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**ESKOM**

## **KOEBERG NUCLEAR POWER STATION**

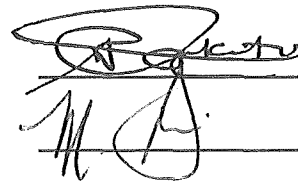
### **USER REQUIREMENT SPECIFICATION (URS)**

CIVIL REPAIRS ON UNIT 2SEC & CFI FILTRATION PITS  
- OUTAGE 225

PREPARED BY: ANDISIWE COKOTO

APPROVED BY: MZWEKHAYA SALI

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## 1. DESCRIPTION

The CRF and SEC pump stations are constructed from reinforced concrete and houses rotating filtration system components and cooling water pumps. The CRF system supplies cooling water to the conventional island closed cooling water system with the SEC supplying cooling water to the Nuclear Island, providing cooling during normal and accident operating conditions. The structures are situated on the western side of the plant. The seawater is filtered on entering the CRF filtration system suction pits (referred to as CFI Filtration System) and the SEC filtration system to remove any debris that could lead to damaging the pumps, clogging up of the heat exchangers or pipes, or causing flow restrictions. The filtration system consists of two parts, a rake and bar screen and a rotating drum screen. Both the rake screens and the drum screens are supported by concrete structures referred to as the CFI and SEC pits. These pits are classified as very corrosive splash zones. Repeated wetting and drying of the concrete provides both a high concentration of chloride ions and sufficient quantities of oxygen and water for corrosion of the reinforcement. Hence, the walls of the pits are experiencing large areas of delamination as a result of chloride induced reinforcement corrosion. Delamination of these walls can cause significant damage to the drum screens and/or water blockages downstream of the system if left unattended.

## 2. OBJECTIVES

The primary objective of the contract is to render a concrete repair service to Koeberg Nuclear Power Stations, for the SEC and CFI Filtration Pits for Outage 225.

## 3. SCOPE OF WORK

- Prepare concrete surfaces for repair
- Concrete removal/breaking out of concrete
- Sandblasting of steel reinforcement
- Supply and install anodes
- Supply and install products and equipment required to repair concrete surfaces
- Mix and apply grout
- Profile area to design (formwork)
- Install/Reinstate the protective/conductive coating to the entire concrete surface of the pump station.
- Provision of all quality control documents associated with the repairs
- Supply and installation of access scaffolding to repair areas

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- Disposal of waste material (Contractor to dispose of own waste at a registered waste disposal site and provide certificates and relevant paper work)

#### **4. CATEGORIES OF LABOUR**

##### **4.1 EQUIPMENT**

The Contractor to ensure that the equipment being supplied is in a good working condition. The Contractor to have an additional set of equipment on standby should the supplied equipment be inoperable.

##### **4.2 LABOUR**

The Contractor and his representatives appointed to perform the work shall be competent in the field for which they are appointed. The Contractor must ensure that the staff is qualified and certified. The Contractor must verify and ensure that only skilled and properly authorized personnel are resourced for this service. The Contractor to ensure that personnel are medically fit, and should provide this proof.

In the event of the contractor supplying staff, that upon investigation do not meet the requirements, Eskom will only compensate the contractor for the actual (proven) skill/ authorization/ qualification level of the individual. This information must be made available to the Eskom project leader prior to the start of the project.

**All staff must be able to communicate in English.**

#### **5. OCCUPATIONAL HEALTH AND SAFETY REQUIREMENTS**

The Contractor is required to comply with the requirements of the Occupational Health and Safety Act of 1993 (as amended).

#### **6. TIMING AND PLANNING**

The work will commence on 2022-01-01, for the duration of 5 months. More accurate dates will be communicated at a later stage.

#### **7. SHIFT REGIME**

The Contractor will be expected to work day and night shift during outages.

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## **8. TRAINING**

The Koeberg Project Manager is responsible for organizing and scheduling the training and will provide additional information. The Contractor is responsible for ensuring that all staff linked to this project has completed all the relevant training prior to the start date of this work. The cost of the course will be covered by Koeberg, but any transport and manpower incurred in respect of the course will be for the contractors account.

### **8.1 SPECIFIC TRAINING**

The Contractor is to ensure that all personnel appointed for this work have completed the working at heights training, materials handling and confined space training.

### **8.2 GENERIC TRAINING**

Prior to the commencement of any intrusive work on site, the selected Contractor and the personnel appointed to perform the work are required to complete the following training.

- Plant Access Training (½ day)
- Fitness for duty testing (drug testing, security screening, verification, etc.)
- Safety Induction Course. (Prior to start of work, 1 hour)

## **9. ACCESS FORMALITIES**

- Eskom to arrange all access onto site as well as the issuing of a Personal Identification Access Card (This card remains the property of Eskom).
- All personnel must have a valid identification document or passport
- Hard hat, safety boots, hearing protection and safety glasses are mandatory safety equipment at Koeberg Nuclear Power Station. The Contractor is responsible to supply all personnel with this safety gear prior to the start of the work.

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#### **10. ESKOM SCOPE OF SUPPLY**

Eskom shall supply the following in support of the work.

- Permit to Work for execution of the work.
- PSR authorised personnel.
- Access to training facilities.
- Access to documentation and procedures.
- Rigging assistance when requested by the Contractor.
- Procedures where applicable

#### **11. CONTRACTOR SCOPE OF SUPPLY**

As per DSG-318-230 rev.1, DSG-318-213 rev.1

#### **12. QUALITY REQUIREMENTS**

As per DSG-318-230 rev.1, DSG-318-213 rev.1

#### **13. PRICING STRUCTURE**

As per DSG-318-230 rev.1, DSG-318-213 rev.1

#### **14. APPENDICES**

N/A