

Draft Regulations laid before Parliament under sections 113(2)(a) and (aa) 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

20-- No.

ENERGY

The Nuclear Safeguards Regulations 20--

Made - - - - - ***

Coming into force - - - - - ***

The Secretary of State, in exercise of the powers conferred by sections 74(3), 75, 76, 76A(1)(a) and (b), 76A(2), 76A(3), 76A(6), 113(7), of and paragraphs 2 to 16 of Schedule 2 to the Energy Act 2013(a) and by sections 2(1) and (3) of the Nuclear Safeguards Act 2018, makes the following Regulations:

In accordance with section 113(2)(a) and (aa) of the Energy Act 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.

CHAPTER I
INTRODUCTION

Citation and commencement

- 1.—(1) These Regulations may be cited as the Nuclear Safeguards Regulations 20--.
- (2) Subject to paragraph (3), these Regulations come into force on **** 20--.
- (3) Regulations [] come into force on [].

Interpretation

2. In these Regulations—

“Additional Protocol” means the Protocol dated [], entered into between the United Kingdom and the Agency which is additional to the Agreement with the Agency;

“adjustment” means an entry made in an accounting record or a report, which is required by these Regulations, and which shows a shipper/receiver difference or material unaccounted for;

“Agency” means the International Atomic Energy Agency;

“Agreement with the Agency” means the agreement made on [] 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;

“annual throughput” means the amount of qualifying nuclear material transferred annually out of a qualifying nuclear facility working at nominal capacity;

“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 element of qualifying nuclear material and, in the case of plutonium and uranium, the isotopic composition when appropriate. The units of account shall be as follows—

- (a) grams of contained plutonium;
- (b) grams of total uranium and grams of contained uranium-235 plus uranium-233 for uranium enriched in these isotopes; and
- (c) kilograms of contained thorium, natural uranium or depleted uranium for reporting purposes the weights of individual items in the batch must be added together before rounding to the nearest unit;

“book inventory” of 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;

“categories” of qualifying nuclear material are natural uranium, depleted uranium, uranium enriched in uranium-235 or uranium-233, thorium and plutonium;

“commencement date” means [] 20--;

“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 to rectify an identified mistake or to reflect an improved measurement of a quantity previously entered in a record or report. Each correction must identify the entry to which it relates;

“decommissioned qualifying nuclear installation” means a qualifying nuclear installation for which it has been verified 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 handle, process or utilise source material nor fissionable material;

“defence purposes” means defence purposes within the meaning of section 70 of the Energy Act 2013;

“discards to the environment” means waste, measured or estimated on the basis of measurements, which has been irrecoverably discarded to the environment as a result of a planned discharge;

“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;

“Energy Act” means the Energy Act 2013;

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

“fissionable material” means—

- (a) plutonium-239,
- (b) uranium-233,
- (c) uranium containing the isotopes 235 or 233 or both, in an amount such that the abundance ratio of the sum of these isotopes to the isotope 238 is greater than the ratio of the isotope 235 to the isotope 238 occurring in nature, and
- (d) any material containing one or more of the materials described in paragraphs (a) to (c);

“inventory change” means an increase or decrease, in terms of batches, of qualifying nuclear material in a material balance area which involves one of the following—

- (a) increase—
 - (i) import;
 - (ii) domestic receipt: receipts within the United Kingdom from another material balance area or from an activity not subject to safeguards under these Regulations;
 - (iii) nuclear production: production of fissionable material in a reactor; and
 - (iv) de-exemption: re-application of safeguards on qualifying nuclear material previously exempted therefrom on account of its use or quantity;
- (b) decrease—
 - (i) export;
 - (ii) domestic shipment: shipments within the United Kingdom to other material balance areas or for an activity not subject to safeguards under these Regulations;
 - (iii) nuclear loss: loss of qualifying nuclear material due to its transformation into one or more other elements or isotopes as a result of nuclear reactions;
 - (iv) measured discard: qualifying nuclear material which has been measured, or estimated on the basis of measurements, and disposed of in such a way that it is not suitable for further nuclear use;
 - (v) retained waste: nuclear material generated from processing or from an operational accident, which is deemed to be irrecoverable for the time being but which is stored;
 - (vi) exemption: exemption of qualifying nuclear material from safeguards on account of its use or quantity; and
 - (vii) other loss: for example, accidental loss (that is, irretrievable and inadvertent loss of qualifying nuclear material as the result of an operational accident) or theft.

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

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

“Nuclear Safeguards Act” means the Nuclear Safeguards Act 2018;

“ONR” means the Office for Nuclear Regulation, the regulator for the civil nuclear industry in the United Kingdom;

“operator” means a person or undertaking setting up or operating a qualifying nuclear facility for the production, separation, reprocessing, storage 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; or
 - (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;

“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 equipment” means equipment designed or adapted for use in connection with qualifying nuclear material or a qualifying nuclear facility;

“qualifying nuclear facility” means a facility (including associated buildings) in which qualifying nuclear material is produced, processed, used, handled, stored or disposed of;

“qualifying nuclear material” means—

- (a) fissionable material;
- (b) source material in the form of
 - (i) uranium metal, alloy or compound, or
 - (ii) thorium metal, alloy or compound, or
- (c) ore containing a substance from which a source material falling in paragraph (b) is capable of being derived;

“relevant international standards” mean [STR 368, International Target Values 2010 for Measurement Uncertainties in Safeguarding Nuclear Materials published on [] number []];

“retained waste” means waste, 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;

“source material” means—

- (a) uranium metal, alloy or compound, or
- (b) thorium metal, alloy or compound;

“use” of qualifying nuclear material includes power production in reactors, research in critical or zero energy installations, conversion, fabrication, reprocessing, storage, isotope separation, and ore concentration, as well as treatment or storage of waste;

“waste” means qualifying nuclear material in concentrations or chemical forms considered as irrecoverable for practical or economic reasons and which may be disposed of.

CHAPTER II

ACCOUNTANCY AND CONTROL, RECORDS AND THE PROVISION OF INFORMATION BY THE OPERATOR

Questionnaire and declaration of the basic technical characteristics

3.—(1) The operator of an existing qualifying nuclear facility 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, within [30] days of the commencement date.

(2) In the case of a new qualifying nuclear facility, which comes into existence after the commencement date, the operator must declare the basic technical characteristics of the facility to the ONR, using the relevant questionnaire shown in Part 1 of Schedule 1, [as soon as the decision to construct or to authorise construction has been taken, and keep the characteristics up to date].

(3) The operator must inform the ONR of any change in the basic technical characteristics within [30] days after the completion of the change unless advance notification to the ONR of such a change is required by any particular safeguards provisions imposed on the operator by regulation 5.

Programme of activities

4.—(1) To enable the ONR to plan its safeguards activities, the operator must send to the ONR an annual outline programme of activities using the form set out in Part 10 of Schedule 1, indicating, in particular, provisional dates for taking a physical inventory.

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

(3) The operator must inform the ONR of the programme of work for the taking of a physical inventory at least [40] days before the taking of the physical inventory.

(4) The operator must communicate to the ONR without delay any changes which affect or may affect the outline programme of activities and, in particular, the taking of physical inventories.

Particular safeguards provisions

5.—(1) Acting on the basic technical characteristics submitted by an operator under regulations 3, 27 or 29 and having, where necessary, discussed the relevant technical characteristics with the operator, the ONR may impose particular safeguards 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 safeguards provisions which it has imposed.

(3) The operator must comply with the general requirements of these Regulations unless it has received a written notice referred to in paragraph (2), in which case it must, from the date set out in the notice, comply with the general requirements of these Regulations as modified or replaced by the particular safeguards provisions.

(4) The particular safeguards 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 containment and surveillance measures; and
 - (f) the arrangements for sample taking by the operator.
- (5) The particular safeguards provisions may also specify—
- (a) the content of subsequent communications from the operator required under regulation 4 (programme of activities); and
 - (b) the conditions under which shipments and receipts of qualifying nuclear material require advance notification.

Accountancy and control of qualifying nuclear material

6.—(1) Each operator must maintain a system of accountancy and control of the relevant qualifying nuclear material in each qualifying nuclear facility.

(2) The system referred to in paragraph (1), must include in respect of the qualifying nuclear material —

- (a) the accounting and operating records required by regulations 10 and 11;
- (b) information on the quantities, category, form and composition of qualifying nuclear material as provided for in Regulation 20 (weights);
- (c) its actual location;
- (d) the particular safeguards provisions set out in Regulation 5; and
- (e) details of the recipient or shipper in the case of transfer.

(3) The operator must retain the information referred to in paragraph (2) for a period of at least five years and must, on the basis of the records described in sub-paragraph 2(a), be able to draw up and substantiate the information which it provides to the ONR in accordance with the requirements of these Regulations.

(4) The operator must make the accounting records, referred to in Regulation 10, and the operating records, referred to in Regulation 11, available for inspection by the ONR, if requested to do so, and the records may be made available in electronic form if they are kept in this form in the qualifying nuclear facility.

(5) The system of measurements on which the records used for the preparation of reports are based must conform with the relevant international standards.

Accountancy and control plan

7.—(1) An operator of a qualifying nuclear facility must submit to the ONR an accountancy and control plan for the qualifying nuclear material in that facility.

(2) The accountancy and control plan must describe in writing the arrangements and procedures adopted or to be adopted by the operator to satisfy the requirements set out in regulation 6 to establish a system of accountancy and control of qualifying nuclear material.

(3) The accountancy and control plan must demonstrate how the operator will operate the components of the accountancy and control system set out in Schedule 2 in a manner proportionate to and appropriate for the basic technical characteristics of the qualifying nuclear facility as reported to the ONR under regulation 3.

(4) The ONR may approve the accountancy and control plan as submitted or with such amendments as it may require.

Replacement, amendment and revocation of an accountancy and control plan

8.—(1) In the event of a change in the basic technical characteristics of a qualifying nuclear facility, as described in regulation 3(3), the operator of that facility must submit to the ONR for approval, at least [30] days prior to the completion of the change—

- (a) a revised accountancy and control plan for the qualifying nuclear facility; or
- (b) a proposal for amending the approved accountancy and control plan for the qualifying nuclear facility.

(2) Subject to paragraph (1), an operator of a qualifying nuclear facility may at any time submit to the ONR for approval—

- (a) a revised accountancy and control plan for the qualifying nuclear facility; or
- (b) a proposal for amending the approved accountancy and control plan for the qualifying nuclear facility.

(3) The ONR may approve an accountancy and control plan as submitted or with such amendments as it may require.

(4) On approving a revised accountancy and control plan for a qualifying nuclear facility the ONR must revoke the approval for the former plan for the qualifying nuclear facility.

Operation of an accountancy and control plan

9.—(1) In addition to complying with the general requirements of these Regulations, the operator of each qualifying nuclear facility must implement and comply with the arrangements and procedures described in the approved accountancy and control plan for the qualifying nuclear facility.

(2) The operator is not to be regarded as having failed to comply with those arrangements and procedures by reason of any matter if the ONR has notified the operator in writing that that matter is in the ONR's opinion unlikely to be prejudicial to the maintenance of the system of safeguards in respect of qualifying nuclear material at the qualifying nuclear facility.

Accounting records

10.—(1) In respect of each material balance area the operator must ensure that the accounting records show the following —

- (a) all inventory changes, so that the book inventory can be determined at any time;
- (b) all measurement and counting results used to determine the physical inventory; and
- (c) all adjustments and corrections that have been made in respect of inventory changes, book inventories and physical inventories.

(2) The accounting records relating to any inventory change or physical inventory must show, in respect of each batch of qualifying nuclear material, the material identification, batch data and source data.

(3) The records must account separately for uranium, thorium and plutonium in each batch of qualifying nuclear material.

(4) For each inventory change, the date of the change and, when appropriate, the originating and dispatching material balance area and the receiving material balance area or the shipper and the recipient must be indicated.

(5) The operator must communicate the data referred to in paragraph 1 to the ONR on request.

Operating records

11.—(1) An operator must ensure that the operating records for each material balance area set out—

- (a) those operating data which are used to determine changes in the quantities and composition of qualifying nuclear material;
 - (b) a list of inventory items, updated to the best extent possible, and their location;
 - (c) the data, including derived estimates of random and systematic errors, obtained from the calibration of tanks and instruments as well as from sampling and analysis;
 - (d) the data resulting from quality control measures applied to the accountancy system for the qualifying nuclear material, including derived estimates of random and systematic errors;
 - (e) a description of the sequence of the actions taken to prepare for, and take, a physical inventory and to ensure that the inventory is correct and complete;
 - (f) a description of the actions taken in order to ascertain the cause and magnitude of any accidental or unmeasured loss that might have occurred; and
 - (g) the isotopic composition of plutonium, including its decay isotopes, and reference dates, if recorded at the qualifying nuclear facility for operational needs.
- (2) The operator must communicate the data referred to in paragraph 1 to the ONR on request.

Accounting reports

12.—(1) The operator must provide the ONR with accounting reports in accordance with Regulations 13 to 20 in respect of each material balance area.

(2) The operator must ensure that the accounting reports contain up to date information as at the date of reporting and that any corrections to that information are submitted to the ONR within [] days of [].

(3) On a written request by the ONR, the operator must supply further details, explanations, amplifications or clarifications of any information set out in the relevant accounting report within [14] days of the date of the request.

Initial book inventory

13.—(1) Subject to paragraph (2), the operator must send to the ONR, within [30] days of the date of entry into force of these Regulations, an initial book inventory of all the qualifying nuclear material in each material balance area of a qualifying nuclear facility or part thereof, using the format set out in Part 4 of Schedule 1.

(2) Paragraph (1) does not apply in respect of a qualifying nuclear facility which is used wholly or mainly to treat or store conditioned or retained waste.

Inventory change report

14.—(1) For each material balance area, the operator must send to the ONR an inventory change report in respect of all qualifying nuclear material using the format set out in Part 2 of Schedule 1.

(2) Unless otherwise specified in the particular safeguards provisions imposed under regulation 5, the operator must send to the ONR an inventory change report within [15 days after the end of each month], in which the operator must state all inventory changes to the qualifying nuclear material which have occurred or become known to the operator during that month.

(3) In respect of any month in which a physical inventory is taken, where the physical inventory did not include the period up to and including the last date of the month, two separate inventory change reports must be sent to the ONR—

- (a) a first inventory change report containing any inventory changes up to and including the date on which the physical inventory was taken; and
- (b) a second inventory change report, to be sent within [15 days of the end of the month] containing all inventory changes from the first day after the physical inventory was taken up to and including the last day of the month.

(4) In respect of a month in which no inventory changes occur, the operator must send the inventory change report, carrying over the ending book inventory of the previous month.

(5) In order that they may be reported as a single inventory change, small inventory changes, such as transfers of samples for purposes of analysis, may be grouped together, as laid down in the particular provisions of the particular safeguards provisions for the relevant qualifying nuclear facility.

(6) The operator may send to the ONR, with an inventory change report, comments explaining the inventory changes within that report.

Material balance report and physical inventory listing

15.—(1) For each material balance area, the operator must send to the ONR—

- (a) material balance reports, in the format set out in Part 3 of Schedule 1, showing—
 - (i) the beginning physical inventory;
 - (ii) inventory changes (first increases, then decreases);
 - (iii) ending book inventory;
 - (iv) ending physical inventory; and
 - (v) material unaccounted for;
- (b) a physical inventory listing, in the format set out in Part 4 of Schedule 1, showing all batches separately.

(2) The operator must send the reports and the listing to the ONR as soon as possible and at the latest within [30] days of the date on which the physical inventory was taken.

(3) Unless otherwise specified in the particular safeguards provisions for the qualifying nuclear facility, a physical inventory for each material balance area must be taken every calendar year and the period between two successive physical inventory takings must not exceed 14 months.

Special reports

16.—(1) The operator must send to the ONR a special report whenever the circumstances referred to in Regulations 17 or 23 arise.

(2) The ONR may—

- (a) request further details or explanations in connection with a special report; and
- (b) specify, in the particular safeguards provisions for a qualifying nuclear facility, additional requirements concerning the type of information to be supplied in a special report;

(3) The special reports, and further details or explanations requested by the ONR in connection with a special report, must be supplied to the ONR within 7 working days or such longer time as agreed with the ONR.

Unusual occurrences

17.—(1) The circumstances referred to in regulation 16(1) are—

- (a) as a result of any unusual incident or circumstances, an operator believes that there has been or might be an increase in or a loss of qualifying nuclear material in excess of the limits specified for these purposes in the particular safeguards provisions for the qualifying nuclear facility; or
- (b) the containment of qualifying nuclear material has unexpectedly changed from that specified in the particular safeguards provisions, to a point where an unauthorised removal of qualifying nuclear material has become possible.

(2) An operator must submit a special report as soon as it becomes aware of any such loss or increase or sudden change in the containment conditions, or of anything which leads them to believe that there has been such an occurrence.

(3) An operator must also inform the ONR of the causes of the unusual occurrences described in paragraph (1)(a) or (b) as soon as the operator becomes aware of them.

Reporting of nuclear transformations

18.—(1) In respect of a qualifying nuclear facility, which contains a reactor, the operator must include in the inventory change report calculated data on nuclear transformations and include this data on or before the time when irradiated fuel is transferred from the reactor material balance area.

(2) In addition, the ONR may specify alternative procedures for recording and reporting nuclear transformations in the particular safeguard provisions.

Relevant international agreements

19.—(1) When an operator provides the ONR with—

- (a) the initial book inventory, provided for in regulation 13;
- (b) inventory change reports, including ending book inventories, provided for in regulation 14;
- (c) material balance reports and physical inventory listings provided for in regulation 15; or
- (d) intended imports and exports provided for in regulations 21 and 22;

the operator must, subject to paragraph (2), identify separately for each obligation in each of the forms listed in sub-paragraphs (a) to (d), any qualifying nuclear material which is subject to a relevant safeguards obligation in a relevant international agreement, unless otherwise stipulated by that agreement.

(2) The ONR must publish a notice, in respect of each relevant international agreement, identifying the relevant qualifying nuclear material and the relevant safeguards obligations in the agreement.

(3) Unless specifically prohibited in the relevant international agreement, the separate reporting requirement set out in paragraph (1) shall not preclude the physical mixing of qualifying nuclear materials.

(4) Paragraphs (1) and (2) do not apply to the Agreement with the Agency nor to the Additional Protocol.

Weight units and categories of qualifying nuclear materials

20.—(1) When any person supplies information under these Regulations the quantities of qualifying nuclear materials must—

- (a) be expressed in grams; and
- (b) be rounded down when the first decimal is 0 to 4 and rounded up when the first decimal is 5 to 9.

(2) The corresponding accounting records must be kept—

- (a) in grams or in smaller units; and
- (b) in such a manner as to render them trustworthy.

(3) Unless otherwise provided for in the particular safeguards provisions, any notification under these Regulations must include the following—

- (a) the total weight of the elements uranium, thorium and plutonium, and also, for enriched uranium, the total weight of the fissile isotopes; and
- (b) separate reports for each material balance area as well as separate line entries in inventory change reports and in physical inventory listings for the following categories of qualifying nuclear material —
 - (i) depleted uranium;

- (ii) natural uranium;
- (iii) uranium enriched to less than 20%;
- (iv) uranium enriched to 20% and above;
- (v) plutonium;
- (vi) thorium.

CHAPTER III EXPORTS AND SHIPMENTS

Exports

21.—(1) The operator must give advance notification to the ONR if any qualifying nuclear material is exported outside the UK—

- (a) where the consignment exceeds one effective kilogram; or
- (b) where a qualifying nuclear facility transfers a total quantity of materials to the same State that could exceed one effective kilogram in any consecutive period of twelve months, even though no single consignment exceeds one effective kilogram.

(2) The operator must give the notification under paragraph (1) after the conclusion of the contractual arrangements leading to the transfer, using the form set out in Part 5 of Schedule 1, and must ensure that the notification reaches the ONR at least 8 working days before the material is to be packed for transfer.

(3) If so required for reasons of physical protection, special arrangements concerning the form and transmission of the notification may be agreed upon between the operator and the ONR.

(4) This regulation does not apply to ores nor to waste.

Imports

22.—(1) The operator must give advance notification to the ONR if any qualifying nuclear material is imported into the UK—

- (a) where the consignment exceeds one effective kilogram; or
- (b) where a qualifying nuclear facility imports or receives a total quantity of qualifying nuclear material from the same State that could exceed one effective kilogram in any consecutive period of twelve months, even though no single consignment exceeds one effective kilogram.

(2) The operator must provide the notification to the ONR as far in advance as possible of the expected arrival of the qualifying nuclear material in the UK and, at the latest, on the date of receipt by the operator, using the form set out in Part 6 of Schedule 1.

(3) The operator must ensure that the notification is received by the ONR at least 5 working days before the qualifying nuclear material is unpacked.

(4) If so required for reasons of physical protection, special arrangements concerning the form and transmission of the notification may be agreed between the operator and the ONR.

(5) This regulation does not apply to ores nor to waste.

Loss or delay during transfer

23. The operator must submit a special report, under Regulation 16, where, following exceptional circumstances or an incident, the operator has received information that qualifying nuclear material has been lost or appears to be lost, or where there has been a considerable delay during transfer.

Communication of change of date

24. The operator must inform the ONR, without delay, of any change in the dates for packing before transfer, transport or unpacking of qualifying nuclear material, which have been given in the notifications provided for under Regulations 21 or 22, and must provide an indication of the revised dates if known, unless the change gives rise to a special report under Regulation 16.

CHAPTER IV

CARRIERS AND TEMPORARY STORAGE AGENTS

Carriers and temporary storage agents

25.—(1) Any person or undertaking engaged, in the UK, in transporting, or temporarily storing during transport, qualifying nuclear material must accept or hand over such material only against a duly signed and dated receipt.

(2) The receipt referred to in paragraph (1), must state the names of the parties handing over and receiving the qualifying nuclear material and indicate the quantities carried as well as the category, form and composition of the material.

(3) If so required for reasons of physical protection, the description of the qualifying nuclear material transferred may be replaced by a suitable identification of the consignment which is traceable to the operator.

(4) The persons referred to in paragraph (1) and the relevant operators must retain records of the transaction and a copy of any receipt for at least 5 years.

Intermediaries

26.—(1) Any intermediaries taking part in the conclusion of any contract for the supply of qualifying nuclear material, such as authorised agents, brokers or commission agents, must keep all records relating to the transactions performed by them or on their behalf for at least five years after expiry of the contract.

(2) The records referred to in paragraph (1) must contain the names of the contracting parties and indicate the date of the contract as well as the quantity, category, form, composition, origin and destination of the qualifying nuclear material.

CHAPTER V

ORES

Ore producers

27.—(1) An operator of a qualifying nuclear facility which extracts ores in the UK on the commencement date 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, within 120 days of the commencement date.

(2) In the case of a new mine or extraction facility, the operator must declare the basic technical characteristics of the facility to the ONR, using the relevant questionnaire shown in Part 1 of Schedule 1, at least 200 days before the mine or extraction facility starts to operate.

(3) The operator of the qualifying nuclear facility must inform the ONR of any change in the basic technical characteristics within 30 days after the completion of the change unless advance notification to the ONR of such a change is required by the relevant safeguards provisions imposed on the operator by regulation 5.

(4) The requirements set out in Regulations [10] to [15] do not apply to an operator of a qualifying nuclear facility which extracts ores in the UK, instead the operator must keep—

- (a) accounting records of the ores extracted indicating, in particular, the quantities of the ore extracted, with the average uranium and thorium content, and the stock of extracted ore at each mine; and
 - (b) records of the details of shipments, stating the date, consignee and quantity in each case.
- (5) An operator of a qualifying nuclear facility which extracts ores in the UK must retain the records referred to in paragraph (4) for at least five years.
- (6) An operator of a qualifying nuclear facility which extracts ores in the UK must provide the ONR with a programme of activities in accordance with Regulation 4.

Ore shipment/export reports

28. The requirements set out in Regulations 21 and 22 do not apply to an operator of a qualifying nuclear facility which extracts ores in the UK, instead the operator must inform the ONR, using the form set out in Part 7 of Schedule 1, of—

- (a) the amount of material dispatched from each mine, by [31 January of each year for the previous calendar year]; and
- (b) exports of ores outside the UK, by the date of the dispatch at the latest.

CHAPTER VI

WASTE

Questionnaire, stock list and accounting records for waste

29.—(1) An operator of a qualifying nuclear facility which treats or stores waste on the commencement date must send to the ONR, within [120] days of the commencement date—

- (a) the basic technical characteristics of the qualifying nuclear facility, using the relevant Questionnaire shown in Part 1 of Schedule 1; and
- (b) an initial stock list of all waste by category.

(2) In the case of an operator of a qualifying nuclear facility which begins to treat or store waste after the commencement date, the person or undertaking must declare the basic technical characteristics of the facility to the ONR, using the relevant questionnaire shown in Part 1 of Schedule 1, at least 200 days before the treatment or storage facility starts to operate.

(3) An operator of a qualifying nuclear facility must inform the ONR of any change in the basic technical characteristics within [30] days after the completion of the change unless advance notification to the ONR of such a change is required by the relevant safeguards provisions imposed on the operator by regulation 5.

(4) The requirements set out in Regulations [10] to [15] do not apply to retained waste nor to conditioned waste.

(5) An operator of a qualifying nuclear facility which treats or stores qualifying nuclear material, that has been declared as retained or conditioned waste, in the UK, must keep accounting records of that material which must include—

- (a) the operating data used to determine changes in the quantities and composition of qualifying nuclear material;
- (b) a stock list to be updated yearly after physical inventory taking;
- (c) a description of the sequence of actions taken to prepare for and take a physical inventory and to ensure that the inventory is correct and complete;
- (d) a description of the actions taken in order to ascertain the cause and magnitude of any accidental loss that might have occurred; and
- (e) all stock changes, so that the book inventory can be established when requested.

(6) An operator of a qualifying nuclear facility which treats or stores waste in the UK must retain the records referred to in paragraph (5) for at least five years.

(7) An operator of a qualifying nuclear facility which treats or stores waste in the UK must provide the ONR with a programme of activities in accordance with Regulation 4.

(8) The requirements for reporting the processing of retained waste to the ONR must be specified in the particular safeguards provisions referred to in Regulation 5.

Transfers of conditioned waste

30. The requirements set out in Regulations 21 and 22 do not apply to an operator of a qualifying nuclear facility which treats or stores waste in the UK, instead such a person must inform the ONR, of—

- (a) shipments or exports of conditioned waste to a qualifying nuclear facility or outside the UK using the form set out in Part 11 of Schedule 1; and
- (b) receipts or imports of conditioned waste from a qualifying nuclear facility or installation—
 - (i) without a material balance area code; or
 - (ii) which is located outside the UK,

using the form set out in Part 12 of Schedule 1.

CHAPTER VII CIVIL ACTIVITIES

Withdrawal from civil activities

31.—(1) An operator must not withdraw qualifying nuclear material from civil activities except with the previous written consent of the ONR.

(2) An operator must provide the ONR with advance notification of any proposed withdrawal of qualifying nuclear material from civil activities using the form set out in Part 13 of Schedule 1.

Qualifying nuclear facilities which are used partly for civil activities

32.—(1) These Regulations do not apply to anything done for defence purposes within the meaning of section 70 of the Energy Act.

(2) Notwithstanding paragraph (1), these Regulations apply to qualifying nuclear material which is used in civil activities when that material is in a qualifying nuclear facility which is partly used for civil activities.

CHAPTER VIII CONTROL AND COMMUNICATION

Qualifying nuclear facility which is controlled from outside the UK

33. Where a qualifying nuclear facility is controlled by a person or undertaking established outside the UK, any obligations imposed by these Regulations on the operator must be fulfilled by [the local management of the facility].

Communication with the ONR

34. Any questionnaire, form or other communication which an operator is required by these Regulations to send to the ONR, must be in writing and sent by post or delivered to the ONR at the address given on its website as its postal address, or sent by means of an electronic communications network to the address given on the ONR's website as its address for electronic communications.

CHAPTER IX SAFEGUARDS EQUIPMENT

Safeguards equipment

35.—(1) An operator must, at the written request of the ONR, install suitable safeguards equipment in each qualifying nuclear facility to provide independent confirmation that the information recorded by the operator, or provided by the operator to the ONR or to the Agency, is accurate and up to date.

(2) The particular safeguards provisions provided for in Regulation 5 may impose particular requirements on an operator in relation to safeguards equipment.

Access to safeguards equipment

36. An operator must permit an ONR inspector to have access to the safeguards equipment in a qualifying nuclear facility.

Interference with safeguards equipment

37. A person must not take action, in connection with the operation of any safeguards equipment in a qualifying nuclear facility, which results in the safeguards equipment providing information on qualifying nuclear material that is significantly different from the information which the equipment would have provided had the action not occurred.

CHAPTER X DEROGATION

Derogation for certain kinds of qualifying nuclear material

38.—(1) [The ONR may grant an operator a derogation from the requirements of Regulations [] in respect of a material balance area holding—

- (a) fissionable material, when used in gram quantities or less as a sensing component in instruments;
- (b) qualifying nuclear material used in non-nuclear activities, such as the production of alloys or ceramics, and which is recoverable; or
- (c) plutonium with an isotopic concentration of plutonium -238 exceeding 80%.

(2) An operator who seeks a derogation from the ONR must submit the form set out in Part 8 of Schedule 1.

(3) The ONR may grant a derogation only for a whole material balance area in which qualifying nuclear material is not processed or stored together with qualifying nuclear material which does not fall within any of the categories listed in paragraph (1)(a) to (c).

(4) The operator to whom a derogation has been granted must transmit an annual report to the ONR by 31 January of each year, using the form set out in Part 9 of Schedule 1 and which describes the situation at the end of the previous calendar year.

(5) In the case of exports of qualifying nuclear material from the UK, the operator to whom a derogation has been granted must send a report to the ONR as soon as possible and, at the latest, within 15 days of the end of the month in which the export occurred, using the form set out in Part 9 of Schedule 1. This report must indicate the quantity of qualifying nuclear material exported and the stock of qualifying nuclear material still the subject of a derogation.

(6) In the case of imports of qualifying nuclear material into the UK the operator to whom a derogation has been granted, must send a request to the ONR to add this material to the list of qualifying nuclear materials in respect of which the derogation applies.

(7) The operator request referred to in paragraph (6) must be submitted to the ONR as soon as the transfer date is known to the operator and, at the latest, within 15 days of the end of the month in which the transfer occurred, using the form set out in Part 8 of Schedule 1.

(8) The ONR may impose additional requirements concerning the form and frequency of the reports in the particular safeguard provisions which apply to the material balance area.

(9) The ONR [may] withdraw a derogation, on becoming aware that any condition set out in the derogation have not been complied with.]

[Possible further derogations

39.—(1) The ONR may grant a person or an undertaking a derogation from the requirements of some or all of these Regulations if [].

(2) [].]

Re-application of safeguards

40. If qualifying nuclear material, which is the subject of a derogation under regulations 38 or 39, is processed or stored together with qualifying nuclear material which is subject to the general requirements of these Regulations then the provisions of these Regulations apply to the previously derogated material.

CHAPTER XI THE ONR

Inspections by the ONR

41.—(1) For the purpose of ensuring compliance with the requirements of these Regulations, the ONR may—

- (a) examine the records kept by an operator in accordance with the requirements of these Regulations;
- (b) make independent measurements of any qualifying nuclear material;
- (c) verify the functioning and calibration of an operator's qualifying nuclear equipment and of any other instruments or equipment used to measure or control qualifying nuclear material;
- (d) apply and make use of surveillance and containment measures together with any other objective methods of monitoring which the ONR considers to be reasonable;
- (e) observe that samples of qualifying nuclear material at key measurement points for accounting purposes are taken in accordance with procedures which produce representative samples;
- (f) observe the treatment and analysis of the samples and to obtain duplicates of such samples;
- (g) observe that the measurements of qualifying nuclear material at key measurement points for accounting purposes are representative, and
- (h) observe the calibration of any equipment of the operator, or of any other relevant instruments and equipment.

(2) The ONR may by written notice require an operator to—

- (a) take additional measurements or samples of the qualifying nuclear material for the ONR's use;
- (b) analyse the ONR's standard analytical samples;
- (c) use appropriate absolute standards in the operator's qualifying nuclear equipment and other equipment and calibrating instruments; and

(d) carry out additional calibrations to the relevant equipment or instruments.

(3) The ONR may by written notice require an operator to permit the ONR to use safeguards equipment for independent monitoring and surveillance, and to install such equipment.

(4) The ONR may apply its seals and other identifying and tamper-indicating devices to containments of qualifying nuclear material.

(5) The ONR may by written notice require an operator to ship to the ONR any samples of qualifying nuclear material which have been taken for the ONR's use.

Request for derogation for certain qualifying nuclear material

42. [The ONR may, in accordance with the Agreement with the Agency, request the exemption by the Agency of qualifying nuclear material from safeguards under the Agreement in relation to—

- (a) fissionable material, when it is used in gram quantities or less as a sensing component in instruments;
- (b) qualifying nuclear material used in non-nuclear activities, if such nuclear material is recoverable; and
- (c) plutonium with an isotopic concentration of plutonium -238 exceeding 80%.]

Determination of status of certain qualifying nuclear material

43. [The ONR may consult with the Agency on the termination of safeguards under the Agreement with the Agency on qualifying nuclear material as provided for in the Agreement with the Agency in respect of —

- (a) waste; or
- (b) qualifying nuclear material which is used in non-nuclear activities and is recoverable.]

Publication of information by the ONR

44. The ONR must publish on the ONR website, and update where appropriate, the following information relating to nuclear safeguards -

- (a) the amount of qualifying nuclear material which has been withdrawn in the preceding year from civil activities; and
- (b) the UK inventories of plutonium and enriched uranium as at [] which have been notified to the Agency in accordance with [the UK's commitment under INFCIRC/549].

ONR to provide an annual report to the Secretary of State

45. [The ONR must provide an annual report to the Secretary of State setting out how these Regulations have been applied in the previous twelve months.]

Provision of information to the Agency

46.—(1) The ONR must provide information to the Agency, which the UK is required to provide to the Agency under the Agreement with the Agency, including —

- (a) a list of qualifying nuclear facilities or parts thereof which contain qualifying nuclear material which is subject to the Agreement with the Agency; and
- (b) the relevant information which the ONR receives from a person under these Regulations.

(2) The ONR may agree with the Agency the manner and form in which the information referred to in paragraph (1) is sent to the Agency.

(3) The ONR must keep the list of qualifying nuclear facilities up to date and must give the Agency advance notice of any additions or deletions.

(4) If the Agency so requests, the ONR must provide the Agency with amplifications or clarifications of any information referred to in paragraph (1).

CHAPTER XII OFFENCES

Offences

47.—(1) If an operator fails to comply with regulation 6, 7(1), 9(1), 10, 11, 12 or 31, or any person fails to comply with regulation 37, they shall be guilty of an offence.

(2) An offence under regulation (1) shall be triable either summarily or on indictment.

(3) [An offence under these regulations that is triable either way shall be punishable—

(a) on conviction on indictment with imprisonment for a term not exceeding the period specified, which may not exceed 2 years or a fine (or both), and

(b) on summary conviction with imprisonment for a term not exceeding six months or, in England and Wales, a fine or, in Scotland or Northern Ireland, a fine not exceeding £20,000, or both.]

CHAPTER XIII GENERAL

Extent

48. These regulations apply to England and Wales, Scotland and Northern Ireland.

Questionnaire and forms

49. Schedule 1, which contains the Questionnaire in Part 1 and the Forms in Parts 2 to 13, has effect.

The elements of the accountancy and control system

50. Schedule 2, which sets out the elements of the accountancy and control system, has effect.

General consequential and supplementary amendments

51. Schedule 3, which sets out the general consequential and supplementary amendments, has effect.

Consequential and supplementary amendments of the Nuclear Safeguards Act 2000 and related legislation

52. Schedule 4, which sets out the consequential and supplementary amendments of the Nuclear Safeguards and Electricity (Finance) Act 1978, the Nuclear Safeguards Act 2000 and the Nuclear Safeguards (Notification) Regulations 2004, has effect.

Transitional provisions

53. Schedule 5, which sets out the transitional provisions, has effect.

Review

54. [Review clause to be considered further in the light of amendments to section 118 EA 2013 (review of Part 3 of the Energy Act 2013) and more generally].

Date

Name
Parliamentary Under Secretary of State
Department for Business, Energy and Industrial Strategy

DRAFT

PART 1

QUESTIONNAIRE FOR THE DECLARATION OF THE BASIC TECHNICAL
CHARACTERISTICS OF A QUALIFYING NUCLEAR FACILITY**I-A. REACTORS**

Date:

NB:

1. The reply 'not applicable' can be given to questions which are not applicable. The ONR is still entitled to request any additional information it considers necessary in connection with the relevant questionnaire.
2. The declaration, duly completed and signed, should be forwarded to the ONR in electronic form in accordance with Regulation 34.

IDENTIFICATION OF THE QUALIFYING NUCLEAR FACILITY

1. Name
2. Location, exact address with telephone and fax numbers and e-mail address.
3. Owner (legally responsible body or individual).
4. Operator (legally responsible body or individual).
5. Present status (e.g. under construction, in operation or closed down).
6. Purpose and type.
7. Operating mode influencing its production (shift system adopted, approximate dates of operating periods in year, etc.)
8. Area layout (map showing the installation, boundaries, buildings, roads, rivers, railways, etc.)
9. Layout of qualifying nuclear facility:
 - (a) structural containment, fences and access routes;
 - (b) incoming-material storage area;
 - (c) reactor area;
 - (d) test and experiment area, laboratories;
 - (e) outgoing-material storage area;
 - (f) disposal area for qualifying nuclear waste.
10. Additional data per reactor:
 - (a) nominal thermal output;

- (b) material that is either source material or fissionable material;
- (c) initial core enrichments;
- (d) moderator;
- (e) coolant.

GENERAL ARRANGEMENTS AT THE QUALIFYING NUCLEAR FACILITY, INCLUDING THOSE RELATING TO MATERIAL USE AND ACCOUNTANCY, CONTAINMENT AND SURVEILLANCE

Description of qualifying nuclear material

- 11. Description of the use of qualifying nuclear material.
- 12. Outline drawings of fuel assemblies, fuel rods/pins, fuel plates etc., in sufficient detail to indicate general structure with overall dimensions. (Provisions for pin exchange should be described, if applicable, and an indication given if this is a routine operation.).
- 13. Fuel material (including material in control or [shim assemblies], if applicable):
 - (a) Fuel material (including material in control or [shim assemblies], if applicable):
 - (b) average enrichment per assembly;
 - (c) average enrichment per assembly;
- 14. Cladding material.
- 15. Method of identifying individual assemblies, rods/pins, plates etc., if applicable.
- 16. Other qualifying nuclear material used in the qualifying nuclear facility (briefly state material, purpose and method of use, e.g. as booster rods).

Flow of qualifying nuclear material

- 17. Flow sheet showing: points where qualifying nuclear material is identified or measured; material balance areas and inventory locations used for material accountancy; and the estimated range of nuclear material inventories at these locations under normal operating conditions.
- 18. Expected nominal fuel cycle data, including:
 - (a) reactor core loading;
 - (b) expected burn-up;
 - (c) annual refuelling amount;
 - (d) refuelling interval (on-load or off-load);
 - (e) forecast of throughput and inventory, and of receipts and shipments.

Handling of qualifying nuclear material

- 19. Layout of the fresh fuel storage area, drawings of fresh fuel storage locations, and description of packaging.
- 20. Drawings of fresh fuel preparation [and/or assay room] and reactor loading area.
- 21. Drawings of transfer equipment for fresh and irradiated fuel, including refuelling machines or equipment.
- 22. Drawings of reactor vessel showing location of core and openings in vessel; description of method of fuel handling in vessel.
- 23. Drawing of core showing: general layout, lattice, form, pitch and dimensions of core; reflector; location, shapes and dimensions of control devices; experimental and/or irradiation positions.

24. Number and size of channels for fuel assemblies and control devices in the core.
25. Spent fuel storage area:
 - (a) drawing of storage area;
 - (b) method of storage;
 - (c) design storage capacity;
 - (d) drawing of equipment for handling irradiated fuel;
 - (e) minimum cooling time before shipment of spent fuel;
 - (f) drawing and description of shipping cask for spent fuel (e.g. to determine whether sealing is possible).
26. Qualifying nuclear material testing area (if applicable):
 - (a) brief description of the activities performed;
 - (b) description of main equipment (e.g. hot cell, fuel assembly decladding and dissolving equipment);
 - (c) description of shipping containers for qualifying nuclear material and of waste and scrap packaging (e.g. to determine whether sealing is possible);
 - (d) description of storage area for non-irradiated and irradiated qualifying nuclear material;
 - (e) drawings of the above, if not covered elsewhere.

Coolant data

27. Coolant flow diagrams as required for heat balance calculations (indicating pressure, temperatures and mass flow rates at main points).

ACCOUNTANCY AND CONTROL OF QUALIFYING NUCLEAR MATERIAL

Accountancy system

28. Description of accountancy and control system for qualifying nuclear material (describe item and/or mass accountancy system, including assay methods used and assessed accuracies, supplying specimen blank forms used in all accountancy and control procedures). Period during which such records must be retained should be stated.

Physical inventory

29. Description of: procedures, scheduled frequency and methods for operator's physical inventory taking (both for item and/or mass accountancy, including main assay methods and expected accuracy); access to qualifying nuclear material in the core and to qualifying nuclear material which is irradiated and outside the core; expected radiation levels.

OTHER INFORMATION RELEVANT TO APPLICATION OF SAFEGUARDS

30. Organisational arrangements for material accountancy and control.
31. Information on the health and safety rules which have to be observed at the qualifying nuclear facility, and with which the inspectors must comply.

I-B. CRITICAL AND ZERO ENERGY INSTALLATIONS

Date:

IDENTIFICATION OF THE QUALIFYING NUCLEAR FACILITY

1. Name
2. Location, exact address with telephone and fax numbers and e-mail addresses.
3. Owner (legally responsible body or individual).
4. Operator (legally responsible body or individual).
5. Present status (e.g. under construction, in operation or closed down).
6. Purpose and type.
7. Operating mode (shift system adopted, approximate dates of operating periods in year, etc.)
8. Area layout (map showing the installation, boundaries, buildings, roads, rivers, railways, etc.)
9. Layout of qualifying nuclear facility:
 - (a) structural containment, fences and access routes;
 - (b) nuclear material storage area(s);
 - (c) fuel element assembling area, laboratories, etc.;
 - (d) critical assembly proper .
10. Additional data:
 - (a) maximum expected operating power and/or neutron flux;
 - (b) main type(s) of qualifying nuclear material and their enrichment;
 - (c) moderator;
 - (d) reflector, blanket;
 - (e) coolant.

GENERAL ARRANGEMENTS AT THE QUALIFYING NUCLEAR FACILITY, INCLUDING THOSE RELATING TO MATERIAL USE AND ACCOUNTANCY, CONTAINMENT AND SURVEILLANCE

Description of qualifying nuclear material

11. Description of the use of qualifying nuclear material.
12. Description of the use of qualifying nuclear material.
13. Fuel material (including material in control or shim assemblies, if applicable).
 - (a) chemical composition or main alloy constituents;
 - (c) form and dimensions;
 - (c) enrichment of fuel rods/pins, fuel plates etc.;
 - (d) nominal weight of nuclear material, with design tolerances.
14. Cladding material.
15. Method of identifying individual assemblies, rods/pins, plates etc., if applicable.
16. Other qualifying nuclear material used in the qualifying nuclear facility (briefly state material, purpose and method of use, e.g. as booster rods).

Location and handling of qualifying nuclear material

17. Description, including layout drawings, of:
 - (a) storage and assembly areas and critical assembly (assemblies) proper (inventory locations) for the qualifying nuclear material;
 - (b) the estimated range of inventories of qualifying nuclear material in these locations;
 - (c) the physical arrangement of equipment used for assembling, testing and measuring qualifying nuclear material; and
 - (d) the routes followed by the qualifying nuclear material.
18. Sketch of critical assembly core showing core support structure, shielding and heat removal systems, with description (to be provided for each critical assembly if more than one in the qualifying nuclear facility).

NUCLEAR MATERIAL ACCOUNTANCY AND CONTROL

Accountancy system

19. Description of qualifying nuclear material accountancy and control system (describe item and/or mass accountancy system, including assay methods used and assessed accuracies, supplying specimen blank forms used in all accountancy and control procedures). Period during which such records must be retained should be stated.

Physical inventory

20. Description of: procedures, scheduled frequency and methods for operator's physical inventory taking (both for item and/or mass accountancy, including main assay methods and expected accuracy); access to qualifying nuclear material in the core and to qualifying nuclear material, which is irradiated and outside the core; expected radiation levels.

OTHER INFORMATION RELEVANT TO APPLICATION OF SAFEGUARDS

21. Organisational arrangements for material accountancy and control.
22. Information on the health and safety rules which have to be observed at the qualifying nuclear facility and with which the inspectors must comply.

I-C. QUALIFYING NUCLEAR FACILITIES WHERE CONVERSION, FABRICATION AND REPROCESSING ARE CARRIED OUT

Date:

IDENTIFICATION OF THE QUALIFYING NUCLEAR FACILITY

1. Name.
2. Location, exact address with telephone and fax numbers and e-mail addresses.
3. Owner (legally responsible body or individual).
4. Operator (legally responsible body or individual).
5. Present status (e.g. under construction, in operation or closed down).
6. Purpose and type.
7. Operating mode influencing its production (shift system adopted, approximate dates of operating periods in year, etc.)
8. Area layout (map showing the qualifying nuclear facility, boundaries, buildings, roads, rivers, railways, etc.)

9. Layout of qualifying nuclear facility:
 - (a) structural containment, fences and access routes;
 - (b) routes followed by qualifying nuclear material;
 - (c) storage area for qualifying nuclear material which is incoming;
 - (d) each main processing area and process laboratory;
 - (e) test or experimental areas;
 - (f) storage area for qualifying nuclear material which is outgoing;
 - (g) nuclear waste disposal area;
 - (h) analytical laboratory.

GENERAL ARRANGEMENTS AT THE QUALIFYING NUCLEAR FACILITY, INCLUDING THOSE RELATING TO MATERIAL USE AND ACCOUNTANCY, CONTAINMENT AND SURVEILLANCE

Flow, location and handling of qualifying nuclear material

10. Flow sheet showing: points where qualifying nuclear material is identified or measured; material balance areas and inventory locations used for material accountancy; and the estimated range of nuclear material inventories at these locations under normal operating conditions. The description should include (if applicable):
 - (a) batch size or flow rate;
 - (b) method of storage or packing;
 - (c) storage capacity;
 - (d) general forecasts of throughput and inventory and of receipts and shipments.
11. In addition to point 10 above, a description and a layout drawing should be provided of feed storage areas for a qualifying nuclear facility where reprocessing is carried out, indicating:
 - (a) locations for fuel elements and handling equipment;
 - (b) type of fuel elements including the content and enrichment of qualifying nuclear material.
12. In addition to point 10 above, the description of the recycling stage of the process should include, if available:
 - (a) duration of temporary storage;
 - (b) schedules for external recycling (if applicable).
13. In addition to point 10 above, the description of the discard stage of the process should include the discard method (disposal or storage).
14. Under steady-state conditions, for each flow sheet referred to in points 10 and 17 and assuming the modes of operation in point 7, state:
 - (a) the nominal throughput per year;
 - (b) the in-process inventory based on design capacity.
15. Description of the normal procedures adopted for complete or partial clean-out of the qualifying nuclear facility. Include description of special sampling and measurement points associated with the clean-out procedure and subsequent physical inventory taking, if not described in point 10 above.

Description of qualifying nuclear material

16. Description of the use of qualifying nuclear material.
17. Description, by means of flow sheets or otherwise, of estimated flow and inventory of all qualifying nuclear material for storage and process areas. The description should include:

- (a) physical and chemical form;
- (b) content range or expected upper limits for each category of solid or liquid discard material;
- (c) enrichment range.

QUALIFYING NUCLEAR MATERIAL ACCOUNTANCY AND CONTROL

Accountancy system

- 18. Description of the accountancy system used to record and report accountancy data and establish material balances, supplying specimen blank forms used in all procedures. Period during which such records must be retained should be stated.
- 19. Indicate when and how often material balances are established, including those established during campaigns. Description of method and procedure for adjusting accounts after a physical inventory taking.
- 20. Description of procedure for handling shipper/receiver differences and method of adjusting accounts.
- 21. Description of procedure for correcting accounts following procedural or clerical errors and its effect on shipper/receiver differences.

Physical inventory

- 22. Refer to point 15. Identify items of qualifying nuclear equipment on the flow sheets referred to in points 10 and 17 that are to be regarded as containers for qualifying nuclear material under physical inventory conditions. State the schedule of physical inventory taking during the campaign.

Methods for measurement, sampling and analysis

- 23. Description of method for establishing each measurement at the point indicated; equations or tables used and calculations made to determine actual quantities of weights or volumes should be identified. Indicate whether data are recorded automatically or manually. Method and practical procedures for sampling at each point indicated should be described.
- 24. Description of analytical methods used for accountancy purposes. Refer to a manual or report, if possible.

Control of measurement accuracy

- 25. Description of: measurement quality control programme needed for material accountancy purposes, including programmes (together with accuracy values) for the continuing appraisal of analytical, weight, volume and sampling precisions and biases, and for the calibration of associated equipment; method of calibrating the measuring equipment referred to in point 24; type and quality of standards used for analytical methods referred to in point 24; type of analytical equipment used, indicating method and frequency of calibration.

Statistical evaluation

- 26. Description of methods for statistical evaluation of data collected in measurement control programmes for evaluating the precision and the accuracy of measurements and for estimating measurement uncertainties (i.e. determination of the standard deviations of random and systematic error in the measurements). Also description of statistical procedures used to combine individual error estimates to obtain the standard deviations of overall error for shipper/receiver differences, the book inventory, the physical inventory and material unaccounted for.

OTHER INFORMATION RELEVANT TO APPLICATION OF SAFEGUARDS

27. Organisational arrangements for material accountancy and control.
28. Information on the health and safety rules which have to be observed at the qualifying nuclear facility and with which the inspectors must comply.

I-D. QUALIFYING NUCLEAR FACILITIES USED FOR STORAGE

1. Name.
2. Location, exact address with telephone and fax numbers and e-mail addresses.
3. Owner (legally responsible body or individual).
4. Operator (legally responsible body or individual).
5. Present status (e.g. under construction, in operation or closed down).
6. Purpose and type.
7. Area layout (map showing the qualifying nuclear facility, boundaries, buildings, roads, rivers, railways, etc.).
8. Layout of qualifying nuclear facility, showing structural containment, fences and access routes.

GENERAL ARRANGEMENTS AT THE QUALIFYING NUCLEAR FACILITY, INCLUDING THOSE RELATING TO MATERIAL USE AND ACCOUNTANCY, CONTAINMENT AND SURVEILLANCE

Description of qualifying nuclear material.

9. Description of the use of qualifying nuclear material.
10. Description, by means of drawings or otherwise, of all qualifying nuclear material in the qualifying nuclear facility, showing:
 - (a) all types of items, including normal handling equipment;
 - (b) chemical composition or main alloy constituents;
 - (c) form and dimensions;
 - (d) enrichment;
 - (e) nominal weight of nuclear material, with design tolerances;
 - (f) cladding materials;
 - (g) methods of identifying items.

Location and handling of qualifying nuclear material

11. Description, by means of layout drawings or otherwise, of:
 - (a) storage areas (inventory locations) for qualifying nuclear material;
 - (b) the estimated range of inventories of qualifying nuclear material in these locations;
 - (c) storage and/or shipping containers of qualifying nuclear material;
 - (d) the routes and equipment used for movement of qualifying nuclear material, if applicable.

QUALIFYING NUCLEAR MATERIAL ACCOUNTANCY AND CONTROL

Accountancy system

12. Description of qualifying nuclear material accountancy and control system (describe item and/or mass accountancy system, including assay methods used and assessed accuracies, supplying specimen blank forms used in all accountancy and control procedures). Period during which such records must be retained should be stated.

Physical inventory

13. Description of procedures, scheduled frequency and methods for operator's physical inventory taking (both for item and/or mass accountancy, including main assay methods), and expected accuracy.

OTHER INFORMATION RELEVANT TO APPLICATION OF SAFEGUARDS

14. Organisational arrangements for material accountancy and control.
15. Information on the health and safety rules which have to be observed at the qualifying nuclear facility and with which the inspectors must comply.

I-E. QUALIFYING NUCLEAR FACILITIES WHERE ISOTOPES ARE SEPARATED

Date:

IDENTIFICATION OF THE QUALIFYING NUCLEAR FACILITY

1. Name.
2. Location, exact address with telephone and fax numbers and e-mail address.
3. Owner (legally responsible body or individual).
4. Operator (legally responsible body or individual).
5. Present status (e.g. under construction, in operation or closed down).
6. Building schedule (if qualifying nuclear facility not in operation):
 - (a) date building starts;
 - (b) date of acceptance for the qualifying nuclear facility;
 - (c) commissioning date.
7. Purpose and type (nominal separation capacity, enrichment facilities, etc.)
8. Operating mode influencing its production (shift system adopted, approximate periods of operating times in year, etc.)
9. Area layout (map showing the qualifying nuclear facility, boundaries, buildings, roads, rivers, railways, etc.)
10. Layout of qualifying nuclear facility:
 - (a) structural containment, fences and access routes;
 - (b) containment of certain parts of the qualifying nuclear facility;
 - (c) routes followed by qualifying nuclear material;
 - (d) storage area for qualifying nuclear material which is incoming;

- (e) each main processing area and process laboratory, including weighing and sampling area, decontamination, purification and feed areas, etc.;
- (f) test or experimental areas;
- (g) storage area for qualifying nuclear material which is outgoing;
- (h) nuclear waste disposal area;
- (i) analytical laboratory.

GENERAL ARRANGEMENTS AT THE QUALIFYING NUCLEAR FACILITY, INCLUDING THOSE RELATING TO MATERIAL USE AND ACCOUNTANCY, CONTAINMENT AND SURVEILLANCE

Description of qualifying nuclear material.

- 11. Description of the use of qualifying nuclear material.
- 12. Description, by means of flow sheets or otherwise, of estimated flow and inventory of all qualifying nuclear material for storage and process areas. The description should include:
 - (a) physical and chemical form;
 - (b) enrichment range for feed, product and tails;
 - (c) content range or expected upper limits for each category of solid or liquid discard material.

Flow, location and handling of qualifying nuclear material

- 13. Description, by means of diagrams or otherwise, of storage and process areas. The description should include:
 - (a) sampling and measuring points;
 - (b) batch size and/or flow rate;
 - (c) method of storage or packing;
 - (d) storage capacities.
- 14. In addition to point 13 above, the description of the installation should include:
 - (a) separation capacity;
 - (b) enrichment techniques or methods;
 - (c) possible points for feed, product and tails;
 - (d) recycling facilities;
 - (e) type and size of UF₆ cylinders used, filling and emptying methods.
- 15. Power consumption should be given, where necessary.
- 16. Each diagram should indicate, under steady-state conditions:
 - (a) nominal throughput per year;
 - (b) physical inventory of in-process materials;
 - (c) material loss rate owing to leakage, decomposition, deposition, etc.;
 - (d) arrangements for regular plant maintenance (periodic shutdown or continuous component replacement, etc.)
- 17. Description of special sampling and measurement points associated with decontamination of qualifying nuclear equipment that is off-process and is to be maintained or replaced.
- 18. Description of process waste disposal point, including disposal method, storage period, type of disposal, etc.

NUCLEAR MATERIAL ACCOUNTANCY AND CONTROL

Accountancy system

19. Description of the accountancy system used to record and report accountancy data and to establish material balances, supplying specimen blank forms used in all procedures. Period during which such records must be retained should be stated.
20. Indicate when and how often material balances are established, including any established during campaigns. Description of method and procedure for adjusting accounts after a physical inventory taking
21. Description of procedure for handling shipper/receiver differences and method of adjusting accounts.
22. Description of procedure for correcting accounts owing to procedural or clerical errors and the effect on shipper/receiver differences, if applicable.

Physical inventory

23. Identification of items of qualifying nuclear equipment mentioned in the description referred to in points 13 and 18 that are to be regarded as containers for qualifying nuclear material under physical inventory conditions. State the timing of physical inventory taking.

Methods for measurement, sampling and analysis

24. Refer to the information given under points 13 and 17 for location of sampling and measurement points.
25. Description of method for establishing each measurement at the point indicated; equations or tables used and calculations made to determine actual quantities of weights or volumes should be identified. Indicate whether data are recorded automatically or manually. Method and practical procedures for sampling at each point indicated should be described. Indicate number of samples taken and rejection criteria.
26. Description of analytical methods used for accountancy purposes. Refer to a manual or report, if possible.

Control of measurement accuracy

27. Description of programmes for the continuous appraisal of weight, volume and sampling precision and biases, and for the calibration of associated qualifying nuclear equipment.
28. Descriptions of type and quality of standards used for analytical methods referred to in point 26, type of qualifying nuclear equipment which is used for analysis together with the method and frequency of calibration.

Statistical evaluation

29. Description of methods for statistical evaluation of data collected in measurement control programmes for evaluating the precision and the accuracy of measurements and for estimating measurement uncertainties (i.e. determination of the standard deviations of random and systematic error in the measurements). Also description of statistical procedures used to combine individual error estimates to obtain the standard deviations of overall error for shipper/receiver differences, the book inventory, the physical inventory and material unaccounted for.

OTHER INFORMATION RELEVANT TO APPLICATION OF SAFEGUARDS

30. Organisational arrangements for material accountancy and control.

31. Information on the health and safety rules which have to be observed at the qualifying nuclear facility, and with which the inspectors must comply.

I-F. QUALIFYING NUCLEAR FACILITIES USING QUALIFYING NUCLEAR MATERIAL IN QUANTITIES EXCEEDING ONE EFFECTIVE KILOGRAM

Date:

For any qualifying nuclear facility of a type not referred to in sections A to E which uses more than one effective kilogram per annum, information should be given on the following:

- identification of the qualifying nuclear facility,
- general arrangements at the qualifying nuclear facility, including those relating to material use and accountancy, containment and surveillance,
- description of the use of qualifying nuclear material,
- nuclear material accountancy and control system, including techniques for physical inventory taking,
- other information relevant to the application of safeguards.

The information required under these headings is, where applicable, the same as that required for the types of qualifying nuclear facility coming under sections C, D and E of this Annex.

I-G. QUALIFYING NUCLEAR FACILITIES CANDIDATE MEMBERS OF THE CATCH All MBA (CAM)

Date:

For these holders, the total inventory is calculated as the sum of the stock of each category of qualifying nuclear material held, each expressed as a percentage of the following limits:

depleted uranium	350 000 g or
thorium	200 000 g or
natural uranium	100 000 g or
low enriched uranium	1 000 g or
high enriched uranium	5 g or
plutonium	5 g

For example:

- (a) a holder with 4 g of plutonium has a percentage inventory equal to 80 % (4/5);
- (b) a holder with 1g of high enriched uranium plus 20 000 g of natural uranium has a percentage inventory equal to 40 % (1/5 + 20 000/100 000).

IDENTIFICATION OF THE QUALIFYING NUCLEAR FACILITY AND OF THE QUALIFYING NUCLEAR MATERIAL

1. Name.
2. Owner and/or operator.
3. Location, exact address with telephone and fax numbers and e-mail addresses.
4. Type of qualifying nuclear material.
5. Description of containers used for storage and handling.
6. Description of the use of qualifying nuclear material.

ACCOUNTANCY AND CONTROL OF QUALIFYING NUCLEAR MATERIAL

The holders' obligations have been simplified as following:

A. Limits on holdings/movements

If any individual receipt of qualifying nuclear material exceeds the quantities indicated above or if the 'percentage inventory' of the qualifying nuclear facility exceeds 100 % at any time, the ONR must be notified immediately.

B Accounting/operating records to be maintained

Accounting/operating records must be kept in a manner permitting ready verification of reports made to the ONR and of any correction thereto.

C. Inventory change reports (ICR)

Need be submitted only if an inventory change occurs.

A note explaining unusual inventory changes and corrections or any other piece of information included in the report should be attached. In particular, the identification and address should be given of any entity to which qualifying nuclear material is shipped (including export) or from whom qualifying nuclear material is received (including import). Even if no inventory change occurred during the year, an ending book inventory by category as at 31 December must be declared. This declaration must be forwarded to the ONR at [] by 31 January of each year in accordance with regulation 34.

D. Report form

No special form is required for the report under C above. The report can be made by letter sent to the ONR in accordance with regulation 34.

I-H. WASTE TREATMENT OR WASTE STORAGE AT A QUALIFYING NUCLEAR FACILITY (4)

Date:

IDENTIFICATION OF THE QUALIFYING NUCLEAR FACILITY

1. Name.
2. Location, exact address with telephone and fax numbers and e-mail addresses.
3. Owner (legally responsible body or individual).
4. Operator (legally responsible body or individual).
5. Present status (e.g. under construction, in operation or closed down).
6. Purpose and type.
7. Area layout (map showing the qualifying nuclear facility, boundaries, buildings, roads, rivers, railways, etc.).
8. Layout of qualifying nuclear facility:
 - (a) structural containment, fences and access routes;
 - (b) routes followed by qualifying nuclear material;
 - (c) nuclear waste disposal areas;

- (d) each main processing area and process laboratory;
- (e) test or experimental areas;
- (f) analytical laboratory.

GENERAL ARRANGEMENTS AT THE QUALIFYING NUCLEAR FACILITY, INCLUDING THOSE RELATING TO MATERIAL USE AND ACCOUNTANCY, CONTAINMENT AND SURVEILLANCE

Locations and handling of qualifying nuclear material

- 9. Description of the use of qualifying nuclear material.
- 10. Description, by means of drawings or otherwise, of:
 - (a) storage areas (inventory locations) for qualifying nuclear material;
 - (b) the estimated range of inventories of qualifying nuclear material in these locations;
 - (c) storage and/or shipping containers for qualifying nuclear material;
 - (d) the routes and equipment used for movement of qualifying nuclear material, if applicable.

QUALIFYING NUCLEAR MATERIAL ACCOUNTANCY AND CONTROL

Accountancy system

- 11. Description of the qualifying nuclear material accountancy and control system, supplying specimen blank forms used in all accountancy and control procedures. Period during which such records must be retained should be stated.

Physical inventory

- 12. Description of procedures, scheduled frequency and methods for operator's physical inventory taking (both for item and/or mass accountancy including main assay methods), and expected accuracy.

OTHER INFORMATION RELEVANT TO APPLICATION OF SAFEGUARDS

- 13. Organisational arrangements for material accountancy and control.
- 14. Information on the health and safety rules which have to be observed at the qualifying nuclear facility and with which the inspectors must comply.

I-J. OTHER QUALIFYING NUCLEAR FACILITIES

Date:

IDENTIFICATION OF THE QUALIFYING NUCLEAR FACILITY AND OF THE QUALIFYING NUCLEAR MATERIAL

- 1. Name
- 2. Location, exact address with telephone and fax numbers and e-mail addresses.
- 3. Owner (legally responsible body or individual).

4. Operator (legally responsible body or individual).
5. Type of nuclear material.
6. Description of containers used for storage and handling (e.g. to determine whether sealing is possible).
7. Description of the use of qualifying nuclear material.
8. In the case of ore producers, the potential annual throughput of the qualifying nuclear facility.
9. The current status (e.g. under construction, in operation or closed down).

ACCOUNTANCY AND CONTROL OF QUALIFYING NUCLEAR MATERIAL

10. Description of the procedures for the accountancy and control of qualifying nuclear material, including procedures for physical inventory taking.
11. Organisational arrangements for material accountancy and control.

(1) Items 12 to 15 are to be answered for each type of assembly in the qualifying nuclear facility. Terminology consistent with item 12 should be used.

(2) To be provided for each critical assembly if more than one in the qualifying nuclear facility.

(3) Separate qualifying nuclear facilities not normally associated with reactors, with enrichment, conversion and fabrication, or with chemical reprocessing and recovery.

(4) Separate qualifying nuclear facilities engaged solely in the handling, storing or processing of waste materials (not forming a part of qualifying nuclear facilities dealing with enrichment, conversion, fabrication, chemical reprocessing and recovery or of reactors).

(5) The term 'other' denotes all the qualifying nuclear facilities not covered by sections A to H, and where qualifying nuclear material in quantities not exceeding one effective kilogram is habitually used. It also specifically includes ore producers (point 8 above).

(6) This form may be used by the producers of ores.

PART 2

Regulation 14

INVENTORY CHANGE REPORT (ICR)

Label/tag	Content	Comments	#
MBA	Character (4)	MBA code of reporting MBA	1
Report type	Character (1)	I for Inventory Change Report	2
Report date	DDMMYYYY	Date on which the report was completed	3
Report number	Number (8)	Sequential number, no gaps	4
Line count	Number (8)	Total number of lines reported	5
Start report	DDMMYYYY	Date of first day in reporting period	6
End report	DDMMYYYY	Date of last day in reporting period	7
Reporting person	Character (30)	Name of person responsible for the report	8
Transaction ID	Number (8)	Sequential number	9
IC code	Character (2)	Type of inventory change	10
Batch	Character (20)	Unique identifier for a batch of qualifying nuclear material	11
KMP	Character (1)	Key measurement point	12
Measurement	Character (1)	Measurement code	13
Material form	Character (2)	Material form code	14
Material container	Character (1)	Material container code	15
Material state	Character (1)	Material state code	16
MBA from	Character (4)	MBA code of shipping MBA (for IC codes RD and RF only)	17
MBA to	Character (4)	MBA code of receiving MBA (for IC codes SD and SF only)	18
Previous batch	Character (20)	Name of previous batch (for IC code RB only)	19
Original date	DDMMYYYY	Accounting date of the line to be corrected (always of first line in correction chain)	20
PIT date	DDMMYYYY	Date of physical inventory taking (PIT) to which MF adjustment refers (use with IC code MF only)	21
Line number	Number (8)	Sequential number, no gaps	22
Accounting date	DDMMYYYY	Date on which the inventory change occurred or became known	23
Items	Number (6)	Number of items	24
Element category	Character (1)	Category of qualifying nuclear material	25
Element weight	Number (24.3)	Element weight	26
Isotope	Character (1)	G for U-235, K for U-233, J for a mixture of U-235 and U-233	27
Fissile weight	Number (24.3)	Weight of fissile isotope	28
Isotopic composition	Character(130)	U, Pu isotopic weight (only if agreed in particular safeguard provisions)	29
Obligation	Character (2)	Safeguards obligation	30
Previous category	Character (1)	Previous category of qualifying nuclear material (use for IC codes CB, CC and CE only)	31
Previous obligation	Character (2)	Previous obligation (use for IC codes BR, CR, PR and SR only)	32
CAM code from	Character (8)	Code to identify the shipping small holder	33

CAM code to Document	Character (8) Character (70)	Code to identify the receiving small holder Operator-defined reference to supporting documents	34 35
Container ID	Character (20)	Operator-defined identifier for the container	36
Correction	Character (1)	D for deletions, A for additions forming part of a deletion/addition pair, L for late lines (stand-alone additions)	37
Previous report	Number (8)	Report number of line to be corrected	38
Previous line	Number (8)	Line number of line to be corrected	39
Comment	Character (256)	Operator comment	40
Burn-up	Number (6)	Burn-up in MWdays/tonne (use for IC codes NL and NP in nuclear reactors only)	41
CRC	Number (20)	Hash code of line for quality control purposes	42
Previous CRC	Number (20)	Hash code of line to be corrected	43
Advance notification	Character (8)	Reference to advance notification sent to the ONR (use for IC codes RD, RF, SD and SF only)	44
Campaign	Character (12)	Campaign identifier for qualifying nuclear facilities which carry out reprocessing	45
Reactor	Character (12)	Reactor code for reprocessing campaigns	46
Error path	Character (8)	Special code for evaluation purposes	47

Explanatory notes

1. **MBA:**
Code of the reporting material balance area. This code is notified to the qualifying nuclear facility concerned by the ONR.
2. **REPORT TYPE:**
I for inventory change reports.
3. **REPORT DATE:**
Date on which the report was completed.
4. **REPORT NUMBER:**
Sequential number, no gaps.
5. **LINE COUNT:**
Total number of lines reported.
6. **START REPORT:**
Date of first day of reporting period.
7. **END REPORT:**
Date of last day of reporting period.
8. **REPORTING PERSON:**
Name of person responsible for the report.
9. **TRANSACTION ID:**
Sequential number. This is used to identify all inventory change lines relating to the same physical transaction.

10. IC CODE:

One of the following codes must be used:

Keyword	Code	Explanation
Receipt	RD	Receipt of qualifying nuclear material from material balance area within the UK.
Import	RF	Import of qualifying nuclear material.
Receipt from non-safeguarded activity	RN	Receipt of qualifying nuclear material from a non-safeguarded activity.
Shipment	SD	Transfer of qualifying nuclear material to a material balance area within the UK.
Export	SF	Export of qualifying nuclear material.
Shipment to non-safeguarded activity	SN	Transfer of qualifying nuclear material to a non-safeguarded activity.
Transfer to conditioned waste	TC	Qualifying nuclear material contained in waste that is measured or estimated on the basis of measurements, and which has been conditioned in such a way (e.g. in glass, cement, concrete or bitumen) that it is not suitable for further nuclear use. The quantity of qualifying nuclear material involved is to be subtracted from the inventory of the material balance area. Separate records must be kept for this type of material.
Discards to the environment	TE	Qualifying nuclear material contained in waste that is measured or estimated on the basis of measurements, and which has been irrevocably discarded to the environment as the result of a planned discharge. The quantity of qualifying nuclear material involved is to be subtracted from the inventory of the material balance area.
Transfer to retained waste	TW	Qualifying nuclear material generated from processing or from an operational accident contained in waste that is measured or estimated on the basis of measurements, and which has been transferred to a specific location within the material balance area from which it could be retrieved. The quantity of qualifying nuclear material involved is to be subtracted from the inventory of the material balance area. Separate records must be kept for this type of material.
Retransfer from conditioned waste	FC	Retransfer of conditioned waste to the inventory of the material balance area. This applies whenever conditioned waste undergoes processing.
Retransfer from retained waste	FW	Retransfer of retained waste to the inventory of the material balance area. This applies whenever retained waste is retrieved from the specific location within the material balance area, either for any processing involving the separation of elements in the material balance area or for any shipment from the material balance area.
Accidental loss	LA	Irretrievable and inadvertent loss of a quantity of qualifying nuclear material as the result of an operational accident. Use of this code requires a special report to be sent to the ONR.
Accidental gain	GA	Qualifying nuclear material unexpectedly found, except when detected in the course of a physical inventory taking. Use of this code requires a special report to be sent to the ONR.
Category change	CE	Accountancy transfer of a quantity of qualifying nuclear material from one category to another as a result of an enrichment process (only one line to be reported per category change).

Category change	CB	Accountancy transfer of a quantity of qualifying nuclear material from one category to another as a result of a blending operation (only one line to be reported per category change).
Category change	CC	Accountancy transfer of a quantity of qualifying nuclear material from one category to another for all types of category change not covered by codes CE and CB (only one line to be reported per category change).
Rebatching	RB	Accountancy transfer of a quantity of qualifying nuclear material from one batch to another (only one line to be reported per rebatching).
Change in particular obligation	BR	Accountancy transfer of a quantity of qualifying nuclear material from one particular safeguards obligation to another, to balance the total uranium stock following a blending operation (only one line to be reported per change of obligation).
Change in particular obligation	PR	Accountancy transfer of a quantity of qualifying nuclear material from one particular safeguards obligation to another, used when qualifying nuclear material enters or leaves an accountancy pool (only one line to be reported per change of obligation).
Change in particular obligation	SR	Accountancy transfer of a quantity of qualifying nuclear material from one particular safeguards obligation to another, following an obligation exchange or a substitution (only one line to be reported per change of obligation).
Change in particular obligation	CR	Accountancy transfer of a quantity of qualifying nuclear material from one particular safeguards obligation to another, for all cases not covered by codes BR, PR or SR (only one line to be reported per change of obligation).
Nuclear production	NP	Increase in the quantity of qualifying nuclear material due to nuclear transformation.
Nuclear loss	NL	Decrease in the quantity of qualifying nuclear material due to nuclear transformation.
Shipper/receiver difference	DI	Shipper/receiver difference.
New measurement	NM	Quantity of qualifying nuclear material, in one particular batch, accounted for in the nuclear material balance area, being the difference between a newly measured quantity and the quantity formerly accounted for, and which is neither a shipper/receiver difference nor a correction.
Balance adjustment	BJ	Quantity of qualifying nuclear material accounted for in the material balance area, being the difference between the result of a physical inventory taken by the plant operator for his own purposes (without reporting a physical inventory listing to the ONR) and the book inventory established on the same date.
Material unaccounted for	MF	Book adjustment for material unaccounted for. Must be equal to the difference between the ending physical inventory (PE) and the ending book inventory (BA) reported in the material balance report (Part 4). The original date must be that of the physical inventory taking, while the accounting date must be after the date of the physical inventory taking.
Roundings	RA	Rounding adjustment to make the sum of the quantities reported in a given period coincide with the ending book inventory of the material balance area.
Isotope adjustment	R5	Adjustment to make the sum of the isotope quantities reported coincide with the ending book inventory for U-235 of the material balance area.
Material production	MP	Quantity of qualifying nuclear material, obtained from substances originally not subject to safeguards, which has become subject to safeguards because its concentration now exceeds the minimum levels.
Termination of	TU	Quantity of qualifying nuclear material considered as irrecoverable for

use		practical or economic reasons which is: (i) incorporated in end products used for non-nuclear purposes; or (ii) contained in waste in very low concentrations measured or estimated on the basis of measurements, even if these materials are not discarded to the environment. The quantity of qualifying nuclear material involved is to be subtracted from the inventory of the material balance area.
Ending book inventory	BA	Book inventory at the end of a reporting period and at the PIT date, separate for each category of qualifying nuclear material and for each particular safeguards obligation.

11. BATCH:

The batch designation may be chosen by the operator, but:

- (a) in the case of the inventory change 'Receipt (RD)', the batch designation used by the shipper must be reported;
- (b) a batch designation must not be used again for another batch in the same material balance area.

12. KMP:

Key measurement point. The codes are notified to the qualifying nuclear facility concerned in the particular safeguard provisions. If no codes have been specified, '&' should be used.

13. MEASUREMENT:

The basis on which the quantity of qualifying nuclear material reported was established has to be indicated. One of the following codes must be used:

Measured	Estimated	Explanation
M	E	In the reporting material balance area.
N	F	In another material balance area.
T	G	In the reporting material balance area when the weights have already been given in a previous inventory change report or physical inventory listing.
L	H	In another material balance area when the weights have already been given in a previous inventory change report or physical inventory listing for the present material balance area.

14. MATERIAL FORM:

The following codes must be used:

Main type of material form	Subtype	Code
Ores		OR
Concentrates		YC
Uranium hexafluoride (UF6)		U6
Uranium tetrafluoride (UF4)		U4
Uranium dioxide (UO2)		U2
Uranium trioxide (UO3)		U3
Uranium oxide (U3O8)		U8
Thorium oxide (ThO2)		T2

Solutions	Nitrate	LN
	Fluoride	LF
	Other	LO
Powder	Homogeneous	PH
	Heterogeneous	PN
Ceramics	Pellets	CP
	Spheres	CS
	Other	CO
Metal	Pure	MP
	Alloys	MA
Fuel	Rods, pins	ER
	Plates	EP
	Bundles	EB
	Assemblies	EA
	Other	EO

Main type of material form	Subtype	Code
Sealed sources		QS
Small quantities/samples		SS
Scrap	Homogeneous	SH
	Heterogeneous (clean-outs, clinkers, sludges, fines, other)	SN
Solid waste	Hulls	AH
	Mixed (plastics, gloves, papers, etc.)	AM
	Contaminated equipment	AC
	Other	AO
Liquid waste	Low active	WL
	Medium active	WM
	High active	WH
Conditioned waste	Glass	NG
	Bitumen	NB
	Concrete	NC
	Other	NO

15. MATERIAL CONTAINER:

The following codes must be used:	
Type of container	Code
Cylinder	C
Pack	P
Drum	D

Discrete fuel unit	S
Bird cage	B
Bottle	F
Tank or other container	T
Other	O

16. MATERIAL STATE

State	Code
Fresh qualifying nuclear material	F
Irradiated qualifying nuclear material	I
Waste	W
Irrecoverable qualifying nuclear material	N

17. MBA FROM:

Use only for inventory change codes RD and RF. For inventory change code RD, the code of the shipping material balance area is reported. If this code is unknown, the code 'F', 'Q' or 'W' (for the shipping MBA [in France], the United Kingdom or a non-nuclear-weapon State) is reported and the shipper's full name and address must be entered in the comment field (40). For inventory change code RF, the country code of the exporting state, or the MBA code of the exporting installation if known, is reported, and the shipper's full name and address must be entered in the comment field (40).

18. MBA TO:

Use only for inventory change codes SD and SF. For inventory change code SD, the code of the receiving material balance area is reported. If this code is unknown, the code 'F', 'Q' or 'W' (for the receiving MBA in [France], the United Kingdom or a non-nuclear-weapon State) is reported and the receiver's full name and address must be entered in the comment field (40). For inventory change code SF, the country code of the importing state or the MBA code of the importing installation if known, is reported, and the receiver's full name and address must be entered in the comment field (40).

19. PREVIOUS BATCH :

Batch designation before rebatching. The batch designation after the rebatching must be reported in field 11.

20. ORIGINAL DATE:

In the case of a correction, the day, month and year when the line to be corrected was originally entered must be reported. For correction chains, the original date is always the accounting date of the first line in the chain. For late lines (stand-alone additions), the original date is the date on which the inventory change occurred.

21. PIT DATE

Date of the physical inventory taking as reported in the material balance report on which the book adjustment for MUF (material unaccounted for) is based. Use only with inventory change code MF.

22. LINE NUMBER:

Sequential number starting with 1 in each report, no gaps.

23. **ACCOUNTING DATE:**
Day, month and year when the inventory change occurred or became known.

24. **ITEMS:**
The number of items making up the batch must be reported. If an inventory change consists of several lines, the sum of the number of items reported must equal the total number of items belonging to the same transaction ID. If the transaction involves more than one element the number of items should be declared in the line(s) for the element category of highest strategic value only (in descending order: P, H, L, N, D, T).

25. **ELEMENT CATEGORY:**
The following codes must be used:

Category of nuclear material	Code
Plutonium	P
High enriched uranium (20 % enrichment and above)	H
Low enriched uranium (higher than natural but less than 20 % enrichment)	L
Natural uranium	N
Depleted uranium	D
Thorium	T

26. **ELEMENT WEIGHT:**
The weight of the element category referred to in field 25 must be reported. All weights must be reported in grams. The decimal digits appearing in the accounting lines can be reported up to a maximum of three decimal places.

27. **ISOTOPE:**
This code indicates the fissile isotopes involved and should be used when the weight of fissile isotopes is reported (28). Use the code G for U-235, K for U-233, and J for a mixture of U-235 and U-233.

28. **FISSILE WEIGHT:**
Unless otherwise stated in the particular safeguard provisions, the weight of fissile isotopes must only be reported for enriched uranium and category changes involving enriched uranium. All weights must be reported in grams. The decimal digits appearing in the accounting lines can be reported up to a maximum of three decimal places.

29. **ISOTOPIC COMPOSITION:**
If agreed in the particular safeguard provisions the isotopic composition of U and/or Pu must be reported in the format as a list of weights separated by semi-colons to denote the weight of U-233, U-234, U-235, U-236, U-238 or Pu-238, Pu-239, Pu-240, Pu-241, Pu-242. The decimal digits appearing in the accounting lines can be reported up to a maximum of three decimal places.

30. **OBLIGATION:**
Indication of the particular safeguards obligation assumed by the UK under an Agreement concluded with another country, the EU or an international organisation, to which the material is subject (Regulation 19). The ONR will communicate the appropriate codes to the

installations.

31. **PREVIOUS CATEGORY:**

Code of the category of qualifying nuclear material before the category change. The corresponding code after the change must be reported in field 25. Use only with the inventory change codes CE, CB and CC.

32. **PREVIOUS OBLIGATION:**

Code of the particular safeguards obligation to which the qualifying nuclear material was subject before the change. The corresponding obligation code after the change must be reported in field 30. Use only with the inventory change codes BR, CR, PR and SR.

33. **CAM CODE FROM:**

Code of installation of Annex I-G shipping material. The ONR will communicate to the operator or entity the appropriate code. Simplified reporting procedures apply to these operators.

34. **CAM CODE TO:**

Code of installation of Annex I-G receiving material. The ONR will communicate to the operator or entity the appropriate code. Simplified reporting procedures apply to these operators.

35. **DOCUMENT:**

Operator-defined reference to supporting document(s).

36. **CONTAINER ID:**

Operator-defined container number. Optional data element which can be used in those cases where the container number does not appear in the batch designation.

37. **CORRECTION:**

Corrections have to be made by deleting the wrong line(s) and adding the correct one(s), where appropriate. The following codes must be used:

Code	Explanation
D	Deletion. The line to be deleted must be identified by indicating in field 38 the report number (4), in field 39 the line number (22) and in field 43 the CRC (42) which were declared for the original line. Other fields need not be reported.
A	Addition (forming part of a deletion/addition pair). The correct line must be reported with all data fields, including the 'previous report' field (38) and the 'previous line' field (39). The 'previous line' field (39) must repeat the line number (22) of the line being replaced by the deletion/addition pair.
L	Late line (stand-alone addition). The late line to be added must be reported with all data fields, including the 'previous report' field (38). The 'previous report' field (38) must contain the report number (4) of the report in which the late line should have been included.
D	Deletion. The line to be deleted must be identified by indicating in field 38 the report number (4), in field 39 the line number (22) and in field 43 the CRC (42) which were declared for the original line. Other fields need not be reported.

38. **PREVIOUS REPORT:**

Indicate the report number (4) of the line to be corrected.

39. **PREVIOUS LINE:**
For deletions, or additions forming part of a deletion/addition pair, indicate the line number (22) of the line to be corrected.
40. **COMMENT:**
Free-text comment field for short comments by operator (replaces separate concise note).
41. **BURN-UP:**
For inventory changes of type NP or NL in nuclear reactors, burn-up in MWdays/tonne.
42. **CRC:**
Hash code of line for quality control purposes. The ONR will inform the operator of the algorithm to be used.
43. **PREVIOUS CRC:**
Hash code of the line to be corrected.
44. **ADVANCE NOTIFICATION:**
Reference code for the advance notification (Regulations [] and []). Use with inventory changes SF and RF and with those inventory changes of type SD and RD when the States where the shipper and receiver are located are not party to the same safeguards agreement with the International Atomic Energy Agency.
45. **CAMPAIGN:**
Unique identifier for the reprocessing campaign. Use only for inventory changes in the process material balance area(s) of those qualifying nuclear facilities where spent fuel is reprocessed.
46. **REACTOR:**
Unique identifier for the reactor from which irradiated fuel is being stored or reprocessed. Use only for inventory changes in those qualifying nuclear facilities where spent fuel is stored or reprocessed.
47. **ERROR PATH:**
Special code describing measurement errors and their propagation, for material balance evaluation purposes. The codes are agreed between the qualifying nuclear facility and the ONR.

GENERAL REMARKS CONCERNING THE COMPLETION OF THE REPORTS

1. In the case of transfer of qualifying nuclear material, the shipper must provide the receiver with all the necessary information for the inventory change report.
2. If numerical data contain fractions of units, a point should precede the decimal digits.
3. The following 55 characters may be used: the 26 capital letters A to Z, figures 0 to 9 and the characters 'plus', 'minus', 'slash', 'asterisk', 'space', 'equal', 'greater than', 'less than', 'point', 'comma', 'open bracket', 'close bracket', 'colon', 'dollar', 'percent', 'quotation mark', 'semi-colon', 'question mark' and 'ampersand'.

5. Reports must be prepared according to a world-wide accepted labelled reporting format, agreed between the ONR and operators.
6. The reports, duly completed and digitally signed, should be forwarded to the ONR in accordance with Regulation 34.

DRAFT

PART 3 Regulation 15

MATERIAL BALANCE REPORT (MBR)

<i>Label/tag</i>	<i>Content</i>	<i>Comments</i>	<i>#</i>
MBA	Character (4)	MBA code of reporting MBA	1
Report type	Character (1)	M for Material Balance Report	2
Report date	DDMMYY YY	Date on which the report was completed	3
Start report	DDMMYY YY	Starting date of MBR (date of last PIT +1 day)	4
End report	DDMMYY YY	End date of MBR (date of current PIT)	5
Report number	Number (8)	Sequential number, no gaps	6
Element category	Character (1)	Category of qualifying nuclear material	7
Line count	Number (8)	Total number of lines reported	8
Reporting person	Character (30)	Name of person responsible for report	9
IC code	Character (2)	Type of inventory change	10
Line number	Number (8)	Sequential number, no gaps	11
Element weight	Number (24.3)	Element weight	12
Isotope	Character (1)	G for U-235, K for U-233, J for a mixture of U-235 and U-233	13
Fissile weight	Number (24.3)	Weight of fissile isotope	14
Obligation	Character (2)	Safeguards obligation	15
Correction	Character (1)	D for deletions, A for additions forming part of a deletion/addition pair, L for late lines (stand-alone additions)	16
Previous report	Number (8)	Report number of line to be corrected	17
Previous line	Number (8)	Line number of line to be corrected	18
Comment	Character (256)	Operator comment	19
CRC	Number (20)	Hash code of line for quality control purposes	20
Previous CRC	Number (20)	Hash code of line to be corrected	21

Explanatory notes

1. **MBA:**
Code of the reporting material balance area. This code is notified to the qualifying nuclear facility concerned by the ONR.
2. **REPORT TYPE:**
M for material balance reports.
3. **REPORT DATE:**
Date on which the report was completed.
4. **START REPORT:**
Start date of MBR, date of the day immediately following the day of the previous physical inventory taking.
5. **END REPORT:**
End date of MBR, date of current physical inventory taking.
6. **REPORT NUMBER:**
Sequential number, no gaps.
7. **ELEMENT CATEGORY:**
The following code for categories of qualifying nuclear material must be used:

Category of qualifying nuclear material	Code
Plutonium	P
High enriched uranium (20 % enrichment and above)	H
Low enriched uranium (higher than natural but less than 20 % enrichment)	L
Natural uranium	N
Depleted uranium	D
Thorium	T

8. **LINE COUNT:**
Total number of lines reported.
9. **REPORTING PERSON:**
Name of person responsible for report.
10. **IC CODE:**
The different types of inventory information and of inventory change should be entered in the sequence indicated below. The following codes must be used:

Keyword	Code	Examination
Beginning physical inventory	PB	Physical inventory at the beginning of the reporting period (must be equal to the physical inventory at the end of the previous reporting period).
Inventory		For each type of inventory change, one consolidated line has to be

changes (only codes in the list below)		entered for the entire reporting period (first increases, then decreases).
Ending book inventory	BA	Book inventory at the end of the reporting period. It must be equal to the arithmetic sum of the MBR entries above.
Ending physical inventory	PE	Physical inventory at the end of the reporting period.
Material unaccounted for	MF	Material unaccounted for. Must be calculated as 'ending physical inventory (PE)' minus 'ending book inventory (BA)'.

For inventory changes, one of the following codes must be used:

Keyword	Code	Explanation
Receipt	RD	Receipt of nuclear material from a material balance area within the UK.
Import	RF	Import of qualifying nuclear material.
Receipt from non-safeguarded activity	RN	Receipt of qualifying nuclear material from a non-safeguarded activity.
Shipment	SD	Transfer of nuclear material to a material balance area within the UK.
Export	SF	Export of qualifying nuclear material.
Shipment to non-safeguarded activity	SN	Transfer of qualifying nuclear material to a non-safeguarded activity.
Transfer to conditioned waste	TC	Qualifying nuclear material contained in waste that is measured or estimated on the basis of measurements, and which has been conditioned in such a way (e.g. in glass, cement, concrete or bitumen) that it is not suitable for further nuclear use. The quantity of qualifying nuclear material involved is to be subtracted from the inventory of the material balance area. Separate records must be kept for this type of material.
Discards to the environment	TE	Qualifying nuclear material contained in waste that is measured or estimated on the basis of measurements, and which has been irrevocably discarded to the environment as the result of a planned discharge. The quantity of qualifying nuclear material involved is to be subtracted from the inventory of the material balance area.
Transfer to retained waste	TW	Qualifying nuclear material generated from processing or from an operational accident contained in waste that is measured or estimated on the basis of measurements and which has been transferred to a specific location within the material balance area from which it could be retrieved. The quantity of qualifying nuclear material involved is to be subtracted from the inventory of the material balance area. Separate records must be kept for this type of material.
Retransfer from conditioned	FC	Retransfer of conditioned waste to the inventory of the material balance area. This applies whenever conditioned waste

waste		undergoes processing.
Retransfer from retained waste	FW	Retransfer of retained waste to the inventory of the material balance area. This applies whenever retained waste is retrieved from the specific location within the material balance area, either for any processing involving the separation of elements in the material balance area or for any shipment from the material balance area.
Accidental loss	LA	Irretrievable and inadvertent loss of a quantity of qualifying nuclear material as the result of an operational accident. Use of this code in the MBR is only allowed if a special report was sent to the ONR when the inventory change occurred or became known.
Accidental gain	GA	Qualifying nuclear material unexpectedly found, except when detected in the course of a physical inventory taking. Use of this code in the MBR is only allowed if a special report was sent to the ONR when the inventory change occurred or became known.
Category change	CE	Accountancy transfer of a quantity of qualifying nuclear material from one category to another as a result of an enrichment process.
Category change	CB	Accountancy transfer of a quantity of qualifying nuclear material from one category to another as a result of a blending operation.
Category change	CC	Accountancy transfer of a quantity of qualifying nuclear material from one category to another for all types of category change not covered by codes CE and CB.
Change in particular obligation	BR	Accountancy transfer of a quantity of qualifying nuclear material from one particular safeguards obligation to another, to balance the total uranium stock following a blending operation.
Change in particular obligation	PR	Accountancy transfer of a quantity of qualifying nuclear material from one particular safeguards obligation to another, used when qualifying nuclear material enters or leaves an accountancy pool.
Change in particular obligation	SR	Accountancy transfer of a quantity of qualifying nuclear material from one particular safeguards obligation to another, following an obligation exchange or a substitution.
Change in particular obligation	CR	Accountancy transfer of a quantity of qualifying nuclear material from one particular safeguards obligation to another, for all cases not covered by codes BR, PR or SR.
Nuclear production	NP	Increase in the quantity of qualifying nuclear material due to nuclear transformation.
Nuclear loss	NL	Decrease in the quantity of qualifying nuclear material due to nuclear transformation.
Shipper/receiver difference	DI	Shipper/receiver difference.
New measurement	NM	Quantity of qualifying nuclear material, in one particular batch, accounted for in the qualifying nuclear material balance area, being the difference between a newly measured quantity and the quantity formerly accounted for, and which is neither a shipper/receiver difference nor a correction.
Balance adjustment	BJ	Quantity of qualifying nuclear material accounted for in the material balance area, being the difference between the result of a physical inventory taken by the plant operator for his own purposes (without reporting a physical inventory listing to the ONR) and the book inventory established on the same date.
Roundings	RA	Rounding adjustment to make the sum of the quantities reported in a given period coincide with the ending book inventory of the material balance area.

Isotope adjustment	R5	Adjustment to make the sum of the isotope quantities reported coincide with the ending book inventory for U-235 of the material balance area.
Material production	MP	Quantity of qualifying nuclear material, obtained from substances originally not subject to safeguards, which has become subject to safeguards because its concentration now exceeds the minimum levels.
Termination of use	TU	Quantity of qualifying nuclear material considered as irrecoverable for practical or economic reasons which is: (i) incorporated in end products used for non-nuclear purposes; or (ii) contained in waste in very low concentrations measured or estimated on the basis of measurements, even if these materials are not discarded to the environment. The quantity of qualifying nuclear material involved is to be subtracted from the inventory of the material balance area.

11. **LINE NUMBER:**
Sequential number starting with 1, no gaps.
12. **ELEMENT WEIGHT:**
The weight of the element category referred to in field 7 must be reported. All weights must be reported in grams. The decimal digits appearing in the accounting lines can be reported up to a maximum of three decimal places.
13. **ISOTOPE:**
This code indicates the kind of fissile isotopes involved and should be used when the weight of fissile isotopes is reported. Use the code G for U-235, K for U-233, and J for a mixture of U-235 and U-233.
14. **FISSILE WEIGHT:**
Unless otherwise stated in the particular safeguard provisions, the weight of fissile isotopes must only be reported for enriched uranium and category changes involving enriched uranium. All weights must be reported in grams. The decimal digits appearing in the accounting lines can be reported up to a maximum of three decimal places.
15. **OBLIGATION:**
Indication of the particular safeguards obligation assumed by the UK under an Agreement concluded with another country, the EU or an international organisation, to which the material is subject (Regulation 19). The ONR will communicate the appropriate codes to the qualifying nuclear facilities.
16. **CORRECTION:**
Corrections have to be made by deleting the wrong line(s) and adding the correct one(s), where appropriate. The following codes must be used:

Code	Explanation
D	Deletion. The line to be deleted must be identified by indicating in field 17 the report number (6), in field 18 the line number (11) and in field 21 the CRC (20) which were declared for the original line. Other fields need not be reported.

A	Addition (forming part of a deletion/addition pair). The correct line must be reported with all data fields, including the 'previous report' field (17) and the 'previous line' field (18). The 'previous line' field (18) must repeat the line number (11) of the line being replaced by the deletion/addition pair.
L	Late line (stand-alone addition). The late line to be added must be reported with all data fields, including the 'previous report' field (17). The 'previous report' field (17) must contain the report number (6) of the report in which the late line should have been included.

17. **PREVIOUS REPORT:**

Indicate the report number (6) of the line to be corrected.

18. **PREVIOUS LINE:**

For deletions, or additions forming part of a deletion/addition pair, indicate the line number (11) of the line to be corrected.

19. **COMMENT:**

Free-text comment field for short comments by operator (replaces separate concise note).

20. **CRC:**

Hash code of line for quality control purposes. The ONR will inform the operator of the algorithm to be used.

21. **PREVIOUS CRC:**

Hash code of the line to be corrected.

GENERAL REMARKS CONCERNING THE COMPLETION OF THE REPORTS

General remarks 2, 3, 4, 5 and 6 at the end of Part 3 apply to this Part as appropriate.

PART 4

Regulation 15

PHYSICAL INVENTORY LISTING (PIL)

Label/Tag	Content	Comments	#
MBA	Character (4)	MBA code of reporting MBA	1
Report type	Character (1)	P for physical inventory listings	2
Report date	DDMMYYYY	Date on which the report was completed	3
Report number	Number (8)	Sequential number, no gaps	4
PIT date	DDMMYYYY	Date on which the physical inventory was taken	5
Line count	Number (8)	Total number of lines reported	6
Reporting person	Character (30)	Name of person responsible for report	7
PIL_ITEM_ID	Number (8)	Sequential number	8
Batch	Character (20)	Unique identifier for a batch of qualifying nuclear material	9
KMP	Character (1)	Key measurement point	10
Measurement	Character (1)	Measurement code	11
Element category	Character (1)	Category of qualifying nuclear material	12
Material form	Character (2)	Material form code	13
Material container	Character (1)	Material container code	14
Material state	Character (1)	Material state code	15
Line number	Number (8)	Sequential number, no gaps	16
Items	Number (6)	Number of items	17
Element weight	Number (24.3)	Element weight	18
Isotope	Character (1)	G for U-235, K for U-233, J for a mixture of U-235 and U-233	19
Fissile weight	Number (24.3)	Weight of fissile isotope	20
Obligation	Character (2)	Safeguards obligation	21
Document	Character (70)	Operator-defined reference to supporting documents	22
Container ID	Character (20)	Operator-defined identifier for the container	23
Correction	Character (1)	D for deletions, A for additions forming part of a deletion/addition pair, L for late lines (stand-alone additions)	24
Previous report	Number (8)	Report number of line to be corrected	25
Previous line	Number (8)	Line number of line to be corrected	26
Comment	Character (256)	Operator comment	27
CRC	Number (20)	Hash code of line for quality control purposes	28
Previous CRC	Number (20)	Hash code of line to be corrected	29

Explanatory notes

1. MBA:
Code of the reporting material balance area. This code is notified to the qualifying nuclear facility concerned by the ONR.
2. REPORT TYPE:

P for physical inventory listings.

3. **REPORT DATE:**
Date on which the report was completed.
4. **REPORT NUMBER:**
Sequential number, no gaps.
5. **PIT DATE:**
Day, month and year when the physical inventory was taken, reflecting the situation at 24.00.
6. **LINE COUNT:**
Total number of lines reported.
7. **REPORTING PERSON:**
Name of person responsible for report.
8. **PIL_ITEM_ID:**
Sequential number, common to all PIL lines related to the same physical object.
9. **BATCH :**
If batch follow-up is required in the particular safeguard provisions, the batch designation previously used for the batch in an inventory change report or in a previous physical inventory listing must be used.
10. **KMP:**
Key measurement point. The codes are notified to the installation concerned in the particular safeguard provisions. If no code has been specified, '&' should be used.
11. **MEASUREMENT:**
The basis on which the quantity of qualifying nuclear material reported was established has to be indicated. One of the following codes must be used:

Measured	Estimated	Explanation
M	E	In the reporting material balance area.
N	F	In another material balance area.
T	G	In the reporting material balance area when the weights have already been given in a previous inventory change report or physical inventory listing.
L	H	In another material balance area when the weights have already been given in a previous inventory change report or physical inventory listing for the present material balance area.

12. **ELEMENT CATEGORY:**
The following codes must be used:

Category of qualifying nuclear material	Code
Plutonium	P
High enriched uranium	H

(20 % enrichment and above)	
Low enriched uranium (higher than natural and less than 20 % enrichment)	L
Natural uranium	N
Depleted uranium	D
Thorium	T

13. MATERIAL FORM:

The following codes must be used:

Main type of material form	Subtype	Code
Ores		OR
Concentrates		YC
Uranium hexafluoride (UF ₆)		U6
Uranium tetrafluoride (UF ₄)		U4
Uranium dioxide (UO ₂)		U2
Uranium trioxide (UO ₃)		U3
Uranium oxide (U ₃ O ₈)		U8
Thorium oxide (ThO ₂)		T2
Solutions	Nitrate	LN
	Fluoride	LF
	Other	LO
Powder	Homogeneous	PH
	Heterogeneous	PN
Ceramics	Pellets	CP
	Spheres	CS
	Other	CO
Metal	Pure	MP
	Alloys	MA
Fuel	Rods, pins	ER
	Plates	EP
	Bundles	EB
	Assemblies	EA
	Other	EO
	Sealed sources	
Small quantities/samples		SS
Scrap	Homogeneous	SH
	Heterogeneous (clean-outs, clinkers, sludges, fines, other)	SN
Solid waste	Hulls	AH
	Mixed (plastics, gloves, papers, etc.)	AM

	Contaminated equipment	AC
	Other	AO
Liquid waste	Low active	WL
	Medium active	WM
	High active	WH
Conditioned waste	Glass	NG
	Bitumen	NB
	Concrete	NC
	Other	NO

14. MATERIAL CONTAINER:

The following codes must be used:

Type of container	Code
Cylinder	C
Pack	P
Drum	D
Discrete fuel unit	S
Bird cage	B
Bottle	F
Tank or other container	T
Other	O

15. MATERIAL STATE:

The following codes must be used:

State	Code
Fresh qualifying nuclear material	F
Irradiated qualifying nuclear material	I
Waste	W
Irrecoverable qualifying nuclear material	N

16. LINE NUMBER:

Sequential number starting with 1 in each report, no gaps.

17. ITEMS:

Each physical inventory line must indicate the number of items involved. If a group of items belonging to the same batch are reported as several lines, the sum of the number of items reported must equal the total number of items in the group. If the lines involve more than one element category, the number of items should be declared in the line(s) for the element category of highest strategic value only (in descending order: P, H, L, N, D, T).

18. ELEMENT WEIGHT:

The weight of the element category referred to in field 12 must be reported. All weights must be reported in grams. The decimal digits appearing in the accounting lines can be reported up to a maximum of three decimal places.

19. **ISOTOPE:**
This code indicates the fissile isotopes involved and should be used when the weight of fissile isotopes is reported. Use the code G for U-235, K for U-233, and J for a mixture of U-235 and U-233.
20. **FISSILE WEIGHT:**
Unless otherwise stated in the particular safeguard provisions, the weight of fissile isotopes must only be reported for enriched uranium and category changes involving enriched uranium. All weights must be reported in grams. The decimal digits appearing in the accounting lines can be reported up to a maximum of three decimal places.
21. **OBLIGATION:**
Indication of the particular safeguards obligation assumed by the UK under an Agreement concluded with another country, the EU or an international organisation, to which the material is subject. The ONR will communicate the appropriate codes to the qualifying nuclear facility.
22. **DOCUMENT:**
Operator-defined reference to supporting document(s).
23. **CONTAINER ID:**
Operator-defined container number. Optional data element which can be used in those cases where the container number does not appear in the batch designation.
24. **CORRECTION:**
Corrections have to be made by deleting the wrong line(s) and adding the correct one(s), where appropriate. The following codes must be used:
- | Code | Explanation |
|------|---|
| D | Deletion. The line to be deleted must be identified by indicating in field 25 the report number (4), in field 26 the line number (16) and in field 29 the CRC (28) which were declared for the original line. Other fields need not be reported. |
| A | Addition (forming part of a deletion/addition pair). The correct line must be reported with all data fields including the 'previous report' field (25) and the 'previous line' field (26). The 'previous line' field (26) must contain the line number (16) of the line being replaced by the deletion/addition pair. |
| L | Late line (stand-alone addition). The late line to be added must be reported with all data fields, including the 'previous report' field (25). The 'previous report' field (25) must contain the report number (4) of the report in which the late line should have been included. |
25. **PREVIOUS REPORT:**
Indicate the report number (4) of the line to be corrected.
26. **PREVIOUS LINE:**
For deletions, or additions forming part of a deletion/addition pair, indicate the line number (16) of the line to be corrected.
27. **COMMENT:**
Free-text comment field for short comments by operator (replaces separate concise note).

28. **CRC:**
Hash code of line for quality control purposes. The ONR will inform the operator of the algorithm to be used.
29. **PREVIOUS CRC:**
Hash code of the line to be corrected.

GENERAL REMARKS CONCERNING THE COMPLETION OF THE REPORTS

If, on the date the physical inventory was taken, there was no qualifying nuclear material in the material balance area, only labels from 1 to 7, 16, 17 and 28 above should be completed on the report.

General remarks 2, 3, 4, 5 and 6 at the end of Part 3 apply to this Part as appropriate.

DRAFT

ADVANCE NOTIFICATION OF EXPORTS/SHIPMENTS OF QUALIFYING
NUCLEAR MATERIAL

NRA SAFEGUARDS

1. Reference code:
2. Material balance area code:
3.

Qualifying nuclear facility (shipper):...	Installation (receiver):
---	--------------------------
4. Quantities split up by category of qualifying nuclear material and particular safeguards obligation:
5. Chemical composition:
6. Enrichment or isotopic composition:
7. Physical form:
8. Number of items:
9. Description of containers and seals:
10. Shipment identification data:
11. Means of transport:
12. Location where qualifying nuclear material will be stored or prepared:
13. Last date when qualifying nuclear material can be identified:
14. Approximate dates of dispatch:
Expected dates of arrival:
15. Use:
16. Supply agency's contractual reference:
Date and place of dispatch of notification:

Name and position of signatory:

Signature:

Explanatory notes

1. Reference code for advance notifications to be used in the inventory change report (use up to eight characters).
2. Code of the reporting material balance area as notified by the ONR to the qualifying nuclear facility concerned.
3. Name, address and country of the qualifying nuclear facility shipping, and of the qualifying nuclear facility or facility receiving, the qualifying nuclear material. The receiver at the ultimate destination should also be indicated where applicable.
4. The total weight of the elements should be given in grams. The weight of fissile isotopes should be indicated, if applicable. The weights must be split up by category of qualifying nuclear material and particular safeguards obligation.
5. Chemical composition should be indicated.
6. If applicable, the degree of enrichment or the isotopic composition should be indicated.
7. Use the description of materials as laid out in [Part 3 (14)] of this Schedule.
8. The number of items included in the shipment should be indicated.
9. Description (type) of containers, including features that would permit sealing.
10. Shipment identification data (e.g. container markings or numbers).
11. Indicate, where appropriate, the means of transport.
12. Indicate the location within the material balance area where the qualifying nuclear material is prepared for shipping and can be identified, and where its quantity and composition can if possible be verified.
13. Last date when qualifying nuclear material can be identified and when its quantity and composition can if possible be verified.
14. Approximate dates of dispatch and of expected arrival at destination.
15. Indicate the use to which the qualifying nuclear material has been assigned.

This form, duly completed and signed, must be forwarded to the ONR in accordance with Regulation 34.

PART 6

Regulation 22

ADVANCE NOTIFICATION OF IMPORTS/RECEIPTS OF QUALIFYING NUCLEAR MATERIAL

NRA SAFEGUARDS

1. Reference code:
2. Material balance area code:
3.

Qualifying nuclear facility (receiver):...	Installation (shipper):
--	-------------------------
4. Quantities split up by category of qualifying nuclear material and particular safeguards obligation:
5. Chemical composition:
6. Enrichment or isotopic composition:
7. Physical form:
8. Number of items:
9. Description of containers and seals:
10. Means of transport:
11. Date of arrival:
12. Location where qualifying nuclear material will be unpacked:
13. Date(s) when qualifying nuclear material can be unpacked:
14. Supply agency's contractual reference:
 - Date and place of dispatch of notification:
 - Name and position of signatory:
 - Signature:

Explanatory notes

1. Reference code for advance notifications to be used in the inventory change report (use up

to eight characters).

2. Code of the reporting material balance area as notified by the ONR to the qualifying nuclear facility concerned.
3. Name, address and country of the qualifying nuclear facility receiving, and of the installation shipping, the qualifying nuclear material.
4. The total weight of the elements should be given in grams. The weight of fissile isotopes shall be indicated if applicable. The weights must be split up by category of nuclear material and particular safeguards obligation.
5. Chemical composition should be indicated.
6. If applicable, the degree of enrichment or the isotopic composition should be indicated.
7. Use the description of qualifying nuclear materials as laid out in [Part 3 (14)] of this Schedule.
8. The number of items included in the shipment shall be indicated.
9. Description (type) of containers and, if possible, of the seals affixed.
10. Indicate, where appropriate, the means of transport.
11. Expected or actual date of arrival in the reporting material balance area.
12. Indicate the location within the material balance area where the qualifying nuclear material will be unpacked and can be identified, and where its quantity and composition can be verified.
13. Date(s) when material will be unpacked.

This form, duly completed and signed, must be forwarded to the ONR in accordance with Regulation 34.

PART 7

Regulation 28

REPORT OF ORE EXPORTS/SHIPMENTS

NRA SAFEGUARDS

Undertaking (2):

Mine (3):

Code (4):

Year:

Date	Consignee	Quantity contained in g:		Remarks
		of uranium	of thorium	

Date and place of dispatch of report:

Name and position of signatory:

Signature:

Explanatory notes

- (1) The shipment report is to be made at the latest by the end of January of each year for the previous year, with a separate entry for each consignee. The export report is to be made for each export consignment at the date of shipment.
- (2) Name and address of the reporting undertaking.
- (3) Name of the mine in respect of which the report is made.
- (4) Code of the mine as notified to the undertaking by the ONR.

This form, duly completed and signed, must be forwarded to the ONR in accordance with Regulation 34.

REQUEST FOR DEROGATION OF A QUALIFYING NUCLEAR FACILITY
FROM THE RULES GOVERNING THE FORM AND FREQUENCY OF
NOTIFICATIONS

NRA SAFEGUARDS

1. Date:
2. Qualifying nuclear facility:
3. Material balance area code:
4. Category of qualifying nuclear material:
5. Enrichment or isotopic composition:
6. Quantities:
7. Chemical composition:
8. Physical form:
9. Number of items:
10. Type of derogation (Regulation 38):
 - (a) fissionable material, when used in gram quantities or less as a sensing component in instruments;
 - (b) qualifying nuclear material used in non-nuclear activities, such as the production of alloys and ceramics;
 - (c) plutonium with an isotopic concentration of plutonium -238 exceeding 80%.
11. Intended use:

12. Particular safeguards obligation:

13.

Date of transfer...	From
---------------------	------

Date and place of dispatch of request: Name and position of signatory: Signature:	
Derogation granted as above... Name and position of signatory granting the derogation: Signature:... (for the ONR)	Date:

Explanatory Notes

1. This form should be used either when the initial request is made for derogation of a qualifying nuclear facility from the rules governing the form and frequency of notifications, or when qualifying nuclear material which may qualify for a derogation is imported into the UK.
2. Point 13 should be used only in the case of imports, and should state the name and address of the shipper.
3. A separate request should be submitted for each type of derogation (Regulation 38(2)).

This form, duly completed and signed, must be sent to the ONR in accordance with Regulation 34.

PART 9

Regulation 38(5)

ANNUAL REPORT OR EXPORT REPORT FOR DEROGATED QUALIFYING NUCLEAR MATERIAL

NRA SAFEGUARDS

MBA code:		
Declaration date:	Declaration No:	Name of the qualifying nuclear facility:
Reporting period:	from:	to:

Type of Report (2)	Entry (3)	Ref. (4)		Inventory change information (5)	MBA code or name and address of corresponding installation	Element	Enrichment	Weight of element	Use		Type of derogation under Regulation []
		Declaration	Entry						Nuclear or non-nuclear (6)	Description	

Date and place of dispatch of report:

Name and position of signatory:

Signature:

Explanatory Notes

- (1) This form should be used either as an annual report to declare any changes in the inventory of qualifying nuclear material held by the MBA to which a derogation has been granted as well as the stocks at the beginning and at the end of the reporting period (Regulation 38(4)), or as an export report in the case of exports from the UK (Regulation 38(5)).
- (2) The 'Type of report' column should show 'A' when the form is used for an annual report or 'EXP' when the form is used to report exports of qualifying nuclear material from the MBA to which a derogation has been granted.
- (3) 'Entry' in each declaration should be numbered sequentially, beginning with '1'.
- (4) The 'Ref.' column should be used to refer to another entry. The contents of the 'Ref.' column consist of the relevant declaration and entry numbers. The reference indicates that the current entry adds to or updates information reported earlier.

- (5) The 'Inventory change information' column should be used to state the type of inventory change that occurred during the reporting period and/or the stock at the beginning and at the end of the reporting period. The IC codes of Part 3 of this Schedule should be used. The code BB should be used to update the stock at the beginning of the period.

A separate entry should be made for each type of derogation, for each corresponding qualifying nuclear facility and for each type of inventory change.

- (6) The 'Nuclear or non-nuclear' column should show 'N' if the qualifying nuclear material is used in nuclear activities or 'NN' if it is used in non-nuclear activities.
- (7) The 'Description' column should indicate the actual or intended use of the qualifying nuclear material.

This form, duly completed and signed, must be sent to the ONR in accordance with Regulation 34.

DRAFT

OUTLINE PROGRAMME OF ACTIVITIES

NRA SAFEGUARDS

Communications should, if possible, cover the next two years.

In particular, communications should indicate:

- types of operations, e.g. proposed campaigns with indication of type and quantity of fuel elements to be fabricated or reprocessed, enrichment programmes, reactor operating programmes, with planned shutdowns,
- expected schedule of arrival of qualifying nuclear materials, stating the amount of material per batch, the form (UF₆, UO₂, fresh or irradiated fuels, etc.), anticipated type of container or packaging,
- anticipated schedule of waste processing campaigns (other than repackaging, or further conditioning without separation of elements), stating the amount of material per batch, the form (glass, high active liquid, etc.), anticipated duration and location,
- dates by which the quantity of qualifying nuclear material in products is expected to be determined, and dates of dispatch,
- dates and duration of physical inventory taking.

This communication, duly completed and signed, must be sent to the ONR in accordance with Regulation 34.

PART 11

Regulation 30(a)

ANNUAL REPORT ON EXPORTS/SHIPMENTS OF CONDITIONED WASTE (1)

NRA SAFEGUARDS

Name of the qualifying nuclear facility which is shipping:		
MBA code of the qualifying nuclear facility which is shipping:	Reporting period from	to

Date	MBA code of the receiving qualifying nuclear facility or Name and address of the receiving facility or qualifying nuclear facility (2)	Conditioned form (3)	Quantity (4)	Remarks
			g of P g of U-235 g of U g of T	
			g of P g of U-235 g of U g of T	
			g of P g of U-235 g of U g of T	
			g of P g of U-235 g of U g of T	

Date and place of dispatch of report:

Name and position of signatory:

Signature:

Explanatory notes

- (1) This report shall include all the shipments or exports of conditioned waste to facilities or qualifying nuclear facilities outside the UK that have occurred during the reporting period.
- (2) Full name and address to be filled in for exports.
- (3) The 'Conditioned form' column should show the conditioned form of the waste, e.g. glass, ceramic, cement or bitumen.
- (4) The quantity column may be based on the quantity data recorded at the qualifying nuclear

facility and does not require measurements of the items exported/shipped.

This form, duly completed and signed, must be sent to the ONR in accordance with Regulation 34.

DRAFT

PART 12

Regulation 30(b)

ANNUAL REPORT ON IMPORTS/RECEIPTS OF CONDITIONED WASTE (1)

NRA SAFEGUARDS

Name of the receiving qualifying nuclear facility:		
MBA code of the receiving qualifying nuclear facility:	Reporting period from	to

Date	Name, address and, if known, MBA code of the qualifying nuclear facility which is shipping the waste	Conditioned form (2)	Quantity (3)	Remarks
			g of P g of U-235 g of U g of T	
			g of P g of U-235 g of U g of T	
			g of P g of U-235 g of U g of T	
			g of P g of U-235 g of U g of T	

Date and place of dispatch of report:

Name and position of signatory:

Signature:

Explanatory notes

- (1) This report is required for conditioned waste which has been received from installations/qualifying nuclear facilities without an MBA code or from installations outside the UK.
- (2) The 'Conditioned form' column should show the conditioned form of the waste, e.g. glass, ceramic, cement or bitumen.
- (3) The quantity column may be based on the quantity data recorded at the qualifying nuclear

facility and does not require measurements of the items imported/received.

This form, duly completed and signed, must be sent to the ONR in accordance with Regulation 34.

DRAFT

PART 13

Regulation 31

ADVANCE NOTIFICATION OF
INTENDED WITHDRAWAL OF QUALIFYING NUCLEAR MATERIAL FROM
CIVIL ACTIVITIES

Date _____

This is to notify the ONR that a withdrawal of qualifying nuclear material from civil activities will be made as follows:

- (a) Material Balance Area code: _____
- (b) Facility code: _____
- (c) Quantity: _____ g/kg total weight of element _____
_____ g/kg fissile isotope(s), if applicable
- (d) Chemical composition : _____
- (e) Enrichment or isotopic composition (if appropriate): _____
- (f) Physical form: _____
- (g) Number of items : _____
- (h) Description of containers and seals: _____
- (i) Shipment identification data: _____
- (j) Name of the operator: _____

(Signature)

For the operator

This form, duly completed and signed, must be sent to the ONR in accordance with Regulation 34.

COMPONENTS OF AN ACCOUNTANCY AND CONTROL SYSTEM

The components of an accountancy and control system, referred to in regulation 7(3), are set out below:

- **a structure of material balance areas (MBAs)** in which the physical inventory of qualifying nuclear material in that area and the transfers of qualifying nuclear material into and out of that areas can be determined. This structure should be designed to maximise the control of qualifying nuclear material flows and physical inventories;
- **defined roles and responsibilities**, that are assigned, and communicated to operators of a qualifying nuclear facility to meet the obligations contained in these Regulations;
- **quality assurance and quality control measures** that detect, describe, address, and reduce sources of errors in and poor performance of the system;
- **a programme of measurements** that provides accurate, suitably precise, and representative information, that quantifies and characterises qualifying nuclear material;
- **a measurement control programme** that validates and provides traceability for measurement results and their uncertainties and ensures that measurements comply with the relevant international standards or are equivalent in quality to those standards, for example by assessing, approving, recording, and calibrating measurement procedures;
- the ability **track and document the movement of qualifying nuclear material** through receipts, packaging, re-packaging, processing, storage, and shipment in a timely manner. The system should show the location, characteristics, and containment of all qualifying nuclear material;
- the ability to unambiguously **identify batches of qualifying nuclear material** in whatever containers, process vessels, or equipment they may be located in. The locations in which qualifying nuclear material can be held, as well as positions within these areas, should also be identifiable;
- **an inventory control system** to regularly check the agreement between records of qualifying nuclear material, and between those records and the physical reality, and take appropriate action to manage discrepancies as they arise by investigating, documenting, reporting, and resolving such discrepancies;
- the ability to **manage anomalies** are consistent with the loss or gain of a significant amount of qualifying nuclear material, or any other situation corresponding with Regulation 17 (unusual occurrences), in a timely manner by, for example, recognising,

investigating, and documenting anomalies. The system must define personnel responsibilities and authorities to carry out the actions required by Regulation 16 (special reports);

- **data processing procedures** that store, trace, identify, and produce the information required by these Regulations, and that are required to facilitate the checking of data against the physical reality;
- **receipt and shipment procedures** that check the quantity and characteristics of qualifying nuclear material entering or leaving a qualifying nuclear facility against the accountancy information that must accompany such receipts and shipments. These procedures should also allow for the introduction or extraction of qualifying nuclear material to or from the tracking, identification, and inventory control processes described above;
- a **Physical Inventory Taking (PIT)**, carried out at least every calendar year. The period between two successive physical inventory takings should not exceed 14 months;
- **procedures for a PIT** that describe the responsibilities of those involved, the methods they should use, the records that should be kept, the associated measurement uncertainties and material balance tests (where appropriate), the reporting that must be made to the ONR, and the steps for authenticating any information made available to inspectors under these Regulations; and
- a **List of Inventory Items (LII)**, generated from a PIT, that facilitates inspector verification of information provided to ONR against the physical reality. The LII should include information on the mass and composition of qualifying nuclear material per item, as well as its location, containment, identity, and type.

SCHEDULE 3

General Consequential and supplementary amendments

SCHEDULE 4

Consequential and supplementary amendments to the Nuclear Safeguards Act 2000 and related legislation

SCHEDULE 5

Transitional provisions