Appendix - III

SLAERC/GUIDANCE/NM/2017/01

Requirements for Establishing a Iodine Therapy Facility

Obtaining an approval from the Sri Lanka Atomic Energy Regulatory Council for a plan of a Iodine therapy facility is mandatory under section 20(2)(b)(i) and 22(1)(a) of the Sri Lanka Atomic Energy Act No. 40 of 2014 prior to commencing the construction of a iodine therapy facility. Noncompliance of this requirement will results refusal of granting approval for importation of radiopharmaceuticals for treatment.

Sri Lanka Atomic Energy Regulation Council,
No. 977/18, Kandy Road,
Bulugaha Junction,
Kelaniya.

Tel: 011 2987860
Fax: 011 2984099

Regulatory Requirements for High Dose Iodine 131 Therapy Facility

1) Requirements for Isolation Rooms (For 04 rooms / 04 patients as indicated in the Annex 01):

a) The entire system should include patients' rooms, Nurses' duty room, iodine administration room, waste storage room & buffer zone.

b) The minimum dimension of an isolation room should be 4.5 m x 3.5 m.

c) Wall material & thickness of the patients' rooms should be 25 cm concrete (2.35 g/cm^3).

d) Ordinary doors may be fixed to the entrance of the nurses' duty station & patients' rooms.

e) Minimum width of the buffer zone should be 2 m.

f) 3 mm thick lead doors should be fixed to the main entrance of the patient's rooms and entrance to be used in an emergency.

g) Wall material & thickness of the outside wall of the patients' isolation rooms should be 45 cm concrete (2.35 g/cm^3).

h) Exhaust fan with charcoal filters should be fitted to each isolation room including toilets and iodine administration room.

2) Delay Tanks Arrangements:

a) Delay tanks may be arranged underground or above ground. Specifications are given in the Annex 02-A and Annex 02-B.

b) Pressure levels should be maintained in the tanks to drain water with the aid of gravity.

Please draw a suitable plan including the above requirements and submit to Sri Lanka Atomic Energy Regulatory Council (Regulatory Council) for approval prior to commence of any constructions.

3) Other Requirements:

a) At least one survey meter & one contamination monitor should be provided for a facility.

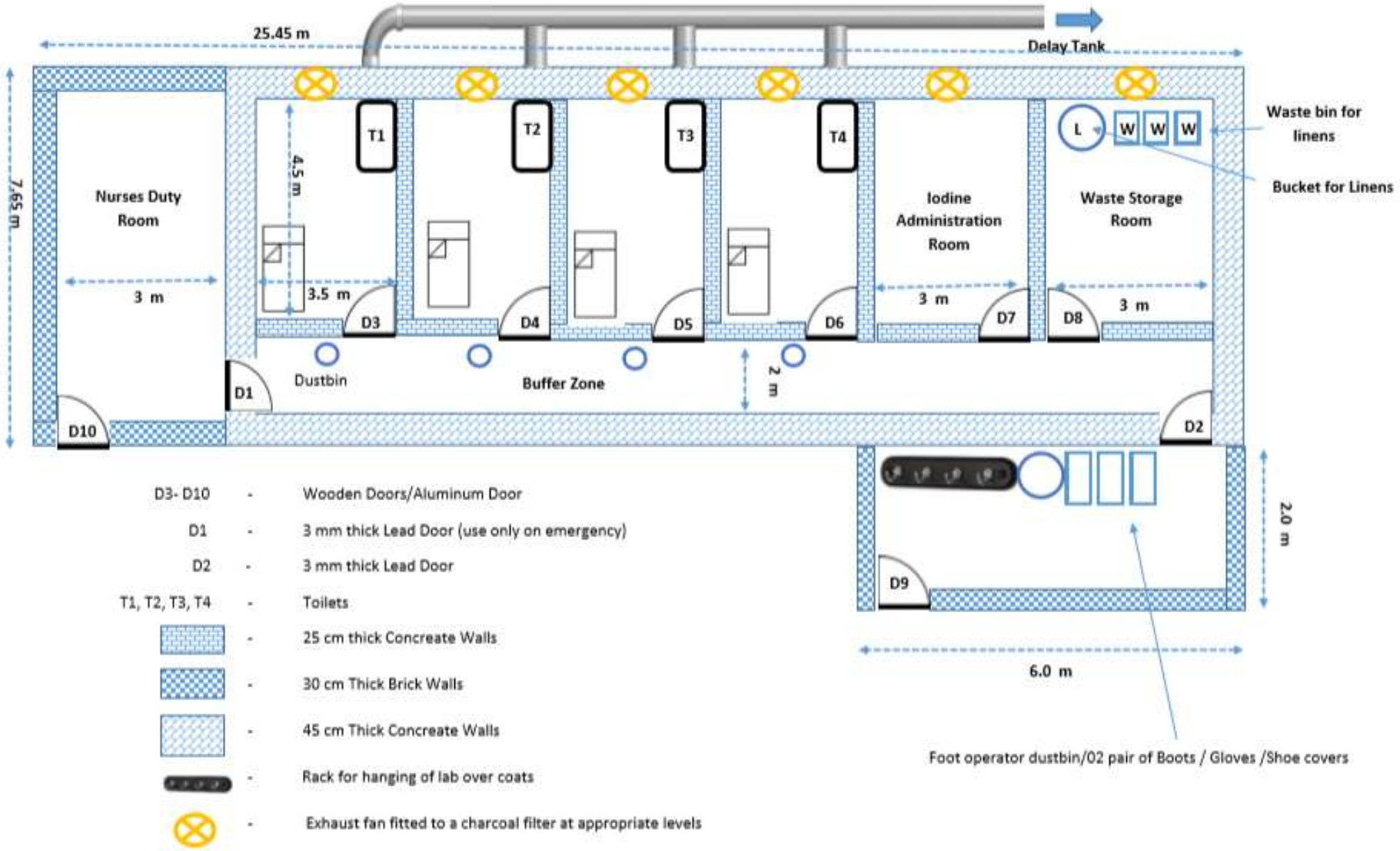
b) Emergency kit should be made available.

c) CCTV cameras & audio communication systems should be provided to each isolation room and viewing panel of CCTV cameras should be installed at nurses' duty rom.

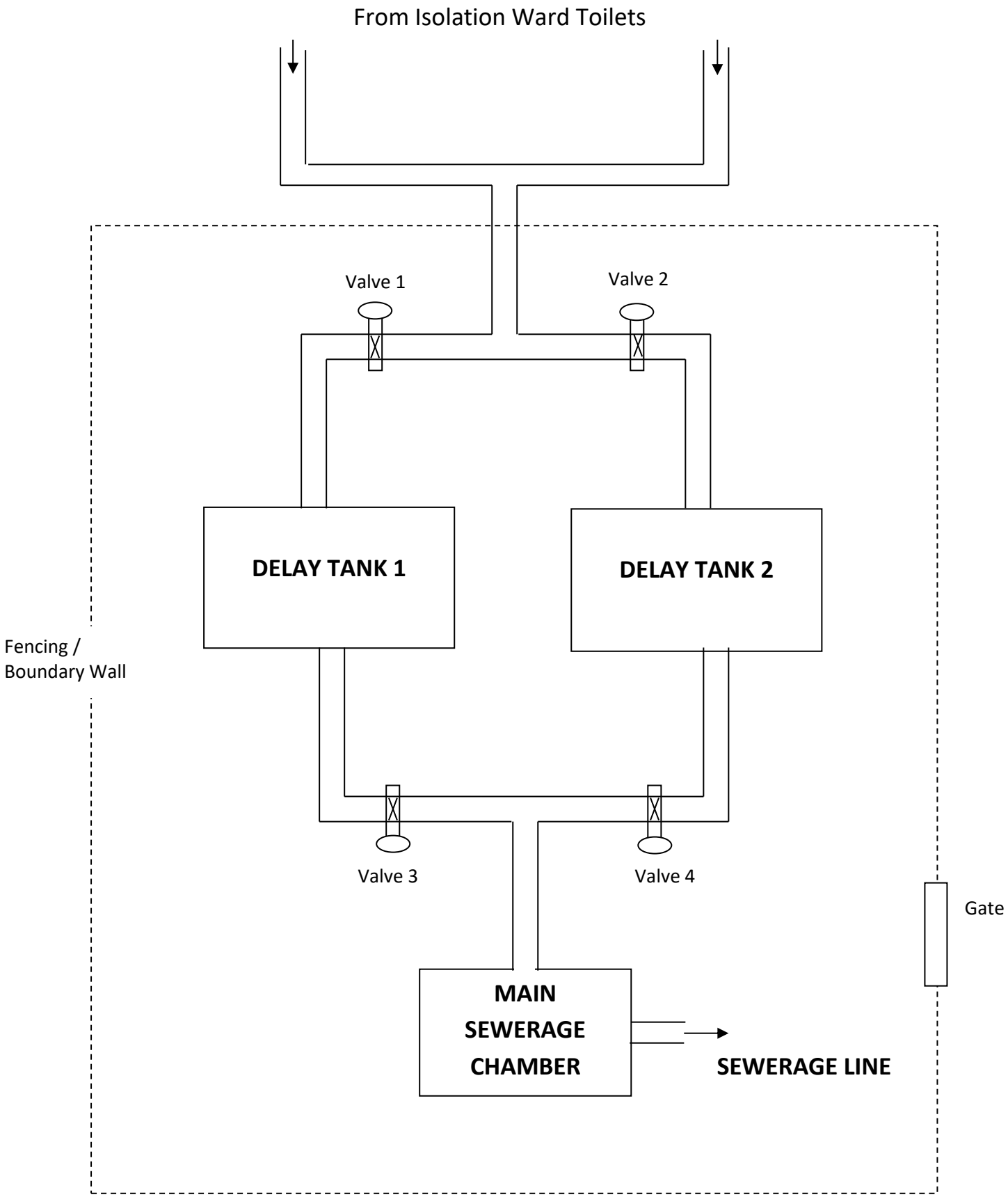
d) Suitable arrangements should be made available for collection of radioactive wastes and provision of adequate radiation protection gears.

e) Any other necessary instructions to be provided by the Regulatory Council in accordance with the design of the facility and number of patients to be treated should be adhered.

Sample diagram for Iodine therapy facility



Delay Tank System for Iodine Therapy Facility



Annex 02-B

Specifications for Delay Tanks

1. Tanks may be pre-fabricated concrete or stainless steel.

2. Tanks may be above ground or underground. If above ground, boundary wall should be 30 cm thick concrete regardless of the type of tank. If underground an ordinary fence is sufficient from 30 cm from the edges of the slab of the pit.

3. If pre-fabricated stainless-steel tanks are used as underground tanks, walls of the pit should be 10 cm concrete. If pre-fabricated concrete tanks are used thickness of the tanks should also be 10 cm.

4. 3 mm or more stainless-steel lining should be used for inside walls of the concrete tanks, If stainless steel tanks are used, sufficient thicknesses of stainless steel should be used to withstand the pressure of waste water (more than 3 mm).

5. The volume of a tank may be 5000, 10,000 or 20,000 liters.

6. The tanks should be built in such a way that outlet of the tank is above the sewerage chamber.

7. Thickness of the lid of the pit should be 30 cm concrete.

8. Suitable arrangements should be made available to collect the contaminated waste water samples from the tanks for testing radioactivity prior to release.

9. At least 02 tank systems are required for delay the wastes.

10. Total capacity of a delay tank system should be 2000 liter / patient per week. (eg. 10 patients per week require 02 number of 20,000 liters of delay tank systems). In other words, this facility requires 40,000 liters in total of delay tank system. (total 4 x 10,000-liter tanks)- See **Annex 03**

11. Arrangements should be made to fix of an indicator to show levels of filling of the delay tanks (Floating device may be used for this purpose with indicator) or any other suitable alternative method.

Annex 03

Delay Tank System for Iodine Therapy Facility