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6 December, 2013

Our ref: 0940/ND/ND

Department of Environmental Affairs
Fedsure forum building
315 Pretorius Street
Pretoria
Tel:012 395 1734

Muhammad Essop

Dear Sir

Notification of the change of scope of the initial hydrological specialist study during the duration of the BA assessment process

EIMS wish to inform the DEA of a change in scope related the proposed PV development, and the subsequent hydrogeologist specialist mitigation measures proposed for the project. The initial scope for the specialist study included the possibility that Eskom would need to apply for closure and decommissioning of the Ash Disposal Facility (ADF) from DEA, it was later confirmed by DEA that Eskom do not need to apply for closure for the ADF. In addition to this, the mitigation measures proposed to treat and manage storm water from the site will be determined in consultation with DWA as part of the WULA process.

The report was issued on 19/02/2013 with a scope that included assessing the impact of the PV facility on the ADF, and the possibility that Eskom would need to apply for closure and decommissioning (this was assessed a 100% impearmeability scenario with detailed storm water treatment and management measures) and a Section 21 Water Use Licence (WUL). This was later clarified with the DEA and it was determined that closure and decommission was not required. Refer to Appendix J4 for the relevant correspondence. The requirement for the treatment and management of storm water from the site is still unknown, and the requirements will be determined in consultation with DWA as part of the WULA process.

The specialist study identified that the placement of the PV facility on the ADF would have a positive impact on water quality, compared to the no-go option.

The following mitigation measures were included in the report but are not be applicable since the closure requirement is no long necessary. Consequently, the following management measures applicable to the ADF have not been included in the Basic Assessment Report (BAR) and EMPr as these reports relate to the proposed PV facility only:

- New dewatering boreholes can be established up-gradient towards the west of the project area to act as a dewatering curtain to keep groundwater flow away from the old ash dam source concentration. The abstracted water can then be diverted along with the surface water collected from the stabilised areas and

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discharge if the quality is within limits. This will keep clean water clean and away from the source. Also solar driven submersible pumps can be used to pump the water and gravity fed to the downstream collector basin, which makes it a sustainable long term solution.

- The other option is to apply pump and treat where boreholes are drilled to abstract water from the aquifer down gradient in line with the plume migration and then pumped to a treatment facility. The water is then treated to a reasonable level ready for discharge to the surface water environment. This option is quite expensive and not the best option in the long term.
- A third very expensive option is to remove all material and dispose at a disposal facility designed and regulated to handle such material.
- As part of future mitigation actions and depending on the scenario selected going forward it is advised that two to three new monitoring boreholes needs to be established around the old ash dam as per targets summarised in **Error! Reference source not found.**, these then need to be sampled to ascertain the current contamination plume derived from the old ash dam;
- Once this is achieved and completed the numerical model should be re-calibrated and final simulations performed;
- A land surveyor should firm up on the positions of all monitoring positions especially the elevation component as this will be crucial for future numerical models;
- More detailed plans and scenarios needs to be provided to firm up on the results of this study; and
- Measures relating to the Rain Water Catchment system to be determined in consultation with DWA as part of the WULA:
    - The fact that the area will be covered by hard compacted or paved areas means that no extra berms or canals are required only designed drain pipes or canals.
    - An emergency lined storage pond will have to be added though that can handle flood events and reduce weathering to the natural environment.
    - As a partial mitigation option it is recommended that scenario two which includes a 100 % capping be applied to restore conditions over the long term.

All other mitigation measures included in the specialists report, in so far as they relate to the proposed PV facility, have been considered and incorporated, where necessary, into the BAR and EMPr.

Sincerely,

Nicus Durieux

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