



SPECIFICATION

10 x Portable Emergency Decontamination System including Generator

1. Scope

This specification describes the requirements for 10 portable emergency decontamination systems (hereinafter referred to as the “System”) including 10 generators, intended for the decontamination of both ambulant and non-ambulant emergency responders for Ukraine. The System including generators shall hereinafter be referred to as the “Equipment”.

The Equipment shall be used and operated by emergency first responders in the case of radiological incident or emergency.

The provision of the Equipment shall be coordinated by the IAEA and delivered to Ukraine under the coordination of the Response and Assistance Network mechanism as well as other available mechanisms in the IAEA.

2. Definitions, Acronyms, and Abbreviations

The following definitions, acronyms, and abbreviations shall apply throughout this Specification unless defined otherwise hereinafter:

- Ambulant: Able to walk, not confined to a stretcher.
- Decontamination: The term ‘decontamination’ is used to refer to the removal of radionuclide contamination from personal protective equipment used at the scene.
- Non-Ambulant: Unable to walk, confined to a stretcher.
- Throughput: The number of persons passing through the decontamination system per hour.
- Lifetime of the System: The normal operating period or lifetime of the system is the period of time after an ample initial trial, where the effects of wear are negligibly small, and quality has levelled off to a constant failure rate with regard to time.

3. Requirements

3.1. Functional and Performance Requirements

The System shall meet the following functional and performance requirements:

The System shall:

- 3.1.1. Provide appropriate wet decontamination of emergency first responders;
- 3.1.2. Provide protection against adverse or inclement weather with a vinyl enclosure;
- 3.1.3. Be of a rugged design with appropriate fixtures and fastenings to allow for use in adverse or inclement weather conditions;



- 3.1.4. Be portable;
- 3.1.5. Be deployable in locations with no or limited access to utilities such as electricity or water;
- 3.1.6. require a generator to power the System as specified in section 3.2 and 3.4, when needed;
- 3.1.7. Be compatible with Ukraine's power and water connectors;
- 3.1.8. Be easily assembled with a frame;
- 3.1.9. Have the capability to decontaminate both ambulant and non-ambulant first responders; and
- 3.1.10. Have the capacity to decontaminate multiple first responders simultaneously.

3.2. The Generators shall

- 3.2.1. Be portable;
- 3.2.2. Be compatible with the Decontamination System;
- 3.2.3. Be easy to use; and
- 3.2.4. Supply electrical power.

3.3. Technical Requirements

The System shall meet the following technical requirements:

3.3.1. Essential features

The System shall meet the following essential features:

- a) Wet decontamination of both ambulant and non-ambulant emergency responders;
- b) Complete portability;
- c) Stand-alone capability in locations with no access to utilities; and
- d) Compatibility with States current power and water delivery systems.

3.3.2. Safety requirements

The System shall meet all applicable safety requirements, such as ANSI/ISEA 113-2013 for flow rates, spray pattern and other performance characteristics to operate this kind of equipment/system in Ukraine.

3.3.3. Ease of construction

The System shall require a maximum 6 emergency responders to erect and operate, although a smaller number of operators or emergency responders required to erect and operate the System is preferable. Examples of good practice are 4 – 6 operators.

3.3.4. Physical dimensions and weight

The outside dimensions of the System's main structure when packed for transportation and storage should generally not exceed a volume of 2 m³ and the weight should be generally less than 80 kg.

3.3.5. Decontamination Capacity



The System should have the capacity to simultaneously provide decontamination for both ambulant and non-ambulant emergency responders with a minimum throughput of 12 per hour.

3.3.6. Operational Capability

The System shall have a stand-alone operational capability, to allow for deployment in locations where access to lighting and power is unavailable. Additionally, a water heating function shall allow for the operation of the system during cold weather.

3.3.7. Compatibility

The System's power and water delivery components shall be compatible with the State of Ukraine's current water supply and power systems allowing for ease of interoperability.

3.3.8. Durability

The System shall be of a robust and rugged construction with appropriate fixtures and fittings to allow for use in remote locations during adverse and inclement weather.

3.3.9. Temperature

The System shall be tolerant to operating temperature changes within the temperature range from -10 to $+30$ °C.

3.4. The Generators shall meet the following technical requirements:

3.4.1. The System shall be powered by a portable generator with covered outlets;

3.4.2. The generator shall run on diesel or petrol fuel and suitable for power range (watt) of the System;

3.4.3. The generator should have monitors for voltage, hertz and run-time hours; and

3.4.4. Power cables and connectors shall be compatible with Ukraine's operating systems

4. Marking

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

4.2 The Equipment shall be clearly marked with designation of the type, model, manufacturer and serial number.

5. Packing

The Equipment shall be packed in accordance with international standards that are applicable for the shipment of this kind of equipment.

6. Quality Requirements

6.1. The Equipment shall be manufactured, shipped in accordance with ISO quality assurance system or an equivalent quality assurance system. This quality control system must ensure testing of the system occurs.



6.2. The Contractor shall document the compliance with this quality assurance system. Quality control results obtained by the Contractor shall be attached to each batch of Equipment delivered to IAEA.

7. Testing and Acceptance

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

8. Deliverable Data Items

The Contractor shall provide the documentations specified below, in English language.

8.1. Two complete sets of operation and servicing manuals.

8.2. Technical specification, complete description of the Equipment with general technical data, including configuration, its size, its weight, compatibility, reliability and any other relevant information.

8.3. Manuals and Checklists User manuals, quick use manual, maintenance manuals, as well as Equipment configuration(s). The manufacturer shall provide a quick use manual, a list of recommended spare parts, and a trouble-shooting guide.

8.4. Certificates and legalization. In order to ensure reliable and safe operation, the Contractor should provide a valid safety certificate and, preferably, a type test certificate of compliance with the relevant national/international standards. The Contractor shall be entirely responsible for providing all documentation/certification necessary to allow legal export and use of the Equipment in Ukraine. This may include, for example, export licenses.

9. After-sale and Maintenance services

The Contractor shall ensure the availability of spare parts and maintenance services for the entire lifetime of the Equipment.

10. Warranty

10.1. The Contractor shall provide minimum warranties (on labour and parts) for the Equipment in accordance with the IAEA General Conditions of Contract

10.2. The Contractor shall clearly note the manufacturer's guarantee conditions, the routine or preventive maintenance required to ensure operation of the Equipment