontein.             | discuss and review the Draft Scoping Report.  | early stage of the project prior to undertaking detailed studies, especially social to determine the impact to all the sites.<br><br>As part of the studies highlighted for the EIA, please refer to the scope of work for the social study to ensure that all your concerns will be addressed.  |
| 4 | I live at Site B, but I am trying to be objective and look at this development as a South African. It makes no sense to move the whole development somewhere else, because an ash disposal facility will always have a negative impact on its immediate environment. | Mr Christiaan Gerber, Witklip | Public meeting on 15 February 2012 at 18:00 to discuss and review the Draft Scoping Report. | Noted.   |
| 5 | The cost of a project of this size is important and must be kept as low as possible. Does it make sense to have a site, such as Site B, so far away from the power station?  | Mr Christiaan Gerber, Witklip | Public meeting on 15 February 2012 at 18:00 to discuss and review the Draft Scoping Report. | When the site selection was done, the current four alternatives were the four most feasible sites both when the financial costs of this development were included and excluded from the calculations.<br><br>During the site selection process, both the environmental and social investigations also came out with the current four alternatives.<br><br>At this early stage in the project all the feasible alternatives are considered, as it is unknown what additional factors might influence cost at the other sites. |
| 6 | What about looking at sites on the other side of the N4 highway?   | Mr Christiaan Gerber, Witklip | Public meeting on 15 February 2012 at 18:00 to discuss and review the Draft Scoping Report. | Building a conveyor belt under or over a highway is very challenging from engineering perspective. The area to the north of the N4 is also not flat enough and there is a long ridge which makes it unsuitable for an ash disposal facility.   |

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| 7 | Why did the Scoping Report not state that the previous sites selected were not feasible and why were the implications not addressed? | Mrs Annamie Duvenhage, Bronkhorstspuit and Wilge River Conservancy | Focus group meeting on 20 July 2012 at 10:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | The sites identified in the Scoping Report were identified using available information (such as published resources, other studies, and desktop information). The available information at present allows us to evaluate sites at a very high level. We have identified the top rated sites i.e. sites most likely to be feasible, for more detailed investigations.   |
| 8 | When will the preferred site be pinpointed?  | Mrs Annamie Duvenhage, Bronkhorstspuit and Wilge River Conservancy | Focus group meeting on 20 July 2012 at 10:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | The EIA process is expected to be done by next year. The EIA will either receive environmental authorisation or not and if successful, then another year can be expected before construction starts.   |
| 9 | Our site (Site F) was never included until now; can we assume that this will be the chosen site?                                     | Mrs Marietjie Boshof, Landowner                                    | Focus group meeting on 26 July 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of             | Site F had to be included as an option. Should it be chosen, it will have to be in combination with another site due to its small size. Site F was an option when the sites were selected, but just not included at that time. After the sites have been ranked, Site F came up as a viable "combination" option and it was brought back into consideration. It does not mean that this will be the chosen site, but it had to be included. Only when the specialist |

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|    |  |   | the project   | studies have been done can the best site be identified and recommended by the EIA process.   |
| 10 | Is Site F the only site that cannot be used on its own?  | Mr Hentie Boshof,<br>Landowner                                | Focus group meeting on 26 July 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | No, Site A + G and Site F + G will be used in combination, should these options come out as the best options in the specialist studies. Combination sites will be shown on a map at the next meeting.  |
| 11 | Why can't the ash facility be built on Site A as originally planned? I feel that we were placed under a misconception since Site F was not included from the start. The ash dump will have long term effects, especially on farming. | Mr Leon Van Dyk   | Focus group meeting on 26 July 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | There are a number of factors to consider for the site selection process such as: <ul style="list-style-type: none"> <li>• The need for a 60 year ash disposal facility;</li> <li>• Technical and social matters and implications; and</li> <li>• Legislation and its changes.</li> </ul> More sites needed to be included for the process to continue forward. Site A is closer to the Kusile power station but it also has the highest rankings in all fields. It will only be clear which site is most suitable after the specialist studies. |
| 12 | When will we know which area is affected?  | Mrs Tersia van Vuuren,<br>MANYATHELA<br>AVENTURES<br>Witpoort | Focus group meeting on 26 July 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible   | The EIA process will take another year to get the necessary authorisation and to allow time for the specialist studies to be done.   |

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|                                |   |  | alternative to be taken forward to the EIA phase of the project  |   |
| 13                             | If Site F is selected as the preferred alternative, what will happen to the pan on this site?   | Mrs Carol Wentzel, Bronkhorstspuit and Wilge River Conservancy | Focus group meeting on 3 August 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | It may be lost as part of the impact on the site. However, appropriate authorisation processes will be followed prior to this pan being sacrificed.   |
| <b>1.3. Technical Comments</b> |   |  |  |   |
| 1                              | Why did you move from a 500 m buffer around houses and other structures to a 100 m buffer? There should be a big enough distance between houses and an ash disposal facility, because nobody wants to live near it. | Mr Karel Rajchrt, Witklip                                      | Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report.  | The buffer zone was purely a technical exercise to find out what structures are on the four alternative sites. There will definitely be an impact with an ash disposal facility of this size, no matter where it is placed in the landscape, but through the EIA and the specialist studies we will endeavour to identify the most suitable site. |
| 2                              | We need to discuss the exact route of the NMMP pipeline which runs past your proposed developments.   | Mr Robbie van Bulderen, Transnet Pipelines                     | Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report.  | Noted and Mr. Van Bulderen indicated that he would send the final route alignment of the pipeline to Zitholele.   |



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| 3 | What happens if the EIA is rejected?   | Mr Hans van Rensburg, Witklip   | Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report. | Then the project cannot continue. This could be catastrophic for the power generation of the country as the Kusile Power Station will not be allowed to operate without this facility.   |
| 4 | This project is of national interest and therefore the DEA will not reject this EIA. Will it not be better if an independent body take a decision on the EIA?  | Mr Adriaan Loots, Jakhalsfontein  | Public meeting on 15 February 2012 at 18:00 to discuss and review the Draft Scoping Report. | The DEA is the only authorising authority for this project and makes its decision based on the study that Zitholele Consulting is undertaking. It is a legal requirement that Zitholele remains independent from the applicant.  |
| 5 | How wide will the foot print of the ash disposal facility be measured? Will there be a wide enough buffer zone around the boundary of the facility.  | Mr Adriaan Loots, Jakhalsfontein  | Public meeting on 15 February 2012 at 18:00 to discuss and review the Draft Scoping Report. | This will be determined by the engineering specialist studies during the next phase. At this stage the preliminary sizes vary from 1300 – 1600 ha.<br><br>In terms of the buffer zone, this will also be determined by the various specialist studies (air, noise, social). Once these studies have indicated the required buffer zone Eskom will have to negotiate with the landowners on how that buffer will be maintained. |
| 6 | <p><b>Recommendations made by the City of Tshwane:</b></p> <p>a) Measures should be put into place to ensure that no nuisance by way of noise, dust and smoke are caused to the public and surrounding environment. During site preparation and during the operation of the activity. These measures should form part of the EMP.</p> <p>b) An Emergency /Fire Response Plan approved by a qualified risk consultant must be included in the EIA report.</p> | Mr Livhuvani Siphuma, Executive Director: Environmental Management, City of Tshwane | Letter on 22 February 2012 in response to the Draft Scoping Report.                         | Thank you, all these recommendations will be taken into consideration at the relevant phases on this EIA. The comments related to the various specialist studies have been included in the Scope of Works for the specialists. In addition the requirements for management plans will be included in the EMP once the specialist studies have been completed.  |

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| <p>c) The applicant must take note of the applications of the Air Quality Act, No 39 of 2004 and follow the requirements thereof.</p> <p>d) A detailed storm water management plan must be compiled that ensures that storm water generated on site is discharged in such a way that the receiving environment is not adversely impacted upon. This plan should form part of the EMP.</p> <p>e) It is the responsibility of the applicant to comply with the water use legislation and apply for water use licenses and authorisation from the Department of Water Affairs where necessary.</p> <p>f) Adequate storm water management should be implemented as part of the proposed activity to prevent erosion and sedimentation of the surrounding water resources. Sheet runoff from access roads should be curtailed and runoff from exposed surfaces should be slowed down by the strategic placement of berms.</p> <p>g) During construction, erosion berms should be installed to prevent gully formation. The following points should serve to guide the placement of erosion berms:</p> <ul style="list-style-type: none"> <li>• Where the track has a slope of less than 2%, berms must be installed every 50 metres;</li> <li>• Where the track slopes between 2 and 10%, berms must be installed every 25 metres;</li> <li>• Where the track slopes between 10 and 15%, berms must be installed every 20 metres; and where the track slope is greater than 15%, every 10 metres.</li> </ul> <p>h) All areas affected by the proposed activity must be rehabilitated immediately after the completion of the proposed activity. The following should be included</p> |  |  |  |
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|   | <p>within the rehabilitation method and indicated within the EMP:</p> <ul style="list-style-type: none"> <li>• All areas of disturbed and compacted soils need to re-profiled and compaction alleviated;</li> <li>• Disturbed areas must be re-seeded with a combination of different indigenous grass species;</li> <li>• Rehabilitation shall be done to a coverage of at least 80% indigenous species of the rehabilitated area; and</li> <li>• On-going removal of alien vegetation from the area must take place at least three months after the completion of the structures to prevent the uncontrollable recruitment of species.</li> </ul> |   |  |   |
| 7 | <p>Are there not plans for a 10 year ash dump facility at Kusile?</p>   | <p>Mrs Annamie Duvenhage, Bronkhorstspuit and Wilge River Conservancy</p> | <p>Focus group meeting on 20 July 2012 at 10:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project</p> | <p>There is a co-disposal facility, not an ash dump facility already planned and approved. The co-disposal facility is designed to accept ash and gypsum from the first unit of the power station for a 5 year period. Thereafter it will receive the gypsum for the remaining life of the power station. This structure will, thus, take 60-years' worth of gypsum from the power station.</p> |
| 8 | <p>Why does a big ash facility need to be built, why can the ash not be used for other purposes, such as making bricks?</p>   | <p>Mrs Annamie Duvenhage, Bronkhorstspuit and Wilge River Conservancy</p> | <p>Focus group meeting on 20 July 2012 at 10:00 to present information regarding the inclusion of Site F as a feasible</p>   | <p>Kusile, and Eskom at large, is undertaking investigative projects to find companies to take the ash and gypsum.</p> <p>The volumes of ash are just too large, and currently there are not enough other uses to take all the ash. Eskom already has markets where ash is sold, but only manages to disperse 5% of its ash</p>   |

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|    |   |   | alternative to be taken forward to the EIA phase of the project   | through sales. Thus a facility will still need to be built.  |
| 9  | Where will the water for the Kusile power station be sourced? | Mr Andries van Vuuren,<br>MANYATHELA<br>AVENTURES<br>Witpoort | Focus group meeting on 20 July 2012 at 10:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | The water for Kusile will be coming from the integrated water supply system, through a pipeline from Kendal power station.   |
| 10 | What happens to the excess water?                             | Mr Andries van Vuuren,<br>MANYATHELA<br>AVENTURES<br>Witpoort | Focus group meeting on 20 July 2012 at 10:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | There is no excess water as it is a dry ash disposal facility. In the unlikely event that excess water is generated for whatever reason, such water will be used for ash control and the clean water will be put back into the nearby streams.   |
| 11 | What is going to happen to the wildlife in the area?          | Mr Andries van Vuuren,<br>MANYATHELA<br>AVENTURES<br>Witpoort | Focus group meeting on 20 July 2012 at 10:00 to present information regarding the inclusion of Site F   | A terrestrial assessment will be done. Any red data species identified will be relocated. Animals tend to move themselves when things get too noisy, however plants need to be moved manually and are then stored in a nursery before being used in rehabilitation. This process also requires approval by |

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|    |   |                                     | as a feasible alternative to be taken forward to the EIA phase of the project   | provincial authorities.   |
| 12 | How long does it take for the specialist studies to be done?                          | Mrs Marietjie Boshoff,<br>Landowner | Focus group meeting on 26 July 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | Specialist studies need to be done during a wet / dry period and a report needs to be written. It can thus take up to a year. Specialist studies for this project are anticipated to finish by February 2013  |
| 13 | When will we know which site(s) are selected?   | Mr Hentie Boshoff,<br>Landowner     | Focus group meeting on 26 July 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | All stakeholders will be informed as soon as the specialist studies are done, through the draft Environmental Impact Report. The specialist studies will determine which site(s) are selected and this will then be submitted to the Department of Environmental Affairs (DEA) that must take the final decision. |
| 14 | I know that water and ground sampling have been done; can it be made available to us? | Mr Leon Van Dyk                     | Focus group meeting on 26 July 2012 at 09:00 to present information regarding the   | The reports should be done by the end of next week. The specialist studies will also be available to you. The decision for the information to be distributed is up to Eskom, but it should not be a problem.  |

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|    |  |  | inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project   |  |
| 15 | How is the environmental monitoring done for pollution and waste management?   | Mr Leon Van Dyk  | Focus group meeting on 26 July 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | All environmental requirements will be stated in the Environmental Management Plan (EMP) and monitoring should be done accordingly. The EMP considers all environmental factors and legislation. |
| 16 | Are you aware that there are land claims on Site F? It has been published in the Government Gazette.   | Mr Karel Rajchrt, Witklip                                | Focus group meeting on 26 July 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | Noted. However Eskom is busy with land rights and negotiations.  |
| 17 | What will happen if the ash facility was built and 30 years down the line Eskom realises that they made a mistake with the site regarding water and wind impacts. What happens then? | Mr Hennie Pienaar, Alledo, PO Box 2793, Bronkhorstspuit, | Focus group meeting on 3 August 2012 at 09:00 to present information  | This question has two answers one from an environmental perspective and one from a technical perspective. From an environmental perspective all relevant concerns and issues are investigated.   |

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|    |   | 1020   | regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project  | <p>This is why it is important for the public to partake in these meetings to raise issues. But if this does in fact happen the responsibility will be on Eskom to fix the problem.</p> <p>From a technical side it is important to understand that everything is not designed and built in one day. The construction will be split up into developmental phases. As we continue from one phase to the next and data changes or technology changes we implement that into the new phase and design. As the phases progress from one to the other a new Waste Management Licence application is required in which the DEA can decide not to grant it due to environmental impacts.</p> <p>Decisions in the past were purely made with regards to cost whereas all decisions now are based on a wide variety of specialist studies.</p> |
| 18 | How does the specialist study work, is it only done for one day? How effective is that?   | Mr Karel Rajchrt, Witklip                          | Focus group meeting on 3 August 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | The specialists will undertake representative field visits to inform the integrity of their reports. This process is well planned and effective. Some of the specialist studies need to be done during summer and winter and will require multiple visits.  |
| 19 | If the lining for the ash dump cracks, will there be a disaster management plan in place? | Mrs Carol Wentzel, Bronkhorstspuit and Wilge River | Focus group meeting on 3 August 2012 at 09:00 to present   | The design for the liner will be finalised in the next stage. The plastic liner that is used for the ash dumps has a lifespan of 1000 years. This plastic liner is used with  |

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|                                |  | Conservancy  | information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project  | a clay liner underneath it, which makes it very effective. The only substance that can attack the plastic is petrochemicals, but this will not be on the site, even if there were petrochemicals on site it would have no affect on the clay liner. Another option would be to have detection systems. These detection systems will inform Eskom as soon as there is a shortfall in the liner and actions can be taken to ensure that waste management is implemented before the waste reaches any water bodies. |
| 20                             | What happens after the 60 years with regards to rehabilitation? Who will take responsibility then and can the ash dump be fully rehabilitated?   | Mrs Carol Wentzel, Bronkhorstspuit and Wilge River Conservancy | Focus group meeting on 3 August 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | The rehabilitation process should be concurrent. After 5 years, preparation is made for the next rehabilitation process to be implemented. Rehabilitation of the ash dump will continue until a closure certificate is issued, which follows an authorisation process. The closure certificate has conditions, hence even after the closure certificate is issued, Eskom will still be responsible and liable for the ash dump. The ash dump can fully be rehabilitated.   |
| 21                             | Although not directly detailed but nonetheless relevant the issue of the disposal of gypsum from Kusile Power Station remains uncertain. Clarity regarding the use of the co-disposal site currently available and impacts thereof on the proposed sites is required as is the future handling requirements thereof. | Dr James Meyer, Consultant for TOPIGS SA (Pty) Ltd             | Email on 2 August 2012   | There is a co-disposal facility, not an ash dump facility already planned and approved. The co-disposal facility is designed to accept ash and gypsum from the first unit of the power station for a 5 year period. Thereafter it will receive the gypsum for the remaining life of the power station.   |
| <b>2. BIOPHYSICAL COMMENTS</b> |  |  |  |  |



| 2.1. Water |  |  |   |   |
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| 1          | This development will be an ecological disaster for the Wilge River.   | Mr Andre Roets,<br>Farm:<br>Nooitgedacht, PO<br>Box 1994,<br>Bronkhorstspuit<br>1020 | Reply sheet on 5<br>October 2011  | The potential ecological consequences will be fully investigated during the next phase of this study. Please see and comment on the proposed Terms of Reference for this study to ensure all elements of concern will be addressed. At completion of the specialist studies, the public will be given an opportunity to confirm acceptability of proposed mitigation strategies and plans.                      |
| 2          | Investigate the following: <ul style="list-style-type: none"> <li>Impact on water quality and the impact on the Wilge River;</li> <li>The impact of Site C on adjacent land value, ground water, the N14, R104 and dust that will be generated, must be investigated.</li> </ul> | Dr Paul<br>Meulenbeld, DWA   | Reply sheet on 10<br>October 2011   | This will be fully investigated during the next phase of this study. Also, please refer to the Terms of Reference for the water quality specialist studies, and give comments.  |
| 3          | Documentation relevant to Water Research Commission Endocrine Disrupting Chemical (WRC EDC) projects and agricultural water use in the area must be investigated.  | Dr James Meyer,<br>Water Research<br>Commission,<br>Pretoria                         | Email on 1<br>November 2011   | The potential impact on agriculture and all water resources will be fully investigated during the EIA phase of this study. Please see and comment on the proposed Terms of Reference for this study to ensure all elements of concern will be addressed. At completion of the specialist studies, the public will be given an opportunity to confirm acceptability of proposed mitigation strategies and plans. |
| 4          | How will water running off the conveyor belt and the ash disposal facility be prevented from contaminating the ground water resources?   | Mr Robbie van<br>Bulderen, Transnet<br>Pipelines                                     | Public meeting on<br>15 February 2012<br>at 14:00 to<br>discuss and<br>review the Draft | Sufficient prevention systems will be in place to collect all polluted water (clean and dirty water channels next to conveyors). This will be pumped to a collection pond where it will be cleaned.   |

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|   |  |   | Scoping Report.   | Another system will collect clean rain water.<br><br>The ash disposal facility will be designed to prevent any seepage. A barrier made from clay and plastic materials will form the foundation of the ash disposal facility.   |
| 5 | <p>We would like to see the perceived risk of the ash disposal facility to the water quality that is very vital to the agricultural industry adjacent to Kusile Power Station.</p> <p>You should also discuss all the risks in your study, what could go wrong and how that can be mitigated.</p> <p>Eskom already told me water quality cannot be guaranteed 15 years from now.</p> | Mr Stefan Vermaak, Topigs                           | Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report. | <p>This Draft Scoping Report we present here today is a desktop study of the current situation.</p> <p>However in order to accurately detail the impact of this proposed project, various specialist studies will be undertaken and we will ensure that your concerns are addressed through these studies. In terms of water the studies will include a surface water and a ground water study. Furthermore air quality and the resultant health impacts will also be investigated.</p> |
| 6 | At the next public meeting the water quality and air quality specialists must also be available for discussion.  | Mr Stefan Vermaak, Topigs                           | Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report. | These two specialists will be at the next meeting.  |
| 7 | Why is ground water not prominently highlighted in Sections 6, 7 and 9 of the Draft Scoping Report?  | Dr James Meyer, Water Research Commission, Pretoria | Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report. | This suggestion will be taken further and ground water will be elevated to a higher priority for these Sections.  |
| 8 | Could you also do a baseline study on ground water?  | Dr James Meyer, Water Research Commission,          | Public meeting on 15 February 2012 at 14:00 to  | This will be done during the next phase of this EIA as part of the relevant specialist study.   |

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|    |  | Pretoria  | discuss and review the Draft Scoping Report.  |  |
| 9  | The elements monitored and assessed in the groundwater assessment should focus on the elements of concern particularly the elements related to coal. | Dr James Meyer,<br>Water Research Commission,<br>Pretoria | Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report. | This will be included in the scope of works for the water assessments to be undertaken in the next phase of the study.   |
| 10 | Do you need a Water Use License Application (WULA)?  | Mr Hans van Rensburg, Witklip                             | Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report. | <p>Yes, an amendment to Kusile Power Station's existing WULA is needed for the ash disposal facility.</p> <p>A WULA is a living document and will be amended when new developments are planned that may have an impact on water resources. An application for an amendment can only be made once the EIA process is finalised and one of the four alternatives has been chosen as the ash disposal facility.</p> <p>Eskom is currently negotiating with the DWA to find out if a separate WULA is necessary or if an amendment to the existing WULA can be done.</p> <p>The DWA must also approve the design of the ash disposal facility.</p> |
| 11 | In which direction does the water flow on Site B.  | Mr Adriaan Loots,<br>Jakhalsfontein                       | Public meeting on 15 February 2012 at 18:00 to discuss and review the Draft Scoping Report. | From the desktop info it appears as if Site B is on a watershed and that the water could flow in two directions (north and south). This will be investigated during the next phase of the study.   |

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| 12 | What happens if the ash facility leaches into the groundwater?  | Ms Ria Loots, Jakhalsfontein                   | Public meeting on 15 February 2012 at 18:00 to discuss and review the Draft Scoping Report. | <p>This should not happen, because a barrier will first be built on which the ash will be placed. The barrier will prevent leaching, with any potential leachate being collected inside the system.</p> <p>However, should there be a problem, Eskom be able to prove to the DWA that the problem has been solved and what measures have been taken to prevent this from happening again.</p> <p>There will also be monitoring systems in place to detect any leaks before it can become a problem.</p> <p>There will also be an independent Environmental Control Officer (ECO) on site that must report all problems to the authorities.</p> <p>The Kusile Power Station has an Environmental Monitoring Committee that can be attended by any neighbour or stakeholder. This committee is also attended by the DEA and the DWA.</p> |
| 13 | Ground water is vital to the farming community and no leaks or leeching must take place. When a leak is detected, then it is already too late, because the water has already been polluted. | Mr Adriaan Loots, Jakhalsfontein               | Public meeting on 15 February 2012 at 18:00 to discuss and review the Draft Scoping Report. | <p>The specialist studies will be investigating where monitoring boreholes will be drilled to pick up any problems as soon as possible, should something occur.</p> <p>Eskom is also busy integrating all its monitoring points (ground and surface water as well as air pollution) with that of Anglo American for the whole area.</p>  |
| 14 | Draft Scoping Report (DEA Reference Number: 12/12/20/2412) states under point 2.1 that:   | Dr James Meyer, Consultant for TOPIGS SA (Pty) | Email in response to the Draft Scoping Report   | Please note that although the WULA application will be a separate application, the water related issues will be assessed   |

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|           | <p>In terms of Section 24 of the Constitution:<br/>                 “Everyone has the right<br/>                 ii) to an environment that is not harmful to their wealth or well-being, and<br/>                 iii) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measure that<br/>                 - prevent pollution and ecological degradation;<br/>                 - secure ecologically sustainable development and use of natural resources.”</p> <p>Within the relevant legal framework it may be noted that pollution control and waste management form an integral part of sustainable development, with a principle of using utmost caution when permission is granted for new developments. Environmental impact assessments form a critical aspect of the process.</p> <p>In section 2.5 it is noted that any WULs that may be required in terms of the NWA will be addressed separately as part of the overall Integrated Water Use Licensing Process for the Kusile Power Station and will not be addressed by authorization process of this EIA.</p> <p>It is argued that any water used in the process of transporting, placing and storage of the waste streams (fly ash and coarse ash) should form a significant and critical part of the Draft Scoping Report and be included therein as part of the environment and subsequent EIA issues.</p> | <p>Ltd</p>   | <p>on 24 February 2012.</p>   | <p>as part of this EIA and that all water-related specialist studies will be done to the level of detail required for an IWULA.</p> |
| <p>15</p> | <p>Section 3.4.6 does note some detail regarding storm water drainage and monitoring boreholes, but no monitoring description is provided.</p> <p>Section 6 lists “Issues Identified to date”, and notes impacts to surface water features and air quality amongst other, but nowhere is groundwater listed.</p>   | <p>Dr James Meyer,<br/>                 Consultant for<br/>                 TOPIGS SA (Pty)<br/>                 Ltd</p> | <p>Email in response to the Draft Scoping Report on 24 February 2012.</p> | <p>Comment noted and please note changes to the FSR subsequent to the public meeting.</p>   |

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|    | <p>Section 7 “Receiving Environment” also lists Surface Water (7.5) but no groundwater or subterranean water impacts are mentioned anywhere.</p> <p>It is argued that this should have formed a key part of data collection (7.5.1 – no reference to groundwater) as the area contains numerous groundwater abstraction points for both Domestic and Agricultural Water Use (Livestock and Irrigation).</p> <p>Section 8 “Potential Environmental and Social Impacts” does however list groundwater in Table 13, yes in Section 9 “Plan of Study for EIA” under 9.2, no water quality specialist is mentioned, neither is groundwater specifically listed. Whilst “ surface water assessment” and “geo-hydrology and hydrology assessment” do appear in 9.2 and the following terms of reference issues do mention “water sampling and analysis”; “ potential impact to baseline conditions”; and “inter-connectedness i.e surface water-groundwater” it is argued that water quality of both surface and groundwater must specifically be investigated from a water quality assessment of all the recognized constituents relevant to the water uses applicable and to the relevant waste stream.</p> <p>The same argument applies to the air quality assessment terms of reference with the specific issues of air quality (descriptive and appropriately determined) for health hazards to both public health, animals and plants (pastures &amp; crops).</p> <p>It is argued that groundwater should be elevated in terms of prominence in the Draft Scoping Report as a key issue that will receive appropriate attention, including groundwater quality in terms of baseline conditions, potential hazardous contamination and monitoring of relevant and appropriate constituents to ensure no adverse impact.</p> |           |               |       |
| 16 | Thank you for doing this study to keep our environment  | Ms Gloria | Comment sheet | Noted |

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|    | clean. Our municipality cannot keep our water pure and it is contaminated.  | Macuthwane, 1058 Phola Location  | on the Draft Scoping Report on 31 January 2012             |   |
| 17 | <p>In relation to the other proposed sites, we believe the impact on the environment would be greater as the proposed area is surrounded by dams and streams. The ash would inevitably find its way into these streams and dams, polluting not only the immediate area but also the area downstream from the affected area. It would in our opinion probably affect the quality of drinking water not to mention the living conditions of the communities nearby.</p> <p>2. The Kungwini (Bronkhorstspuit) Dam</p> <p>This dam provides drinking water to the town of Bronkhorstspuit but also to a large part of Pretoria. Although the dam is not adjacent to the facility it is nearby and we are concerned of the effect that a 40 to 60m high ash heap may have on the dam, especially in windy conditions. The dam is only 6,3 kilometres from the proposed site.</p> | Van Rensburg Jordaan & Olivier Attorneys on behalf of Hans van Rensburg Boerdery cc  | Email on 11 January 2012                                   | <p>Your concern is noted and in order to understand the impact that this facility might have a range of specialist studies have been proposed for the EIA phase of the project including ground water, surface water and air quality. These reports will be made available to the public as part of the review of this project during the EIA phase.</p> <p>Please also note that the design of this facility will include barrier systems to prevent surface and ground water contamination.</p> |
| 18 | <p>When coal is burned, toxins in the coal are released into the smokestack. With modern air pollution controls, airborne toxins are captured through filtration systems before they can become airborne, and contained in a fine ash called coal ash, fly ash, or coal combustion waste. As a result, heavy metals such as mercury are concentrated in what the EPA (USA Environmental Protection Agency) considers "recycled air pollution control residue".</p> <p>Coal ash contains large quantities of toxic metals, including mercury, arsenic, beryllium, cadmium, chromium, nickel, and selenium</p> <p>Most often coal waste is disposed of in landfills or "surface impoundments," which are lined with compacted clay soil, a plastic sheet, or both. As rain filters through the toxic</p>  | Mr Kobus Duvenhage, Chairperson of the Bronkhorstspuit and Wilge River Conservancy Assoc, PO Box 691, Bronkhorstspuit, 1020. | Email on 30 March 2012 in response to Draft Scoping Report | Noted   |

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| <p>ash pits year after year, the toxic metals are leached out and pushed downward by gravity towards the lining and the soil below. An EPA study found that all liners eventually degrade, crack or tear, meaning that all landfills eventually leak and release their toxins into the local environment.</p> <p>The flue-gas desulfurization (FGD) process creates a wet solid residue containing calcium sulfite (CaSO<sub>3</sub>) and calcium sulfate (CaSO<sub>4</sub>). Scientific American finds coal ash is more radioactive than nuclear waste. Although nuclear power retains the stigma of producing dangerous radiation, "waste produced by coal plants is actually more radioactive than that generated by their nuclear counterparts" in addition to known problems such as polluting the air and causing acid rain. Coal contains small amounts of uranium and thorium, which are concentrated "up to 10 times" in coal ash, a waste product of burning coal.</p> <p>Coal ash can leech radioactivity into the surrounding groundwater and soil, depending on where it is disposed.</p> <p>Robert Finkelman, a former US Geological Survey (USGS) researcher, said that people living around coal plants will increase the amount of radiation they are exposed to by 5% every year.</p> <p>In May 2009, the Environmental Integrity Project and Earth Justice released a report finding that the Bush Administration failed to release information suggesting an alarmingly high cancer threat for people who live near coal ash waste dumps. According to the study, the Bush Administration only made a portion of the data available, hiding the true extent of the health risks associated with coal ash disposal sites.</p> <p>In 2002, an EPA study showed significant risk of coal ash sumps, but requests for the data under the Freedom of Information Act were either denied or given documents</p> |  |  |  |
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|    | <p>with the estimates of cancer risk blacked out.</p> <p>A 2007 EPA assessment report found that people living near coal ash dump sites have as high as a 1 in 50 chance of getting cancer from drinking water contaminated by arsenic. It also determined that living near such dump sites raises an individual's risk of liver, kidney, lungs and other organ damage resulting from exposure to toxic metals in the ash.</p> <p>All sites identified are either endangered grassland or cultivated agricultural land.</p> <p>The biodiversity of site A is Important and Necessary<br/>                 Site B is high potential agricultural land under cultivation<br/>                 Site C is right next to a Highly Significant Area</p> <p>Pg 25 "Disposal of the ash waste stream to an open cast void or levelled spoils created by opencast coal mining may be possible, although this would need to be determined at huge expense, there are currently no open-cast voids large enough available within a feasible distance to consider this option further at this juncture. New Largo is the only possible solution that may be large enough, but is currently not approved or operational. This option may be feasible in the distant future, but is currently not considered feasible; and...."</p> <p>We demand that a comparative analysis of the impacts , advantages and disadvantages of placing this ash dump facility on mined out areas (rehabilitated) be done, compared to the high potential agricultural soils that is suggested in this scoping report.</p> <p>We reserve our right to comment further.</p> |   |   |   |
| 19 | <p>Is the Water Use Licence included in the process?</p>   | <p>Mrs Annamie Duvenhage<br/>                 Bronkhorstpruit and Wilge River</p> | <p>Focus group meeting on 3 August 2012 at 09:00 to present</p> | <p>A Water Use Licence is included in several activities and managed through authorities. The Water Use Licence for the co-disposal stack has recently been</p> |

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|    |  | Conservancy  | information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project  | granted. The Water Use Licence will be applied for after this process. A separate process is will be followed for the WUL.  |
| 20 | Who will do the wetland specialist studies?  | Mrs Carol Wentzel<br>Bronkhorstpruit and<br>Wilge River<br>Conservancy | Focus group meeting on 3 August 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | A specialist from Golder Associates Mr Warren Aiken will be performing the aquatic specialist studies.  |
| 21 | Using contaminated water for the ash stack surely has a bigger impact on our health and environment? | Mrs Carol Wentzel<br>Bronkhorstpruit and<br>Wilge River<br>Conservancy | Focus group meeting on 3 August 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | The air quality study will determine the impact of health issues. But the interaction should not be more dangerous to health and environment as the water being used for the irrigation will already be contaminated with whatever is in the ash disposal facility. The re-use of this water is a means to prevent environmental impacts. |
| 22 | Won't the impact of contaminated water usage increase over time?                                     | Mrs Carol Wentzel<br>Bronkhorstpruit and                               | Focus group meeting on 3 August 2012 at  | It might but it is unlikely since the water stays in a closed of process of being used,   |

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|  |  | Wilge River Conservancy  | 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | caught and re-used.  |
| <b>2.2. Pollution (Dust, Fly ash, Air)</b> |  |  |  |  |
| 1  | The only foreseeable concern that may arise is the fugitive dust. We would like to see that proper modelling has been done to project the possible scenarios arising with the dust. And what mitigating measures will be put in place to reduce the impact of the dust on surrounding communities.   | Mr Oscar Olën, Afrisam, PO Box 6367, Weltevredenpark 1715        | Email on 31 October 2011   | Noted. The potential impact of air pollution will be fully investigated during the EIA phase of this study.  |
| 2  | As a first step we would like to draw your attention to the following debate on the eco-toxicology of coal and incinerator ash which we consider meets the criteria as a hazardous waste as there is currently a very live debate here in South Africa, in the USA, The UK and Europe about regulating coal and similar incinerator bottom ash as hazardous waste and the respective regulatory authorities are currently trying to finalise their regulations. These centre on some major and legitimate concerns about the use of coal and bottom ash in sludge dams and unbound uses such as the replacement for aggregate and this summary touches upon some of the arguments. The storage of post-combustion wastes from coal plants threatens human health once the toxic residues have migrated into water supplies.<br><br>In South Africa specifically the coal ash from this facility will have to undergo testing and evaluation as per the WASTE CLASSIFICATION AND MANAGEMENT | Mr Rico Euripidou, groundWork, Friends of the Earth South Africa | Email on 13 January 2012   | The waste classification will be undertaken, and the relevant mitigation measures will be implemented. In addition to the waste classification Eskom is currently undertaking a comprehensive health and toxicity assessment of ash produced at several of its current power stations. This study will feed into the waste classification and also form part of the EIA. |

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| <p>REGULATIONS AND STANDARDS in terms of the NEM: Waste Act. All wastes will have to be classified in terms of these regulations and based on their classification, risk to health and ecotoxicity this will define their waste management.</p> <p>To illustrate a particular major health and ecological incident on coal ash disposal I have provided you with an example below illustrating an incident in the USA where it can cause a very serious environmental and human health risk:</p> <p>It has now been two years since an earthen dike holding back 1.1 billion gallons of coal slurry ruptured, unleashing a tsunami of dark gray sludge from the Tennessee Valley Authority's Kingston Fossil Plant in Harriman, Tennessee. The wave destroyed homes, surged into the yards of neighbours, and caused the nearby ponds and streams to overflow. More than 300 acres of land were covered in the slurry, and in the weeks after, the ash would travel as far as 30 miles downstream on the nearby Emory River. The environmental disaster for the first time raised the question of why coal-burning power plants are allowed to dump the fly ash waste—the fine, dust-like particles emitted when coal is burned to create power—into vast open pits. The ash, doused with water and left in these containment ponds for years, contains toxic elements like arsenic, mercury, and lead. But for decades, the disposal of the waste was left unregulated in the USA where power plants produce more than 130 million tons of the ash each year, and while 43 percent of it gets recycled into products like cement and wallboard, much of the rest remains on site at coal-fired power plants around the country. In October 2009, the EPA issued a proposed rule [5] that would have designated the ash as hazardous waste that needed special handling and would be regulated at the federal level. Unregulated coal ash disposal poses health risks to humans and the environment, as the toxic materials have been found to leach into groundwater at</p> |  |  |  |
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| <p>containment sites.</p> <p>Following this an assessment prepared for the EPA noted that the cancer risk from drinking water contaminated with arsenic—just one of the many hazardous substances in the ash—is 1,800 times EPA's regulatory limit. The Environmental Integrity Project has been looking extensively at data on contamination, identifying 137 sites [11] where toxic materials have leached into the groundwater. At some sites, they found arsenic and other heavy metals at up to 145 times what is permissible under federal guidelines. If EPA kicks in tougher federal regulations, these sites would be monitored more closely.</p> <p>There is no doubt that the 'fly ash' is hazardous waste and will need to be treated and disposed of at specialist facilities. Recent research indicates that there are potentially serious health and environmental impacts arising from the landfill disposal of fly ash even in modern containment landfill sites (Macleod, Duarte-Davidson et al. 2006; Macleod, Duarte-Davidson et al. 2007). This shows that the modelled exposure to children around the Wingmoor farm landfill site, one of the major fly ash disposal facilities in the UK, can exceed acceptable intakes of dioxin from the contamination in the fly ash. Whilst the bottom ash is often described as being 'inert' this is incorrect – bottom ash is never classed as 'inert' in the UK. The bottom ash is currently taxed as "inactive" waste for landfill tax purposes although this may be about to change as the default position in the recent Customs and Excise consultation is that the bottom ash should be taxed at the standard rate of landfill tax. In practice the designation of bottom ash is either as non-hazardous or hazardous waste. At the end of 2006 the UK Environment Agency indicated that they had tested some bottom ash samples and: "Levels of lead and zinc in a number of isolated compliance monitoring samples have exceeded the hazardous waste threshold for H14." H14 is the hazardous waste criteria for ecotoxicity. Veolia, one of</p> |  |  |  |
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| <p>the major incinerator operators, has indicates (Veolia Environmental Services 2007) that when they had tested for metals and then used the recent Environment Agency WM2.2 assessment methodology to determine the whether the wastes were hazardous wastes about 40% of the samples from UK incinerators were found to be hazardous waste under the H14 criteria. This follows increasing concern about the environmental impact of combustion residues in disposal and utilisation, especially for the release of toxic substances such as heavy metals (such as arsenic, cadmium, chromium, copper, mercury, molybdenum, nickel and, particularly in relation to ecotoxicity, lead and zinc) together with soluble salts from the residues (Stegemann, Schneider et al. 1995; Hartenstein and Horvay 1996; Hunsicker, Crockett et al. 1996; Abbas, Moghaddam et al. 2003). The content of toxic metals present in the bottom ash from coal and municipal waste incinerators is usually 10-100 times larger than in natural soils (Theis and Gardner 1990). As a result of the toxicity associated with the heavy metals and other contaminants several researchers have concluded that bottom ash should be classified as a hazardous waste because of the ecotoxic properties it exhibits.</p> <p>Ferrari et al (Ferrari, Radetski et al. 1999) subjected municipal waste incineration bottom ash to a range of ecotoxicity tests in both the leachate and solid phase. Their results clearly demonstrated “a significant increase in all antioxidant stress enzyme activity levels across all plant tests even at the lowest test concentrations (solid phase and leachate)”. This was demonstrated to be a good indicator of solid or leachate phase toxicity. As with many other test regimes it is clear from this work that the bottom ash may not prove hazardous in all tests. This indicates that care must be taken with the test regimes and that selective testing could deliver apparently reassuring, and hence misleading, results. For ash to be demonstrated to be hazardous, however, a single failure</p> |  |  |  |
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| <p>of an appropriate test is sufficient. Ibáñez et al. (Ibáñez, Andrés et al. 2000) found that all four samples of MSW bottom ash from two incinerators (one in an industrial and the other in a rural area) contained chemicals at or above the hazardous waste range. It should be noted that this study was published even before zinc oxide and chloride had to be considered when assessing the hazardous classification of ash. More recently the work by Lapa et al (Lapa, Barbosa et al. 2002) on the EC Valomat project concluded: "all bottom ashes [including sample B1] should be classified as ecotoxic materials."</p> <p>Radetski et al (Radetski, Ferrari et al. 2004) then investigated the genotoxic, mutagenic and oxidant stress potentials of municipal solid waste incinerator bottom ash leachates and reported: "The MSWIBA leachates were found to be genotoxic with the Vicia root tip micronucleus assay. These findings were confirmed by Feng et al. (Feng, Wang et al. 2007): In this study, our results clearly demonstrated that MSWIBA leachates had genotoxicity on Vicia faba root cells as other researches did (Radetski, Ferrari et al. 2004). Bekaert et al. (1999[1] demonstrated that the aqueous leachates from a landfill of MSWI ash had a significant genotoxicity on the amphibian erythrocytes. The United Nations Environment Program (UNEP) (UNEP and Calrecovery Inc 2005) warned in 2005 that whilst ash from incinerators has been reused in civil engineering works: "in industrialised countries, the most prevalent method of management is disposal of the ash in lined landfills to control the risk of underground pollution by soluble toxic chemicals leached out of the ash. UNEP continued: "Both fly ash and bottom ash contain chemical constituents that pose potential serious risks to operating personnel and the public. The chemical constituents of concern include heavy metals, dioxins, and furans". Feng expressed surprise about countries that do not</p> |  |  |  |
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| <p>include bottom ash on their hazardous waste lists: However, in many countries and territories (such as USA, some OECD countries, China), Bottom ash is not included in the List of Hazardous Wastes, being dumped into landfills directly or after maturation (Gau and Jeng, 1998; (Ibáñez, Andrés et al. 2000);(Lapa, Barbosa et al. 2002)). Therefore, we suggested that the comprehensive evaluation of the environmental impacts of BA is necessary before decisions can be made on the utilization, treatment or disposal of bottom ash. Ore et al (Ore, Todorovic et al. 2007) examined the leachate from bottom ash that had been stored outside for six months for weathering (in a similar way to the proposals by Suez) and then used for road construction. They carried out several ecotoxicity tests and found a high initial release of salts and Cu in line with relatively high concentrations in laboratory generated MSWI bottom ash leachates presented in the literature (Meima and Comans 1999; Lapa, Barbosa et al. 2002). A mung bean assay using Phaseolus aureus revealed the toxicity of bottom ash leachate - which continued to the final tests three years later, albeit due to different compounds leaching. Leachates with significantly higher concentrations of Al, Cl, Cr, Cu, K, Na, NO<sub>2</sub>-N, NH<sub>4</sub>-N, total N, TOC and SO<sub>4</sub> were generated in the road-section built on bottom ash when compared to the road-section built with conventional gravel. Compared to the leachate from gravel, the concentrations of Cl, Cu and NH<sub>4</sub>-N were three orders of magnitude higher, while those of K, Na and TOC were one order of magnitude higher. After 3 years of observations, while the concentrations of most components had decreased to the level in gravel leachate, the concentrations of Al, Cr and NO<sub>2</sub>-N in bottom ash leachates were still two orders of magnitude higher. The authors concluded that high concentrations of chloride emitted from the road can lead to increased toxicity to the recipient, e.g. for plants, and the bottom ash reused in a road construction could thus have a</p> |  |  |  |
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|          | <p>toxicological impact on the surroundings. A series of ring tests for ecotoxicity methods have been carried out in Europe (Becker, Donnevert et al. 2007; Moser 2008). These included sampling and testing of incinerator bottom ash from a Dutch incinerator (Cu 6,800 mg/kg; Zn 2,639 mg/kg; Pb 1,623 mg/kg) a high pH (about 10.5). The bottom ash was found to be ecotoxic in these tests even after it had been aged for several months (Römbke, Moser et al.). Very recently the UK Highways Agency (Highways Agency 2009) has banned the use of incinerator bottom ash in foaming cement because of a series of explosions on sites caused by hydrogen when the ash has been used (Mann 2009). The Environment Agency has admitted it does not "have 100% confidence" in its classification of incinerator bottom ash (IBA) as non-hazardous waste (ENDS 2009). It cannot therefore be assumed that the bottom ash would be suitable for re-use – and, properly assessed much of the bottom ash would almost certainly be hazardous waste. Finally it is noted that even when incinerator bottom ash is 'recycled' only part of the ash can be used. In Hampshire, for example, where particular efforts have been made to increase the acceptability of incineration only about 33% of the ash can be utilised according to Project Integra reports[2]. The landfill demand is therefore likely to be higher than suggested by operators. On the basis of the evidence available it is reasonable to conclude that bottom ash should be treated as hazardous waste and that future disposal options represent a potentially high risk and expensive addition to the costs of incineration.</p> |  |                                       |   |
| <p>3</p> | <p>I notice that a traffic study will be done. Has this started as yet? Site C is adjacent to the N4 Toll Road. The SANRAL Act, Act 8 of 1998 will apply regarding building lines and services within the building line. A 60m building line is applicable from the road reserve.</p>  | <p>Ms Carla Davis,<br/>Traffic Engineer,<br/>Trans African<br/>Concessions (Pty)<br/>Limited</p> | <p>Email on 13<br/>February 2012.</p> | <p>At present we are only in the Draft Scoping Phase so no specialist studies have been completed as yet. Once the DEA has accepted the Scoping Report (2-3 months) we will start with the specialist studies and we will ensure that you get a</p> |

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|   | <p>Dust could be problematic. What measures will be taken to ensure that dust will not blow onto the N4 Toll Road? What dust monitoring will be done? This could be a safety hazard if it causes poor visibility on the N4 Toll Road. Dust is also a nuisance as part of road maintenance, as frequent cleaning of roadside furniture, such as road signs, guard rails and guard rail reflectors would be required.</p> <p>Concerning traffic I will only be able comment on this once the traffic impact report has been submitted to us.</p> |                                      |  | <p>copy of the traffic report.</p> <p>In addition the air quality assessment will assess the problems related to dust deposition and visibility.</p>  |
| 4 | <p>How will the dust/ash be controlled to prevent pollution?</p>   | <p>Mr Hans van Rensburg, Witklip</p> | <p>Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report.</p> | <p>Dust suppression with water will prevent ash being blown away. Top soil that would have been removed before the ash was placed will be put on top of the ash and vegetation will be planted to anchor it.</p> <p>More detail on the dust suppression measures will be provided in the Environmental Management Programme (EMProg) and air quality reports in the next phase of the EIA.</p>  |
| 5 | <p>There is a lot of dust at the Kendal power station.</p>   | <p>Mr Hans van Rensburg, Witklip</p> | <p>Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report.</p> | <p>The ash disposal facility at Kendal power station was designed and built with old technology. This facility is a long and thin structure with a large area exposed to the wind. Ideally the Kusile ash disposal facility will be square in shape to reduce exposure to wind.</p> <p>This will, however, be thoroughly investigated during the next phase of this EIA. Mitigation measures will be written into the Environmental Management Programme (EMProg) that must be adhered to during construction and the daily operation of the ash disposal facility.</p> |

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|    |   |   |   | Eskom is also continuously investigating measures of how the dust pollution at Kendal can be reduced.  |
| 6  | There must be no dust pollution.  | Mr Hans van Rensburg, Witklip                       | Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report. | The EIA will recommend various dust management measures; the effective implementation of these measures should reduce the dust. Please refer to the air quality assessment that will be undertaken in the next phase of the EIA.                   |
| 7  | Why did you use a 75% waste stream and not a full 100% waste stream in your calculations?   | Dr James Meyer, Water Research Commission, Pretoria | Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report. | A power station never runs at 100% for 60 years. With downtime for maintenance and normal demand a figure of 75% is more realistic.  |
| 8  | What is the wind direction at Kusile Power Station?   | Mr Zweli Mpfu, Bravo Cooperative, Hartbeestfontein. | Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report. | The main wind direction is from the north west.  |
| 9  | Will the ash disposal facility be kept wet all the time to prevent dust pollution?  | Mr Adriaan Loots, Jakhalsfontein                    | Public meeting on 15 February 2012 at 18:00 to discuss and review the Draft Scoping Report. | Various studies will be done to find the most effective dust suppression method, but water suppression is a common method.   |
| 10 | In the Schedule of Government Notice No. 32816 (24 Dec 2009) the National Ambient Air Quality Standards are established (NEM: Act 34 of 2004), with section 2.3 on Ambient air quality measurement requirements stating that the assessment of all ambient pollutant concentrations shall be conducted in terms of the relevant | Dr James Meyer, Consultant for TOPIGS SA (Pty) Ltd  | Email in response to the Draft Scoping Report on 24 February 2012.                          | Thank you for your comments. The constituents of concern mentioned in your submission will be added to the scope of work for the relevant specialist study and also the specialist will be required to indicate if these elements should form part |

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| <p>sections of the National Framework for Air Quality Management. Section 3 on National Ambient Air Quality Standards addresses SO<sub>2</sub>, NO<sub>2</sub>, Particulate matter, ozone, benzene, lead and carbon monoxide.</p> <p>Although the Kusile Power Station is to use FGD to reduce many of these hazardous coal combustion products (specifically the SO<sub>2</sub> and NO<sub>2</sub>) concern still exists for list of potentially hazardous constituents related to coal, combustion thereof, storage of combustion products and related activities, including transport of both coal and combustion products.</p> <p>It is widely published that concern for trace elements in FGD byproduct (e.g. arsenic, selenium and mercury) limits the utilization of FGD byproduct and that the release of FGD byproduct is a barrier impacting utilization thereof.</p> <p>It is also widely reported in the literature that trace elements may be captured by fly ash and coarse ash with consequent significant environmental concerns as many are reported to be carcinogenic, toxic and potential endocrine disruptors.</p> <p>The key carcinogenic elements most frequently cited include arsenic, cadmium, nickel and zinc, whilst toxicity concerns are most often reported for selenium and mercury.</p> <p>The scientific literature generally reports potentially hazardous trace elements associated with fly ash to be:</p> <ul style="list-style-type: none"> <li>• Arsenic</li> <li>• Aluminium</li> <li>• Antimony</li> <li>• Barium</li> <li>• Beryllium</li> <li>• Bromide</li> </ul> |  |  | <p>of the monitoring program at Kusile.</p> |
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| <ul style="list-style-type: none"> <li>• Cobalt</li> <li>• Chromium</li> <li>• Copper</li> <li>• Iron</li> <li>• Lanthanum</li> <li>• Lead</li> <li>• Manganese</li> <li>• Mercury</li> <li>• Molybdenum</li> <li>• Nickel</li> <li>• Selenium</li> <li>• Silicon</li> <li>• Strontium</li> <li>• Tungsten</li> <li>• Uranium</li> <li>• Vanadium</li> </ul> <p>In addition many macro elements are cited such as Fluoride, Sulphur and Nitrogen. Other potential hazards include PAHs and VOCs.</p> <p>Although many technologies to improve emissions quality exist and may be applicable to Kusile Power Station these do not totally remove the hazards and concern for hazardous constituents still exists.</p> <p>In some cases the removal of hazards from air in an attempt to improve the air quality and reduce air emissions may result in a higher non-airborne hazardous waste requiring disposal.</p> <p>According to studies published regarding health impacts</p> |  |  |  |
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| <p>associated with coal-fired power plants and disposal of coal combustion products concern exists for both air quality and water quality impacts. Numerous environmental studies also observe hazardous substances in a variety of exposure media, from soil to aquatic organisms utilized for human consumption. Public health studies cite 84 separate hazardous air pollutants to be associated with coal-fired power plants.</p> <p>There is thus a wealth of information in the scientific literature where the environmental aspects of trace elements in coal and coal combustion products (including fly ash) are reviewed and researched.</p> <p>Critically, it cannot be assumed that Kusile Power Station will automatically monitor the relevant pollutants as the current EMC process omits obvious elements relevant to establishing baseline concentrations that may be adversely affected or impacted by coal-fired power stations.</p> <p>As noted above, trace elements described in FGD by-products also include recognized potentially hazardous elements such as arsenic, selenium and mercury. Studies note that disposal of the ash may be accompanied by dissolution of calcium that may lower the pH and calcium concentration in the leachate facilitating the release of arsenic and mercury, which may be argued to represent a greater environmental hazard.</p> <p>It is thus argued that these constituents are known, internationally published and cited, and should be specifically included in any EIA process for the relevant sources, pathways and receptors.</p> <p><b>Key Concern:</b></p> <p>Nowhere in the Draft Scoping Report is specific reference to these constituents noted, and although it may be argued that they are included by implication, it is argued that in order for meaningful public participation and</p> |  |  |  |
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|           | <p>acceptable EIA terms of reference to be formulated, they should appear prominently in the report with clear assurances that they will be established in terms of baseline values, potential hazardous waste streams and monitored accordingly.</p> <p>Failure to do this transparently may result in various environmental and water licenses and authorizations to be granted without specific reference to the primary pollutants relevant.</p>  |   |   |   |
| <p>11</p> | <p>Section 3.2.3 describes the waste streams in Table 4. Although some reasons were offered verbally at the public meeting on 15/02/2012 at El Toro (Kendall) it remains unclear how the calculations for the approval of Kusile Power Station Ash Dump could be so underestimated to the point that the current 10 year Ash Dump Facility is only capable of handling 16 % of the waste stream envisaged.</p> <p>Although the calculations for Table 4 state a volume of ash produced at 75% of the waste stream it is assumed this is meant to read of the "potential" waste stream. Despite the preferred approach (see point 1 above) being one that is conservative and one that should thus err on the higher risk side, this is not performed.</p> <p>If the initial projections failed in forming a reasonable estimate of the required ash dump facility size and scope it is unclear how the Draft Scoping Process accommodates the same set of scenario circumstances from occurring again (as verbally explained for the 10 year ash dump).</p> <p>Should the WUL and other EIA restrictions be placed (apparently key reasons for the initial ash dump being inadequate) again in a manner to yield the same outcome, namely that the 60 year ash dump is also insufficient, then the Draft Scoping Report will not be applicable to the Kusile Power Station waste stream relevant, and may run</p> | <p>Dr James Meyer,<br/>Consultant for<br/>TOPIGS SA (Pty)<br/>Ltd</p> | <p>Email in response to the Draft Scoping Report on 24 February 2012.</p> | <p>The calculations related to the potential volume of ash to be disposed are based on the best information available at present. We will endeavour through the design process to finalise all these figures to a higher level of confidence.</p> <p>In the case of this EIA if the authorities place similar restrictions on the proposed development more than one site will be utilised to ensure that the full life of the station is covered. This objective (to provide a legislated waste disposal facility for the life of the Kusile Power Station) is the main purpose of the design team, hence if any restrictions apply to a particular or all sites, a motivation to use multiple sites will be provided.</p> |

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|    | <p>the risk of having yet another additional waste stream burden that will require yet another similar process.</p> <p>It is argued that for the initial authorizations and licenses (specifically WULs) to be valid they should not misrepresent the actual waste stream specifics and that this Draft Scoping Report may be taken as an indication that the current authorizations and licenses were based on misleading calculations and thus require amendments or new compliance notices.</p>   |   |   |   |
| 12 | <p>No mention is made of handling the waste stream from human effluent and other hazardous wastes associated with the construction phase, both of the ash dump and conveyor systems.</p> <p>No indication is given of the number of people involved and assurances to prevent contamination of the environment (including wetlands, surface and groundwater) by their waste and construction-related hazards.</p> <p>It is argued that this should form part of the EIA process as construction can be assumed to be a process requiring a significant amount of time and people.</p>  | <p>Dr James Meyer,<br/>Consultant for<br/>TOPIGS SA (Pty)<br/>Ltd</p> | <p>Email in response to the Draft Scoping Report on 24 February 2012.</p> | <p>Noted – the issues pertaining to human and construction related wastes will be included in the FSR and highlighted in the relevant specialist studies.</p> <p>The mitigation and management measures related to these will also be included in the Environmental Management Programme that will specifically be written for the construction phase of the project.</p> |
| 13 | <p>The US EPA notes an increase in sites classified as High Potential Hazard with reference to Coal Combustion Residues and the scientific literature (peer-reviewed journals) dealing with coal combustion products, byproducts and related waste, continue to note a range of environmental concerns affecting a wide range of receptor types, including aquatic, human and animal.</p> <p>To date, key critical data gaps exist in the Kusile EMC Monitoring reports, with no meaningful response to requests for specific constituents (pollutants and hazardous substances) to be monitored to establish current air quality, groundwater quality or surface water quality.</p> | <p>Dr James Meyer,<br/>Consultant for<br/>TOPIGS SA (Pty)<br/>Ltd</p> | <p>Email in response to the Draft Scoping Report on 24 February 2012.</p> | <p>Noted and the specialist studies scopes have been expanded to include source, pathway receptor analysis on all the relevant studies.</p>   |



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|    | <p>It is thus a concern that failure to have the list noted under point 1 included in the EIA process will render those affected by the proposed ash dump open to the same lack of monitoring data which would effectively prevent an assessment of impact.</p> <p>The sources, pathway and receptor approach is fundamental to the assessment of hazards and risks and accepted world-wide, and implied in the relevant NEMA and NWA Acts.</p> <p>Observation in terms of sampling, analytical determination and transparent reporting, of the relevant potentially hazardous constituents should be included for all these aspects (waste stream and other possible sources; pathways as relevant, e.g. air, soil, water, plant; for relevant receptor types).</p> |   |  |  |
| 14 | <p>An issue was raised about dust control and how it will be managed.</p>  | <p>Mr Warren Kok,<br/>Zitholele Consulting</p>                                | <p>Focus group meeting on 20 July 2012 at 10:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project</p> | <p>Dust is a problem at ash disposal facilities. Studies will be undertaken to quantify this impact. Typical dust control measures include controlled irrigation on the facility, covering with vegetation, etc.</p> |
| 15 | <p>Traditional methods of dust control does not work. Other methods must be found.</p>   | <p>Mrs Annamie Duvnhage,<br/>Bronkhorstspruit and Wilge River Conservancy</p> | <p>Focus group meeting on 20 July 2012 at 10:00 to present information regarding the inclusion of Site F as a feasible</p>   | <p>This is true, and is noted for the record.</p>  |

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|    |   |  | alternative to be taken forward to the EIA phase of the project   |  |
| 16 | There is no proper monitoring of dust and dust control present at Kusile.   | Dr James Meyer, Consultant for TOPIGS SA (Pty) Ltd                 | Focus group meeting on 20 July 2012 at 10:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | Thank you and this is noted for the record. Specialists will be requested to review this during their detailed investigations, and propose better monitoring of this facility for the EMP.<br><br><b><i>(Post meeting note: Kusile has got a dust monitoring programme, and measures, e.g. water suppression, binding chemical. On a monthly basis, monitoring is done through a dust bucket. Kusile has an ASTM standard which it is in compliance with).</i></b> |
| 17 | A big concern is the pollution implications with the ash facility. It is going to pollute the air, water and soil, also have health implications and lead to land degradation and reduce crop production. We are also concerned about the visual impact of the ash dump and the impact to our property values | Mrs Annamie Duvenhage, Bronkhorstspuit and Wilge River Conservancy | Focus group meeting on 20 July 2012 at 10:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | This is noted for the record. Specialist studies will address these concerns and quantify the impact.  |
| 18 | How is the ash being kept from blowing away?  | Mrs Carol Wentzel, Bronkhorstspuit and Wilge River Conservancy     | Focus group meeting on 3 August 2012 at 09:00 to present information regarding the  | The ash is managed through irrigation systems using water from the plant. Water generated from the ash stack is used as top up irrigation water.<br><br>No water will be taken from the nearby streams or rivers.  |

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|    |   |  | inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project |   |
| 19 | <p>Whilst the issue of air quality and dust suppression is noted in the draft scoping report and during the presentations the specialists have all admitted to the fact that despite the mitigation measures that may be put in place some impact from dust and ash-particle fallout will occur.</p> <p>It was noted by the specialists that this currently occurs at Kendal ash disposal site.</p> <p>This is a major concern for not only public health but the agricultural production activities currently underway by the landowners potentially affected.</p> <p>This affects animal health directly by sensitive pulmonary exposure pathways and related respiratory and subsequent systemic adverse effects, and indirectly by grazing quality. Crop production may obviously also be adversely affected by fallout, product quality and long-term soil effects.</p> <p>It is proposed that this aspect needs to be addressed more fully and comprehensively by a workshop/specialist/stakeholder interaction where these issues and the issues noted below are dealt with:</p> <p>National Ambient Air Quality Standards are established (NEM: Act 34 of 2004), with section 2.3 on Ambient air quality measurement requirements stating that the assessment of all ambient pollutant concentrations shall be conducted in terms of the relevant sections of the National Framework for Air Quality Management. Section 3 on National Ambient Air Quality Standards addresses SO<sub>2</sub>, NO<sub>2</sub>, Particulate matter, ozone, benzene, lead and</p> | Dr James Meyer, Consultant for TOPIGS SA (Pty) Ltd | Email on 2 August 2012  | The EIA will recommend various dust management measures. An air quality assessment will be undertaken in the next phase of the EIA. |

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| <p>carbon monoxide but monitoring needs to include a comprehensive list of potentially hazardous constituents related to coal, combustion thereof, storage of combustion products and related activities, including transport of both coal and combustion products. Additional key elements include:</p> <ul style="list-style-type: none"> <li>• trace elements in FGD byproduct (e.g. arsenic, selenium and mercury)</li> <li>• trace elements captured by fly ash and coarse ash with consequent significant environmental concerns as many are reported to be carcinogenic, toxic and potential endocrine disruptors.</li> </ul> <p>The key carcinogenic elements most frequently cited include arsenic, cadmium, nickel and zinc, whilst toxicity concerns are most often reported for selenium and mercury.</p> <p>Potentially hazardous trace elements associated with fly ash include:</p> <p>Arsenic; Aluminium; Antimony; Barium; Beryllium; Bromide; Cobalt; Chromium; Copper; Iron; Lanthanum; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Silicon; Strontium; Tungsten; Uranium; Vanadium.</p> <p>Macro elements include Fluoride, Sulphur and Nitrogen. Other potential hazards include PAHs and VOCs.</p> <p>According to studies published regarding health impacts associated with coal-fired power plants and disposal of coal combustion products concern exists for both air quality and water quality impacts. Numerous environmental studies also observe hazardous substances in a variety of exposure media, from soil to aquatic organisms utilized for human consumption. Public health studies cite 84 separate hazardous air pollutants to be associated with coal-fired power plants. Given the</p> |  |  |  |
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|                   | <p>sensitivity of the catchment involved for all the sites in terms of wetlands and surface water, and the reliance on groundwater by many of the affected landowners, water quality impacts need to be monitored for the same constituents noted above for air quality.</p> <p>In addition, as noted in the previous comments submitted, concerns regarding Turbidity, Suspended Solids, COD, Ammonia and microbiological indicator organisms are also valid due to the impacts for construction activities and stormwater runoff. These should thus also be monitored to assess environmental impact on a continuous basis as it is understood that the construction of the ash disposal facility or facilities will not be a single event but rather an ongoing process as storage requirements increase over time.</p> |  |   |   |
| <b>2.3. Noise</b> |  |  |   |   |
| 1                 | Will there be noise buffer ones?   | Mr Adriaan Loots, Jakhalsfontein                                   | Public meeting on 15 February 2012 at 18:00 to discuss and review the Draft Scoping Report.   | The noise levels will be in line with that of an agricultural zone. A noise assessment is one of the specialist studies that will be undertaken during the next phase and included in this assessment will be recommendations related to noise buffers. |
| 2                 | What will the noise impact be?   | Mrs Annamie Duvenhage Bronkhorstspruit and Wilge River Conservancy | Focus group meeting on 20 July 2012 at 10:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | A noise specialist study has been included in the EIA, and it will determine this and provide mitigation.   |

### 3. SOCIO-ECONOMIC COMMENTS

| 3.1. Agriculture |  |  |                                  |  |
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| 1                | The proposed Site B takes up most of my farm. The remaining land will not make it economically viable to continue farming.   | Mr Hans Jansen van Rensburg, Farm: Witklip, PO Box 273, Bronkhorstspruit, 1020   | Reply sheet on 30 September 2011 | Noted. If the site is the preferred and recommended site, through the EIA process, appropriate engagement and negotiations will be held with the landowner, by Eskom once DEA authorises a particular site.  |
| 2                | I farm with organic export berries. This development will mean the end of our farming activities and our existence. (A detailed presentation of the farming activities that will be destroyed by this development can be found in the attached documentation.)   | Mr Andreas Moll, Bio Select, Jakhalsfontein, PO Box 1918, Bronkhorstspruit, 1020 | Reply sheet on 7 October 2011    | The potential impact on agriculture will be fully investigated during the next phase of this study. Please see and comment on the proposed Terms of Reference for this study to ensure all elements of concern will be addressed. At completion of the specialist studies, the public will be given an opportunity to confirm acceptability of proposed mitigation strategies and plans. |
| 3                | Site B will affect one portion of my farm, but since all three portions are being managed as one unit, all three portions will eventually be affected.   | Mr Hennie Terblanche, Farm: Bossemanskraal, PO Box 427, Groblersdal, 0470        | Reply sheet on 22 October 2011   | Noted. Please note that the potential impact on agriculture will be fully investigated during the next phase of this study. If the site is the preferred and recommended site, through the EIA process, appropriate engagement and negotiations will be held with the landowner, by Eskom.   |
| 4                | Site B will adversely affect agricultural land. There are various wetlands and dams that will be negatively affected by your development. Pollution from the ash disposal facility will affect agricultural operations, the wetlands and dams. There is also an oil pipeline that is not marked on your map. | Mr P.J. Schreuder, PO Box 1453, Bronkhorstspruit, 1020                           | Reply sheet on 16 October 2011   | The potential impact on agriculture and all water resources will be fully investigated during the next phase of this study.<br><br>The oil pipeline will be confirmed and the feasibility of the site, with such infrastructure, will be investigated.   |

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| 5 | <p>This development will adversely affect agricultural land.</p>   | <p>Mr Hennie Pienaar,<br/>Alledo, PO Box<br/>2793,<br/>Bronkhorstspuit,<br/>1020</p>       | <p>Reply sheet on 24<br/>October 2011</p> | <p>The potential impact on agriculture will be fully investigated during the next phase of this study. Please see and comment on the proposed Terms of Reference for this study to ensure all elements of concern will be addressed. At completion of the specialist studies, the public will be given an opportunity to confirm acceptability of proposed mitigation strategies and plans.</p>  |
| 6 | <p>My farm Jakhalsfontein Portion 31 is due north of the proposed Site B.</p> <ul style="list-style-type: none"> <li>• The farm Jakhalsfontein has a JR number of 528 and not 258.</li> <li>• I supply vegetables to a variety of businesses such as Woolworths in a 120 km radius. We are dependent on good quality water to supply high quality vegetables. Our water originates from your Site B.</li> <li>• Six new houses with a value of around R2 million are being used to plant the vegetables in. These structures cannot be moved.</li> <li>• We provide labour to unemployed people and especially women from area. If this ash disposal facility is going to be built on Site B, many employment opportunities will be lost.</li> <li>• The wetlands north of Site B will be adversely affected. This water eventually ends up in Loskop Dam, a major irrigation source.</li> <li>• Many animals are directly dependent on the wetlands for survival.</li> <li>• Air pollution will have a negative impact on the vegetable famers next to Site B.</li> <li>• All farming activities next to Site B will be negatively</li> </ul> | <p>Mr Adriaan Loots,<br/>Gala Boerdery, PO<br/>Box 2102,<br/>Bronkhorstspuit,<br/>1020</p> | <p>Reply sheet on 18<br/>October 2011</p> | <p>The potential impact on agriculture and all water resources will be fully investigated during the next phase of this study. Air pollution will also be investigated. Please see and comment on the proposed Terms of Reference for this study to ensure all elements of concern will be addressed. At completion of the specialist studies, the public will be given an opportunity to confirm acceptability of proposed mitigation strategies and plans.</p> |

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| 7 | <p>We farm on Witklip 12 and will be directly affected by Site B.</p> <p>This development will affect a fountain on my property which also provides water to other farmers, such as Eagles Pride Hatchery, as well.</p> <p>Agricultural land in Gauteng is already marginalised. Dumping waste in Gauteng that will be created in Mpumalanga will have a financial impact on Gauteng farmers.</p>  | <p>Mr CJ Gerber,<br/>Witklip, PO Box 242,<br/>Bronkhorstspuit,<br/>1020</p>  | <p>Email on 26<br/>October 2011</p> | <p>Noted. The potential impact on agriculture and all water resources will be fully investigated during the next phase of this study.</p>   |
| 8 | <p>With regard to the above proposed site for the establishment of an ash disposal facility, on the farm Witklip 539, Jakhalsfontein 258 and Nooitgedacht 525, as well as the proposed conveyor corridor over various farms including Bossemanskraal 538 JR (the site marked as "Site B" on your map), we would like to make the following comments on behalf of our client, who owns the farm Witklip 539 JR and parts of the farm Bossemanskraal 538 JR.</p> <p>Please take note that these comments are based on our initial assessment of the situation and, as additional information comes to hand, we may expand on our arguments set out herein.</p> | <p>Van Rensburg<br/>Jordaan &amp; Olivier<br/>Attorneys on behalf<br/>of Hans van<br/>Rensburg Boerdery<br/>cc</p> | <p>Email on 11<br/>January 2012</p> | <p>Noted.</p>   |
| 9 | <p>1. The farm Witklip</p> <p>The entire proposed site "B" is situated on prime agricultural land, affecting approximately 250 hectares of irrigated land. Currently crops such as corn, potatoes and peas are produced under irrigation. Apart from the area directly affected, the whole farming business of our client will be ruined as the farm is integrated and the remainder of the farm cannot be sustained independently from that part of it. Crops on that land but also on the rest of the farm are irrigated from dams whose water quality will no</p>   | <p>Van Rensburg<br/>Jordaan &amp; Olivier<br/>Attorneys on behalf<br/>of Hans van<br/>Rensburg Boerdery<br/>cc</p> | <p>Email on 11<br/>January 2012</p> | <p>It is noted that the agricultural impact and air quality impacts of the proposed development, especially Site B is a concern. In order to address this concern an Agricultural Potential Study has been included in the list of studies to be undertaken so that this aspect can be fully understood. Please see and comment on the proposed Terms of Reference for this study to ensure all elements of concern will be addressed. At completion of the</p> |



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|           | <p>doubt be affected by the ash.</p> <p>2. The farm Bossemanskraal</p> <p>Immediately adjacent to, and approximately 1,5 km from the proposed site on the farm Bossemanskraal, my client has a broiler facility where approximately 1,75 million chickens are reared every year. We are concerned about the effect the ash may have on the health of the chickens and also on the quality of the product and the safety to consumers.</p> <p>3. The Conveyor Corridor area</p> <p>The area earmarked for the conveyor is also agricultural land. Although it may not affect our client directly we are aware of many farmers who may be adversely affected, among which is a large-scale pig farm.</p> <p>4. The farm Groenfontein</p> <p>One of the major players in the chicken industry in Gauteng, namely Eagles Pride, has one of its' major hatcheries as well as about 36 broiler houses on the property immediately adjacent to the proposed site. They have informed us that they are busy conducting their own environmental impact assessment through their agents and will give their comments in due course.</p> <p>Although we are not authorised to give an opinion on their behalf, we are aware of a number of reasons why the ash will negatively impact their facility, and possibly to the extent that it may have to close down entirely. These reasons shall also apply, to a large extent, to the chicken facility on the farm Bossemanskraal, belonging to our client.</p> |                                      |  | <p>specialist studies, the public will be given an opportunity to confirm acceptability of proposed mitigation strategies and plans. Reference will also be made to recommendations from the Kusile power station EIA process, and its Environmental Authorisation.</p> |
| <p>10</p> | <p>Invaluable agricultural land needed for food production will go to waste if it is used for this ash disposal facility.</p>  | <p>Mr Christiaan Gerber, Witklip</p> | <p>Public meeting on 15 February 2012 at 18:00 to discuss and review the Draft</p> | <p>This will be investigated during the specialist studies during the next phase.</p>   |

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| 11 | <p>With regard to the establishment of an ash disposal facility, on the farms Witpoort 563 JR and Nooitgedacht 564 JR, (the site marked as “Site G” on your map), we would like to make the following comments:</p> <p><b>Economic farm unit</b></p> <p>We have been farming on this land for many years, and we have over the years established farming activities on the farms Witpoort and Nooitgedacht. This forms an economic farming unit and, should this proposed site be chosen, it will divide the unit in such a way that it will no longer be possible to farm economically on the adjoining part of these farms. This will mean the end of our farming operation, which will also result in 25 workers losing their income.</p> <p><b>Integrity of water resources and air</b></p> <p>The Wilge River and three smaller streams run through this proposed area. These water resources are used by the community and many farmers for irrigation of crops and also as drinking water, especially for cattle. We believe that the presence of the ash heap will pollute these resources to the extent that it will no longer be suitable for any of these purposes. This will have a wide socio-economic impact on the area as a whole. We understand that water is a scarce resource and it is difficult to see why this could be deemed a suitable area for an ash heap of this size. Apart from the water, we are also deeply concerned about pollution of the air and how it will affect the people working and living in the area.</p> <p><b>Financial implications</b></p> <p>This proposed area is mainly on fertile agricultural land that is suitable for the production of various crops. Land suited for crops is more expensive than land that is suitable only for grazing, and typically more people are</p> | <p>Mr JP Joubert,<br/>Joubert Boerdery,<br/>PO Box 55<br/><br/>Bronkhorstspruit,<br/>1020</p> | <p>Email on 29 February 2012 in response to the Draft Scoping Report</p> | <p>The potential impact on agriculture, the economy and all water resources will be fully investigated during the next phase of this study.</p> |

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|           | <p>employed on such fertile land. If this area (Site G) is compared to area Site C, it is evident that Site C consists of a smaller portion of fertile land, thereby not only rendering that area a cheaper proposition in terms of land prices, but also in terms of the number of people who may be adversely affected. Apart from this, we understand that a portion of this land already belongs to ESKOM.</p> <p>Even more so, Site A is located on land which already belongs to ESKOM.</p> <p>Recommendations:</p> <p>We propose that Site C or Site A, being closer to the site of the plant be chosen, as this will not only have a smaller financial impact on the project as a whole but will also not affect as many people, land or water resources. We sincerely believe that it will have a much smaller impact on the local economy too, especially as much of that land already belongs to Eskom.</p> |   |  |   |
| <p>12</p> | <p>MANYATHELA AVENTURES on the farm Witpoort offers the following activities to its clients:</p> <ul style="list-style-type: none"> <li>• Hunting;</li> <li>• Mountain biking;</li> <li>• Horse riding,</li> <li>• Fishing,</li> <li>• Walking; and</li> <li>• Abseiling.</li> </ul> <p>Other economic activities on the farm include chicken, game, cattle and sheep farming.</p> <p>It is a known fact that dust/ash from such a facility cannot be fully controlled and that it will pollute neighbouring properties. This pollution will have a serious impact on all the activities we currently have on our property.</p>  | <p>Mr Andries van Vuuren,<br/>MANYATHELA AVENTURES<br/>Witpoort</p> | <p>Email on 1 March 2012 in response to the Draft Scoping Report</p> | <p>The potential impact on the economy activities on neighbouring properties and all water resources will be fully investigated during the next phase of this study.</p> <p>Eskom does have regular monitoring of the soil, water, air in the area of Kusile Power Station.</p> |

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|                        | We understand that Kusile is of national interest. Eskom must, however, look after the interests of its neighbours by doing regular monitoring of the soil, water, air and vegetation to ensure that the surrounding area is not adversely affected. |  |  |   |
| 13                     | What happens if only portion of the farm is used for the ash facility?   | Mr Leon Van Dyk  | Focus group meeting on 26 July 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project  | That will be negotiated between Eskom and the landowner.  |
| 14                     | Is the vegetation on the rehabilitated ash dump edible?  | Mrs Carol Wentzel, Bronkhorstspuit and Wilge River Conservancy | Focus group meeting on 3 August 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | It is in fact edible and not toxic, but ultimately you do not want any animals grazing on the rehabilitated ash dump as the vegetation is removed and the ash will be open. |
| <b>3.2. Employment</b> |  |  |  |   |
| 1                      | The people in Bronkhorstspuit need employment on Eskom projects. At Kusile Power Station people from other provinces are working, but we cannot find a job with  | Mr Aaron Skhosana, Mazolman Partners Network, PO Box           | Reply sheet on 20 October 2011   | Noted. This aspect will be addressed in the project's Social Impact Study.  |

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|                          | Eskom.  | 2077,<br>Bronkhorstspuit,<br>1020  |  |  |
| 2                        | Irrigated crops in general provide higher employment than non-irrigated crops and land used for grazing. For crops like potatoes, temporary labour is often used in the harvesting season and for some of these labourers this is their only source of income. Although the ash disposal facility will probably create some employment, it will adversely affect not only these farm workers but also the many people employed by the various chicken facilities in the area.   | Van Rensburg<br>Jordaan & Olivier<br>Attorneys on behalf<br>of Hans van<br>Rensburg Boerdery<br>cc | Email on 11<br>January 2012  | This concern will be addressed by the Social Impact Assessment proposed for the EIA phase.   |
| <b>3.3. Compensation</b> |   |  |  |  |
| 1                        | <p>Apart from the obvious financial implications for our client and for the other farmers mentioned in section 2 above, the proposed site "B" is, as mentioned, situated on prime and licensed irrigated land. It will be on, or directly affect, approximately 250 hectares of this high-value land, the value of which is approximately R80,000 (Eighty Thousand Rands) per hectare.</p> <p>Apart from this there is the cost of the corridor, which, though we have no estimate of the amount, must be substantial. Apart from the capital cost, it will incur substantial monthly running costs including health and safety costs and security.</p> | Van Rensburg<br>Jordaan & Olivier<br>Attorneys on behalf<br>of Hans van<br>Rensburg Boerdery<br>cc | Email on 11<br>January 2012  | Your comment is noted and the cost of land and the operating of the facility and its conveyors will be part of a cost-benefit analysis done by the technical team. Furthermore, land analysis will follow the recognised evaluation procedures, and appropriate engagement will be undertaken. |
| 2                        | Once a site has been chosen, will Eskom buy the properties as land is needed or will all the properties on the site be bought out in the beginning?   | Mr Christiaan<br>Gerber, Witklip   | Public meeting on<br>15 February 2012<br>at 18:00 to<br>discuss and<br>review the Draft<br>Scoping Report. | Eskom will buy all the properties on the chosen site at the same time. The property could then be rented out to the previous owner until it is needed for the ash disposal facility.   |
| 3                        | If only a portion of a property falls within a site, will the   | Mr Adriaan Loots,  | Public meeting on  | This must be discussed between Eskom   |

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|                    | whole property be bought out, or just the small part inside the site.  | Jakhalsfontein   | 15 February 2012 at 18:00 to discuss and review the Draft Scoping Report.  | and the individual owners. Apart from being paid a market-related price, a landowner will also be compensated for improvements on the property.  |
| 4                  | How will the pan on Site F be compensated for?   | Mrs Carol Wentzel<br>Bronkhorstpruit and<br>Wilge River<br>Conservancy | Focus group meeting on 3 August 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | As a mitigation measure should it should be compensated for off-site.  |
| <b>3.4. Social</b> |  |  |  |  |
| 1                  | Can you show me on the map where the families who have been displaced due to the power station have been moved?  | Mr Zweli Mpfu,<br>Bravo Cooperative,<br>Hartbeestfontein.              | Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report.  | The families have been moved to an area that now falls in Site C.  |
| 2                  | What about the social impact on us, because we have already been moved once.   | Mr Zweli Mpfu,<br>Bravo Cooperative,<br>Hartbeestfontein.              | Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report.  | The social impact assessment to be done during the next phase will investigate this in great detail. The reason for this is that all properties in the area have been treated equally for the purpose of this study. |
| 3                  | Land owners and affected parties do not have the financial resources to undertake monitoring to ensure that this facility is not polluting, can we ask for monthly | Mr Andries van<br>Vuuren,<br>MANYATHELA                                | Focus group meeting on 20 July 2012 at   | You may ask that Eskom be made responsible to undertake the monitoring and make this available for public  |

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|   | monitoring to be done?   | AVENTURES<br>Witpoort   | 10:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project   | consumption. Eskom is currently undertaking monitoring for the current Kusile Operations and reports this at an Environmental Monitoring Committee (EMC) meeting, held every 6 weeks, where public stakeholders are able to attend. It may be possible to combine the monitoring undertaken for this project with existing efforts.<br><br>A standard requirement of a Waste Management License (WML), which will be required for this type of facility, is extensive monitoring and reporting. |
| 4 | What part does heritage play? There are distinctive circles on some farms from previous inhabitants. My farm also has a small cave with bushman drawings.  | Mr Andries van Vuuren,<br>MANYATHELA<br>AVENTURES<br>Witpoort | Focus group meeting on 3 August 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | Noted. A heritage impact assessment will be done.   |
| 5 | As was noted by the stakeholders and affected land owners present at the meeting referred to above the primary mechanism of protection for interested and affected parties remains a combination of:<br><br>A commitment on behalf of Eskom/Kusile to monitor the relevant constituents and parameters that may impact on the environment and affected parties.<br><br>An agreement or undertaking on behalf of Eskom/Kusile to adhere to standards set for upper limits of pollution for the relevant sources applicable to the construction, | Dr James Meyer,<br>Consultant for<br>TOPIGS SA (Pty)<br>Ltd   | Email on 2 August 2012   | Noted.  |

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|   | <p>operation and maintenance of the proposed ash waste disposal site/s.</p> <p>The implementation of environmental management plans that offer sufficient protection to the current land uses.</p> <p>Provision of all monitoring data within a reasonable time-frame to the interested and affected parties.</p> <p>Regular engagement with the interested and affected parties.</p> <ul style="list-style-type: none"> <li>• It is proposed that this take the form of an Environmental Monitoring Committee similar to that currently in operation by Kusile Power Station.</li> <li>• However, as these meetings already provide many specialist reports relating to the construction (and future operation) of the power station itself and do not necessarily relate specifically to the Ash Disposal Facility/s it is proposed that a separate forum be established to focus on the Ash Disposal Facility/s.</li> </ul> |  |                        |  |
| 6 | <p>A key concern noted in the initial comments submitted remains that there appears to be an on-going adjustment to scope of waste disposal facility or facilities required:</p> <ul style="list-style-type: none"> <li>• The initial projections failed in forming a reasonable estimate of the required ash dump facility size and scope and it was previously argued that it was unclear how the Draft Scoping Process would prevent the same set of scenario circumstances from occurring again (as verbally explained for the 10 year ash dump).</li> <li>• This has now occurred as predicted by the inclusion of yet another potential site and possible use of a combination of sites (as presented on 20 July 2012).</li> <li>• The fact that more reasons have presented themselves since the initial draft scoping report</li> </ul>  | Dr James Meyer, Consultant for TOPIGS SA (Pty) Ltd | Email on 2 August 2012 | Many possible options or alternative sites are investigated during the scoping phase of an EIA. This is done in order to be as thorough as possible during the assessment phase of the EIA when specialists do their work to find the site with the least impact from an environmental, social and economic perspective. |



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|  | <p>warranting the inclusion of another site (site F) suggests that landowners have a valid concern that additional sites may yet again be included at later stages with a similar set of reasons put forward to motivate for yet another set of waste disposal requirements.</p> <ul style="list-style-type: none"> <li>• This implies that landowners are potentially expected to continually re-evaluate the challenges that may impose themselves on their environment.</li> <li>• These landowners should have the certainty to plan their own development/expansions/ land use programmes, yet this is clearly very hard to do given the high degree of uncertainty that exists regarding the true requirement for Kusile Power Station.</li> <li>• The request is thus that Eskom/Kusile not delay the process unnecessarily but commit with scientifically defensible motivation the true capacity and site requirements and that the selection and proposal be put forward for the necessary authorisations.</li> <li>• It was noted previously that this should have been completed to a far greater degree of certainty when the initial authorization was granted for the location of the Kusile Power Station.</li> <li>• Whilst this problem may not necessarily relate to the actions/decision making responsibilities of Eskom/Kusile Power Station, and may be significantly influenced by relevant authorities involved in the processes, it should not be at the cost of current existing landowners and activities in the area.</li> </ul> |  |  |  |
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**4. ORIGINAL EIA FOR KUSILE POWER STATION AND TEN YEAR ASH DISPOSAL FACILITY**

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| 1 | <p>I just want clarification. Which was the original site as you are calling this an extension?</p> <p>Why did the original planning not take the life of the project into account and not adequately provide for a</p> | <p>Rev. Andrew Manning, Anglican Communion Environmental</p> | <p>Reply sheet on 13 October 2011</p> | <p>The original EIA did include planning for an ash disposal facility for the station as part of the EIA authorisation process. Through the Environmental Authorisation,</p> |
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|          | <p>suitable ash disposal site.</p> <p>Please provide any relevant comment or details of the technical investigations in the original application regarding the Ash Disposal site or other related infrastructure so that we can align ourselves with the work done to date.</p> <p>A copy of the existing Kusile Environmental Authorisation would also assist the interested and affected parties to align themselves with where we are in the process.</p> | <p>Network, PO Box 5726, Secunda, 2302</p> |  | <p>the Department of Environmental Affairs enforced development and execution of a site layout that would avoid and minimise impacting on wetlands. To this end, a wetland delineation study was undertaken, which resulted in a reduction on available land that could be used for the ashing. Furthermore, the Water Use Licence also required that the project avoid and minimise impacts on water resources (wetlands and drainage lines). Through the need to avoid these sensitive systems, it became necessary for the project to consider other sites for the development of the ash disposal facility.</p> <p>The word extension is used in terms of extending the infrastructure at the Power Station, not necessarily an extension of the ashing facility.</p> <p>Copies of previous EIAs are available on the Eskom website <a href="http://www.eskom.co.za/eia">www.eskom.co.za/eia</a> and the link Kusile power station.</p> |
| <p>2</p> | <p>How can you plan a power station without including an ash disposal facility for the total life span of the power station? Your planning was not good enough.</p>  | <p>Mr Hans van Rensburg, Witklip</p>       | <p>Public meeting on 15 February 2012 at 14:00 to discuss and review the Draft Scoping Report.</p> | <p>The EIA for the power station left sufficient space for an ash disposal facility for the total life span of the power station. The Department of Environmental Affairs, however, in its conditions attached to the Environmental Authorisation, delineated all the water courses on the land where the power station and ash disposal facility had to be developed. Another condition stated that flue gas desulphurisation (FGD) technology be used, which will add another waste – gypsum.</p> <p>This only left enough space for the power</p>  |

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|   |   |  |  | station and a 10-year ash disposal facility.   |
| 3 | Did the original EIA not under estimate the size of the ash disposal facility?  | Dr James Meyer,<br>Water Research<br>Commission,<br>Pretoria                   | Public meeting on<br>15 February 2012<br>at 14:00 to<br>discuss and<br>review the Draft<br>Scoping Report.   | No, the initial EIA investigated an area of over 1000 hectares for the ash disposal facility.<br><br>The Department of Environmental Affairs (DEA), however, in its conditions attached to the Environmental Authorisation, delineated all the water courses on the land where the power station and ash disposal facility had to be developed. Another condition was that flue gas desulphurisation (FGD) technology must be used, which will add another waste – gypsum.<br><br>This only left enough space for the power station and a 10-year ash disposal facility. |
| 4 | Where can I get the EIA done for the power station?   | Mr Stefan<br>Vermaak, Topigs   | Public meeting on<br>15 February 2012<br>at 14:00 to<br>discuss and<br>review the Draft<br>Scoping Report.   | This study was not done by the current team of consultants, Zitholele Consulting and can be found on the Eskom website: <a href="http://www.eskom.co.za/eia">www.eskom.co.za/eia</a>   |
| 5 | It is mentioned in the Scoping Report that there is a possibility of disposing the ash in the open-cast void created by New Largo. Why is this not a sufficient solution? | Mrs Annamie<br>Duvenhage,<br>Bronkhorstspuit<br>and Wilge River<br>Conservancy | Focus group<br>meeting on 20<br>July 2012 at<br>10:00 to present<br>information<br>regarding the<br>inclusion of Site F<br>as a feasible<br>alternative to be<br>taken forward to<br>the EIA phase of<br>the project | At present the New Largo operation is not approved, and a billion Rand decision cannot be based on a possibility. Assuming that New Largo is approved it would be many years before a pit of a suitable size is available before feasibility studies could be undertaken to quantify the feasibility of in-pit disposal. Studies undertaken on other operations of a similar nature have been inconclusive.<br><br>Options that could be considered and that have been done before is to have an ash   |

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|   |   |   |   | <p>dump facility at an open cast pit with compacted material in the pit for rehabilitation i.e. to install the ash disposal facility on an area of open cast mining that has been appropriately backfilled and compacted; rather than in an opencast pit.</p> <p>The ash disposal facility will be constructed in stages, and the total identified area will not be levelled and prepared from start of operations. Typically Eskom will only build what the power station need within a 5 year window. Thus a small portion will be used for the ash dump and later it will be extended as more space is needed.</p> <p>Thus ash disposal can be shifted to a new location on New Largo in the future, should feasibility studies show that it is possible. This option is also only available for Areas A, F and G. None of the other areas identified (Areas B, D, E, H1-3 and I) allow for this later change in disposal operations, because of the significant cost to move all the supporting infrastructure, such as conveyor belts, electricity, roads etc.</p> |
| 6 | <p>As affected parties we would like a regular review and feasibility study for in-pit ashing to be included in the EMP of the EIA application to ensure that this study is done, and reported to authorities and stakeholders.</p> | <p>Mrs Annamie Duvenhage,<br/>Bronkhorstspuit<br/>and Wilge River<br/>Conservancy</p> | <p>Focus group meeting on 20 July 2012 at 10:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to</p> | <p>Noted</p>  |

|   |  |  | the EIA phase of the project                           |               |
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| 7 | <p>Some of the Key Concerns noted for the Draft Scoping Report that remain applicable include:<br/>                     Nowhere in the Draft Scoping Report is specific reference to these constituents noted, and although it may be argued that they are included by implication, it is argued that in order for meaningful public participation and acceptable EIA terms of reference to be formulated, they should appear prominently in the report with clear assurances that they will be established in terms of baseline values, potential hazardous waste streams and monitored accordingly. Failure to do this transparently may result in various environmental and water licenses and authorizations to be granted without specific reference to the primary pollutants relevant.<br/>                     It is argued that any water used in the process of transporting, placing and storage of the waste streams (fly ash and coarse ash) should form a significant and critical part of the Draft Scoping Report and be included therein as part of the environment and subsequent EIA issues. Monitoring descriptions must be detailed for storm water drainage and monitoring boreholes, listing at the very least those prohibited discharges typically used for Special Limits by DWA.<br/>                     Clearer indications should be given regarding the handling of waste from human effluent and other hazardous wastes associated with the construction phase, both of the ash dump and conveyor systems. It is already noted by Kusile that Phola Sewage plant cannot cope with the current load, yet Kusile will show a significant increase in staff</p> | <p>Dr James Meyer,<br/>                     Consultant for<br/>                     TOPIGS SA (Pty)<br/>                     Ltd</p> | <p>Email on 2<br/>                     August 2012</p> | <p>Noted.</p> |

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|                              | entering the site per day over time (increase from 8500 currently to over 10000 by 2013 – EMC data). It is vital that any additional construction activities be managed with due regard for the existing impacts and subsequent sensitivities of the receiving environment.   |  |  |   |
| <b>5. CONSTRUCTION PHASE</b> |   |  |  |   |
| 1                            | <p>Trans African Concessions (TRAC) is the operator/concessionaire of the N4. The provision of a conveyor belt in the road reserve or 'building line' adjacent to the N4 would need to be acceptable to TRAC and SANRAL.</p> <p>We require additional information regarding the possibility of additional vehicles on the N4 during construction and the operational phase of this project.</p> | Ms Carla Davies, ,<br>PO Box 4356,<br>Nelspruit, 1200        | Email on 28<br>October 2011  | Noted. A traffic specialist study has been commissioned to address this concern. Please see and comment on the proposed Terms of Reference for this study to ensure all elements of concern will be addressed. At completion of the specialist studies, the public will be given an opportunity to confirm acceptability of proposed mitigation strategies and plans.   |
| 2                            | Will the whole area of the ash disposal facility be developed before any ash is accepted?   | Mr Robbie van<br>Bulderen, Transnet<br>Pipelines             | Public meeting on<br>15 February 2012<br>at 14:00 to<br>discuss and<br>review the Draft<br>Scoping Report. | <p>No, it will be developed step-by-step. At Medupi power station (which is similar to what is planned at Kusile) the ash disposal facility is developed in sections enough for four years at a time while the storm water system is changed every two years.</p> <p>The whole facility is also checked every two years. Annual audits are also done to see if there is any seepage. All these results must be submitted to the relevant authorities.</p> |
| 3                            | Construction waste material must also be investigated in this EIA.  | Dr James Meyer,<br>Water Research<br>Commission,<br>Pretoria | Public meeting on<br>15 February 2012<br>at 14:00 to<br>discuss and<br>review the Draft                    | The construction phase will be dealt with extensively in an Environmental Management Programme (EMProg).  |

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| 4 | What will be done with the gypsum?   | Dr James Meyer,<br>Water Research<br>Commission,<br>Pretoria             | Public meeting on<br>15 February 2012<br>at 14:00 to<br>discuss and<br>review the Draft<br>Scoping Report.  | During the first few years of operation the gypsum and the ash will both be stored on the 10 year ash disposal facility until the 60 year ash disposal facility has been completed. Then only gypsum will be stored on the smaller facility which will have a dedicated barrier for gypsum and ash on the bigger facility.  |
| 5 | Why can you not throw the ash in the open pit of the coal mine?  | Mr Hans van<br>Rensburg, Witklip<br><br>Mr Christiaan<br>Gerber, Witklip | Public meeting on<br>15 February 2012<br>at 14:00 to<br>discuss and<br>review the Draft<br>Scoping Report.<br><br>Public meeting on<br>15 February 2012<br>at 18:00 to<br>discuss and<br>review the Draft<br>Scoping Report | That will not be possible in the first 10 to 15 years of operation, because there is a big lag between digging out the coal and having an open pit to place the coal into.<br><br>When Kusile Power Station starts operating, coal will be brought in by conveyor belt from the Phola Washing Plant while the proposed New Largo Colliery is being constructed.<br><br>It is also unknown what will happen to the groundwater if ash and gypsum is added to the mine pit. Studies need to be done to find out what will happen to groundwater 15 to 20 years after this ash and gypsum have been added.<br><br>Eskom and Anglo American will be investigating this during the next few years.<br><br>The DWA does not like back fill, because there are still too many uncertainties regarding groundwater pollution. |
| 6 | When does the construction for the ash dump start, if the ash disposal facility affects our property directly will we be given ample time to relocate? | Mr Andries van<br>Vuuren,<br>MANYATHELA                                  | Focus group<br>meeting on 20<br>July 2012 at  | Construction is planned to start 2015 and commissioning is planned to start 2017. It is important to realise that the I&AP's  |

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|   |  | AVENTURES<br>Witpoort   | 10:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project  | need fair time frames in order to make arrangements. A two year timeframe can be expected |
| 7 | Are there construction plans for new roads for the ash facility? | Mr Andries van Vuuren,<br>MANYATHELA<br>AVENTURES<br>Witpoort | Focus group meeting on 26 July 2012 at 09:00 to present information regarding the inclusion of Site F as a feasible alternative to be taken forward to the EIA phase of the project | All new road plans will be showed at the meeting on Friday the 3 <sup>rd</sup> of August. |