ENVIRONMENTAL IMPACT ASSESSMENT: PROPOSED BRINE AND GROUNDWATER TREATMENT WORKS AT TUTUKA POWER STATION, MPUMALANGA:
COMMENTS AND RESPONSE REPORT II (SCOPING PHASE)

This Comments and Response Report reflects the comments submitted in writing from **10 March 2010 until 12 April 2010** during the Scoping Phase of the proposed project. A total of two submissions were received and have been summarised and responded to below.

List of submissions:

No.	Name	Organisation	Date Received	Method
1	M Lesley	South African Heritage Resources Association (SAHRA)	23/03/2010	Letter
2	N Meulenbeld	Department of Water Affairs (DWA)	01/04/2010	Letter

Comments and reponses:

No.	Name and Organisation	Date Received	Issue	Response
1.1	M Lesley, SAHRA	23/03/2010	In terms of the National Heritage Resources Act, No. 25 of 1999, heritage resources, including archaeological or palaeontological sites over 100 years old, graves older than 60 years, structures older than 60 years are protected. They may not be disturbed without a permit from the relevant heritage resources authority. This means that before such sites are disturbed by development it is incumbent on the developer (or mine) to ensure that a Heritage Impact Assessment is done. This must include the archaeological component (Phase 1) and any other applicable heritage components. Appropriate (Phase 2) mitigation, which involves recording, sampling and dating sites that are destroyed, must be done as required. In your application received by SAHRA there was no indication of an assessment of the archaeological resources. The quickest process to follow for the archaeological component is to contract an accredited specialist (see www.asapa.prg.za for CRM practitioners) to provide a Phase 1 Archaeological Impact Assessment	This is noted. A heritage specialist, Johnny van Schalkwyk, has been appointed to undertake a Phase 1 Heritage Impact Assessment. Please see Section 4.4.2 of the Final Scoping report (FSR) for more details.

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			Report. This must be done before any development takes place. The Phase 1 Impact Assessment Report will identify the archaeological sites and assess their significance. It should also make recommendations (as indicated in section 38) about the process to be followed, For example, there may need to be a mitigation phase (Phase 2) where the specialist will collect or excavate material and date the site. At the end of the process the heritage authority may give permission for destruction of the sites.	
1.2	M Lesley, SAHRA		Where bedrock is to be affected, or where there are coastal sediments, or marine or river terraces and in potentially fossiliferous superficial deposits, a Paleaontological Desk Top study must be undertaken to assess whether or not the development will impact upon palaeontological resources – or at least a letter of exemption from a Palaeontologists is needed to indicate that this is unnecessary. If there area is deemed to be senstive, a full Phase 1 Palaeontological Impact Assessment will be required and if necessary a Phase 2 rescue operation might be necessary (see attached list of accredited Palaeontologists).	While the boreholes will be located through bedrock these boreholes are very narrow (approximately 254 mm diameter). Bedrock will not otherwise be affected.
1.3	M Lesley, SAHRA		If the property is very small or disturbed and there is no significant site the specialist may choose to send a letter to the heritage authority to indicate that there is no necessity for any further assessment. Any other heritage resources that may be impacted such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural	Noted.

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			landscapes or viewscapes must also be assessed. Attached please find a list of accredited archaeological and paleaontological specialists who may be contacted to undertake the necessary archaeological or palaeontological impact assessments.	
2.1	N Meulenbeld, DWA		The project will be subject to various water use licensing (Pages 16, 17) under the National Water Act, 1998 (No. 36 of 1998) pertaining to groundwater abstraction and use in the power station (Section 21a), pipeline crossings over watercourses (Sections 21c&i), potential discharge of cleaned water into streams (Sections 21f&i), etc. The groundwater component (pages 35, 42) of the project needs to consider a thorough geophysical survey (including CVES) so that palaeochannels, dolerite dykes and sills, areas of deeper weathering, etc can be appropriately determined. This will influence the placing of boreholes and assist in pollution plume mapping. Chemical analysis of the borehole water shall include a full spectrum of heavy metal analysis, including Cr^{6+} as it is a byproduct of the milling process. The adequate disposal/treatment of heavy metals shall be discussed in detail. The water quality of the surface dam adjacent to the north of the ash dams will be determined and the potential existence of any pollution plume in that area. As the ash dam is covering a natural stream, the pollution load into this covered stream shall also be determined through geophysical techniques and might require a specific drilling program into this feature as its geohydrological characteristics are different from the	This is noted. An Integrated Water Use License Application (IWULA) will be submitted to DWA. Studies are currently being undertaken by Aurecon (Geohydrological Assessment (including geohydrological modelling), Surface Hydrology Assessment and Salt and Water Balance) and GHT (geohydrological study) to inform the IWULA, and these will incorporate the requirements noted. It shold be noted that an ash dump, and not an ash dam, is operated at Tutuka Power Station

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			surrounding environment. A hydrocensus of a 2 km radius is required to provide information on groundwater users, background water qualityies and quantities and the impact of a drawdown in water levels.	
2.2	N Meulenbeld, DWA		Clarity to be provided about the end-use of the treated groundwater.	Treated water would be used in the power station process. This would reduce the impact of the station's abstraction process of raw water from the system.