

Date: 10 November 2015

Acting CEO – Pongola-Umzikulu proto CMA
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Annexure L

File no.: 16/2/7/W51/Yzermyn

Attention: Zamashenge Habede

YZERMYN UNDERGROUND COAL MINE PROJECT - WATER USE LICENSE APPLICATION

Your letter dated 26 October 2015 with the above file reference number and heading refers:

Atha Africa Ventures profoundly thanks you for the feedback on the water use license application. We take note that a meeting has been scheduled for Friday 13th November 2015 jointly with the DWS Specialist Team; we look forward to attending the same together with our Specialist Team.. The duly signed Civil Drawings (**Annexure 14**) and Waste storage and handling facility Design (**Annexure 6**) will be handed over during the Friday Meeting and soft copies will be emailed to you thereafter. We are hereby submitting the reply to your comments, following the same numbering sequence as per your referenced letter.

- 1.1. Please see the attached front page as **Annexure 1** with the three main authors of the initial document as listed, being: P J L Smit, C S Ramesh and J Enslin. The document is a living document and authorship may change annually or whenever reviewed. The Specialists will sign off during the Friday 13 November 2015.
- 1.2. Stockpile A will contain Run of Mine (ROM) raw coal from the mine. Both stockpiles (Slab A and Slab B) have been applied for to be licensed under Section 21(g) of the National Water Act. See page 42 of the submitted IWWMP document as well as forms in

- Appendix D. This is done under the precautionary principle and clearly specify that these are product stockpiles and is not regarded as waste or contribute to waste in any manner.
- 1.3. Your point that the ablution block is considered as a water use, has been carefully considered; kindly explain how the DWS view the ablution facility as a “water use that disposes of waste in a manner which may detrimentally impact on a water resource” The reason why the ablution block is excluded from being licensed as a water use under Section 21(g) of the National Water Act, is that there is no disposal of waste at the ablution block. The disposal of waste water from the ablution facility is dealt with under the sewage treatment plant, which has been included in the application to be licensed under Section 21(g).
- 1.4. The updated risk and mitigation table in **Annexure 12** to this letter gives further details to the impacts and mitigation measures of dewatering mentioned in the IWWMP. Please also see page 131 to 135 of the submitted IWWMP document for a discussion on the dewatering impacts. Page 176 to 178 of the same document summarises the findings from the specialist again. On page 225, a further discussion related to dewatering can be found. At the end of life of mine the expected inflow of water will total a limited rate of 5.7l/s as modelled by the groundwater specialist (Prof Dr Kai Witthueser), and is deemed marginal for a mine of this size. Considering water losses as a result of ventilation, and water lost in product, there will be limited free water inside the mine. Nevertheless to further reduce possible inflows, mitigation measures as part of the mining method, have been developed, which includes underground cover drilling to identify zones of potentially significant ingress followed by pre-grouting zones of ingress.
- 1.5. We take note of your requirement related to the future upgrade of the road.
- 1.6. Please find the application forms and updated Table 3-1 attached (**Annexure 15**). **Annexure 12** details risk and mitigation measures. Dust suppression will be done with clean water during the construction phase, with the road surface being stabilised by polymers for the operational phase. The use of polymers is essential due to the limited availability of water to mitigate against dust pollution, which may reduce water consumption by up to 90%.
- 1.7. Table 7.1 indicates the stockpiles and pads to be built; this table has been updated to specifically refer to the overburden used in the pads (**Annexure 2**).

- 1.8. We take note that this license will only apply to Phase One of the mining project as determined in the mine works programme.
- 1.9. The Updated Table 1-1 is available in **Annexure 3**.
- 1.10. The mine will get safe disposal certificates from the removal contractor and submit proof of this quarterly to the department as part of its license requirements. The site is the municipal sewage works in Piet Retief. See letter from the municipality attached in **Annexure 4**.
- 1.11. The mine will get safe disposal certificates from the removal contractor and submit proof of this quarterly to the department as part of license requirements. No contract can be signed with the waste contractor, since the site is not operational. Please see documents received from the waste contractor, Enviroserve, (**Annexure 5**) indicating their ability to provide the removal service.
- 1.12. The designs for temporary waste storage will be submitted during the meeting on Friday 13 November 2015 noted as **Annexure 6** to this letter once we clarify fully with DWS Specialist Team.
- 1.13. The coal mine will be mined in sections and the mine planning has been done to sequentially use resources over the 15 year mine life. **Annexure 7** shows the mining blocks, as planned by Mindset (professional mining engineers and consultants), to ensure effective underground coal mining using the available access.
- 1.14. For ease of reference please see Figure 4-17 (page 86) in the submitted document as the base map developed by SAS, indicating the three HGMs clearly. The ground truthing is discussed on pages 90 and 91 of the document. The SAS reports were all ground truthed by extensive field mapping. HGMs clearly show on every map (Figure 2-1 page 13; Figure 3-1 page 47; Figure 3-2 page 48; Figure 3-3 page 49; Figure 4-17; Figure 4-10 page 72; figure 14-21 page 92; Figure 4-22 page 93; Figure 4-36 page 135 and Figure 5-3 page 161). Figures 4-13 and 4-14 (pages 81 and 82) indicates FEPAs in relation to the mine, clearly showing no impact, which is separate from the list of ground truthed maps above. Wetland delineation was done by mapping soils with a wetland specialist – season does not affect this method (page 91). The best wetland delineation opportunity will be provided at the end of the rainy season when the wetlands have built up reserves throughout the summer rainfall season, which is from March to April. Please see

Annexure 17 for a list of studies conducted at different times of the year for the site. See a letter from the wetland specialist in **Annexure 8**.

1.15. The wetlands are slope seep wetlands fed by shallow, perched aquifers as stated by both the wetland- and groundwater specialists (page 72; page 132; page 135; and Fig 4-36). It can easily be rehabilitated by replacing the soils in the correct sequence. The site was ploughed in the past, so even the soil sequence has been significantly altered. Natural feeding of moist soil will allow for wetland vegetation to sustain itself. Limited rare species can be introduced to improve the PES to something better than that encountered on site at the moment. The only wetland areas to be temporarily destroyed by the surface infrastructure is limited to a small area of 12.10ha which can, and will, be rehabilitated at mine closure. Limited drawdown will occur as depicted in Figure 4-36 (page 135) according to the groundwater model. This indicates that although there might be some drawdown experienced in the wetland areas, it is unlikely that it would be much different from normal seasonal changes in terms of recurring droughts, to which the system is adapted. The drawdown will reduce when mining stops and recover to pre-mining levels over time. The draw down mapped was also for a worst case scenario of complete dewatering of the total mined area, which will not occur, since mining will stop long before total drawdown can be reached. Further presentation on the topic will be provided at the technical review meeting with DWS.

1.16. There will be no nett loss of wetlands after closure of the mine. All wetlands disturbed during mining can, and will, be rehabilitated (See Appendix U of the submitted IWWMP document for the wetland rehabilitation and management plan).

1.17. The water treatment approach to be followed by AAV is described on page 20 of the submitted document. AMD is part of contaminated water that could be produced by the mine during operation and /or after closure and is addressed there. Additional to this, AMD is not expected to be generated from this site due to no discard being stored on site and the coal being mined having a very low acid generating potential. This view is further supported by evidence from the historically mined adits (older than 60 years) just over 1000m away from the currently planned mining adit, which does not produce AMD. Photos to be presented during Friday 13th November Meeting.

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- 1.18. The different specialists were in contact during a workshop and subsequent meetings to discuss the interaction of each specialist field before their reports were developed. The specialists' reports therefore already takes cognisance of interactions between systems. See Meeting Minutes as **Annexure 9**. Further presentation to the DWS will be provided at the technical review meeting 13 November 2015.
- 1.19. Alternatives were investigated over the last two years to reduce the impact on the environment. See attached **Annexure 10** for figures showing changes in lay-out, specifically informed by the occurrence of wetlands in the area. The best environmental option was indicated as the preferred alternative, specifically because it had the least impact on the environment.
- 1.20. The drivers will not be affected because we simulate subsurface flow. The PES could improve or stay exactly the same. Vegetation management will have a bigger influence on PES and should improve significantly under a change in grazing and burning regime. The middle paragraph on page 21, and the last bullet on page 154 clearly states the water will be discharged into a filter drain (Flo-drain in Wetland system 1 and details of design in drawing 2015-02-28 D02 Typical Detail PC Dam Liner Details & Leakage Detection, part of Appendix B of the IWWMP document). Coordinates of the discharge point and all relevant information has been supplied in the application forms.
- 1.21. Please see attached as **Annexure 11**, a signed copy of the letter.
- 1.22. See requested Table 5-7 as updated to your requirements in **Annexure 12**.
- 1.23. The site has been in use for decades and it is regarded as a continuation of an existing lawful use. See **Annexure 13** for the certified copy of the letter.
- 1.24. The signed drawings shall be submitted on 13 November 2015 as **Annexure 14** to this letter.
- 1.25. We reaffirm that no discard dump will be in place. Appendix U of the submitted IWWMP contains the wetland rehabilitation and management plan, which was developed in conjunction with the wetland specialist. The rehabilitation plan in Appendix C of the submitted document is an exact copy of the one submitted with the EIA and cannot just be changed. It was submitted for completeness and consistency with submissions to other departments.
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- 1.26. The authorisation of the use of water is the responsibility of the DWS. The land owners do not have the authority to grant or refuse the licensed use of water. The land owners do have surface rights to the land that needs to be respected by the applicant and this has been addressed in the access to surface rights agreement.
- 1.27. The land claim is on Naauwgevonden 110HT, which is a farm not affected by the license application.
- 1.28. This work plan is focused on construction only, and the method statement therefore only refers to construction activities as required in the last DWS letter of 22 April 2015 and subsequent supporting documentation for a work method statement as supplied by DWS (**Annexure 16**).
- 1.29. The construction method statement could be submitted to DWS as a license condition, one month before starting construction. The author of the final method statement for construction is normally the construction site engineer and that person signs it as part of preparation for construction together with the design engineer. The final design of all site infrastructure has not been done yet and this will be done as part of the implementation study.
- 1.30. We take note of your requirement for the RoD from the DEA to be supplied.
- 1.31. There will be no surface infrastructure on the farms mentioned and it is not directly affected. The reason why it was included is because it forms part of the wetlands that are within 500m of the underground mining boundary. The minerals mined underground, does not belong to the surface right holder and there will be no lease agreement related to underground activity as the land owner (surface right holder) owns only the surface right. If the DWS regard the 500m from a wetland only as a surface activity these farms should be excluded from the application.
- 1.32. We take note of your forwarding of the document.

We agree that pollution of PES Class A wetlands and rivers will not be acceptable. We do however, not find evidence in our submission that Class A sites will be degraded or/and polluted. Only points 1.4 (impacts and mitigation of mine dewatering); 1.18 (integrated specialist report on wetland soil/groundwater/biodiversity interaction); and 1.25 (rehabilitation plan that could be too generic if Appendix U is excluded) above, could

contribute to this statement. We are confident that based on inputs from DWS and our specialists, all the impacts can be mitigated to the extent that a water use license can be awarded for the YUCM.

Sincerely



M Munsamy
Director

PS. Items highlighted below will be finalised during the Specialist Meeting on Friday 13th November.

Enclosures:

- Annexure 1: YUCM IWWMP Cover page with authors (enclosed, PS and J E signatures – Fri Meeting) - Para 1.1
- Annexure 2: Table 7-1 updated (Enclosed) - Para 1.7
- Annexure 3: Tables 1_1 Updated (Enclosed) - Para 1.9
- Annexure 4: Letter from Piet Retief Municipality - Para 1.10
- Annexure 5: letter from the waste contractor (Enclosed) - Para 1.11
- Annexure 6: Waste storage and handling facilities – to be tabled at Friday Meeting - Para 1.12
- Annexure 7: (Enclosed) - Para 1.13
- Annexure 8: letter from the wetland specialist SAS (Enclosed) - Para 1.14
- Annexure 9: Minutes of Risk Assessment_sept'14(Enclosed) - Para 1.18
- Annexure 10: Surface layout alternatives ver2 (Enclosed) - Para 1.19
- Annexure 11: Motivation letter on wetland offset (Enclosed) – Para1.21
- Annexure 12: Table 5-7 risk and mitigation ver 3 (Enclosed) Para 1.22
- Annexure 13: Certificate copy of Jindal Railway siding (Enclosed) Para 1.23
- Annexure 14: Signed drawings from Engineers (to be presented on Friday 13th November) Para 1.24
- Annexure 15: Table 3-1: A list of water uses to be licensed at YUCM (Enclosed) - Para 1.6
- Annexure 16: DWS letter 22nd April'15(Enclosed) - Para 1.28
- Annexure 17: Sequence of Bio- Wetland Studies (Enclosed) – Para 1.14