



## **Annex 1**

### **Strategies, guidance and management plans for sources of radioactive waste identified in Gibraltar.**

#### **1. Ionisation Smoke Detectors.**

- **Introduction.**

Smoke detectors, more typically old smoke detectors, can contain radioactive material if they are **ionisation smoke detectors**. The majority of these ionisation smoke detectors contain a very small amount of Americium-241 (also referred to as “Am-241”) which is a man-made radioactive metal that exists as a solid under normal conditions. These smoke detectors are rarely used in Gibraltar but it is possible that some may have been installed in households, business premises or other locations.

- **Should I use ionisation smoke detectors?**

The slight amount of radiation that can be measured outside ionisation smoke detectors does not pose any health risk. The safe encapsulation and low amount of radioactive material make these devices safe under normal conditions even during or after a fire.

However, where reasonably practicable, and where suitable alternatives exist, the Agency recommends that **non-radioactive detectors should be used** in preference to those containing radioactive material. These are known as **photoelectric smoke detectors**. They operate on the principle of light scattering. The Agency recommends the use of photoelectric smoke detectors, not only because they do not contain radioactive material, but because they are generally considered to be more accurate, reliable and safer than ionisation type smoke detectors.



- **How can I identify which type of smoke detector I have?**

If you find any mention of radioactive material, or if you find a radiation symbol or if the model number starts with an “I” or if there is any mention of Americium-241 or Am-241 on the alarm’s label, it is an ionisation smoke detector.



You can identify an ionisation smoke alarm because it will have a radioactive symbol sticker somewhere -usually underneath

If your detector does not have the above-described labels, or if it is marked with a “P”, it is likely to be a photoelectric smoke detector.

If you identify that you have an ionisation smoke detector you should contact the Agency since the Agency is collecting data on the use of ionisation smoke detectors in Gibraltar.

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- **How do I dispose of smoke detectors?**

Gibraltar transposed Directive 2012/19/EU on waste electrical and electronic equipment (“WEEE”) through amendments made to the Gibraltar Environment (Waste) Regulations 2007 (the “Waste Regulations”). The aim of this legislation is to address and minimise the environmental impacts of WEEE when it reaches the end of its life. Gibraltar has systems to facilitate and encourage the separate



collection, subsequent treatment, re-use, recycling and ultimately environmentally sound disposal of WEEE.

Both photoelectric smoke detectors and ionisation smoke detectors (provided that they are intact) can be disposed of in the various WEEE bins distributed throughout Gibraltar. They should never be disposed of in normal refuse. Once disposed of smoke detectors reach the local Civic Amenities Site arrangements are made for the radioactive sealed source contained in ionisation smoke detectors to be removed by a licenced operator before treatment begins. This will be the case in situations where sealed source contains radioactive substances above the relevant threshold set out in the WEEE Regulations. You should **never** attempt to remove the radioactive sealed source yourself. Therefore, in no circumstances should you dismantle or tamper with your smoke detector in any way prior to disposal.

If you are unsure about how to dispose of ionisation smoke detectors in accordance with the guidance set out above, it is possible that you may be able to return your ionisation smoke detector to your supplier who will in turn return it to the manufacturer for safe disposal.

If you have any questions or if you are in doubt with respect to the any of the above please consult the Agency.

## **2. X-ray Units.**

- **Introduction.**

This guidance is to be observed as separate to the rules applying under the Ionising Radiation (Administration of Radioactive Medicinal Products and Medical Exposures) Regulations 2002 apply to the use of radiological equipment.

This guidance deals solely with the provision of information on how to safely dispose of disused X-ray units. For the purposes of disposal, it should be noted that X-ray units are also included in the scope of the WEEE Regulations.



- **Where an end-of-life X-ray unit is being replaced by a new one.**

Where an end-user of an X-ray unit is replacing an old unit with a new unit, the producer of the new unit should provide free take back for the end-of-life X-ray unit, and finance its environmentally sound management as WEEE. Should the producer of the new unit not agree to take back the end-of-life unit, the end-user should inform the Agency immediately.

- **Where an end-of-life X ray unit is not being replaced.**

There may be situations where a final end-user of an X-ray unit may wish to discard it and not replace it with a new unit, for example, when a dental practice ceases operations. In such situations, the final end-user is responsible for ensuring the end-of-life X-ray unit is managed properly as WEEE.

Prior to disposal the end-of-life X-ray unit must be rendered permanently incapable of producing ionising radiation. X-ray units can only produce ionising radiation when connected to an electrical power source. X-ray units are not inherently radioactive and once the timer unit has been disconnected and the power cables/batteries permanently removed it can no longer generate X-rays. The X-ray units should be otherwise left fully intact. In this case it can be considered solely as WEEE. To verify whether your X-ray unit is incapable of producing ionising radiation you should contact the Agency.

Such X-ray units can be disposed of directly at the Civic Amenities Site on Dobinson Way just off Europa Advance Road.