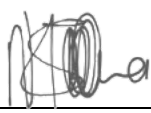
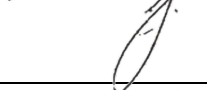
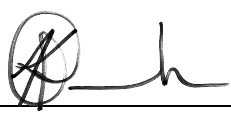


KOEBERG NUCLEAR POWER STATION**Radiation Protection****TITLE:**

**Procurement of a Portable Bioassay measurement Instrument
capable of operating as a Whole-body counter for Nuclear
Emergency Response purposes.**

SUPPLIER:

PREPARED BY:		LEARN NKUNA
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REVIEWED BY:		NARDUS CRONJE
REVIEWED BY:		TERTIUS KARSTEN
APPROVED BY:		KESHNIE GOVENDER
DATE:	2026-08-13	

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1. DESCRIPTION

The Client (Eskom) requires the Contractor to supply, commission, and provide training for a portable bioassay measurement instrument system capable of measuring radioactive material in the human body.

2. SCOPE OF WORK

- The service provider must supply, install, calibrate, and provide training on a portable bioassay measurement instrument.
- The service provider must supply the calibration sources (including their traceability certification) and other necessary equipment to operate the system, perform analysis and report results. Where equipment, tools or vehicles are needed to relocate the equipment after installation, to enable the mobility/portability of the system, the relevant vehicles, tools and equipment shall be included in the supply.
- Supply of sources for routine quality control checks.
- Supply an acceptable quality control program to ensure accuracy, reliability and repeatability.
- The power supply shall include a battery backup that provides power for at least 12 hours.
- They shall perform in accordance with standards for producing accurate, reliable and reproducible in-vivo measurements. As a minimum the requirements of ISO standard 23588: 2024 and ISO standard 28218: 2010 shall be met.
- The portable bioassay measurement system shall include gamma spectroscopy and radionuclide identification and quantification (in the human body) in a maximum of 30 minutes to a level of 6000 Bq for Co-60 and 29000 Bq for Cs-137. The associated background radiation for which this performance is valid shall be quoted

- The calibration must be able to quantify uptakes to the Gastrointestinal tract, Lung, thyroid and whole body.
- The system shall be able to operate in temperatures between 5 degrees Celsius to 40 degrees Celsius.
- The service provider shall provide reports of service performed, next service due and spares used. Certification certificates shall be provided for all calibrations performed.
- ALL hardware and software like operating interface such as computers shall be provided.
- All user, maintenance, calibration manuals shall be provided.
Upon completion of the required scope of work, the Contractor shall clean the site and do the inspection with the Client representative.
- A completion certificate shall be signed by both the Contractor and the Client representative.
- The service provider shall provide training for RP Development and RP Services staff on the use, calibration, maintenance, and repair of portable Bioassay measurement instruments.

3. CATEGORIES OF LABOUR REQUIRED

- The service provider shall supply the portable bioassay measurement instrument and train the client's staff on its operation and calibration.
- The Contractor is required to supply all the necessary consumables, tools, and equipment to execute the job, and the method statement should reflect the equipment and material breakdown.
- Equipment provided for the contractor must be maintained and kept neat and clean to ensure optimal working order. All defects must be reported immediately to the client's representative. Defects due to negligence will be for the contractor's account.
- The Contractor shall supply all its employees with the relevant personal protective equipment; this can be discussed with the Client representative.

4. TIMING AND PLANNING

The Contractor is required to submit with the quote a method statement including a detailed project plan indicating start and finish durations of all activities with milestones, deadlines, and Contractor's plan of execution. The activities are viewed as an entire project, and activities can be planned in parallel with each other.

- Start Date: TBC
- Completion Date: TBC
- Inspection and Hand-over Ongoing

The Contractor shall factor in loss of time due - public holidays or any contingency and include this in their implementation programme.

The final implementation programme must be discussed with the Client representative for acceptance. No claims for additional time will be entertained on failure to do so.

The project will be coordinated by Eskom client dedicated to the project.

The normal working hours will apply; special arrangements must be made for additional oversight by the Eskom project manager.

5. SHIFT REGIME

Normal working hours:

- Mondays to Thursdays: 07:35 – 16:35
- Fridays: 07:35 – 13:30

Non-working times:

- 10:00 – 10:15; 12:15 – 12:45 excluding Fridays.

All other working/non-working hours are subject to Eskom approval.

6. TRAINING

6.1 Specific training

The Contractor must submit to the Client, or its appointed agent, written proof of the competencies of the Contractor and any subcontractors engaged by the Contractor.

All workers must undergo induction training conducted by the principal Contractor before any work commences on site and must be conducted by a competent person.

6.2 Generic Training

All employees required must be registered with the Fitness-for-Duty Programme (FFD) which consists of the following:

- Plant Access Training (PAT)

Duration: 4 hours, with a 1 hour written test. Pass Mark: 80%

Failure of the written test will result in access to site being denied.

- Medical Fitness Test

Duration: 4 hours

Failure of the medical test will result in access to site being denied.

- Human Performance Training

Duration: 4 hours

- Drug Test

Duration: 1 hour

Failure of drug test will result in access to site being denied.

- Police Clearance Certificate

Duration: 2 hours

Staff with criminal records will be denied access to site.

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NOTE: Training is offered only in the English medium both verbal and written. The Contractor must ensure that staff members are conversant in English.

Eskom will supply all training and the expected duration for this training must be discussed with the Client representative. Bookings must be arranged well in advance with the Client representative ensuring there are no unforeseen delays in the installation programme.

All training and clearance above are required prior to commencement of any preparation on site.

7. ACCESS FORMALITIES

The Client's representative will accompany the Contractor on the initial site visit upon successful placement of the contract. The Client's representative will arrange access. After completion of the generic training as stipulated in § 6, the Contractor will be issued with a personal Identification Access Card. All the relevant information to complete the security access application form must be submitted well in advance to ensure timely approval.

Hard hats, safety boots, and safety spectacles are mandatory safety equipment at Koeberg Operating Unit. The Contractor is responsible to supply all his staff with this safety equipment prior to the start of the works.

8. ESKOM SCOPE OF SUPPLY

Eskom shall supply the following in support of the works:

- Access to Site Stores
- Dosimetry.
- No material will be allowed on site unless approved by the Client's representative.
- Power and water points, excluding extension leads and hoses:
- All available power and water points will be pointed out to the Contractor on the site walk-downs.

- The Contractor must inform the Client's representative well in advance of its intended work programme to ensure that there is always availability of such points.
- Access to training facilities.

Access to documentation and procedures.

NOTE: A formal request must be submitted to the Eskom representative if any services are required to alleviate delays.

In order to prevent any delays below is a list of contact persons:

Contact Details:

Simphiwe Tafeni

Senior Supervisor Radiation Protection

Ph: 021 522 3527

Alternate Contact Details:

Keshnie Govender

Acting Manager RP development Ph: 021 500 5508

9. QUALITY REQUIREMENTS

- Quality Assurance (QA) / Quality Control (QC) actions and controls may be required for the service as well as a final inspection and tests if requested.
- All works will be approved by Client's representatives.
- The tasks will be executed in accordance with Eskom procedures and applicable Standards.
- The work will be subject to inspections to verify the absence of defects. The walkdowns will be done by the Client's representatives and Contractor's representative. Defects found upon completion of the work scope must and shall be made good to the satisfaction of the Clients' representatives.
- All work and test certificates to be performed in accordance with SABS standards SANS 277:2004, SANS 275:2004 and SANS 10019:2011

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- The MWBC must be supplied with a warrantee / guarantee period. MWBC that becomes faulty during this period, must be repaired or replaced at the supplier's cost.

10. REFERENCES

- ISO 23588:2024 Radiological protection – General requirements for proficiency tests for in vivo radiobioassay.
- ISO 28218:2010 Radiological protection – Performance criteria for radiobiassay.

11. DOCUMENTATION

- Work will only commence once an order has been accepted by Eskom and the Contractor.
- Access to documents and procedures will be available on site.

12. PRICING STRUCTURE

In order to evaluate your offer per item, it should be structured as follows:

Part 1:

Item no.	Description	Unit	Quantity	Rate	Price
1	Portable Bioassay measurement instrument: Controlled by a computer. The Counter systems shall include: A phantom with four source distribution points (Thyroid, lung, Gastrointestinal and Whole body),	Each			
2	Mix gamma source for calibration and Cs-137 & Co-60 Check source, with the respective calibration certificates.	Each			

User Requirement Specification

3	Installation and Training: RP Development and RP services personnel on-site for 4 weeks for installation and training.	Hours			
4	Acceptance tests & Calibration of the Portable Bioassay measurement instrument. Includes funds for additional days on site for installation but does not include additional airfare or travel time. Therefore, calibration must occur immediately following installation. Calibration report with all supporting documentation supplied after calibration.	Hours			
5	Phantom for efficiency calibration for all source distribution points (Thyroid, Lung, Gastrointestinal, and whole-body)				
6	Equipment Freight	Each			
7	Source Freight	Each			

Part 2:

1.	Maintenance (3 yearly) Routine maintenance and service for MCAs and other wear parts to ensure the equipment health is in order.	Each			

Total of the Prices for Part 2

R

The rates and Prices entered for each item includes for all work and other things necessary to complete the item.

Notes:

1. All the above prices exclude VAT.
2. The above prices to include collection and delivery.

13. APPENDICES

N/A