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STATUTORY INSTRUMENTS

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**1980 No. 953**

**ATOMIC ENERGY AND  
RADIOACTIVE SUBSTANCES**

**The Radioactive Substances (Smoke  
Detectors) Exemption Order 1980**

<i>Made</i>	- - - -	<i>8th July 1980</i>
<i>Laid before Parliament</i>		<i>17th July 1980</i>
<i>Coming into Operation</i>		<i>7th August 1980</i>

The Secretary of State for the Environment, as respects England, and the Secretary of State for Wales, as respects Wales, in exercise of the powers conferred on them by sections 2(6) and (7), 6(5) and 15(3) of the Radioactive Substances Act 1960 and of all other powers enabling them in that behalf, hereby order as follows:—

**Citation and commencement**

1. This order may be cited as the Radioactive Substances (Smoke Detectors) Exemption Order 1980, and shall come into operation on 7th August 1980.

**Interpretation**

2.—(1) In this order—

“the Act” means the Radioactive Substances Act 1960;

“closed source” means a homogeneous source, a laminated source or a sealed source;

“decay products” means, in relation to any radionuclide, the radionuclides succeeding it in the radioactive series in which it and they occur;

“homogeneous source” means an article free from patent defect which—

(a) is made wholly from a substance which—

(i) is solid, coherent, homogenous and tough; and

(ii) is radioactive material or a mixture of radioactive material and material which is not radioactive material, or

(b) is made partly from, or incorporates, such a substance and is radioactive material solely because of the presence of that substance;

“incorporated source” means a closed source incorporated in a smoke detector;

“laminated source” means an article free from patent defect consisting of a layer of coherent radioactive material sandwiched between and securely bonded to layers of coherent, inert and tough material which is not radioactive material;

“sealed source” means radioactive material sealed in a container (otherwise than solely for the purpose of storage, transport or disposal) or bonded wholly within material, the immediate container or the bonding being of adequate mechanical strength and free from patent defect and not being radioactive material; and includes the immediate container or the bonding;

“the Secretary of State” means the Secretary of State for the Environment as respects England, and the Secretary of State for Wales as respects Wales;

“smoke detector” means any apparatus, equipment or appliance designed or constructed for the purpose of detecting smoke;

“waste collection authority” means a local authority which is a collection authority within the meaning of section 30 of the Control of Pollution Act 1974.

(2) Any reference in this order to a numbered Article shall be construed as a reference to the Article bearing that number in the order.

### **Exemption from registration under section 1 of the Act**

3. Subject to the provisions of Articles 5 and 6, any person who, on any premises which are used for the purposes of any undertaking carried on by him, keeps or uses or causes or permits to be kept or used any radioactive material to which this Article applies is hereby granted exemption from registration under section 1 of the Act (which provides for the registration of persons who keep or use radioactive material) in respect of those premises and the keeping and use thereon of that radioactive material.

### **Descriptions of radioactive material to which exemption relates**

4. Article 3 applies to radioactive material falling within either of the following descriptions, that is to say—

- (a) a smoke detector which is radioactive material solely because it contains americium 241 in one or more closed sources in which, or in all of which taken together, the sum total of kilobecquerels does not exceed 40; or
- (b) a smoke detector, not being a smoke detector falling within paragraph (a) of this Article, which is affixed or attached to the premises and is radioactive material solely because it contains radionuclides in one or more closed sources in which, or in all of which taken together, the sum total of megabecquerels of all the radionuclides (including those which are decay products of others present) does not exceed 4.

### **Exemption under section 1 without limitation or condition**

5. The exemption granted by Article 3 in respect of the keeping and use of radioactive material which is a smoke detector falling within Article 4(a) and is affixed or attached to the premises is granted without any limitation or condition.

### **Exemption under section 1 subject to limitations**

6.—(1) The exemption granted by Article 3 in respect of the keeping and use of radioactive material which is a smoke detector falling within Article 4(a) and is not affixed or attached to premises is granted subject to the limitation that the total number of such smoke detectors present on the premises at any given time does not exceed 100.

(2) The exemption granted by Article 3 in respect of the keeping and use of radioactive material which is a smoke detector falling within Article 4(b) is granted subject to the conditions that—

- (a) no incorporated source is mutilated;
- (b) whenever there are reasonable grounds for believing or suspecting that an incorporated source has been lost or stolen,—
  - (i) notification to that effect is given forthwith, by the quickest means available, to a member of a police force and to the Secretary of State and confirmed to the latter in writing as soon as practicable; and
  - (ii) all reasonably practicable measures are taken forthwith for the purpose of recovering the source; and
- (c) whenever there are reasonable grounds for believing or suspecting—
  - (i) that the immediate container or the bonding forming part of an incorporated source is broken or damaged; or
  - (ii) that any radioactive material has become detached or has escaped from an incorporated source because of some defect therein,notification to that effect is given forthwith, by the quickest means available to the Secretary of State and confirmed to him in writing as soon as practicable.

#### **Exemption from registration under section 3 of the Act**

7. Any person is hereby granted exemption from registration under section 3 of the Act (which provides for the registration of mobile radioactive apparatus) in respect of mobile radioactive apparatus consisting of a smoke detector falling within Article 4(a) subject to the limitation that the total number of such smoke detectors to which this Article applies does not exceed 10.

#### **Exclusion of radioactive waste from sections 6 and 7 of the Act**

8.—(1) Radioactive waste falling within one of the following descriptions, that is to say—

- (a) waste which, immediately before it became waste, consisted of an article which was a smoke detector falling within Article 4(a), or
- (b) substances or articles which are radioactive waste solely because they have been contaminated in the course of the keeping or use of smoke detectors falling within Article 4(a), or by contact with or proximity to other waste falling within the last preceding sub-paragraph or this sub-paragraph,

is hereby excluded from the provisions of section 6(1) and (2) of the Act (which relates to the disposal of radioactive waste), subject to the conditions specified in paragraph (2) of this Article.

(2) The conditions to which the preceding paragraph refers are—

- (a) that the waste is disposed of by one of the following means, that is to say—
  - (i) sending it to, or causing or permitting its removal by a person who is authorised under section 6(3) of the Act to dispose of radioactive waste of a description to which the waste belongs;
  - (ii) sending it to, or causing or permitting its removal by a manufacturer of smoke detectors of the same description as the waste;
  - (iii) causing or permitting its removal as refuse by a waste collection authority or their contractors; and
- (b) that, where it is disposed of as refuse by the means referred to in sub-paragraph (a)(iii) of this paragraph—

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- (i) the waste is dispersed in other refuse which is not radioactive waste; and
- (ii) the sum total of kilobecquerels of americium 241 in any 0.1 cubic metre of the whole mass of the waste and refuse does not exceed 40.

(3) Where it is being accumulated with a view to its subsequent disposal by the means referred to in paragraph (2)(a)(i) and (ii) of this Article, radioactive waste falling within paragraph (1) of this Article is hereby excluded from the provisions of section 7(1) of the Act, subject to the condition that it is disposed of as soon as practicable.

(4) Where it is being accumulated with a view to its subsequent disposal by the means referred to in paragraph 2(a)(iii) of this Article, radioactive waste falling within paragraph (1) of this Article is hereby excluded from the provisions of section 7(1) of the Act, subject to the conditions that—

- (a) it is dispersed in other refuse which is not radioactive waste; and
- (b) the refuse in which it is dispersed is disposed of as soon as practicable.

(5) Radioactive waste which, immediately before it became waste, consisted of an article which was a smoke detector falling within Article 4(b) is hereby excluded from the provisions of section 6(1) of the Act, subject to the condition that it is disposed of by one of the means referred to in Article 8(2)(a)(i) and (ii).

#### **Revocation**

9. The Radioactive Substances (Fire Detectors) Exemption Order 1967 is hereby revoked.

2nd July 1980

*Michael R.D. Heseltine*  
Secretary of State for the Environment

8th July 1980

*Nicholas Edwards*  
Secretary of State for Wales

## EXPLANATORY NOTE

This Order, which has been made by the Secretary of State for the Environment and the Secretary of State for Wales, exempts persons conditionally from registration under sections 1 and 3 of the Radioactive Substances Act 1960 in respect of the keeping and use of “radioactive material” within the meaning of section 18(1) of that Act consisting of smoke detectors incorporating closed sources possessing limited radioactivity.

It also excludes conditionally from sections 6(1), 6(2) and 7(1) of that Act (which relate to the accumulation and subsequent disposal of radioactive waste) certain descriptions of “radioactive waste” within the meaning of section 18(4) of that Act arising directly or indirectly from the keeping or use of smoke detectors exempted by the order.

The order revokes and re-enacts with certain amendments the Radioactive Substances (Fire Detectors) Exemption Order 1967. The special provisions in that order with regard to krypton 85 are not reproduced. The new order introduces provisions for exempting persons from registration under sections 1 and 3 of the Act in respect of the keeping and use of smoke detectors which contain americium 241 and have a specified activity limit. It also provides that certain solid waste containing americium 241 shall be exempted from the provisions of sections 6(1) and 6(2) of the Act, if that waste arises directly or indirectly from the keeping and use of smoke detectors.

Measurements of radioactivity which formerly were specified in curies are now set out in becquerels, following adoption of the International System of Units (SI Units), ie 40 kilobecquerels = 1.08 microcuries: 4 megabecquerels = 108 microcuries.