

Brochure on transport of radioactive materials

1.0 WHO REGULATES TRANSPORT OF RADIOACTIVE MATERIALS IN UGANDA?

AEC regulates transportation of radioactive materials in Uganda as per Section 31(1) of the Atomic Energy Act Cap. 154.

Part XII of the Atomic Energy Regulations, 2012 provides requirements for safe transport of radioactive materials.

2.0 HOW CAN YOU TELL THAT A PACKAGE BEING TRANSPORTED CONTAINS A RADIOACTIVE MATERIAL?

Packages containing radioactive materials are labeled with a standard radiation warning trefoil or symbol



In addition, Labels are placed on packages containing radioactive materials as Radioactive I, Radioactive II and Radioactive III with No. 7 as shown in Figure 1 below

All radioactive materials being transported are classified as class 7 (Number 7 means Radioactive Material)



Figure1

N.B Radioactive-III shows highest risk package followed by Radioactive-II and least risk by Radioactive-I.

3.0 WHICH RADIOACTIVE MATERIALS ARE TRANSPORTED IN UGANDA?

The most common radioactive materials transported in Uganda are Cs-137 & Am241:Be used in road construction, Co-60 used in radiation therapy and Ir-192 used in non destructive testing.

4.0 WHO TRANSPORTS RADIOACTIVE MATERIALS IN UGANDA?

There are registered and licensed companies which transport radioactive materials in Uganda. However, in some cases, companies provide their own transport services.

5.0 CAN ANY VEHICLE BE USED TO TRANSPORT RADIOACTIVE MATERIALS?

No, a Vehicle transporting radioactive materials must be designated for that purpose. It must have the following features ;

- a) Placards displayed on all sides as shown in Figure 2 below



Figure 2: Placarded vehicle

- b) Adequate locking mechanism to ensure that the radioactive material locked and fixed during transport.
- c) Fire extinguisher to be used in case of fire outbreak during transport.
- d) Adequately shielded to minimize radiation exposure to the vehicle crew members.
- e) Provisions for the tie-downs to prevent movement of radioactive material during transport.

6.0 WHAT ARE THE LIKELY INCIDENTS/ACCIDENTS DURING TRANSPORT OF RADIOACTIVE MATERIALS ?

The likely incidents/accidents during transport of radioactive materials are;

- Sabotage/Theft of the radioactive materials
- Vehicle accident
- Contamination of the vehicle and environment incase of a damaged encapsulation capsule.
- Possible Over exposure of the crew due to inadequate shielding

7.0 DOES SOMEONE REQUIRE AUTHORIZATION TO TRANSPORT RADIOACTIVE MATERIALS IN UGANDA?

Yes, Section 31(1) of the Atomic Energy Act Cap. 154 prohibits any person from transporting any radiation source without authorization from Atomic Energy Council (AEC).

8.0 HOW DOES AEC REGULATE TRANSPORT OF RADIOACTIVE MATERIALS IN UGANDA?

To ensure that radioactive materials are transported safely and securely, AEC regulates transportation of radioactive materials as follows;

- Assessment of transport documents for the radioactive material prior to transport .
- Conducting transport inspections
- Issuing transport permits

9.0 WHAT ARE THE AUTHORIZATION REQUIREMENTS FOR TRANSPORTING A RADIOACTIVE MATERIAL?

- Notify AEC by filling form 1A from the Atomic Energy Regulations, 2012
- Apply for authorization to transport radioactive materials by filling form 8 from the Atomic Energy Regulations, 2012.
- If transportation of radioactive materials is in or out of the country, obtain authorization to import or export radioactive materials by filling form 4 from the Atomic Energy Regulations, 2012.
- Submit a transport security plan for category 1 & 2 (High category sources)
- Describe the conditions of the storage area (plan and photos).
- Transport vehicle specifications

10.0 WHAT SAFETY MEASURES SHOULD BE UNDERTAKEN FOR THE PROTECTION OF PERSON INVOLVED AND THE PUBLIC DURING TRANSPORT OF RADIOACTIVE MATERIALS?

There are several measures which should be taken when transporting radioactive materials. These include;

- Proper labelling and packaging of radioactive material prior to transport.
- Conducting radiation survey measurements on surfaces of the vehicle
- Vehicle and equipment used for transport of radioactive material should be checked regularly for contamination
- Provision of fire fighting equipment easily accessible by the vehicle crews
- Use seals, tamper indicating devices and suitable locks when transporting radioactive material.
- Use of closed vehicle (s) to keep the packages out of sight
- Providing armed guards to escort the radioactive materials (for Category 1 and 2 sources)
- Packages or overpacks or vehicle should not be left unattended.
- Provision of appropriate training to workers on radiation protection and safety of radioactive material.
- Placing the radioactive material in a well shielded container.

CONCLUSION

Events that happen during transport of radioactive materials can cause serious radiological hazards to people and environment. Therefore, it is prudent to adhere to radiation safety and security requirements during transport of the sources.

For any event or accident involving radioactive materials during transport, Please contact AEC through a hotline number: 0800100488 or the address provided on this brochure

CONTACTS AND ADDRESS

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