TABLE 1
LIST OF RADIATION PROTECTION EQUIPMENT AND SUPPLIES

PURPOSE: To equip the Hot Lab and Nuclear Medicine Department of the National Centre Of Oncology, Kyrgyzstan, with relevant devices and provide radiation safety by the procurement of the required protective and technical equipment and individual means of protection.

NOTE: Any modification or proposed alternatives on the items in the following list can be considered if they also comply with specific national regulations; the Supplier is required to provide supporting documents accordingly in its offer.

Item	Product Commodity	Item description	Quantity	Unit of Measure
1	Nuclear Medicine/ Radiopharmacy	Lead glass syringe shields. (4 shields required: 1x for 1 ml; 1x for 3 ml; 1x for 5 ml; and 1x for 10 ml)	4	ea
2	Nuclear Medicine/ Radiology radiation protection equipment	Protective Strongbox to collect and storage solid radioactive waste and radioactive materials in plastic containers, for Low-Energy Gamma Waste. Dimensions: 11.9" width x 9.9" depth x 15.25" (+/- 2" per dimension) x height (30.2 x 25.1 x 38.7 cm) (+/- 5 cm per dimension) Lead Shielding: .125" thick (3 mm) Capacity: 20 qt. (18.9 L) (+/- 3 L) Weight: 51 lb. (22.6 kg) (+/- 4 kg)	1	ea
3	Nuclear Medicine/ Radiology radiation protection equipment	Shielded Decay Drum Dimensions: 30" h x 19.5" dia. (76 x 50 cm) (+/- 10 cm per dimension) Lead Shielding: minimum .125" (.3 cm) Drop Port: minimum 6.5" x 8" (16.5 x 20.3 cm) Weight - 160 lb. (72 kg) (+/- 10 kg)	1	ea
4	Nuclear Medicine/ Radiology radiation protection equipment	Mobile container for collection of solid radioactive waste from the hot lab and procedure room: Lead lined container for radioactive waste (high energy and medium-low energy) • Capacity – minimum 5 L; • Radiation protection over all walls – not less than 3 mm Pb.; • External dimension 200 (w) x 200 (d) x 250 (in) mm*; (+/- 50 mm per dimension)	1	ea

Item	Product Commodity	Item description	Quantity	Unit of Measure
5	Nuclear Medicine/ Radiology radiation protection equipment	Clear-Lead Mobile Nuclear Medicine Barrier Protection against patient-emitting radiation for the scanning room at the nuclear medicine department. Dimensions: - Overall Dimensions: 49.5" w x 61.1" h (126 x 155 cm) (+/- 30 cm per dimension) - Window: 48" w x 23.5" h (121 x 60 cm) (+/- 20 cm per dimension) - Opaque Panel: 48" w x 32.5" h (122 x 82.5 cm) (+/- 20 cm per dimension) - Shielded Area: 48" w x 56" h (122 x 142 cm) (+/- 20cm per dimension) Window: minimum 1.0 mm lead equivalency Opaque Panel: minimum 1.1 mm lead Leg Depth: 10.5" (26.7 cm) (+/- 5 cm) Casters: Four hospital grade, locking Weight: 161 lb. (73.2 kg) (+/- 20 kh)	1	ea
6	Nuclear Medicine/ Radiopharmacy/ Radiation protection equipment	Shielded passthrough window with interlocked doors with two hinged doors, one on the frontal part and one on the posterior part, with a pneumatic inter-blocking system: with the only possibility to open one of the doors if the other is closed, thereby guaranteeing the safety of the operators by maintaining the quality of the relative rooms. This equipment will be installed by the End-user.	1	ea
7	Nuclear Medicine/ Radiology radiation protection equipment	Clear-Lead Window (protective glass between scan room and operation room); • 36" w x 48" h (91 x 122 cm) (+/- 20 cm) • Not less than 35 mm thick (1.5 mm Lead)	1	ea
8	Nuclear Medicine/ Radiopharmacy/ radiation protection equipment	Trolley for transport of lead containers; • Steel made with rubber wheels, refolding pole for pulling and screwing device for locking in the container. Treated with decontaminable epoxy paints. Suitable for transporting all the containers • Weight kg 15(+/- 5 kg) • External dimensions mm 420 x 370 (w x h) (+/-100 mm) • Capacity kg. 150 (+/- 20 kg)	1	ea

Item	Product Commodity	Item description	Quantity	Unit of Measure
9	Nuclear Medicine/ Radiology radiation protection equipment	Shielded carrier for syringes for technetium radiopharmaceuticals. Dimensions: • I.D.: 8.25" l x 3" w x 2.9 h (21 x 7.6 x 7.4 cm) (+/- 3 cm per dimension) O.D.: 9.5" l x 4.4" w x 3.5" h (24 x 11.2 x 8.9 cm) (+/- 3 cm per dimension) • Lead Shielding: Sides, top and bottom: Not less than.125" thick (.32 cm) Ends: Not less than .25" thick (.64 cm) Weight: 11.3 lb (5.1 kg) (+/- 1 kg)	2	ea
10	Nuclear Medicine/ Radiopharmacy/ Radiology radiation protection equipment	Radioiodine fume hood. • For iodination procedures. • Air baffle to assure flow of air out of the box with adjustable flow speed and filter that contains TEDA charcoal to trap up to 90% of the radioiodine produced. • Constructed of 3/8” clear, rugged Plexiglas • It shall have a swing-away front door to allow easy placement and retrieval of items. • Dimensions: O>D> 24” W x 20” D x 36” H (+/- 5” per dimension) • Weight: 55 kg (+/- 10 kg)	1	ea

Item	Product Commodity	Item description	Quantity	Unit of Measure
11	Nuclear Medicine/ Radiopharmacy radiation protection	Dose Calibrator: To be used for conventional nuclear medicine. • The system shall have a low-pressure ionization chamber, electrometer, display screen and easy-to-build programs for nuclear pharmacy. • Isotope Selection Keys: Tc-99m, Tl-201, I-123, I-131, Cs-137, Co-57, Xe-133, Ga-67, In-111, F-18, Y-90s, Ba-133, up to 25 user-defined isotopes and a full alphabetical list of minimum 98 isotopes • Activity Range: 0.01 µCi to 100 Ci (.0004 MBq to 3700 GBq) of Tc-99m or 25 Ci of F-18 • Energy Range: 25 keV to 3 MeV photons • Response Time: One to two seconds for doses greater than 200 µCi; three seconds for doses greater than 20 µCi; 50-100 seconds below 20 µCi of Tc-99m with default threshold; threshold adjustable to reduce counting time • Electrometer Linearity: ± 1% or 0.2 µCi, whichever is greater, up to 40 curies of Tc-99m, ± 1.5% up to 100 curies of Tc-99m • Electrometer Accuracy: ± 1% or 0.2 µCi, whichever is greater • Overall Accuracy: ± 3% or 0.3 µCi, whichever is greater; • Repeatability: ± 0.3% above 1 mCi short term (24 hr.); 1% long term (one yr.)	1	ea

Item	Product Commodity	Item description	Quantity	Unit of Measure
12	Nuclear Medicine/ Radiopharmacy	Tabletop Shield: To provide protection while working with mid-to-low-energy beta and gamma radioactive materials for nuclear medicine. The shield shall be designed to resist tipping and incorporate shielding overlap to eliminate radiation streaming. The front wall of the shield shall be constructed of thick lead with a lead glass window. Dimensions: • Lead Shielding: not less than .5" thick (1.2 cm) • Viewing Panel: Lead Equivalency: Not less than 2 mm (an optional lead glass panel can be paired to achieve at least 4.0 mm lead equivalency) Clear Plexiglas: For Beta Shielding Viewing Area: 11.1" x 11.1" (28.2 x 28.2 cm) (+/- 5 cm per dimension)	1	ea
13	Nuclear Medicine/ Radiopharmacy	Tec-control chromatography systems. • For radiopharmaceutical manual quality control. • A full set of trips and solvents system to perform QC in conventional nuclear medicine radiopharmacy.	1 complete kit	1 kit
14	Nuclear Medicine/ Radiopharmacy	Forceps. Handling devices for small items in the hot lab. Curved.	1	ea
15	Nuclear Medicine/ Radiopharmacy	High density lead glass vial. For 5 - 30 ml vials.	1	ea
16	Nuclear Medicine/ Radiopharmacy/ radiation protection equipment	Bactericidal Irradiator for hot lab. • Removable bactericidal irradiator for six open lamps to be used for quick disinfection of air and surfaces of larger rooms, production halls, sports facilities and health care facilities. • For ease of movement and protection of lamps from the blow, metal handle shall be mounted on the rack. • Irradiator shall have no protruding sharp parts, to make its operation safe	1	ea
17	Nuclear Medicine/ Radiation Protection	Decontamination Kit: The kit shall contain all the equipment needed to cope with a radioactive spill or routine decontamination problem in the laboratory	1	Kit

Item	Product Commodity	Item description	Quantity	Unit of Measure
18	Nuclear Medicine/ Radiation Protection	Lead-lined generator and storage cabinet: Dimensions: 36.5" w x 24" depth x 36.5" h (92.7 x 61 x 92.7 cm) (+/- 20 cm per dimension): Lead Shielding cabinet: not less than .5" (1.3 cm) or 1" (2.5 cm) thick on all six sides Drawer: .25" thick (.64 cm) on five sides (+/- 10 cm) Dividers: not less than .5" thick (1.3 cm) Drawer Dimensions: I.D.: 15.5" width x 11.9" depth x 18.2" height (39.4 x 30.2 x 46.2 cm) (+/- 5 cm per dimension) Doors and Drawer: Key-locked Countertop: Stainless steel with not less than 4" (10.2 cm) backsplash and .5" (1.3 cm) spill proof lip Weight: 869.5 kg (+/- 100 kg)	1	ea
19	Nuclear Medicine/ Radiation Protection	Lead-Lined Sink and Waste Cabinet Dimensions: 30.5" w x 24" depth x 36.5" h (77.5 x 61 x 92.7 cm) (+/- 20 cm per dimension) Lead Shielding: Not less than .25" (.64 cm), .5" (1.3 cm) or 1" (2.5 cm) thick on all six sides Sink Section: 10" w x 14" depth x 10" h (25.4 x 35.6 x 25.4 cm) (+/- 5 cm per dimension) Integral stainless-steel sink with gooseneck faucet and wrist blades. Waste Section: Chute: 6.5" dia (16.5 cm) (+/- 3 cm) with not less than.5" thick (1.3 cm) lead shielded cover Container: I.D.: 20.5" h x 11.25" dia. (52 x 28.6 cm) (+/- 10 and 5 cm in each dimension), polyethylene, minimum 7-gal. capacity Door: Key-locked. Counter top: Stainless steel with not less than 4" (10.2 cm) backsplash and not less than 0.5" (1.3 cm) spill proof lip. Weight: 244-130: 849 lb. (386 kg) (+/- 50 kg)	1	ea

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20	Nuclear Medicine/ Radiation Protection	Lead-lined Preparation Enclosure Base Cabinet Dimensions: 36" w x 24" depth x 30.5" h (91.4 x 61 x 77.5 cm) (+/- 20 cm per dimension) - Interior Floor Space: 31" w x 19" depth (78.7 x 48.3 cm) (+/- 20 cm per dimension) Lead Shielding: not less than.25" thick (.64 cm) - Adjustable Shield: Not less than 12" w x 10" h x .5" thick (30.5 x 25.4 x 1.3 cm) Exhaust: not less than 6" dia. (15.2 cm) chimney, fixed upper and adjustable lower baffles. Blower and filter shall be included Lighting: Halogen lamp with at least two 25-watt bulbs,. Lead Glass Window: - Dimensions: 34.5" w x 11.8" h x not less than.75" thick (87.6 x 30 (+/- 15 cm) x not less than 1.9 cm) - Density: not less than 5.05 g/cm3 Weight: 733 lb. (332 kg) (+/- 50 kg)	1	ea
21	Nuclear Medicine/ Hot lab	Stainless Steel Lab Stool Specifications: • Product type: Stainless Steel Lab Stool • Material: Stainless Steel • Feature: Height adjustable • Diameter: not less than 330 mm	3	ea
22	Nuclear Medicine/ Medical device	Injection/Resting chair Dimensions: 35" w x 49" h (89 x 125 cm) (+/- 15 cm per dimension) - Seat: 20" depth x 25" w x 21" h (51 x 64 x 53 cm) (+/- 5 cm per dimension) - Back: 25" w x 34" h, above seat (64 x 86 cm) (+/- 5 cm per dimension) Upholstery: Blueridge, fire retardant Frame: Welded powder-coated steel Casters: Four heavy-duty with positive locking swivel and wheel brakes Patient Capacity: 450 lb (204 kg) (+/- 30 kg) Weight: 116 lb. (52.6 kg) (+/- 10 kg)	1	ea

Item	Product Commodity	Item description	Quantity	Unit of Measure
23	Nuclear Medicine/ Radiology radiation protection equipment	Lead Glass Goggles * Designed to reduce radiation exposure to the eyes, the lead glass goggles shall be framed with soft vinyl and held on the head securely by an adjustable strap. *Vents on top and bottom of the goggles to help prevent fogging. *Eye shielding shall be provided by not less than 2" x 4.25" single sheet of fluoroscopic quality lead glass. The density glass shall eliminate more than 95% of direct radiation produced by gamma rays. *Not less than 2.00 mm lead equivalency.	1	ea
24	Nuclear Medicine/ Radiology radiation protection equipment	Soft-Skin Coat Apron Dimensions: 36" l x 24" w (91.4 x 61 cm) (+/- 5 cm per dimension) Lead Equivalency: Not less than 0.5 mm Weight: 10 lb. (4.6 kg) (+/- 1 kg)	2	ea
25	Nuclear Medicine/ Radiation Protection	Rectangular lead bricks (not less than 15 x 10 x 5 cm per dimension)	20	ea