



SPECIFICATION

Radon Monitoring Equipment

1. Scope

This specification describes the requirements for radon monitoring equipment (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:

ISO11665: 2012, Measurement of radioactivity in the environment – Air: radon-222.

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:

- Rapid response and rapid recovery radon measurement;
- Radon and thoron measured simultaneously and independently;
- Computer software to download measurement data;
- Radon Concentration Range : 4.0 - 750,000 Bq/m³;
- Intrinsic Background: 0.2 Bq/m³ or less, for the life of the instrument;
- Measurement Accuracy: +/-5% absolute accuracy, 0% - 100% RH;
- Nominal Sensitivity: SNIFF mode, 0.0067 cpm/(Bq/m³), normal mode, 0.013 cpm/(Bq/m³);
- Recovery Time Residual activity in Sniff mode drops by factor of 1,000 in 30 minutes; and
- Operating Ranges - Temperature: 32° - 113°F (0° - 45° C), Humidity: 0% - 100%, non-condensing.

4. Marking

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.