

**Question & Answers
On**

Invitation to tender N°ENER/E1/112-3/2010

**Framework contract to implement improved metrology for portable UF₆
cylinder verification systems (Lot1) and portable High-Purity Germanium
(HPGe) gamma detectors (Lot2) – contract notice JO S 113-170894**

Updated: 16/07/10

Before submitting any written question to the Commission, the tenderers should consult this frequently asked questions section relating to the invitation to tender. Questions and answers are published here with full respect to the anonymity of the enquiring tenderers.

Question 1: In the technical description of LOT1? you have mentioned that the system should contain a set of tungsten collimators (or equivalent).

There should be 3 collimators with different aperture sizes.

Could you please clarify this? Do you mean different opening angles and if yes which angles? Do you mean a set of collimators with different opening holes at the front and if yes which sizes?

Could you describe the typical application for such a system to enable us to select the right product for your tender?

Answer 1:

Typically, the detection system will be used to acquire gamma spectra at nuclear installations to determine the isotopic composition of the analyzed material with the MGA/MGAU code.

The set of collimators should enable the end-user to acquire spectra with an HPGe-detector in an area with high background and/or strong sources of radiation. Several parameters have to be taken into consideration when choosing the appropriate collimator, e.g. a manageable weight, adequate shielding against gamma rays from off-axis directions and a fixed acceptance solid angle. Consequently, since those parameters depend strongly on the HPGe crystal size and the overall detector construction, the collimators are specific for a given HPGe-detector. A construction with apertures of different sizes is envisaged; one aperture should have the same diameter as the HPGe crystal, the second aperture should be approximately 70% and the third aperture should be around 28% of the crystal diameter. The collimators shall be made from such material which does not interfere with the MGA code, e.g. W, Ta.

Question 2: In the technical description of LOT2 you have mentioned under I.3.1.1 item b) that there should be a holder to temporarily mount the device to a UF₆ cylinder.

Could you clarify this? What are the UF₆ diameters? What should be the distance from the UF₆ cylinder wall to the detection system?

Answer 2:

The UF₆ cylinders of interest are mainly standard cylinders of type 30B and 48Y. There is no specified distance which needs to be kept between the UF₆ cylinder and the detection system; a direct contact between the steel drum and the detection system will be acceptable.