PROPOSED NEW COAL-FIRED POWER STATION IN THE LEPHALALE AREA, LIMPOPO PROVINCE
ENVIRONMENTAL IMPACT ASSESSMENT

KEY STAKEHOLDER WORKSHOP
30 March 2006
14:00
Eskom Convention Centre, Congella Room

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1. WELCOME AND INTRODUCTION

Dr. David de Waal, the facilitator, welcomed the attendants to the key stakeholder workshop regarding the proposed new coal-fired power station in the Lephalale area, Limpopo Province. He indicated that the meeting proceedings would be minuted and recorded for record purposes. He introduced the members of the project team:

- Ms. Deidre Herbst: Environmental Manager: Eskom Generation
- Mr. Tony Stott: Stakeholder Manager: Eskom
- Mr. Willem Laenen: Project Leader: Eskom
- Mr. Nico Gewers: Senior Environmental Advisor
- Ms. Ashlea Strong: Bohlweki Environmental: Project Manager
- Mr. Gift Magangane: Bohlweki Environmental: Public Participation
- Ms. Ingrid Snyman: Bohlweki Environmental: Public Participation
- Ms. Yvonne Scorgie: Airshed: Air Quality Impact Assessment

He explained that the purpose of the meeting was to:

- Provide stakeholders with further information regarding the proposed new Coal-fired Power Station project;
- Provide stakeholders with further information regarding the EIA and public participation process being undertaken for the proposed new Coal-fired Power Station project;
- Provide a forum for stakeholders to engage with project team members; and
- Provide an additional opportunity for stakeholders to formally raise any issues and concerns.

2. OVERVIEW OF THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS EIA AND PUBLIC PARTICIPATION

Ms. Ashlea Strong provided and overview of the proposed project and discussed the EIA process and public participation process, as well as the findings of the draft Environmental Impact Assessment Report (EIR).

The presentation is attached as Appendix A.

3. DISCUSSION SESSION

Mr. Danie Venter of WESSA said the decision with regards to the ashing into the pit needs to be made and included in the EIA due to its huge environmental impacts that need to be assessed. Ms. Deidre Herbst replied that Eskom has to make this decision together with Kumba Resources, who have just started their EIA. For an analysis of the environmental impacts all relevant investigations and research have to be completed, which was not a simple exercise. Eskom have two other power stations where they undertake ashing into the pit, but every situation is different and one could not compare the results. Kumba Resources could not complete their research as part of this EIA, as various environmental aspects have to be investigated. The studies on groundwater (as part of this EIA) did consider ashing into the pit. As soon as Eskom have all the necessary information, they will do detailed studies in this regard and if ashing into the pit proves viable it would be the preferred option. The relevant studies have therefore been initiated and have to be completed before commissioning.

Mr. Danie Venter of WESSA asked whether there would be any criteria to judge the service providers that the power station would utilise to determine whether they are ISO compliant. Ms. Deidre Herbst said Eskom do supplier audits to determine whether their service providers are ISO 14000 compliant. In this regard, the EIA criteria are also taken into account.

Mr. Danie Venter of WESSA noted that in Eskom's annual report it was stated that the water target was 1,3 although the target for this power station was 0,2. He wanted to know what the real target for this power station would be. Ms. Deidre Herbst said the target for this power station was 0,2. The annual report states a target of 1,3 due to the fact that all the power stations were not wet cooled. Approximately 10% of the power stations are dry cooled. The water target of each power station is thus measured based on the design of the power station and what it

could achieve. Historical performances are used and Eskom aims to keep to the targets as far as possible.

Mr. Danie Venter of WESSA said the 45 million m^3 water per annum would have a long term effect on climate change. Models indicated that one could expect a decrease in rainfall, which would result in drier areas. He wanted to know how that would influence the Crocodile River Catchment and the utilisation of water from that catchment into another catchment. Mr. Van der Merwe of DWAF said he was responsible for managing the DWAF studies regarding the transfer of water. DWAF was busy concluding their reconnaissance study and would then continue with the necessary feasibility studies. The 45 million m^3 water per annum was basically return flows from Johannesburg waterworks and works around Tshwane. It thus referred to treated sewage effluent into that system. No water would thus be taken out of the natural resources in the Crocodile River Catchment. The current indications are that even after the 45 million m^3 water would be taken away, that there would still be a surplus in the Crocodile River Catchment in future. DWAF was also busy with assessments regarding the return flows and to confirm the overall availability of water in the Crocodile River Catchment system.

Mr. Danie Venter of WESSA noted that Eskom was involved with energy and water resources, which would become critical issues in the future. He wished Eskom the best with their future endeavours as all areas were pressed for energy. He stated that, from an NGO point of view, they were not against development, but supported sustainable development. If they could assist the studies in any regard, Eskom should contact them.

Mr. Albert Jeleni of DWAF said he was concerned that the presentation on the findings of the EIR did not provide the attendants with specific numbers, but only mitigation measures. The impacts were only rated as low or high. It would have been helpful if more detail could have been provided as one did not only look at mitigation, but also at compensation. With regards to compensation, he indicated that in terms of the risk of cancer, percentages should have been given. Ms. Ashlea Strong explained that the presentation outlined the most important issues and not all the details could be provided in the time allowed for the presentation. She recommended that the draft EIR should also be studied for the detailed information. Ms. Yvonne Scorgie said the cancer risk was found to be very low and that it was between 1 in 10 million to 1 in 20 million, whereas with a landfill site it was usually in the order of 1 in 100 000 or 1 in 200 000. The cancer risks were therefore really negligible due to the height at which the particulates would be released and the controls that would be in place.

Mr. Albert Jeleni of DWAF stated that the impact on groundwater was not quantified and during the presentation it was only indicated as 'low'. Ms. Ashlea Strong said the impact was quantified (tables with monitoring values) and included in the EIR report.

Mr. Koos Croucamp indicated that he represented the Hills family. He asked whether there was an option to combine the existing ash dump with the new ash dump. Mr. Willem Laenen said a high level decision was made that there would be two independent power stations that would operate as separate business units in future. Eskom investigated the possibility of combining the ancillary services, but based on the existing ash dam's size and its growth until the end of the existing power station's life, as well as the size of ash dump needed for the proposed new power station (for all 6 units) it was found that it would be more beneficial to have one ash dump and emergency dump. Therefore it was decided that it would be best to have a separate ancillary ash dam for the proposed new coal-fired power station. Eskom is still investigating in-pit ashing and if this could be implemented there would be no new ashing facility.

Mr. Koos Croucamp noted that it was common practice that quarterly external audits be done. He wanted to know whether these results would be available to the affected parties such as surrounding property owners. Ms. Deidre Herbst said audits in terms of ISO 14000 are carried out for all Eskom's power stations and would be implemented for new power stations. It is Eskom's current policy to be compliant which means that they have regular external audits although they have not yet decided to go for certification. During construction external audits will be undertaken. It is likely that this would be quarterly in addition to internal audits. This information would be made available to Interested and Affected Parties (I&APs) in the area. In other areas Eskom has established Environmental Liaison Committees consisting of members of the public, I&APs, representatives from government, Eskom and other relevant parties. Such a committee discusses the environmental issues and monitor whether Eskom complies with the Environmental Management Plan. Such a committee can also be established in this area.

Mr. Koos Croucamp wanted to know how long the construction period would be. The current industry norm for a plant of this capacity is 48 months. He also wanted to know whether the contractors would develop their own management plans or if they would have to comply with Eskom's management plan. Ms. Deidre Herbst said the EMP is developed from the EIA and all parties are legally bound to comply with this EMP. The contractors would therefore also have to comply with this EMP.

Mr. Koos Croucamp said that he does not agree that the construction noise would be negligible, especially with regards to the reverse indicator noise made by heavy machinery. He stated that there was thus an oversight in the draft EIR regarding this issue. The comment was noted.

Mr. Koos Croucamp said that employing locals as part of the mitigation measures was not a valid argument. People tend to become locals due to the influx of outsiders to the area. This was a serious concern of the landowners, as the influx of additional people to the area would have severe negative impacts. It needs to be clearly stated how Eskom would deal with contractors and the influx of people to the area. Mr. Willem Laenen indicated that Eskom developed contracts for the future contractors and the contracts stipulate specific requirements in terms of local labour and the development of the local people during the construction and operational period. The contractors need to comply with these specifications and Eskom would verify their compliance. Eskom would also indicate in the tender documentation that the necessary funds should be set aside to tend these issues. Mr. Laenen added that Eskom know from experience that employing people from other areas is not beneficial as these people typically stay in the area for one or two years and then leave. It was thus in Eskom's and the contractors' own interest to find the 'real' locals to form successful long-term relationships.

Dr. De Waal added that the influx of people to the area formed part of the discussions between Eskom, the mine, the Lephalale Municipality and other key stakeholders. Mr. Laenen explained that indications are that 50% of the lower level skills would come from e.g. Seleka by means of existing transport facilities. The municipality is planning to develop the farm Peerboom and Eskom intends to support them in this regard. The Lephalale Development Forum has been formed and consists of various stakeholders in the area who are involved with the socio-economic planning for the proposed new coal-fired power station. Ms. Deidre Herbst added that in general, the influx of people is not an easy issue to control. Although Eskom sets specific criteria on how contractors should source local people (e.g. to link individuals to a local address and how long they have been living there), one could not control it perfectly. Eskom therefore echoes the concern raised. In addition to this, the stakeholders have to ensure that safety and security measures are in place and improved. If there is an expectation that there would be an increase in crime, the SAPS would have to get additional resources.

Mr. Koos Croucamp was concerned that DWAF and the other relevant government departments could make some mistakes in terms of allocating water use. As background, Mr. Croucamp explained that there are numerous mining developments in the Brits-Rustenburg area, as well as industries. In addition, the irrigation farmers

also have specific rights in terms of water use. This situation puts enormous pressure on the local water resources. He wanted to know whether such a situation was also taken in consideration for the Lephalale area, as more mining developments could come to the Lephalale area. He asked whether the little that would be left would be enough for all the users. He was of the opinion that there was a lack of an integrated strategic plan to address the issue. Mr. Van der Merwe of DWAF replied that DWAF was busy with parallel studies in the Crocodile River Catchment to confirm the water availability and current water balances. As part of this, they were engaging with stakeholders to confirm their water requirements and to project this to determine the future water use. This would further assist to determine how the return flows might respond to water conservation and water demands implemented. This information was included in a model to come up with water balances. The findings of these studies would be used to develop water management strategies. In addition, DWAF would also undertake "what if" analyses, e.g. what would happen if the water requirements grew more than expected. The current expectations are that the growth in surpluses would be more than the 45 million m^2 of water provided for and to be transferred to the Mokolo Catchment. Mr. Van der Merwe, however, emphasised that the quantity of water to be transferred was not yet fixed. DWAF was similarly faced with the possibility of further developments in the Lephalale area, but was engaging with the government stakeholders in the Lephalale catchment regarding this issue. Only once there would be certainty about the future developments would they be able finalise the figures.

Mr. Koos Croucamp said that a strategic assessment and development plan were necessary to plan in a regional context. This was a major shortcoming in terms of this study. Dr. de Waal indicated that such strategic planning was the responsibility of government although the Lephalale Development Forum was aiming to address certain aspects of this issue. Ms. Deidre Herbst added that it was the responsibility of the National (DEAT) and Provincial Government to determine whether there was a need for an Environmental Management Framework or strategic assessment to be undertaken for that area.

Mr. Louis Steyn said he represented his farther, Mr. Leon Steyn, the property owner of the farms Kromdraai and Grootvallei. He wanted to know when the EIA for the proposed power lines would be undertaken. He wanted more information on the proposed alignment of these power lines, as there were already seven power lines on his father's property Kromdraai. He added that he has submitted his concerns regarding the proposed coal-fired power station to the environmental consultants during the Scoping phase. He again emphasised that the proposed development would have several negative impacts on the residents of Kromdraai such as the impact on the property value, safety impacts and air quality impacts, as well as the

possible overflowing of the proposed ash dam. Ms. Deidre Herbst indicated that the EIA for the proposed transmission lines has been initiated. It was expected that the public consultation would also start soon. Eskom Transmission have confirmed that EIA's are to be undertaken for the following power lines:

- 3 x 400 kV power lines i.e. 2 x 270 km power lines from the new power station to the Dinaledi substation (via Spitskop) and 1 x 270 km power line from the new power station to the Marang substation.
- 4 x 400 kV power lines from the new power station to a new substation (Delta)
- 6 x 765 kV power lines from the Delta substation to the Mercury substation

The contact details for the consultants undertaking the relevant EIA processes are as follows:

Margen Industrial Services / PBAI
Moses Mahlangu (013 699 0749) or Stewart Dunsmore (011 646 5130)

Mr. Louis Steyn wanted to know what the timeframes for the proposed project was and what their role as landowners would be. Ms. Deidre Herbst said that if Eskom receive a positive RoD (expected in July 2006 this year), the site preparation should start before the end of the year. 2010 was the planned date for the first unit to be operational. She added that the affected landowners should approach Eskom to determine a way forward. Mr. Steyn could contact Ms. Herbst and she would then put him into contact with the correct people.

Mr. Louis Steyn noted that the boundary of the farm Kromdraai was not exactly indicated correctly on the map as the boundary of Kromdraai runs along the road.

Dr. de Waal explained that after the RoD has been issued, there was an appeal period where I&APs could appeal directly to DEAT regarding the RoD given.

Mr. Koos Croucamp stated that the impact of the power lines did not form part of the cumulative impact assessment, but should actually have been part of this EIA. Ms. Deidre Herbst said that the linear nature of power lines made it difficult to undertake a joint EIA for e.g. this process and such a linear development.

Mr. Mike Yorke-Hart of SANRAL indicated that their primary interest was with road infrastructure. He wanted to know whether the transportation of the coal would in the long-term only be via the conveyor belt or whether there would be future road transport. Mr. Willem Laenen said that all indications were that the coal would only be transported via the conveyor belt.

Mr. Mike Yorke-Hart of SANRAL said that they were concerned about the impacts on the roads during the construction period. The transportation study indicated that it would be negligible, except for the R33. He asked whether the draft EIR included any substantive data concerning loading on the roads. Mr. Willem Laenen said that the first phase of the project would consist of the construction of the first three units. The biggest component to be transported for one unit would be a generator and transformer. It was still unclear where the boiler components would be manufactured or whether it would be assembled on site which would have different transportation impacts. Due to the fact that three to four units would be built over three years it was not expected that the transportation of heavy materials would cause that much disturbance. The R33 would thus have a one day disturbance per year in terms of the transportation of heavy machinery during the construction phase. Ms. Deidre Herbst indicated that although the impact is moderate Eskom committed to the Lephalale community that they would discuss the issue with SANRAL to find solutions especially for that section of the R33 that needed attention from a safety perspective.

Mr. Ian Hall of Anglo Coal wanted to know what the current Matimba Power Station's water usage was. Ms. Deidre Herbst indicated that it was approximately 0.12 litres per kilowatt hour. The proposed power station's water use would depend on the type emission control technology that would be used. This issue regarding the technology alternatives must still be finalised in consultation with DEAT.

Mr. Ian Hall of Anglo Coal said that his understanding was that the existing Grootegeluk mine and Matimba Power Station complex use approximately seven million m^3 water per year. He asked why there was then referred to 45 million m^3 water per year that would be required. He also enquired whether the Mokolo dam does not have enough capacity for the water requirements of the first three units. Ms. Deidre Herbst indicated that Eskom only required six million m^3 water per year for operating six units and that the 45 million m^3 water per year referred to the amount of water that would be transferred for the entire catchment.

Mr. Ian Hall of Anglo Coal said that his understanding was that the augmentation from the Crocodile River Catchment would only be undertaken once the Mokolo Dam wall has been raised. He wanted to know whether that was the case. Mr. Van der Merwe of DWAF said that based on the information received, the Matimba Power Station required 7.3 million m^3 water per year and Kumba Resources 9.9 million. The yield from the existing Mokolo dam was already fully allocated and was thus not available for this development unless taken away from other developments or users. There was the possibility of raising the dam wall as the infrastructure has been constructed for such an option. While reviewing the hydrology of the Mokolo River it

was clear that there would be definite international implications for raising the dam wall. Negotiations in this regard would take some time as Botswana, Zimbabwe and Mozambique would also be involved and it was thus not foreseen that the negotiations would be concluded in these timeframes. Mr. Van der Merwe added that one also has to consider that the Crocodile River Catchment system was linked to a larger system which again linked to the Vaal River which sourced its water from the Lesotho Highlands and Tugela water schemes. DWAF therefore reduced the risks for shortages if they linked to the Crocodile River Catchment system. The proposed power station was a strategic issue and if no water would be made available it would impact on the electricity supply. It is therefore, from a strategic perspective better to link into another system.

Mr. Ian Hall of Anglo Coal noted that the explanations did not make any sense, as water would be augmented but that there would be no place to store that water. He would discuss it with the representatives of DWAF after the meeting.

Mr. Ian Hall of Anglo Coal stated that pulverised fuel was given as a technology option, but no other alternative was presented. He wanted to know whether other alternatives were considered. His understanding was that in the initial coal supply discussions Kumba Resources was asked to supply coal to a similar quality as the coal that the existing Matimba power station was using. He asked if pulverised fuel was an option based on pure economics and wanted to know why fluidised bed combustion was not considered due to the fact that one was dealing with a low quality coal. Mr. Willem Laenen said fluidised bed combustion was definitely considered, albeit if for the second phase of the project. He further explained that one of the considerations was the fact there were no units of a large enough size available in the world to satisfy Eskom's needs. The efficiency of the smaller units was also lower. If you burn low quality coal one could pay less per ton, but if the price per energy unit was considered it was not that much cheaper. The technology was thus not based on pure economics, but also on the lower efficiency and design constraints. Eskom was, however still investigating the technology options for the second phase of the project and it could thus still be decided that fluidised bed combustion would be used.

Mr. Ian Hall of Anglo Coal indicated that it was stated that there would be some exceedance in terms of SOx. Fluidised bed combustion would lessen the SOx emissions. He said that this must then obviously indicated that fluidised bed combustion would be a better option than pulverised fuel as one would not have to wash the coal (less water use), there would be better air quality and the resource would be more fully used.

Mr. Ian Hall of Anglo Coal noted that the development would increase the amount of traffic, although the increase was not quantified. He wanted to know whether the upgrading of the local roads by the Limpopo Government would be completed in time for the proposed construction period of the new power station and whether there were any communication in this regard between Eskom and the Limpopo Government. He added that, at this stage, it seemed as if all traffic to the proposed power station would be channelled through Lephalale and the residential area of Onverwacht. The southern alternative road to bypass the town, which was proposed by the Lephalale Municipality, should thus also be included in the planning process. Ms. Ashlea Strong indicated that the specialists did road counts and included the number of additional traffic in their report. The safety aspect was also considered. It was recommended that discussions between Eskom, the Limpopo and National Government take place with regards to the upgrading of the roads. Eskom was aware of this issue and was willing to discuss what needed to be done. The consultants, however, could not comment on the timeframe. Ms. Strong added that the Lephalale Municipality did not mention the southern bypass at the last meeting held with them, and at this stage it was still planned that the traffic would be through town.

Mr. Ian Hall of Anglo Coal said housing was a problem, specifically with regards to the influx of outsiders. He wanted to know whether Eskom would provide housing or whether prefabricated housing facilities would be set up. It would be unfortunate if Marapong exploded into a type of squatter camp. He indicated that it seemed as if there were no real answers at this stage on where the necessary houses would be. Mr. Willem Laenen said that it was no longer Eskom's policy to build houses. Eskom was in negotiations with the Lephalale Municipality in this regard and would cooperate with the Council to make sure that serviced land would be available to the contractors for the construction of housing units for their purpose.

Mr. Ian Hall of Anglo Coal asked if a higher stack has been considered to not increase the SOx risks, since it seemed as if pulverised fuel was the preferred option. Ms. Yvonne Scorgie explained that, as part of the air quality impact assessment, modelling of both pulverised fuel and fluidised bed combustion were done. Due to the fact that the first three units might use pulverised fuel (PF) as technology and the additional three units might use PF or fluidised bed combustion (FBC), different scenarios were modelled. The emissions from FBC are 10% less compared to PF and the air quality assessment has indicated in the draft EIR what the reduction in the ground level concentrations would be. The stack heights were modelled at 220 and 250 meters, although the existing Matimba Power Station's stack heights were 250 meters. The findings indicated that the reduction of emissions at ground level for these two heights varied very slightly. In terms of the increase in the impact area it

was found that there would be a moderate increase in the risk area of between 10 to 20 km (depending on the number of units) as illustrated in the report. Ms. Scorgie added that in terms of non-compliance, it was difficult to determine whether there would actually be non-compliance or not as the current South African standards provided no guidance regarding the permittable frequencies of exceedances and where these would be applicable. The consultants therefore used the UK guidelines as basis as it was almost considered international best practice. These guidelines allowed twenty-four exceedances of one hour per year which was only applicable in high density areas. DEAT should therefore determine whether there was non-compliance or not. Ms. Deidre Herbst noted that due to the uncertainties with regards to the guidelines these issues needed a lot of consideration. If there would only be twenty-four hour exceedances per year, it might not be viable to make use of the flue gas desulphurisation technology for the reduction of SO2 that would more than double the water use. The sorbent to be mined and transportation thereof could also result in additional costs and more severe environmental impacts. All these issues therefore needed to be holistically addressed and assessed in terms of economic, environmental and technical criteria, to determine the best technology.

Mr. Albert Jeleni of DWAF noted that the capacity of the Mokolo dam was not perceived to be a problem supposing that it would be full throughout the year. The issue therefore revolved around the yield.

Mr. Albert Jeleni of DWAF wanted to know what quality water would be discharged from the boiler. He asked whether any type of technology existed to purify this water for re-use. It was explained that the quality change of the water occurred in the cooling tower as a dry-cooled system would be used. The water quality was thus not significantly impacted with a dry cooled system.

Mr. Koos Croucamp wanted to know how the waste from the purification plant would be dealt with. Mr. Willem Laenen said that a similar system to the one currently used by the existing Matimba Power Station system would be used. The waste purification plant will be on site and there would thus be a separately operated plant for each power station.

Mr. Danie Venter of WESSA asked how much of the power generated would be sold to neighbouring countries. Mr. Tony Stott said the electricity demand in South Africa was rising rapidly. Eskom needed 20 000 MW additional capacity over the next twenty years. The intent was that the power station would be build for South Africa only. In South Africa the demand for electricity was on average 30 000 MW per day, and during the peak winter periods this demand escalated to between 35 000 MW to 36 000 MW. The electricity demand in the neighbouring countries such as Zimbabwe

was between 3000 to 5000 MW per day and the other even less. The South African demand far outweighs the demand in the neighbouring countries.

Mr. Danie Venter of WESSA asked how Eskom foresee the role of independent power producers to contribute to the electricity demand in that area. Mr. Tony Stott said that at the moment the intent was that Eskom would provide 70% and an independent power producer, the remaining 30%. Currently Eskom provided 95% of the country's electricity. The government has, however, not yet called for proposals from other independent power producers to build power stations. In principle it would be possible, but at the moment there was no other company that put plans on the table for the Waterberg area. Eskom have only heard of proposals for Botswana, although one should again note that it would not be of the same magnitude, as the demand in Botswana was much less than that of South Africa. Ms. Deidre Herbst said that any plans by independent power producers outside South Africa could not be included in Eskom's plans, especially if no construction has yet been approved or taken place.

Mr. Danie Venter of WESSA said it would be interesting to see how Eskom would use its consumers to sell less electricity. The comment was noted.

Mr. Koos Croucamp wanted to know if the water impact assessment modelled the impact of the plume and ash dam on the groundwater quality over a 20 to 30 year period. Ms. Ashlea Strong said the specialist did take the current monitoring into account and extrapolated what could be expected from the new power station. A risk assessment was also undertaken. Ms. Deidre Herbst added that the report included a map of the different boreholes where monitoring was taking place. It was further found that there was little movement of the groundwater in the area due to the geology.

Mr. Koos Croucamp said it was not reasonable to expect that one could comment if detailed information about the aquifer was not included in the report. Proper mathematical modelling of the groundwater flow and impact of the ash dam on that should be included in the draft EIR. The comment was noted.

Mr. Koos Croucamp said that the mitigation measures for the housing issue should include specifications with regards to the type of houses that should be build. Certain minimum standards should be set. The external audits should also focus on the assessment of the housing conditions and if it was found to be unsatisfactory, the contractor or Eskom should be fined. Mr. Willem Laenen said that the new housing facilities have to comply with the legislation. The Occupational Health and

Safety Act also stipulate how many people may live in one dwelling. Eskom would thus have to comply with the current legislation.

Mr. Koos Croucamp suggested that the EMP must state that audits need to be done during the construction period to monitor the housing conditions of people employed by the contractor to determine whether the contractors comply to the legislation.

Mr. Archer of SASOL Mining asked whether the location of the power station and ash dump was underlain by coal and whether it would sterilise areas for future coal mining. Mr. Willem Laenen said it would not sterilise any land for coal mining as these facilities were located to the south of the coal fields.

Mr. Danie Venter of WESSA asked whether the contact details of the I&APs and key stakeholders for this project could be placed on the website. Ms. Ashlea Strong indicated that the contact details would not be placed on the website due to the confidentiality issue. Only a list of names and the organisation that they represent would be available.

Ms Vasanie Pather of Eskom indicated that the dry cooled capacity of Eskom's power stations was 28% and not 10% as previously mentioned.

4. CLOSURE

Ms. Ashlea Strong indicated that the draft Environmental Impact Assessment Reports (EIR) were available at the following locations for review:

- Lephalale Municipal offices (Corner of Joe Slovo and Douwater Streets)
- Lephalale Library (Corner of Joe Slovo and Douwater Streets)
- Eskom Matimba Power Station
- Co-op Lephalale (Offices of Lephalale District Agricultural Union - Botha Avenue)
- Marapong Clinic (Tlou Street, Marapong)
- Offices of Bohlweki Environmental (Kyalami Office Park, Kyalami)
- www.bohlweki.co.za

She again invited Interested and Affected Parties to review these reports and provide their comments to Bohlweki Environmental by 28 April 2006. Dr. de Waal thanked the attendants for their inputs and closed the meeting at 16:00.

5. ATTENDANCE REGISTER

The attendance register is attached as Appendix B.

Appendix A

Presentation

ENVIRONMENTAL IMPACT ASSESSMENT:

PROPOSED ESTABLISHMENT OF A NEW COAL-FIRED POWER STATION IN THE LEPHALALE AREA, LIMPOPO PROVINCE

NEED FOR THE PROJECT

- The demand for electricity in South Africa has grown, on average, at more than 4% over the past few years, with a concomitant reduction in the surplus generating capacity.
- In terms of the National integrated Resource plan the NER have identified that RSA will require new base-load capacity by 2010
- The Eskom ISEP process identified the need for new coal-fired power stations as a preferred option for the provision of base-load generation capacity in the near future.
- Three potential areas identified for further investigation:
  - **Kendal North** (Witbank)
  - **Vaal South** (Sasolburg)
  - **Lephalale**

BRIEF OVERVIEW OF PROJECT

- Establishment of a new coal-fired power station on a technically feasible site in the Lephalale area of the Limpopo Province.
- To operate at an installed capacity of approximately 4 800 MW (2 100 MW initially, potential expansion to 4 800 MW in the long-term).
- Approximate footprint of 700 ha for the Power Plant and an additional 500 – 1000 ha for ancillary services, including ashing facilities

BRIEF OVERVIEW OF PROJECT

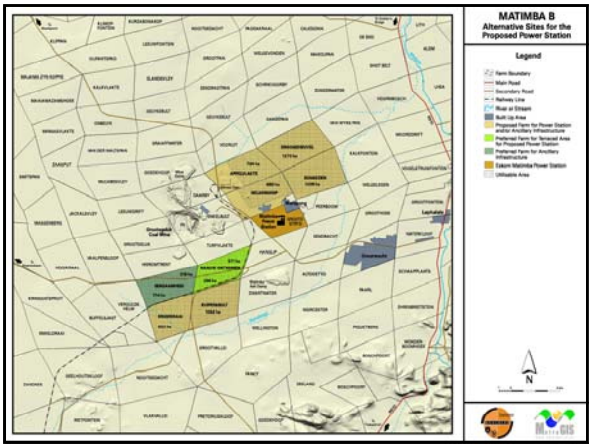
- Power Station will utilise a range of technologies pertaining to cooling, combustion and pollution abatement.
- Environmental Studies undertaken assist in determining the most appropriate technology options to be implemented.
- Due to the limited water availability in the Lephalale area, the power station will utilise direct dry-cooling technology.
- Dry-cooled station would utilise approximately <0,2 litres of water per unit sent out.

POWER STATION ALTERNATIVES

- **Do Nothing alternative:**
  - Electricity demands not being met.
  - Economic impact on RSA
  - Rejected as a feasible alternative
- **New Coal-fired Power Station alternatives:**
  - Regional and local site alternatives identified by Eskom through high level decision making.
  - It was concluded that there was the potential to establish a new power station in close proximity to the existing Matimba Power Station.

LOCATION ALTERNATIVES

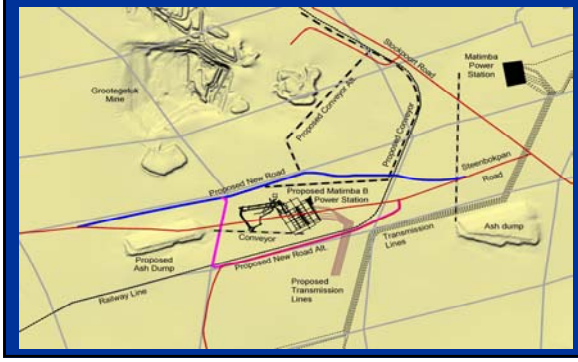
- **8 Farm sites within Lephalele evaluated within the Environmental Scoping Study:**
  - Appelvlakte
  - Nelsonskop
  - Nauwontkomen
  - Eenzaamheid
  - Zongezien
  - Kromdraai
  - Droogeheuvel
  - Kuipersbult
- **Naauwontkomen 509 LQ and Eenzaamheid 687 LQ, nominated for detailed investigation within the Environmental Impact Assessment.**



ROAD AND CONVEYOR BELT ALTERNATIVES

- **Road Re-alignment:**
  - Need to realign the Steenbokpan road.
  - Two alternatives identified and evaluated.
  - Northern Alternative
  - Southern Alternative
- **Conveyor Belt Alternatives:**
  - Two conveyor belt alignments were identified.
  - Eastern Alternative
  - Western Alternative

ROAD AND CONVEYOR BELT ALTERNATIVES



TECHNOLOGY ALTERNATIVES

- **Cooling Alternatives**
  - Dry cooling
- **Combustion alternatives**
  - Pulverised Fuel
- **Ash Disposal Alternatives:**
  - Ash Dumps (Disposal to land)
  - Ashing back into pit at Grootgeluk mine
- **Emissions Control Technologies**
  - For particulate emissions, Sox and NOx

OVERVIEW OF THE EIA PROCESS

- **Phase 1: Environmental Scoping Study**
  - Evaluation of Environmental Issues
  - Public consultation
  - Recommendations regarding preferred alternatives
- **Phase 2: EIA**
  - Detailed studies for Nominated Alternatives
  - Public consultation process
  - Final conclusions & recommendations

PUBLIC PARTICIPATION

- **Public participation**
  - Public meetings & key stakeholder workshops
  - Focus Group Meetings
  - One-on-one consultation
  - Telephonic consultation
  - Media

ASSESSMENT OF IMPACTS …Overall Benefits

- **Will assist in meeting the expected base-load electricity demand in the short-term**
- **Indirect benefits**
  - Increased Eskom capacity to provide reliable electricity supply to existing facilities during peak times
  - Economic benefits for RSA

ASSESSMENT OF IMPACTS …Water Resources

- **No artesian boreholes located within the study area and no large-scale abstraction of groundwater occurs.**
- **The study area falls within the Mogol River Catchment, which drains into the Limpopo River.**
- **The main water users in the area include agriculture, industry, mining, power generation and domestic activities.**
- **A potential impact on water supply was identified.**
- **Groundwater water was found to be impacted by the existing power station however due to the nature of the groundwater resource the impact is not significant.**
- **Mitigation and management measures will decrease the impact of the power station on surface and ground water resources.**

ASSESSMENT OF IMPACTS …Water Resources

- **Mitigation measures include:**
  - Monitoring groundwater quality and water levels
  - Correctly designing and constructing the facility
  - Installing the correct surface water controls
- **Water Supply:**
  - DWAF studies underway
  - Some studies are nearing completion
  - Potential Water augmentation alternatives:
    - Augmentation from Crocodile West Catchment (45 Million cubic meter per annum available supply)
    - Raising the Mokolo Dam Wall
    - Development of borehole fields

ASSESSMENT OF IMPACTS …Fauna and Flora

- **Potential impacts on the fauna and flora can be expected with the proposed power station and ancillary infrastructure.**
- **The study falls within the Savanna biome.**
- **Impacts of significance:**
  - Destruction of natural habitat
  - Destruction of protect species and associated habitat
- **Detailed studies showed habitat to be of medium sensitivity and well represented therefore no fatal flaws**
- **Protected species are also well represented and mitigation measures will limit the impact.**

ASSESSMENT OF IMPACTS …Fauna and Flora

- **Mitigation Measures include:**
  - Remove, relocate and protect as many of the protected species as possible
  - Contain all construction and operational activities within specified areas
  - Utilise trees for effective screening
  - Develop and implement an alien control and monitoring programme

ASSESSMENT OF IMPACTS … Air Quality

- **Current legislation (AQA) provides interim limiting concentrations for a range of pollutants, however, the National Framework and proposed standards have not yet been compiled.**
- **In particular, the national standards for the monitoring of compliance have not yet been compiled.**
- **In light of the lack of certainty a conservative approach has been adopted for this air quality assessment.**

ASSESSMENT OF IMPACTS … Air Quality

- **Cumulative impacts were considered. The following sources were highlighted:**
  - Matimba Power Station
  - Brickworks at Hanglip
  - Grootegeluk Mine
  - Household fuel combustion
  - Veld fires
  - Sewage Works
  - Wind blown dust
  - Vehicle exhausts
- **Ambient NOx and particulate concentrations are not predicted to exceed current standards.**

ASSESSMENT OF IMPACTS … Air Quality

- **Exceedances of interim SA standards are predicted for SO_2.**
- **Health risks as a result of exposure to SO_2 and Heavy Metals were assessed.**
  - This study assumed, that all areas beyond the boundary of the site, were impacted by the maximum possible exposures to heavy metals (i.e. 24 hours per day over a 70 year lifetime).
  - Cancer risk as a result of heavy metals was found to be very low.
  - SO_2 Concentrations occurring as a result of the cumulative impact of two power stations are predicted to be associated with moderate to high health risks.
  - Moderate to high health risks refer to the potential of significant numbers of people being exposed to concentrations that could cause respiratory ailments such as asthma and chronic bronchitis. The effect of these concentrations can also result in serious impacts on those predisposed to respiratory ailments.

ASSESSMENT OF IMPACTS …Emission Control Technologies

- **In the event that control technologies are required for for SO2, possible technologies could include:**
  - Wet or Dry Flue Gas Desulphurisation
- **Negative impacts as a result of FGD:**
  - Decreased efficiency resulting in an increase in the use of natural resources
  - Air quality – increased greenhouse gases and heavy metals
  - Increased water use (double that required for dry cooling)
  - Waste
  - Visual impacts – wet plume from stacks
  - Need for Sorbent material such as lime or lime stone and the associated mining impacts
  - Transport issues as a result of the need for sorbent
- **The implementation of FGD would result in an additional capital expenditure of 6 – 10 % as well as additional operational costs (i.e. approximately R3 – R5 Billion)**

ASSESSMENT OF IMPACTS …Visual

- **Visual quality of study area altered by industrial development**
- **Mitigation required:**
  - Sensitive placement of light fixtures
  - Fitment of covers and shields designed to contain rather than spread light
  - Use of vegetation for screening – localised mitigation
  - Maintenance of facility and associated infrastructure to prevent visual impact of degradation

ASSESSMENT OF IMPACTS …Tourism

- **Tourism types identified in the study are include business, leisure (hunting and ecotourism) and passing trade.**
- **It is anticipated that the business tourism sector will be positively impacted.**
- **The leisure sector is anticipated to be negatively impacted by a small degree.**

ASSESSMENT OF IMPACTS …Heritage Sites

- **Impacts on cultural and historical sites are likely to be of low significance.**
- **Potential impacts may occur during construction and recommendations to minimise these impacts must be included in the EMP.**
- **Mitigation measures include:**
  - Avoid cemeteries, if this is not possible ensure that the correct procedures are implemented with regards to the the relocation of graves
  - Report any exposed sites immediately to a museum (preferably one with a archaeologist)

ASSESSMENT OF IMPACTS ...Noise

- Potential Noise impacts have been identified with the construction and operation phases of the project.
- Existing ambient noise level in study area ranges from 36.2 – 56.4 dBA during the day and from 35.1 – 56.1 dBA at night.
- Noise assessment undertaken in accordance with requirements of SANS 10103
- SA Noise Regulations indicate an increase in ambient noise level of more than 7 dBA to be a "disturbing noise"
- Impact of construction noise anticipated to be low to negligible
- Various construction and operational mitigation measures have been recommended.

ASSESSMENT OF IMPACTS ...Traffic

- Potential impacts are associated with the construction phase of the project.
- Potential impacts:
  - Transportation of components during construction
  - Traffic associated with employees during construction and operation
- Assessed as being of moderate significance

ASSESSMENT OF IMPACTS ...Geology, Soils and Agricultural Potential

- Sediments and volcanics of the Waterberg Group and Karoo Supergroup underlie the study area.
- The Daarby and Eenzaamheid faults traverse the study area
- Both sites identified for the construction of the power Station are acceptable for development in terms of founding conditions.
- Detailed studies showed soils to be of a sandy nature with moderate to low agricultural potential.
- Impact on agricultural potential is indicated to be of low significance.

ASSESSMENT OF IMPACTS ...Social

- A number of potential social impacts associated with the project have been identified.
- Issues include safety and security, land value, air quality and pollution, job creation, influx of external labour and job seekers.
- Mitigation required:
  - Make use of local labour, where possible
  - Involve local communities in identification of labour pool
  - On-going communication with communities

OVERALL CONCLUSION

- Northern Road alternative preferred.
- Eastern Conveyor alternative preferred.
- No environmental fatal flaws, provided the recommended management and mitigation measures are implemented
- Both sites considered to be acceptable from an environmental perspective

OVERALL RECOMMENDATION

- Findings of EIA must be included in an EMP:
  - Consider construction and operation of the power station and associated infrastructure
  - Used to ensure compliance with environmental specifications and management measures
- Process of communication and consultation with community representatives to be on-going.
- The issues raised regarding air quality and water use and potential pollution should be considered by DWAF and DEAT in the respective application for licenses.

THE WAY FORWARD

- Review period for draft EIA:
  - 23 March 2006 – 28 April 2006
- Comments received from the public during review period will be incorporated into final EIA Report
- Submit Final EIA to DEAT
- Authority review and decision-making
- Receive Record of Decision
- Inform all registered I&APs and stakeholders of decision

Direct all comments or queries to:

Ingrid Snyman / Ashlea Strong

Bohlweki Environmental

P.O. Box 11784, Vorna Valley, Gauteng, 1686
Phone: (011) 466 3841
Fax: (011) 466 3849
E-mail: matimba@bohlweki.co.za

DISCUSSION

Appendix B

Attendance Register

ATTENDANCE REGISTER

EIA for the Proposed Establishment of a new Coal-fired Power Station in the Lephalale Area, Limpopo Province

Key Stakeholders Workshop held at the Eskom Convention Centre

30 March 2006 at 14:00

Title	Name	Surname	Company/Organisation	Position/Directorate	Postal Address	Contact details	
Mr	Danie	Venter	WESSA - NAR	Snr Env. Coordinator		**Tel:**	**Fax:**
						Cell: 082 370 9759	
						email: dhventer@wessanorth.co.za	
Mr	Loius	Steyn	Land Owner - KromDraai	Rep. of Leon Steyn		**Tel: 012 427 2807**	**Fax: 012 427 2850**
						Cell: 082 577 9864	
						email: loiuss@africon.co.za	
Mr	Mike	Yorke - Hart	SANRAL	Project Engineer		**Tel: 012 426 6227**	**Fax: 012 348 1512**
						Cell: 083 283 6089	
						email: yorkehm@nra.co.za	
Mrs	Lerato	Bapela	DWAF - Pretoria	Water Res. Planner	P/Bag X 313	**Tel: 012 336 8324**	**Fax: 012 336 8295**
					Pretoria	**Cell: 082 902 8161**	
						email: ifi@dwaf.gov.za	
Mr	Reggie	Mthombeni	Vulavala (Pty) Ltd	Director		**Tel: 011 466 1926**	**Fax: 011 466 1692**
						Cell: 082 393 7578	
						email: reggie@wwtrade.co.za	
Mr	Hugh	Whitty	Vulavala (Pty) Ltd	Director		**Tel: 011 466 1926**	**Fax: 011 466 1692**
						Cell: 083 228 7918	
						email: hughw@wwtrade.co.za	

Ms	Vasanie	Pather	Eskom	Water Engineer		**Tel:**	**Fax:**
						Cell: 084 585 3557	
						email: vasanie.pather@eskom.co.za	
Mr	Hendrie	Hills	Grondeienaar		Posbus 73	**Tel: 012 254 0551**	**Fax: 012 254 0551**
					Vorenter	**Cell: 083 232 5224**	
					259	**email: seem@lantic.net**	
Mr	Ian	Hall	Anglo Coal		P/Bag X9	**Tel:**	**Fax:**
					Leraatsfontein	**Cell: 083 986 6695**	
					1038	**email: ihall@anglocoal.co.za**	
Mr	Wynard	Marais	Anglo Coal	Gen.Manager		**Tel: 011 638 2561**	**Fax:**
						Cell: 082 855 7710	
						email: wmarais@angloamerican.co.za	
Mr	P.	Becuidenlout	Eienearvert		Posbus 73	**Tel: 012 254 0845**	**Fax:**
					Vorenter	**Cell:**	
					259	**email:**	
Mr	Ockie	van der Berg	DWAF	Chief Engineer	P/Bag 313	**Tel: 012 336 8613**	**Fax: 012 336 7397**
					Pretoria	**Cell: 082 809 2011**	
						email: vdbergo@dwaf.gov.za	
Ms	Linda	Manyuchi	Dep. Scie. & Technology	Deputy Director		**Tel: 012 317 4495**	**Fax:**
						Cell: 083 634 5216	
						email: linda.manyuchi@dst.gov.za	

Mr	Tony	Stott	Eskom Generation	Snr Manager	PO Box 1091	**Tel: 011 800 2004 Fax: 011 800 2782**
					Johannesburg	**Cell: 083 655 2004**
					2000	**email: tony.stott@eskom.co.za**
Mr	Archie	Archer	Sasol Mining	Project Engineer	P/Bag X1015	**Tel: 017 614 5163 Fax: 017 614 5017**
					Secunda	**Cell: 083 644 4665**
					2302	**email: archie.archer@sasol.com**
Mr	Albert	Jeleni	DWAF	Planner	P/Bag X 313	**Tel: 012 336 8247 Fax:**
					Pretoria	**Cell: 082 808 2816**
						email: fgm@dwaf.gov.za
Mr	Idi	Okada	HPA	Sales Director	1st floor Building 25	**Tel: 011 656 3601 Fax:**
					Woodmead, Sandton	**cell:**
						email: sotaro.okada@hitachi.eu.com
Mr	Robin	Duff	HPA	MD		**Tel: Fax:**
						Cell:
						email:
	Galia	Doudenska	DWAF	OA	P/Bag X 313	**Tel: 012 336 8492 Fax: 012 336 7399**
					Pretoria	**Cell: 082 885 0114**
						email: galiad@dwaf.gov.za
Ms	Yvonne	Scargie	Airshed	Atmospheric Scientist		**Tel: 011 254 4929 Fax: 011 805 7010**
						Cell: 083 266 7849
						email: yvonne@airshed.co.za

Mr	Koos	Croucamp	Env. & Energy Services	Env. Consultant	Posbus 2260	**Tel: 018 290 5763**	**Fax: 018 290 5763**
					Potchefstroom	**Cell: 082 552 8615**	
						email:seem@lantic.net	
Mr	JA	Olevluf	Kumba Resources	Project Manager		**Tel:**	**Fax:**
						Cell:	
						email:	
Mr	Willem	Laenen	Eskom	Eskom Rep.	PO Box 1091	**Tel: 011 800 3546**	**Fax:**
					Johannesburg	**Cell: 083 727 6376**	
					2000	**email: willem.lainen@eskom.co.za**	
Mrs	Diedre	Herbst	Eskom Generation		PO Box 1091	**Tel:**	**Fax:**
					Johannesburg	**Cell:**	
					2000	**email:**	
Mrs	Ingrid	Snyman	Bohlweki Environmental			**Tel:**	**Fax:**
						Cell:	
						email:	
Mrs	Ashlea	Strong	Bohlweki Environmental			**Tel:**	**Fax:**
						Cell:	
						email:	