*Draft Regulations laid before Parliament under sections 113(2)(a), (aa) and (c) and 113(3)(a) and (c) of the Energy Act 2013 and section 2(5) of the Nuclear Safeguards Act 2018, for approval by resolution of each House of Parliament.*

DRAFT STATUTORY INSTRUMENTS

# 2018 No. XXXX

# EXITING THE EUROPEAN UNION
# NUCLEAR SAFEGUARDS

## The Nuclear Safeguards (EU Exit) Regulations 2018

*Made - - - -* ***

*Coming into force in accordance with regulation 1*

The Secretary of State makes these Regulations in exercise of the powers conferred by sections 74(3), 75, 76A(1), (2), (3), (5) and (7), 112(1B), 113(7), of and paragraphs 6, 7, 11, 13(1) and 14 of Schedule 6 to the Energy Act 2013(**1**) and by sections 2(1) and (3) of the Nuclear Safeguards Act 2018(**2**).

In accordance with sections 76A(8)(a) and (b) and 112(1D) of the Energy Act 2013 the Secretary of State has consulted the ONR and such other persons as the Secretary of State considers it appropriate to consult.

In accordance with section 113(2)(a), (aa) and (c) and 113(3)(a) and (c) of the Energy Act 2013 and with section 2(5) of the Nuclear Safeguards Act 2018, a draft of these Regulations has been laid before Parliament and approved by a resolution of each House of Parliament.

## PART 1

## Introduction

### Citation and commencement

**1.**—(1) These Regulations may be cited as the Nuclear Safeguards (EU Exit) Regulations 2018.

(2) Subject to paragraph 3, these Regulations come into force on exit day.

(3) Regulations 7 to 9 come into force on 1st January 2021.

(**1**) 2013 c. 32. Part 3 of the Act, which relates to Nuclear Regulation, has been amended but in respects which are not relevant to these Regulations.

(**2**) 2018 c. 15.

**Interpretation**

**2.** In these Regulations—

"Agency" means the International Atomic Energy Agency;

"Agreement with the Agency" means the agreement made on 7th June 2018 between the United Kingdom and the Agency for the application of safeguards in the United Kingdom in connection with the Treaty on the Non-Proliferation of Nuclear Weapons;

"batch" means a portion of qualifying nuclear material handled as a unit for accounting purposes at a key measurement point and for which the composition and quantity are defined by a single set of specifications or measurements. The qualifying nuclear material may be in bulk form or contained in a number of separate items;

"batch data" means the total weight of each category of qualifying nuclear material and, in the case of plutonium and uranium, the isotopic composition when appropriate. For reporting purposes the weights of individual items in the batch must be added together before rounding to the nearest unit. The units of account are—

(a) grams of contained plutonium;

(b) grams of total uranium, grams of contained uranium-235 and grams of uranium-233 for uranium enriched in these isotopes; and

(c) grams of contained thorium, natural uranium or depleted uranium;

"book inventory" in relation to a material balance area means the algebraic sum of the most recent physical inventory of that material balance area and of all inventory changes that have occurred since that physical inventory was taken;

"category" in relation to qualifying nuclear material means natural uranium, depleted uranium, uranium enriched to less than 20%, uranium enriched to 20% and above, thorium and plutonium;

"closed down" in relation to a qualifying nuclear facility means a qualifying nuclear facility which has not been decommissioned but in relation to which it has been confirmed by the ONR that operations have ceased and all the qualifying nuclear material removed;

"commencement day" means the day described in regulation 1(2);

"conditioned waste" means waste which has been conditioned in such a way (for example, in glass, cement, concrete or bitumen) that it is not suitable for further nuclear use;

"correction" means an entry made in an accounting record or report which rectifies an identified mistake in a previous entry or reflects an improved measurement of a quantity which was previously entered in a record or report;

"decommissioned" in relation to a qualifying nuclear facility means a qualifying nuclear facility for which it has been confirmed to the satisfaction of the ONR that residual structures and equipment essential for its use have been removed or rendered inoperable so that it is not used to store and can no longer be used to produce, handle, process, dispose of or utilise qualifying nuclear material;

"effective kilogram" means a unit used in safeguarding qualifying nuclear material which is obtained by taking—

(a) for plutonium, its weight in kilograms;

(b) for uranium with an enrichment of 0.01 (1%) and above, its weight in kilograms multiplied by the square of its enrichment;

(c) for uranium with an enrichment below 0.01 (1%) and above 0.005 (0. 5%), its weight in kilograms multiplied by 0.0001; and

(d) for depleted uranium with an enrichment of 0.005 (0. 5%) or below, and for thorium, its weight in kilograms multiplied by 0.00005;

"enrichment" means the ratio of the combined weight of the isotopes uranium-233 and uranium-235 to that of the total uranium in question;

"inventory change" means an increase or decrease, in terms of batches of qualifying nuclear material, in a material balance area as described in the inventory change report set out in Part 2 of Schedule 1;

"item" means an identifiable unit of qualifying nuclear material such as a fuel assembly or a fuel pin;

"key measurement point" means a location where qualifying nuclear material appears in such a form that it may be measured to determine material flow or inventory, including, but not limited to, the inputs and outputs (including measured discards) and storages in material balance areas;

"material balance area" means an area in a qualifying nuclear facility in respect of which—

(a) the quantity of qualifying nuclear material in each transfer into or out of the area can be determined; and

(b) the physical inventory of qualifying nuclear material in the area can be determined when necessary in accordance with specified procedures, in order that quantity of qualifying nuclear material for safeguards purposes under these Regulations can be established;

"material unaccounted for" means the difference between the physical inventory for a material balance area and the book inventory for that material balance area;

"operator" means a person or undertaking setting up, operating, closing down or decommissioning a qualifying nuclear facility for the production, processing, storage, handling, disposal or other use of qualifying nuclear material;

"ore" means any ore containing any average concentration of—

(a) 0.1% or more uranium, in the case of uranium bearing ores;

(b) 3% or more of thorium, in the case of thorium bearing ores, other than monazites;

(c) 10% or more of thorium or 0.1% or more of uranium, in the case of monazites,

from which a source material may be obtained by the appropriate chemical and physical processing;

"particular safeguard provision" means a particular safeguard provision imposed by the ONR under regulation 5;

"physical inventory" means the sum of all the measured or derived estimates of batch quantities of qualifying nuclear material on hand at a given time within a material balance area, obtained in accordance with these Regulations;

"qualifying nuclear facility with limited operation" means a qualifying nuclear facility—

(a) in which less than one effective kilogram of qualifying nuclear material is produced, processed, stored, handled, disposed of or otherwise used; and

(b) which is not a reactor, a critical facility, a conversion plant, a fabrication plant, a reprocessing plant, an isotope separation plant nor a separate storage installation;

"relevant international standards" mean those international standards which are both published by third parties and listed by the ONR on their website;

"retained waste" means waste which is generated from processing or from an operational accident, measured or estimated on the basis of measurements, which has been transferred to a specific location within the material balance area from which it can be retrieved;

"safeguards equipment" means equipment used by the ONR or the Agency to provide independent confirmation that the information produced by an operator under these Regulations is accurate and up to date;

"shipper/receiver difference" means the difference between the quantity of qualifying nuclear material in a batch, as stated by the shipping material balance area and as measured at the receiving material balance area;

"source data" means those data, recorded during measurement or calibration or used to derive empirical relationships, which identify qualifying nuclear material and provide batch data, including, for example—

(a) weight of compounds;

(b) conversion factors to determine weight of element;

(c) specific gravity;

(d) element concentration;

(e) isotopic ratios;

(f) relationship between volume and manometer readings; and

(g) relationship between plutonium produced and power generated; and

"waste" means qualifying nuclear material in concentrations or chemical forms irrecoverable for practical or economic reasons and which is intended to be disposed of.

# PART 2

## Accountancy and control, records and the provision of information by an operator

### Declaration of basic technical characteristics

**3.**—(1) In the case of a qualifying nuclear facility(**3**) existing immediately before commencement day the operator must declare to the ONR the basic technical characteristics of the qualifying nuclear facility, using the relevant questionnaire shown in Part 1 of Schedule 1, before the end of the period of 30 days beginning with commencement day.

(2) In the case of a new qualifying nuclear facility, which comes into existence on or after commencement day, the operator must declare to the ONR—

(a) the preliminary basic technical characteristics of the facility as soon as the decision to construct or authorise construction has been taken;

(b) the basic technical characteristics of the facility, based on the final design for the qualifying nuclear facility, using the relevant questionnaire shown in Part 1 of Schedule 1, not later than 200 days prior to and ending on the day on which construction is started; and

(c) the basic technical characteristics of the facility as built, using the relevant questionnaire shown in Part 1 of Schedule 1, not later than 200 days before the day on which—

(i) qualifying nuclear material is first received at the facility;

(ii) in the case of a qualifying nuclear facility, which only treats or stores conditioned or retained waste, the treatment or storage begins; and

(iii) in the case of a qualifying nuclear facility, whose principal activity is the extraction of ores in the United Kingdom, the operations start.

(**3**) "Qualifying nuclear facility" is defined in section 76A(7) of the Energy Act 2013 c. 32.

(3) An operator must inform the ONR of a change in the basic technical characteristics within the period of 30 days beginning with the day on which the change is completed unless advance notification to the ONR of such a change is required by any particular safeguard provisions imposed on the operator by regulation 5.

(4) The reference in paragraph (3) to a change in the basic technical characteristics of a qualifying nuclear facility includes a change in respect of a qualifying nuclear facility which is in the process of being closed down or decommissioned until such time as the ONR has confirmed in writing to the operator that the qualifying nuclear facility has been fully decommissioned.

(5) On a written request by the ONR, an operator must supply further details, explanations, amplifications or clarifications of any information set out in the relevant questionnaire within the period of 15 days beginning with the day on which the operator receives the request from the ONR.

**Programme of activities**

**4.**—(1) An operator of a qualifying nuclear facility must send to the ONR an annual outline programme of activities using the information described in Part 8 of Schedule 1, indicating, in particular, provisional dates for taking a physical inventory.

(2) Each year, an operator must send the annual outline programme of activities for the following calendar year to the ONR so that it is received by the ONR by 30th September.

(3) An operator must inform the ONR of the programme of activities for the taking of a physical inventory at least 40 days before the day on which the physical inventory is taken.

(4) An operator must communicate to the ONR without delay a change which affects or may affect the outline programme of activities and, in particular, the taking of physical inventories.

**Particular safeguard provisions**

**5.**—(1) Acting on the basic technical characteristics, submitted by an operator under regulations 3 or 31, and having, where necessary, discussed the relevant technical characteristics with the operator, the ONR may impose particular safeguard provisions on an operator in respect of a qualifying nuclear facility, which—

(a) relate to the matters set out in paragraph (4); and

(b) take account of any relevant operational and technical constraints on the operator and the qualifying nuclear facility.

(2) The ONR must provide the operator with written notice of any particular safeguard provisions which it has imposed.

(3) If an operator has received a written notice referred to in paragraph (2) it must, from the date of receipt or from the date set out in the notice if later, comply with the requirements of the particular safeguard provisions.

(4) The particular safeguard provisions may include the following—

(a) the material balance areas and the selection of key measurement points for determining the flow and stocks of qualifying nuclear material;

(b) the changes in basic technical characteristics for which advance notification is required;

(c) the procedures for keeping records of qualifying nuclear material for each material balance area and for drawing up reports;

(d) the frequency of, and procedures for, taking physical inventories;

(e) the safeguards equipment;

(f) the arrangements for sample taking by the operator;