

1978 No. 1779

## ATOMIC ENERGY AND RADIOACTIVE SUBSTANCES

## NUCLEAR MATTER

**The Nuclear Installations (Excepted Matter)  
Regulations 1978**

*Made - - - - - 4th December 1978*

*Laid before Parliament 7th December 1978*

*Coming into Operation 1st January 1979*

The Secretary of State for Energy (as to England and Wales) and the Secretary of State for Scotland (as to Scotland) in exercise of the powers conferred by section 26(1) of the Nuclear Installations Act 1965(a) and now vested in them(b) (hereinafter referred to as "the Act") and of all other powers them enabling hereby jointly make the following Regulations:—

*Commencement and citation*

1. These Regulations may be cited as the Nuclear Installations (Excepted Matter) Regulations 1978 and shall come into operation on the 1st January 1979.

*Interpretation*

2.—(1) The Interpretation Act 1889(c) shall apply to the interpretation of these Regulations as it applies to the interpretation of an Act of Parliament.

(2) Unless the context otherwise requires, expressions in these Regulations shall have the same meanings as in the Act.

(3) In these Regulations the following expressions have the meanings hereby assigned to them, that is to say—

"A2 values" means the values in curies specified for single radionuclides in paragraphs 403 to 405 of the IAEA Regulations and for mixtures of radionuclides in paragraphs 406 to 411 of those Regulations;

"fissile material" means plutonium 239, plutonium 241, uranium 233, uranium 235, or any material containing any of the aforesaid;

"group" in relation to radionuclides means any of the five groups into which radionuclides are classified in the Table set out in Schedule 1 to these Regulations;

"the IAEA Regulations" means the Regulations for the Safe Transport of Radioactive Materials published by the International Atomic Energy Agency and means the 1973 Revised Edition of those Regulations, dated 1973, except where the 1967 Edition of those Regulations is specified;

(a) 1965 c. 57.

(b) S.I. 1969/1498; 1970/1537

(c) 1889 c. 63.

“special form radioactive material” means radioactive material which is either in indispersible solid form or is encapsulated and in either case complies with the requirements of the IAEA Regulations relating to such material.

*Excepted matter*

3. For the purposes of paragraph (d) of the definition of “excepted matter” in section 26(1) of the Act it is hereby prescribed that the following shall be excepted matter—

- (1) any substance consisting substantially of uranium in which—
  - (a) the total activity content per gramme of that substance of all radioisotopes other than any uranium isotopes which are normally present in natural uranium or any daughter products of such uranium isotopes—
    - (i) does not exceed 200,000 alpha disintegrations per minute for all alpha emitting isotopes; and
    - (ii) does not exceed 20 microcuries from all beta or gamma emitting isotopes; and
  - (b) the mass of the isotope uranium 235 does not exceed 1 per cent of the total mass of all the uranium isotopes present; and
- (2) for such time as it is outside a relevant site, nuclear matter (other than waste discharged on or from a relevant site or consigned therefrom) which has been consigned from a relevant site and which at the time when it left that site—
  - (a) was duly packed and labelled in accordance with the appropriate provisions of the IAEA Regulations, and
  - (b) did not exceed the limits of activity prescribed in Regulation 4 hereof, and
  - (c) being fissile material, did not exceed the limits prescribed in Regulation 5 hereof, and was either
    - (i) exempted by paragraph 601 of the IAEA Regulations, or by section C5.1.2 of the 1967 Edition of those Regulations, from the additional provisions of those Regulations relating to packages containing fissile materials, or
    - (ii) packed in such a way as to satisfy the nuclear safety criteria laid down for Fissile Class I or Fissile Class II packages in either the IAEA Regulations or the 1967 Edition of those Regulations.

*Prescribed limits of activity*

4.—(1) Subject to the provisions of paragraphs (2), (3), (4) and (5) of this Regulation, the total activity of any one consignment of nuclear matter containing a single radionuclide or several radionuclides in the same group shall not exceed the limits set out in the Table in Schedule 1 to these Regulations as appropriate to the group to which the radionuclide belongs.

(2) The total activity of any one consignment of radionuclides in the form of special form radioactive material shall not exceed 500 curies.

(3) Where the identity of a radionuclide is not known it shall be deemed to be included in group 1.

(4) Where a consignment of nuclear matter contains any special form radioactive material together with radionuclides not in the form of special form radioactive material, or contains radionuclides not in such form in different groups, the sum of the fractions obtained by dividing the activities of the special form radioactive material and each of the radionuclides not in such form by the relevant limit prescribed in paragraphs (1) or (2) of this Regulation (as the case may be) shall not exceed 1.

(5) For the purposes of the calculation to be made in accordance with paragraph (4) of this Regulation, where the respective activities of any of the radionuclides present are not known, all such radionuclides shall be deemed to belong to the most restrictive group among them.

*Additional limits for fissile material*

5. Fissile material shall comply with such of the provisions of Regulation 4 of these Regulations as may be appropriate and in addition shall not exceed the following mass limits:—

- (a) for a consignment containing only one of the materials specified in column 1 of the Table set out in Schedule 2 to these Regulations, the limit set out in column 2 of the said Table;
- (b) for a consignment containing more than one of the materials specified in column 1 of the Table set out in Schedule 2 to these Regulations, the sum of the fractions obtained by dividing the masses of each of the said materials present by the relevant limit prescribed in column 2 of the said Table shall not exceed 1.

6. The Nuclear Installations (Excepted Matter) Regulations 1965(a) are hereby revoked.

1st December 1978.

*Anthony Wedgwood Benn,*  
Secretary of State for Energy.

4th December 1978.

*Bruce Millan,*  
Secretary of State for Scotland.

## SCHEDULE 1

*Regulation 4*

Group	Radionuclides within the Group	Limit in Curies
1	Radionuclides with A2 values not exceeding 0.01 curie	2
2	Radionuclides with A2 values exceeding 0.01 curie and not exceeding 1 curie	20
3	Radionuclides with A2 values exceeding 1 curie and not exceeding 100 curies	200
4	Radionuclides with A2 values exceeding 100 curies and less than 1,000 curies	5,000
5	Radionuclides with A2 values of 1,000 curies or greater	50,000

## SCHEDULE 2

*Regulation 5*

Column 1	Column 2
Fissile Material	Limits in grammes of contained fissile nuclide
Plutonium 239	375
Plutonium 241	375
Uranium 233	375
Uranium 235	600

## EXPLANATORY NOTE

*(This Note is not part of the Regulations.)*

These Regulations prescribe, for the purposes of paragraph (d) of the definition of "excepted matter" in section 26(1) of the Nuclear Installations Act 1965 ("the Act"), certain specified quantities and forms of nuclear matter and supersede the Nuclear Installations (Excepted Matter) Regulations 1965. They bring the definition of excepted matter in those Regulations into line with recent international decisions taken in relation to the Paris Convention on Third Party Liability in the Field of Nuclear Energy ("the Convention") to which the United Kingdom is a Contracting Party, and on which the liability provisions of the Act are founded.

If nuclear matter falls within the quantities and forms prescribed it is excluded from the provisions of the Act, and so does not attract the strict liability for damage which is imposed on United Kingdom operators of such installations under sections 7, 8 and 9 of the Act, or on responsible parties under section 11.

The quantities and forms prescribed correspond with those determined by the Steering Committee of the Nuclear Energy Agency of the Organisation for Economic Cooperation and Development for the purposes of the Convention. This Committee, on which all Contracting Parties are represented, has power to exclude nuclear substances from the provisions of the Convention if in its view the small extent of the risk involved so warrants.

The first material excepted by the Regulations is uranium in which the mass of the fissile isotope 235 does not exceed 1% of the total uranium mass, and in which the radioactivity due to non-uranium contaminants does not exceed a specified very low value. This exception was not contained in the 1965 Regulations. It includes uranium recovered from spent nuclear fuel, which, unlike natural uranium, contains small amounts of radioactive contaminants. Natural uranium (which contains about 0.72% of the fissile isotope 235) and uranium containing less than 0.72% of this fissile isotope, are already excepted by section 26(1) of the Act.

In addition, a consignment of nuclear matter leaving a nuclear installation is excepted by the Regulations if it does not exceed specified limits of activity (and in the case of fissile materials, of mass) and is also packed and labelled in accordance with the appropriate provisions of the 1973 Revised Edition of the Regulations for the Safe Transport of Radioactive Materials, published by the International Atomic Energy Agency, dated 1973 (or in some cases relating to fissile materials, the 1967 Edition of those Regulations).

Compared with the 1965 Regulations, the principal changes in relation to consignments are that activity limits and packing requirements now take account of the most recent IAEA Regulations. In particular, the activity limit of each radionuclide is dependent upon its "A2 value" as specified in those IAEA Regulations: the new version of Schedule 1 reflects this. The former Regulations 3(v) and 4(4) have been omitted, their requirements being covered by the revised IAEA Regulations.

The IAEA Regulations may be obtained from Her Majesty's Stationery Office.

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