PART 4: SITE INFORMATION

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1. General description

Kendal Power Station is situated approximately 40km South West of Witbank in the Mpumalanga province. Construction started in 1982 and took 11 years to complete.
Kendal Power Station comprises six generating sets (Units) of 686 MW each, the station capacity is 4116 MW, which is indirectly dry-cooled. The generators produces electricity at a voltage of 22KV, the generator transformers steps up the transmission voltage to 400kV.

Kendal Power Station receives its coal supply of over a million tons per month from a neighbouring mine Khutala as well as other sources with varying characteristics. The ash that remains after the combustion of coal has two grading i.e. coarse ash (5% of total ash) and fly ash (95% of total ash). The fly ash together with waste gasses passes through the electrostatic precipitators where 99.9% of the ash is collected. The coarse ash is removed by a submerged scraper conveyor to the apron conveyor. The fly ash is moistened and mixed in the ash conditioners. Both gratings of ash are transported via the overland conveyors to the ash dump, where it is spread by an ash spreader, levelled and covered with topsoil and finally regressed.

The maximum continuous rating of each boiler at the turbine stop valves is 577kg/s with superheated steam temperature and pressure of 540 degrees Celsius and 17,24MPa respectively.

The water usage at Kendal Power Station is minimal (0.1 litre per kilowatt-hour). The water comes from the Vaal and Usutu Water Schemes alternatively. The WTP produces potable and demineralised water, conducts water balancing and effluent management, chemistry control and monitoring of all process water. The CP plants, one at each unit, are used for the polishing of condensate water on the units while the CP Regeneration plant does the transfers and regeneration of the Unit CP resin and is located in the Water Treatment Plant.

The power station had a DIIR of 0.2 in 2005, but is continuously striving towards a DIIR of 0 which has been achieved on 11 August 2006. Kendal Power Station has been graded as a NOSA Integrated Platinum Five Star facility in June 2006.

The power station is a Zero Liquid Effluent Discharge Station and ISO 14001 compliant.

2. Existing buildings, structures, and plant & machinery on the Site

2.1 Abulition Facilities

Permanent toilets to serve the Power Station and urinals at the boundary area have been constructed by the *Employer* and all the *Contractor's* personnel may make use of these facilities if within the allocated site for execution of the *Works*. *Contractor* to ensure that on site establishment include ablution facilities which shall be maintained for the duration of the contract.

2.2 Water Supply

Potable and raw water for construction purposes are also available free of charge at the nearest point of supply installed.
A written request, indicating the Contractor's requirements is submitted to the Project Manager as soon as possible after the contract date.

2.3 Electricity Supply

Electric power for construction, both 220V AC and 380V 3-phase supply, is supplied at Site free of charge, but connection fees are for the Contractor's account. All installations comply with the details set out in Kendal Maintenance Procedure- Contractor's Temporary Electrical Equipment Supply, and Construction Power Supplies (Occupational Health and Safety Act - Act 85 of 1993) and the Kendal Safety, Health and Environmental Specification for Contractors.

The Employer does not guarantee continuity of supply and no claims for standing time as a result of power failures will be considered. The Employer connects distribution boards to a 380V three-phase AC power supply, only after the Contractor has submitted the valid Certificate of Compliance

A written request, indicating the Contractor's requirements is submitted to the Project Manager as soon as possible after the Contract Date.

3. Subsoil information

Ground conditions consist of compacted coal and natural soil. The *Contractor* must make his own observations as to the specific soil conditions. Geotechnical reports for the current station conditions are available on request.