



SPECIFICATION

Mobile Protective Shielding

1. Scope

- 1.1. This specification describes the requirements for a Mobile Protective Shielding (Screen) (hereinafter referred to as the "Equipment") to be used for protection of personnel against gamma radiations by staff of State Specialized Enterprise «Centralised Enterprise for Radioactive Waste Management» (SSE CERWM), Ukraine (hereafter referred to as the "End-User").
- 1.2. The project aims to assist the End-User in assuring the required radioprotection levels for workers during the works to be performed at Module B1 of Pidlisny disposal site by drilling inside the disposal facility for sampling and performing a complete characterization of the samples.

2. Requirements

2.1. Functional and Performance Requirements

The Equipment shall meet the following functional and performance requirements:

- 2.1.1. The dimensions of the protective shielding shall be of at least 1400 mm (height) x 400 mm (width);
- 2.1.2. The lower edge of the level of protection from the floor surface shall be maximum 200 mm;
- 2.1.3. The location of the protective shielding window shall be in the upper part of the shielding;
- 2.1.4. The size of the protective shielding window shall be at least 300 mm (width) x 200 mm (height);
- 2.1.5. The shielding thickness shall be of at least 10 cm pure lead (Pb) (99,94% as per ASTM B-29). (10 cm of lead equivalent is required to achieve the attenuation factor for Cs-137 $k = 100,000$).
- 2.1.6. The thickness of the shielding window shall be at least of 3 mm lead (Pb).
- 2.1.7. The tilt of the upper part of the shielding where the lead window is placed shall be at 45 degrees from the vertical axis.
- 2.1.8. The shielding shall be on wheels (mobile) with a brake function for easy movement (four rotary wheels with at least two having stop fixing). A general design is provided in figure 1.



3. Marking

The Equipment shall have all safety markings in English language.

4. Packing

- 4.1. 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 equipment.
- 4.2. All markings on the components and packaging shall be in English and clearly state the address and contact name of the End-User.

5. Quality Requirements

- 5.1. The Equipment shall be manufactured in accordance with the Contractor's ISO quality assurance system or an equivalent quality assurance system.

6. Testing and Acceptance

- 6.1. The Equipment, prior to shipment, shall be tested for conformance with manufacturer's performance specifications and the minimum requirements specified herein.
- 6.2. The Equipment may be tested by the End-User following receipt to verify that it meets the manufacturer's specifications and the minimum requirements specified in Section 2 above.



Figure 1 (courtesy of SSE CERWM).