



## SPECIFICATION

### Radiation and Contamination Survey Meters

#### 1. Scope

This specification describes the requirements for Radiation and Contamination Survey Meters (hereinafter referred as the “Equipment”) for the Jordanian Uranium Mining Company at its facilities in Jordan (hereinafter referred as the “End-User”).

#### 2. Applicable Document

The following document shall be applicable for this Specification to the extent specified hereinafter:

**IEC 60846-1:2009 Radiation protection instrumentation - Ambient and/or directional dose equivalent (rate) meters and/or monitors for beta, X and gamma radiation - Part 1: Portable workplace and environmental meters and monitors**

In the event of conflict between the document listed above and the content of this Specification, the content of this Specification shall take precedence to the extent of the conflict.

#### 3. Requirements

The Equipment to be provided by the Contractor shall meet the following functional and performance requirements:

- Radiation survey meter including probes (alpha, beta and gamma);
- Gamma dose rate: Ambient dose equivalent,  $H^*(10)$ ;
- Detector – Geiger Mueller energy compensated;
- Measurement Range – 0.01  $\mu\text{Sv/h}$  to 100  $\text{mSv/h}$ ;
- IEC Approved Measurement Range – 0.3  $\mu\text{Sv/h}$  to 100  $\text{mSv/h}$ ;
- Energy Range (IEC 60846) – 40 keV to 1.5 MeV;
- Sensitivity – 0.83 c/s per  $\mu\text{Sv/h}$ ; and
- Accuracy –  $\pm 15\%$ .

#### 4. Marking

The all the Equipment shall have all safety markings in English language.

#### 5. Packing

The Equipment, for the shipment by air to the End-User, shall be packed in accordance with international standards that are applicable for the shipment by air of this kind of Equipment.



## 6. Quality Requirements

The Equipment shall be manufactured, shipped and installed in accordance with the Contractor's ISO quality assurance system or an equivalent quality assurance system.

The Contractor shall document the compliance with this quality assurance system.

## 7. Testing and Acceptance

The Equipment, prior to shipment, shall be tested for conformance of the manufacturer's performance specifications and the minimum requirements specified herein.

The Equipment, after delivery, shall be tested by the End-User to demonstrate that the performance meets the manufacturer's performance specifications and the minimum requirements specified herein as determined by the IAEA and the End-User.

The results of the testing of the Equipment shall be documented in an acceptance protocol that shall be signed by the End-User.

## 8. Deliverable Data Items

The Contractor shall provide two complete sets of operation and servicing manuals and technical drawings in the English language.