Draft Regulations laid before Parliament under section 113(2)(a) and (3)(c) of the Energy Act 2013 (c. 32), for approval by resolution of each House of Parliament.

DRAFT STATUTORY INSTRUMENTS

2026 No.

NUCLEAR SAFEGUARDS

The Nuclear Safeguards (EU Exit and Fees) (Amendment) Regulations 2026

Made - - - -

Coming into force

The Secretary of State makes these Regulations in exercise of the powers conferred by sections 74(3), 75, 76A(1), (2) and (3), 101(1), (2) and (3), and 113(6) and (7) of, and paragraphs 6, 7, 11, 13(1) and 14 of Schedule 6 to, the Energy Act 2013(**a**).

In accordance with sections 76A(8) and 101(6) of the Energy Act 2013, the Secretary of State has consulted the Office for Nuclear Regulation and such other persons as the Secretary of State considers appropriate.

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

PART 1

Introduction

Citation, commencement and territorial extent

1.—(1) These Regulations may be cited as the Nuclear Safeguards (EU Exit and Fees) (Amendment) Regulations 2026.

(2) These Regulations come into force on [*date of entry into force*].

(3) These Regulations extend to England and Wales, Scotland and Northern Ireland.

(**a**) 2013 c. 32. Section 75 was amended by S.I. 2022/500 and S.I. 2023/149. Section 76A was inserted by the Nuclear Safeguards Act 2018 (c. 15), section 1(2).

(**b**) Section 113 was amended by paragraph 9(2)(a) of the Schedule to the Nuclear Safeguards Act 2018 (c. 15).

PART 2

Amendment of the Nuclear Safeguards (EU Exit) Regulations 2019

Amendment of the Nuclear Safeguards (EU Exit) Regulations 2019

2. The Nuclear Safeguards (EU Exit) Regulations 2019(**a**) are amended as follows.

Amendment to regulation 2

3. In regulation 2 (interpretation)—

(a) in the definition of "closed down", after "decommissioned" insert "for safeguards purposes";

(b) in the definition of "conditioned waste", after "means waste" insert "containing qualifying nuclear material";

(c) for the defined term "decommissioned" substitute "decommissioned for safeguards purposes";

(d) in the definition of "decommissioned for safeguards purposes", after "ONR that" insert "operations have been permanently stopped, the qualifying nuclear material has been removed and";

(e) in the definition of "qualifying nuclear facility with limited operation", for paragraph (b) substitute—

> "(b) which is not a reactor, a critical facility, a conversion facility, a fabrication facility, a reprocessing facility, an isotopic enrichment facility, a spent fuel encapsulation facility nor a separate storage facility;";

(f) for the definition of "retained waste" substitute—

> ""retained waste" means waste containing qualifying nuclear material which is generated from processing or from an operational accident, which the ONR is satisfied is irrecoverable for the time being, but which is stored;";

(g) for the definition of "waste" substitute—

> ""waste" refers to waste containing qualifying nuclear material, in concentrations or chemical forms which make the qualifying nuclear material no longer useable for any nuclear activity relevant for safeguards, or which has become practicably irrecoverable.".

Amendment to regulation 3

4.—(1) In the heading of regulation 3 (declaration of basic technical characteristics), for "basic technical characteristics" substitute "design information".

(2) In regulation 3—

(a) omit paragraph (1);

(b) in paragraph (2)—

(i) in sub-paragraphs (a), (b) and (c), for "basic technical characteristics of" substitute "design information for";

(**a**) S.I. 2019/196.

(ii) in sub-paragraph (c)—

(aa) after paragraph (i) insert "or";

(bb) after paragraph (ii) omit the "and";

(cc) omit paragraph (iii);

(c) after paragraph (2) insert—

"(A3) Where a change in the design information for a qualifying nuclear facility results in a change in the purpose or type of the facility, the category of qualifying nuclear material at the facility, or the design capacity or maximum inventory of the facility (a "repurposed facility"), the operator must declare to the ONR—

(a) the preliminary design information for the repurposed facility as soon as the decision to make the change has been taken;

(b) the design information for the repurposed facility, based on the final design for the repurposed facility, using the relevant questionnaire shown in Part 1 of Schedule 1, not later than 200 days before the day on which the repurposing started; and

(c) the design information for the repurposed facility as built, using the relevant questionnaire shown in Part 1 of Schedule 1, not later than 200 days before the day on which—

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

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

(d) in paragraph (3), for the words from "An operator" to "30 days" substitute "In any other case, an operator must declare to the ONR a change in the design information within the period of 15 days";

(e) in paragraph (4)—

(i) for "basic technical characteristics of" substitute "design information for";

(ii) for "fully decommissioned" substitute "decommissioned for safeguards purposes".

Amendment to regulation 4

5. In regulation 4 (programme of activities), in paragraph (3), for "inform the ONR of" substitute "declare to the ONR".

Amendment to regulation 5

6. In regulation 5 (particular safeguard provisions)—

(a) in paragraph (1)—

(i) in the words before sub-paragraph (a), for the words from "basic technical characteristics" to "relevant technical characteristics" substitute "information submitted by an operator under Parts 2, 3 or 6 or regulation 31 and having, where necessary, discussed the relevant information";

(ii) for sub-paragraph (b) substitute—

"(b) take account of any—

(i) obligations under a relevant international agreement(**a**);

(ii) relevant operational and technical constraints on the operator and the qualifying nuclear facility.";

(b) in paragraph (4)—

(i) in sub-paragraph (b), for "basic technical characteristics" substitute "design information";

(ii) after sub-paragraph (h) insert—

"(i) any other procedure, arrangement or equipment the ONR considers necessary or appropriate to give effect to an obligation under a relevant international agreement.";

(c) after paragraph (4) insert—

"(5) Having reviewed the information submitted by an operator under Parts 2, 3 or 6 or regulation 31 and, where necessary, having discussed the relevant information with the operator, the ONR may amend any particular safeguard provision imposed under paragraph (1) provided the amended provision meets the requirements of sub-paragraphs (a) and (b) of that paragraph.

(6) Paragraphs (2) and (3) apply in relation to an amended particular safeguard provision.

(7) The ONR may, by written notice to the relevant operator, withdraw any particular safeguard provision imposed under paragraph (1) where the ONR considers it is no longer necessary or appropriate.".

Amendment to regulation 6

7. In regulation 6 (accountancy and control of qualifying nuclear material)—

(a) in paragraph (1), after "must" insert "establish and";

(b) in paragraph (3), for "basic technical characteristics" substitute "design";

(c) in paragraph (4), for "five" substitute "30".

Amendment to regulation 7

8. In regulation 7 (accountancy and control plan), omit paragraph (2).

Amendment to regulation 8

9. In regulation 8 (replacement, etc. of accountancy and control plan), in paragraph (1)—

(a) for "basic technical characteristics of" substitute "design information for";

(b) for "regulation 3(3)" substitute "regulations 3(A3) or (3)";

(c) for "30" substitute "15".

Amendment to regulation 10

10. In regulation 10 (operating records), in paragraph (1), in sub-paragraph (a), for "operating" substitute "source".

(**a**) "Relevant international agreement" is defined in section 112(1) of the Energy Act 2013 as having the meaning given in section 112(1A), which refers to agreements specified in regulations under subsection (1B). Regulation 3 of the Nuclear Safeguards (Fissionable Material and Relevant International Agreements) (EU Exit) Regulations 2019 (S.I. 2019/195) specifies agreements for this purpose.

Amendment to regulation 12

11. In regulation 12 (accounting reports), in paragraph (1), for "13" substitute "14".

Omission of regulation 13

12. Omit regulation 13 (initial book inventory).

Amendment to regulation 17

13. In regulation 17 (unusual occurrences)—

(a) in paragraph (1), in sub-paragraph (a) omit "an increase in or";

(b) in paragraph (2), for "or increase" substitute "of qualifying nuclear material".

Amendment to regulation 19

14. In regulation 19 (additional reporting obligations), in paragraph (2) omit sub-paragraph (a).

Amendment to regulation 20

15. In regulation 20 (weight units of qualifying nuclear material)—

(a) in paragraph (1)—

(i) for "When" substitute "Subject to paragraph (1A), when";

(ii) in sub-paragraph (a), for "to at least the nearest gram" substitute "in grams";

(iii) in sub-paragraph (b), for the words from "rounded down" to the end substitute "expressed to a maximum of three decimal places.";

(b) after paragraph (1) insert—

"(1A) Paragraph (1) does not apply to information supplied under regulation 3 in so far as the relevant questionnaire in Part 1 of Schedule 1 specifies a different unit of measurement.";

(c) at the beginning of paragraph (2), for "The" substitute "Any";

(d) at the beginning of paragraph (3), for "Unless" substitute "Subject to paragraph (4) and unless";

(e) after paragraph (3) insert—

"(4) Paragraph (3) does not apply to information supplied under regulation 3.".

Amendment to regulation 21

16. In regulation 21 (exports), in paragraph (2), for "7" substitute "15".

Amendment to regulation 22

17. In regulation 22 (imports), in paragraph (2), in sub-paragraph (a), for "4" substitute "9".

Amendment to regulation 25

18. In regulation 25 (carriers and temporary storage agents)—

(a) in paragraph (4), omit "and the relevant operators";

(b) after paragraph (4), insert—

"(5) The relevant operators must retain records of the transaction and a copy of any receipt for a period of at least 30 years beginning with the day on which the record is made or the receipt is received.".

Omission of regulation 26

19. Omit regulation 26 (intermediaries).

Omission of Part 5

20. Omit Part 5 (ores).

Amendment to regulation 29

21. In regulation 29 (stock list and accounting records for conditioned and retained waste)—

(a) in paragraph (1), in sub-paragraph (b), for "operating" substitute "source";

(b) in paragraph (2)—

(i) omit "on commencement day";

(ii) for the words from "an initial stock list" to the end substitute "the most recently updated stock list referred to in paragraph (1)(a) within 30 days of the receipt of a written request from the ONR.";

(c) in paragraph (3), for "five" substitute "30".

Amendment to regulation 30

22. In regulation 30 (transfers of conditioned waste), for paragraph (1) substitute—

"(1) An operator of a qualifying nuclear facility that is used to treat or store conditioned waste must declare to the ONR—

(a) shipments or exports of conditioned waste from the qualifying nuclear facility, using the form set out in Part 9 of Schedule 1;

(b) receipts or imports of conditioned waste to the qualifying nuclear facility, using the form set out in Part 10 of Schedule 1.".

Amendment to regulation 31

23.—(1) In the heading of regulation 31 (qualifying nuclear facility with limited operation), for "basic technical characteristics" substitute "design information".

(2) In regulation 31—

(a) in paragraph (2), in sub-paragraph (b)—

(i) for "basic technical characteristics of" substitute "design information for";

(ii) for "section I-H" substitute "section I";

(b) in paragraph (5), in sub-paragraph (a)—

(i) for "basic technical characteristics of" substitute "design information for";

(ii) for "30" substitute "15".

Amendment to regulation 32

24. In regulation 32 (exemption), in paragraph (1), for "who holds only" substitute "in respect of".

Amendment to regulation 35

25. In regulation 35 (communication with the ONR)—

(a) in the words before paragraph (a), for "in writing" substitute "in writing, signed, dated";

(b) omit paragraph (a).

Amendment to regulation 39

26. In regulation 39 (inspections by the ONR), in paragraph (1), in sub-paragraph (g), for "basic technical characteristics" substitute "design information".

Omission of regulation 41

27. Omit regulation 41 (annual report).

Amendment to regulation 43

28. In regulation 43 (offences), in paragraph (1)—

(a) for "3(1)" substitute "3(2)";

(b) after "4," insert "5(3),";

(c) omit "13,".

Amendment to regulation 46

29. In regulation 46 (form of notification)—

(a) in paragraph (1)—

(i) in sub-paragraph (a), for "5" substitute "28";

(ii) in sub-paragraph (b), for "30" substitute "32";

(b) in paragraph (2), for sub-paragraph (b) substitute—

"(b) be sent by means of an electronic communications network to an address published on the website of the Department for Energy Security and Net Zero.".

Amendment to regulation 49

30. In regulation 49 (interpretation), in the definition of "equipment", for "plants", in each place it occurs, substitute "facilities".

Amendment to Schedule 1

31. In Schedule 1 (information to be provided to ONR)—

(a) for Part 1 (questionnaire for declaration of basic technical characteristics) substitute Part 1 as set out in the Schedule to these Regulations;

(b) in each of Parts 2 (inventory change report) and 3 (material balance report), in explanatory note 10 (IC code), in the table—

(i) in the entry for "Balance adjustment", in the third column, for "plant" substitute "facility";

(ii) in the entry for "Transfer to retained waste", in the third column, for the words from "has been transferred" to "could be retrieved" substitute "the ONR is satisfied is irrecoverable for the time being, but which is stored";

(iii) in the entry for "Termination of use", in the third column, in the words before paragraph (i), for "considered as irrecoverable for practical or economic reasons" substitute—

"in concentrations or chemical forms which make the qualifying nuclear material no longer usable for any nuclear activity relevant for safeguards, or which is considered as practicably irrecoverable, and";

(c) omit Part 7 (report of ore exports/shipments).

Amendment to Schedule 2

32. In Schedule 2 (components of an accountancy and control system)—

(a) for paragraph (2) substitute—

"(2) an adequate number of suitably qualified staff, with clearly defined roles and responsibilities, to meet the obligations contained in these Regulations;";

(b) after paragraph (14) omit the "and";

(c) in paragraph (15), for "type" substitute "category";

(d) after paragraph (15) insert "; and

(16) the equipment, resources and arrangements necessary to meet the obligations contained in these Regulations and ensure the security and resilience of the system.".

Amendment to Schedule 4

33. In Schedule 4 (transitional provisions)—

(a) omit paragraphs 1 to 7;

(b) in paragraph 8—

(i) in sub-paragraph (1)—

(aa) omit paragraph (c);

(bb) for "five" substitute "30";

(ii) omit sub-paragraph (3);

(c) omit paragraph 9.

PART 3

Amendment of the Nuclear Safeguards (Fees) Regulations 2021

Amendment of the Nuclear Safeguards (Fees) Regulations 2021

34. The Nuclear Safeguards (Fees) Regulations 2021(**a**) are amended as follows.

Amendment to Regulation 4

35. In regulation 4 (supplementary provisions), in paragraph (1), for "and must not exceed" substitute "so as to recover".

(**a**) S.I. 2021/1406.

Amendment to Schedule 2

36. In Schedule 2 (fees payable in connection with the Nuclear Safeguards Regulations)—

(a) in the entry for regulation 3 (declaration of design information)—

(i) in the first column, after "Regulation 3(2)," insert "(A3),";

(ii) in both columns, for "basic technical characteristics", in each place those words occur, substitute "design information";

(b) in the entry for regulation 5 (particular safeguard provisions)—

(i) in the first column, for "5(1) and (2)" substitute "5(1), (2), (5) and (7)";

(ii) in the second column—

(aa) after "qualifying nuclear facility" insert "and any amendment or withdrawal of such provisions";

(bb) for "provisions to the operator under regulation 5(2)" substitute "provisions, or any subsequent amendment or withdrawal, to the operator under regulation 5(2) or (7)";

(c) in the entry for regulation 17 (unusual occurrences), in the second column, for "an increase in or loss" substitute "a loss";

(d) omit the entry for regulation 28 (ore shipment and export reports);

(e) in the entry for regulation 29 (stock list and accounting records for conditioned and retained waste)—

(i) in the first column, for "29(4)" substitute "29(2) and (4)";

(ii) in the second column, at the beginning insert "Request, receipt and consideration of stock lists of conditioned and retained waste.";

(f) in the entry for regulation 39 (inspections by the ONR), in the second column, in paragraph (g), for "basic technical characteristics" substitute "design information".

[Name of Minister]
[Title of Minister]
Department for Energy Security and Net Zero

SCHEDULE

Regulation 31(a)

Substitution of Part 1 of Schedule 1 to the Nuclear Safeguards (EU Exit) Regulations 2019

"PART 1

Questionnaire for the Declaration of Design Information for a Qualifying Nuclear Facility

A. Conversion and Fuel Fabrication Facilities

General information

1. Name of qualifying nuclear facility (including any usual abbreviation);

2. Location, postal address, telephone number and e-mail address;

3. Owner (legally responsible person);

4. Operator (legally responsible person);

5. Description (main features only);

6. Purpose;

7. Status (e.g. planned, under construction, in operation, shutdown, closed down, decommissioned for safeguards purposes);

8. Construction schedule dates (if not in operation): start of construction, commissioning, operation;

9. Normal operating mode (days only, number of shifts; number of days/year, etc.);

10. Facility layout (drawings showing structural containment, fences, access, qualifying nuclear material storage areas, laboratories, waste disposal areas, routes followed by qualifying nuclear material, experimental and test areas, etc.);

11. Siting of facility (maps showing location, premises and perimeter of site, other buildings, roads, railways, rivers, etc.);

12. Titles and addresses of persons responsible for accountancy and control of qualifying nuclear material and contact with the Agency (if possible, provide organisation charts showing the position of persons).

Overall Process Parameters

13. Facility description (indicating important items of equipment which use, produce or process qualifying nuclear material, all process stages, storage areas and feed, product and waste points, as relevant to the measurement, accountancy and control of qualifying nuclear material) and general flow diagram (indicating equipment, hoods, cells, areas which contain qualifying nuclear material and those specific areas where hold-up of qualifying nuclear material can occur);

14. Process description (indicating type of conversion, method of fabrication, sampling methods, etc. and the modification of physical and chemical forms);

15. Design capacity (tonnes/year of uranium, plutonium and/or thorium);

16. Anticipated annual throughput (in the form of a forward programme indicating the proportion of various feeds and products);

17. Other important items of equipment using, producing or processing qualifying nuclear material, if any (e.g. testing and experimental equipment).

Qualifying Nuclear Material Description and Flow

18. Description of main qualifying nuclear material: provide the following for all feed, intermediate product (powder, pellets, etc. separately stored or shipped) and product—

i) main types of accounting units to be handled in the facility (drums, elements, bundles, etc.);

ii) chemical and physical form (for product include types of fuel element/assemblies, detailed description of general structure and overall structure, overall dimensions of fuel elements/assemblies, including qualifying nuclear material content and enrichment), with drawings;

iii) throughput, uranium enrichment ranges or plutonium content, or thorium content (for normal flowsheet operation, indicating if blending and/or recycling takes place);

iv) batch size/flow rate and campaign period; means of batch identification;

v) storage and facility inventory (indicating any change with throughput);

vi) frequency of receipt or shipment (batches/units per month);

19. Scrap material;

20. Waste material: describe for each waste stream (including contaminated equipment, measured discards and retained waste)—

i) major contributors (sources);

ii) types of waste;

iii) chemical and physical form (liquid, solid, etc.);

iv) estimated enrichment ranges and uranium/plutonium content;

v) estimated quantities per year, period of sorting;

vi) waste generated rates (as percentage of input/throughput, quantities per month);

vii) store inventory range and maximum capacity;

viii) method and frequency of recovery/disposal;

21. Waste treatment system (with diagrams);

22. Other qualifying nuclear material in the facility (if any) and its location (with diagrams);

23. Schematic flowsheet for qualifying nuclear material (identifying sampling points, flow and inventory measurement points, accounting areas, inventory locations, etc.);

24. Categories, form and ranges of qualifying nuclear material content (including enrichment, as applicable) and ranges of quantities of qualifying nuclear material flow for each qualifying nuclear material handling area (i.e. process area, storage area, other locations), including maximum quantities of qualifying nuclear material to be handled in accounting areas at any one time;

25. Recycling processes: describe any such processes giving source and form of qualifying nuclear material, method of storage, normal inventory, frequency of processing, duration of temporary storage, schedules for any external recycling and measurement method of fissile content of recycled qualifying nuclear material (with diagram);

26. Inventory:

i) in-process (within facility and equipment during normal operation, indicate quantity, range of enrichment, plutonium content, form and principal locations and any significant change in time or throughput; indicate anticipated residual hold-up and mechanism, e.g. plate out, condensation);

ii) feed and product storages;

iii) other locations (quantity, range of enrichment, plutonium content, form and location of inventory not already specified).

Handling of Qualifying Nuclear Material (For Each Accounting Area)

27. Containers, packaging and storage area description: for feeds, products and wastes, describe the type and size of storage and shipping containers and packaging used (including nominal capacity, capacity for normal operation and type of material), method of storage or packing, filing and emptying procedures, shielding and any special identification features (with drawings);

28. Methods and means of transfer of qualifying nuclear material (including equipment used for handling of feed, product, waste);

29. Transportation routes followed by qualifying nuclear material (with reference to facility layout), with diagrams;

30. Shielding (for storage, transfer and process areas);

31. Maintenance, decontamination, clean-out: describe plans and procedures for decontamination and clean-out of equipment containing qualifying nuclear material, defining all sampling and measurement points associated with the following (or in cases where clean-out and/or sampling is not possible, indicate how the hold-up of qualifying nuclear material is measured or calculated)—

i) normal facility maintenance;

ii) facility and equipment decontamination and subsequent recovery of qualifying nuclear material;

iii) facility and equipment clean-out including means of ensuring vessels are empty;

iv) facility start-up and plant shutdown (if different from normal operation).

Protection and Safety Measures

32. Basic measures for physical protection of qualifying nuclear material;

33. Specific health and safety rules for inspector compliance.

Accountancy and Control of Qualifying Nuclear Material

34. System description: describe the qualifying nuclear material accountancy system; method of recording and reporting accountancy data and establishing material balances; frequency of material balances; and procedures for account adjustment after physical inventory, mistakes, etc., under the following headings (include specimen forms for all procedures)—

i) General: state what general and subsidiary ledgers will be used, their form (hard copies, tapes, microfilms, etc.) and who has responsibility and authority; identify the source data (e.g. shipping and receiving forms, internal transfer documents, physical inventory forms, initial recording of measurements and measurement control sheets); describe procedures for making adjustments, the source data and records and how adjustments are authorised and substantiated;

ii) Receipts (including method of dealing with shipper/receiver differences and subsequent account corrections, the checks and measurements used to confirm qualifying nuclear material content and the persons responsible for those determinations);

iii) Shipments (products, waste, measured discards);

iv) Physical inventory: describe procedures (including basic inventory approach, i.e. planning, organising and conducting the inventory, prelisting, use of prior measurement data, who has primary responsibility, how process clean-out is accomplished, accountancy of process residual hold-up), scheduled frequency, estimated distribution of qualifying nuclear material, methods of operator's inventory taking (both for item and/or bulk accountancy, including relevant assay method), accessibility and possible verification method for qualifying nuclear material, expected accuracy and access to qualifying nuclear material and list major items of equipment regarded as qualifying nuclear material containers;

v) Measured discards (method of estimation of quantities per year/month, method of disposal);

vi) Retained waste (method of estimation of quantities per year, method and envisaged period of storage, possible subsequent uses);

vii) Unmeasured losses (indicate the methods used to estimate unmeasured losses);

viii) Operational Records and Accounts (including logbooks, general ledgers, internal transfer forms, method of adjustment or correction, retention location, languages, control measures and responsibility for records);

35. Features related to containment and surveillance measures (general description of applied or possible measures in reference to floor plan or facility layout);

36. For each flow and inventory measurement point, and sampling points of accounting areas (including those identified under questions 13, 23 and 24), provide the following—

Total number of measurement points:

i) description of location, type, identification;

ii) expected types of inventory change at the measurement point;

iii) whether the measurement point can be used for physical inventory taking;

iv) physical and chemical form of qualifying nuclear material (including enrichment range, plutonium content and cladding materials description);

v) qualifying nuclear material containers, packaging and method of storage;

vi) sampling procedure and equipment used (including number of samples taken, frequency and rejection criteria);

vii) measurement/analytical methods and equipment used and corresponding accuracies;

viii) source and level of random and systematic errors for feed, product, scrap, waste (weight, volume, sampling, analytical);

ix) calculative and error propagation techniques;

x) technique and frequency of calibration of equipment used, and standards used;

xi) programme for the continuing appraisal of the accuracy of weight, volume, sampling and analytical techniques and measurement methods;

xii) programme for statistical evaluation of data from (x) and (xi);

xiii) method of converting source data to batch data (standard calculative procedures, constants and empirical relationships for feed, products in sub-accounting areas, waste and scrap);

xiv) means of batch identification;

xv anticipated batch flow rate per year;

xvi) anticipated number of inventory batches;

xvii) anticipated number of items per flow and inventory batches;

xvii category, composition and quantity of qualifying nuclear material per batch (including batch data, total weight of each element of qualifying nuclear material and form of qualifying nuclear material);

xix) features related to containment and surveillance measures;

37. Overall limit of accuracy: describe procedures to combine individual measurement error determination to obtain the overall limit of accuracy for—

i) shipper/receiver differences;

ii) book inventory;

iii) physical inventory;

iv) material unaccounted for.

Post-Operational Information

38. Decommissioning schedule dates: end of operations, decommissioned;

39. Facility decommissioning plan including:

i) key events of the decommissioning plan;

ii) removal and recovery of qualifying nuclear material;

iii) removal or rendering inoperable of essential equipment.

B. Critical and Subcritical Facilities

General information

1. Name of qualifying nuclear facility (including any usual abbreviation);

2. Location, postal address, telephone number and e-mail address;

3. Owner (legally responsible person);

4. Operator (legally responsible person);

5. Description (main features only);

6. Purpose;

7. Status (e.g. planned, under construction, in operation, shutdown, closed down, decommissioned for safeguards purposes);

8. Construction schedule dates (if not in operation): start of construction, commissioning, operation;

9. Normal operating mode (days only, number of shifts; number of days/year, etc.);

10. Facility layout (drawings showing structural containment, fences, access, qualifying nuclear material storage areas, laboratories, waste disposal areas, routes followed by qualifying nuclear material, experimental and test areas, etc.);

11. Siting of facility (maps showing location, premises and perimeter of site, other buildings, roads, railways, rivers, etc.);

12. Titles and addresses of persons responsible for accountancy and control of qualifying nuclear material and contact with the Agency (if possible, provide organisation charts showing the position of persons).

General Storage Data

13. Number of critical assemblies in the facility and their location (with drawings);

14. Expected maximum operating power;

15. General information on:

i) moderator;

ii) reflector;

iii) blanket;

iv) coolant;

v) important items of equipment which use, produce or process qualifying nuclear material.

Description of Qualifying Nuclear Material

16. Main categories of qualifying nuclear material/fuel and the nominal weight of qualifying nuclear material in the facility;

17. Fuel enrichment range and plutonium content;

18. Description of fuel elements (for each type):

i) physical and chemical form of fuel;

ii) geometrical form or type;

iii) dimensions;

iv) number of slugs per element;

v) quantity of qualifying nuclear material and fissionable isotopes (with design tolerance);

vi) composition of alloy, etc.;

19. Description of cladding material:

i) thickness;

ii) composition of material;

iii) bonding;

20. Sub-assemblies of fuel (number of fuel elements per nuclear assembly, arrangement of fuel elements in sub-assembly, configuration and nominal weight of qualifying nuclear material per sub-assembly, with design tolerance), with drawings;

21. Basic operational accounting unit (fuel elements/assemblies, etc.), with drawings;

22. Other types of units (e.g. test or specially instrumented assemblies, fuelled pilot rod);

23. Means of qualifying nuclear material/fuel identification;

24. Other qualifying nuclear material in the facility (each separately identified);

25. Core diagram (for each critical assembly showing the general disposition, core support structure, shielding and heat removal arrangements, channels for fuel elements or sub-assemblies, control rods, moderator, reflector, beam tubes, dimensions, etc.);

26. Ranges of critical mass and maximum radius;

27. Description of most common configurations (with drawings);

28. Average mean neutron flux in the core:

i) thermal;

ii) fast;

29. Instrumentation for measuring neutron and gamma flux:

i) accuracy and type of principal instruments;

ii) location of indicator and recorder;

30. Diagram of radiation level outside/inside shielding at specified places;

31. Maximum radiation dose rate of fuel blanket after refuelling (at the surface and at a distance of 1 metre);

32. Schematic flowsheet for qualifying nuclear material for operator purposes (identifying measurement points, accounting areas, inventory locations, etc.);

33. Inventory: state quantity range and approximate uranium enrichment and plutonium content for—

i) qualifying nuclear material storage areas;

ii) core areas;

iii) assembly core;

iv) other locations;

34. Qualifying nuclear material:

i) packaging (description);

ii) storage plan and arrangements (with drawings);

iii) capacity of storage;

iv) qualifying nuclear material preparation (description and identification of layout and general arrangement);

35. Drawings of fuel transfer equipment, if any;

36. Routes followed by qualifying nuclear material (with drawings);

37. Main equipment used for assembling, testing or measuring qualifying nuclear material.

Protection and Safety Measures

38. Basic measures for physical protection of qualifying nuclear material;

39. Specific health and safety rules for inspector compliance.

Accountancy and Control of Qualifying Nuclear Material

40. System description: describe the qualifying nuclear material accountancy system; method of recording and reporting accountancy data; and procedures for account adjustment after inventory change and for correction of mistakes, etc., under the following headings (include specimen forms for all procedures)—

i) General;

ii) Receipts;

iii) Shipments;

iv) Physical inventory: describe procedures, scheduled frequency, methods of operator's inventory taking (both for item and/or bulk accountancy), including relevant assay methods and expected accuracy, access to qualifying nuclear material, methods of verification of qualifying nuclear material in the core and list major items of equipment regarded as qualifying nuclear material containers;

v) Operational records and accounting records (including method of adjustment or correction, place of preservation and language)

41. How often is the core disassembled to permit the verification of contained qualifying nuclear material?

42. Features related to containment and surveillance measures (general description of applied or possible measures);

43. For each measurement point of an accounting area identified under question 32, provide the following (if applicable) and attach drawings (if necessary):

Total number of measurement points:

i) description of location, type, identification;

ii) anticipated types of inventory change and whether the measurement point can be used for physical inventory taking;

iii) physical and chemical form of qualifying nuclear material (with cladding materials description);

iv) qualifying nuclear material containers, packaging;

v) sampling procedures and equipment used;

vi) measurement methods and equipment used;

vii) source and level of random and systematic errors (measurements);

viii) technique and frequency of calibration of equipment used;

ix) method of converting source data to batch data;

x) means of batch identification;

xi) anticipated batch flow rate per year;

xii) anticipated number of items per flow and inventory batch;

xiii) category, composition and quantity of qualifying nuclear material per batch (including batch data, total weight of qualifying nuclear material in item and the isotopic composition (for uranium) and plutonium content, when appropriate; form of qualifying nuclear material);

xiv) features related to containment surveillance measures.

Post-Operational Information

44. Decommissioning schedule dates: end of operations, decommissioned;

45. Facility decommissioning plan including:

i) key events of the decommissioning plan;

ii) removal and recovery of qualifying nuclear material;

iii) removal or rendering inoperable of essential equipment.

C. Isotopic Enrichment Facilities

General information

1. Name of qualifying nuclear facility (including any usual abbreviation);

2. Location, postal address, telephone number and e-mail address;

3. Owner (legally responsible person);

4. Operator (legally responsible person);

5. Description (main features only);

6. Purpose;

7. Status (e.g. planned, under construction, in operation, shutdown, closed down, decommissioned for safeguards purposes);

8. Construction schedule dates (if not in operation): start of construction, commissioning, operation;

9. Normal operating mode (days only, number of shifts; number of days/year, etc.);

10. Facility layout (drawings showing structural containment, fences, access, qualifying nuclear material storage areas, laboratories, waste disposal areas, routes followed by qualifying nuclear material, experimental and test areas, etc.);

11. Siting of facility (maps showing location, premises and perimeter of site, other buildings, roads, railways, rivers, etc.);

12. Titles and addresses of persons responsible for accountancy and control of qualifying nuclear material and contact with the Agency (if possible, provide organisation charts showing the position of persons).

Overall Process Parameters

13. Facility description (indicating important items of equipment which use, produce or process qualifying nuclear material, all process stages, storage areas and feed, product, tail and waste points) and general flow diagram;

14. Process description (identifying sampling and key measurement points, material balance areas, inventory locations) and flowsheet for normal operation;

15. Design capacity (throughput in tonnes of separative work units/year and maximum energy consumption in MW);

16. Anticipated annual throughput (in the form of a forward programme indicating the proportion of various feeds and products).

Qualifying Nuclear Material Description and Flow

17. Description of main qualifying nuclear material: provide the following for all feed, product and tails—

i) chemical and physical form;

ii) throughput and enrichment ranges (for normal flowsheet operation indicating if blending and/or recycling takes place);

iii) batch size/flow rate and campaign period;

iv) maximum capability as concentration of top product (nat. uranium feed);

v) storage inventory (indicating any change with throughput);

vi) frequency of receipt or shipment;

18. Waste material:

i) source and form (indicating major contributors; liquid or solid; range of constituents; enrichment range; include contaminated equipment);

ii) storage inventory range, method and frequency of recovery/disposal;

19. Containers and storage area description: for feeds, products, tails and wastes, describe the type and size of containers (including operational capacity), method of storage, filing and emptying procedures (including time cycle) and any special identification features;

20. Measured discards and retained waste (as a percentage of input);

21. Inventory:

i) in-process (within facility and equipment during normal operation, indicate quantity, form and main locations and any significant change with time or throughput);

ii) other locations (quantity, form and location of inventory not already specified).

Facility Maintenance

22. Maintenance, decontamination, clean-out: describe plans and procedures and define all sampling and key measurement points associated with the following—

i) normal facility maintenance;

ii) facility and equipment decontamination and subsequent qualifying nuclear material recovery;

iii) facility and equipment clean-out including means of ensuring vessels are empty.

Protection and Safety Measures

23. Basic measures for physical protection of qualifying nuclear material;

24. Specific health and safety rules for inspector compliance.

Accountancy and Control of Qualifying Nuclear Material

25. System description: describe the qualifying nuclear material accountancy system, method of recording and reporting accountancy data and establishing material balances and procedures for account adjustment after inventory change, mistakes, etc., under the following headings (include specimen forms for all procedures)—

i) General;

ii) Receipts (including method of dealing with shipper/receiver differences and subsequent account corrections);

iii) Shipments (products and waste);

iv) Physical inventory: frequency, procedures, estimated distribution (list major items of equipment regarded as qualifying nuclear material containers);

v) Measured Discards and Retained Waste;

vi) Operational Records and Accounts (including method of adjustment or correction, place of preservation and language);

26. For each key measurement point identified under questions 14 and 22, provide the following—

Total number of measurement points:

i) identification;

ii) chemical and physical form of qualifying nuclear material;;

iii) sampling procedure and equipment used

iv) measurement/analytical method and equipment used

v) source and level of random and systematic errors (weighing, volume, sampling, analytical);

vi) method of converting source data to batch data (standard calculative procedures, constants and empirical relationships);

vii) calculative and error propagation technique;

viii) technique and frequency of calibration of equipment used;

ix) programme for the continuing appraisal of the accuracy of weight, volume, sampling techniques and measurement methods;

x) programme for statistical evaluation of data from (viii) and (ix);

27. Features related to containment and surveillance measures (general description of applied or possible measures in reference to floor plan or facility layout);

28. Overall limit of accuracy: describe procedures to combine individual measurement error determination to obtain the overall limit of accuracy for—

i) shipper/receiver differences;

ii) book inventory;

iii) physical inventory;

iv) material unaccounted for.

Post-Operational Information

29. Decommissioning schedule dates: end of operations, decommissioned;

30. Facility decommissioning plan including:

i) key events of the decommissioning plan;

ii) removal and recovery of qualifying nuclear material;

iii) removal or rendering inoperable of essential equipment.

D. Reprocessing Facilities

General information

1. Name of qualifying nuclear facility (including any usual abbreviation);

2. Location, postal address, telephone number and e-mail address;

3. Owner (legally responsible person);

4. Operator (legally responsible person);

5. Description (main features only);

6. Purpose;

7. Status (e.g. planned, under construction, in operation, shutdown, closed down, decommissioned for safeguards purposes);

8. Construction schedule dates (if not in operation): start of construction, commissioning, operation;

9. Normal operating mode (days only, number of shifts; number of days/year, etc.);

10. Facility layout (drawings showing structural containment, fences, access, qualifying nuclear material storage areas, laboratories, waste disposal areas, routes followed by qualifying nuclear material, experimental and test areas, etc.);

11. Siting of facility (maps showing location, premises and perimeter of site, other buildings, roads, railways, rivers, etc.);

12. Titles and addresses of persons responsible for accountancy and control of qualifying nuclear material and contact with the Agency (if possible, provide organisation charts showing the position of persons).

Overall Process Parameters

13. Facility description (indicating important items of equipment which use, produce or process qualifying nuclear material, all process modification stages, storage areas and feed, product and waste points as relevant to the measurement, control and accountancy of qualifying nuclear material) and general flow diagram (indicating equipment, hoods, cells, areas which contain qualifying nuclear material and those specific areas where hold-up of qualifying nuclear material can occur);

14. Process description (indicating the modification of physical and chemical forms);

15. Design capacity (tonnes/year of uranium, plutonium and/or thorium);

16. Anticipated annual throughput (in the form of a forward programme indicating the proportion of various feeds and products);

17. Other important items of equipment using, producing or processing qualifying nuclear material, if any (e.g. testing and experimental equipment);

Qualifying Nuclear Material Description and Flow

18. Description of main qualifying nuclear material: provide the following for all feed and product (Uranium, Plutonium)—

i) main types of accounting units to be handled in the facility;

ii) chemical and physical form (for feed include types of fuel element/assemblies, describe general structure and overall dimensions of fuel elements/assemblies, including qualifying nuclear material content and enrichment), with drawings;

iii) throughput, uranium content and its enrichment ranges, plutonium content and thorium content, where applicable;

iv) batch size/flow rate and campaign period, means of batch identification;

v) storage and facility inventory (indicating any change with throughput);

vi) frequency of receipt or shipment (batches/units per month);

19. Waste material (including contaminated equipment, measured discards and retained waste): for each waste stream, describe—

i) major contributors (sources);

ii) type of waste after waste processing;

iii) chemical and physical form of waste feeds, intermediate storage and waste product after processing (liquid, solid etc.);

iv) for each material in point (iii), uranium and its enrichment ranges/plutonium content;

v) estimated quantities per year, period of storing;

vi) waste generated rates (as a percentage of input/throughput, quantities per month);

vii) store inventory range and maximum capacity;

viii) method and frequency of recovery/disposal;

20. Waste treatment system (with diagrams);

21. Other qualifying nuclear material in the facility (if any) and its location (with diagrams);

22. Schematic flowsheet for qualifying nuclear material for operator purposes (identifying sampling points, flow and inventory measurement points, accounting areas, inventory locations, etc.);

23. categories, form and ranges of qualifying nuclear material content (including enrichment, as applicable), ranges of quantities of qualifying nuclear material flow for each qualifying nuclear material handling area (i.e. process area, storage area, other locations), including maximum quantities of qualifying nuclear material to be handled in accounting areas at any one time;

24. Recycling processes: describe any such processes giving source and form of qualifying nuclear material, method of storage, normal inventory, frequency of processing, duration of temporary storage, schedules for any external recycling and measurement method for fissile content of recycled qualifying nuclear material (with diagram);

25. Inventory:

i) in-process (within facility and equipment during normal operation, indicate quantity, uranium content and its enrichment ranges, plutonium content, thorium content, if applicable, form and principal locations and any significant change in time or throughput; indicate anticipated residual hold-up and mechanism);

ii) feed and product storages;

iii) other locations (quantity, enrichment range, plutonium content, form and location of inventory not already specified).

Handling of Qualifying Nuclear Material (For Each Accounting Area)

26. Containers, packaging and storage area description: for feeds, products and wastes, describe the size and type of containers and packaging used; method of storage including fuel element locations, handling equipment and its capabilities; any special identification features (with drawings);

27. Methods and means of transfer of qualifying nuclear material (including equipment used for handling of feed, product, recycled qualifying nuclear material and waste);

28. Transportation routes followed by qualifying nuclear material (with reference to facility layout), with diagrams;

29. Shielding (for storage and transfer).

Facility Maintenance

30. Maintenance, decontamination, clean-out: describe plans and procedures for decontamination and clean-out of equipment containing qualifying nuclear material (in cases where clean-out and/or sampling is not possible, indicate how the hold-up of qualifying nuclear material is measured or calculated), defining all sampling and measurement points associated with—

i) normal plant maintenance;

ii) plant and equipment decontamination and subsequent qualifying nuclear material recovery;

iii) plant and equipment clean-out including means of ensuring vessels are empty;

iv) plant start-up and plan shut-down (if different from normal operation).

Protection and Safety Measures

31. Basic measures for physical protection of qualifying nuclear material;

32. Specific health and safety rules for inspector compliance.

Accountancy and Control of Qualifying Nuclear Material

33. System description: describe the qualifying nuclear material accountancy system, method of recording and reporting accountancy data and establishing material balances, frequency of material balances, procedures for account adjustment after inventory change, mistakes, etc., under the following headings (include specimen forms for all procedures)—

i) General: state what general and subsidiary ledgers will be used, their form (hard copies, tapes, microfilms, etc.) and who has responsibility and authority; identify the source data (e.g. shipping and receiving forms, initial recording of measurements and measurement control sheets); describe procedures for making adjustments, the source data and records and how adjustments are authorised and substantiated;

ii) Receipts (including method of dealing with shipper/receiver differences and subsequent account corrections; checks and measurements used to confirm qualifying nuclear material content and persons responsible);

iii) Shipments (products, waste, measured discards);

iv) Physical inventory: describe procedures (including basic inventory approach, i.e. planning, organising and conducting the inventory, prelisting, use of prior measurement data, who has primary responsibility for the inventory, how process clean-out is accomplished, accountancy of process residual hold-up), scheduled frequency, scheduled frequency, estimated distribution of qualifying nuclear material, methods of operator's inventory taking (both

for item and/or bulk accountancy, including relevant assay method), accessibility and possible verification method for irradiated qualifying nuclear material, expected accuracy and access to qualifying nuclear material (list major items of equipment regarded as qualifying nuclear material containers);

v) Measured discards (method of estimation of quantities per year/months, method of disposal);

vi) Retained waste (method of estimation of quantities per year, method and anticipated period of storage; possible subsequent uses of retained waste);

vii) Unmeasured losses (methods used to estimate unmeasured losses);

viii) Operational Records and Accounts (including logbooks, general ledgers, internal transfer forms, method of adjustment or correction, retention location and language; control measures and responsibility for records);

34. Features related to containment and surveillance measures (general description of applied or possible measures);

35. For each flow and inventory measurement and sampling point of accounting areas identified under questions 13, 22 and 23, provide the following—

Total number of measurement and sampling points:

i) description of location, type, identification;

ii) type of inventory change expected at the measurement or sampling point;

iii) whether the measurement or sampling point can be used for physical inventory taking;

iv) physical and chemical form of qualifying nuclear material (including enrichment range, plutonium content and cladding material description);

v) qualifying nuclear material containers, packaging and method of storage;

vi) sampling procedure and equipment used (including number of samples taken, frequency and rejection criteria);

vii) measurement/analytical method and equipment used and corresponding accuracies;

vii) source and level of random and systematic errors for feed, product, waste (weight, volume, sampling, analytical);

ix) calculative and error propagation technique;

x) technique and frequency of calibration of equipment used and standards used;

xi) programme for the continuous appraisal of the accuracy of weight, volume, sampling and analytical techniques and measurement methods;

xii) programme for statistical evaluation of data from (x) and (xi);

xiii) method of converting source data to batch data (standard calculative procedures, constants and empirical relationships for feed, products in sub-accounting areas and waste);

xiv) means of batch identification;

xiv anticipated batch flow rate per year;

xvi) anticipated number of inventory batches present at the measurement or sampling point;

xvii) anticipated number of items per flow and inventory batches;

xviii) category, composition and quantity of qualifying nuclear material per batch (including batch data, total weight of each element of qualifying nuclear material and form of qualifying nuclear material);

xix) features related to containment and surveillance measures;

36. Overall limit of accuracy: describe procedure to combine individual measurement error determination to obtain the overall limit of accuracy for—

i) shipper/receiver differences;

ii) book inventory;

iii) physical inventory;

iv) material unaccounted for.

Post-Operational Information

37. Decommissioning schedule dates: end of operations, decommissioned;

38. Facility decommissioning plan including:

i) key events of the decommissioning plan;

ii) removal and recovery of qualifying nuclear material;

iii) removal or rendering inoperable of essential equipment.

E. Research and Development Facilities

General information

1. Name of qualifying nuclear facility (including any usual abbreviation);

2. Location, postal address, telephone number and e-mail address;

3. Owner (legally responsible person);

4. Operator (legally responsible person);

5. Description (main features only);

6. Purpose;

7. Status (e.g. planned, under construction, in operation, shutdown, closed down, decommissioned for safeguards purposes);

8. Construction schedule dates (if not in operation): start of construction, commissioning, operation;

9. Normal operating mode (days only, number of shifts; number of days/year, etc.);

10. Facility layout (drawings showing structural containment, fences, access, qualifying nuclear material storage areas, laboratories, waste disposal areas, routes followed by qualifying nuclear material, experimental and test areas, etc.);

11. Siting of facility (maps showing location, premises and perimeter of site, other buildings, roads, railways, rivers, etc.);

12. Titles and addresses of persons responsible for accountancy and control of qualifying nuclear material and contact with the Agency (if possible, provide organisation charts showing the position of persons).

General Facility Data

13. Facility description (indicating accounting areas), with diagram;

14. Normal inventory;

15. Anticipated annual throughput and/or inventory for the facility working at nominal capacity;

16. Description of the use of qualifying nuclear material;

17. Important items of equipment which use, produce or process qualifying nuclear material.

Qualifying Nuclear Material Description

18. Main types of accounting units to be handled in the facility;

19. Description of qualifying nuclear material for each accounting area (general):

i) chemical and physical form (with cladding materials description);

ii) enrichment ranges and plutonium content;

iii) estimated nominal weight of qualifying nuclear material at the facility;

20. Waste material:

i) source and form (indicating major contributors; liquid or solid; range of constituents, enrichment range and plutonium content; include contaminated equipment);

ii) quantities in storage and at other locations;

iii) method and frequency of recovery/disposal;

21. Other qualifying nuclear material in the facility and its location (each separately located);

22. Means of qualifying nuclear material identification in the facility;

23. Radiation level at qualifying nuclear material locations (at the surface of the qualifying nuclear material and at distance of 1 meter in μSv/h, mSv/h or Sv/h).

Qualifying Nuclear Material Flow

24. Schematic flowsheet for qualifying nuclear material for operator purposes (identifying measurement points, accounting areas, inventory locations, etc. for operator purposes);

25. Categories, form and range of quantities of qualifying nuclear material in operation areas, storage areas, other locations (average data for each location).

Handling of Qualifying Nuclear Material (For Each Accounting Area)

26. Description of qualifying nuclear material storage (including capacity, anticipated inventory and throughput, etc.), with drawings;

27. Maximum quantity of qualifying nuclear material to be handled in accounting areas;

28. Modification of the physical/chemical form during operation;

29. Qualifying nuclear material transfer;

30. Frequency of receipt and shipment;

31. Qualifying nuclear material transfer equipment (if applicable), with drawings;

32. Description of containers used for storage and handling (with drawings);

33. Routes followed by qualifying nuclear material;

34. Shielding (for storage and transfer).

Protection and Safety Measures

35. Basic measures for physical protection of qualifying nuclear material;

36. Specific health and safety rules for inspector compliance.

Accountancy and Control of Qualifying Nuclear Material

37. System description: describe the qualifying nuclear material accountancy system, method of recording and reporting accountancy data and establishing material balances and procedures for account adjustment after inventory and correction of mistakes, etc., under the following headings (include specimen forms for all procedures)—

i) General;

ii) Receipts (including method of dealing with shipper/receiver differences and subsequent account corrections);

iii) Shipments (including waste);

iv) Measured discards (estimated quantities per year/month, method of management);

v) Retained waste (estimated quantities per year, period of storing);

vi) Physical inventory: describe procedures, scheduled frequency, estimated distribution on qualifying nuclear material, methods of operator's inventory taking (both for item and/or mass accountancy, including relevant assay method), accessibility and possible verification method for irradiated qualifying nuclear material, expected accuracy and access to qualifying nuclear material (list major items of equipment regarded as qualifying nuclear material containers);

vii) Operational Records and Accounting Records (including method of adjustment or correction, place of preservation and language);

38. Features related to containment and surveillance measures (general description of applied or possible measures);

39. For each measurement point of accounting areas identified under question 24, provide the following (if applicable)—

Total number of measurement points:

i) description of location, type, identification;

ii) anticipated types of inventory change and/or whether the measurement point can be used for physical inventory taking;

iii) physical and chemical form of qualifying nuclear material (with cladding materials description);

iv) qualifying nuclear material containers, packaging;

v) sampling procedure and equipment used;

vi) measurement method and equipment used;

vii) source and level of random and systematic errors (weight, volume, sampling, analytical, non-destructive assay);

viii) technique and frequency of calibration of equipment used;

ix) method of converting source data to batch data;

x) means of batch identification;

xi) anticipated batch flow rate per year;

xii) anticipated number of inventory batches;

xiii) anticipated number of items per flow and inventory batches;

xiv) category, composition and quantity of qualifying nuclear material per batch (including batch data, total weight of qualifying nuclear material in item, isotopic composition (for uranium) and plutonium content, when appropriate; form of qualifying nuclear material);

xv) Features related to containment and surveillance measures.

Post-Operational Information

40. Decommissioning schedule dates: end of operations, decommissioned;

41. Facility decommissioning plan including:

i) key events of the decommissioning plan;

ii) removal and recovery of qualifying nuclear material;

iii) removal or rendering inoperable of essential equipment.

F. Research and Power Reactors

General information

1. Name of qualifying nuclear facility (including any usual abbreviation);

2. Location, postal address, telephone number and e-mail address;

3. Owner (legally responsible person);

4. Operator (legally responsible person);

5. Description (main features only);

6. Purpose;

7. Status (e.g. planned, under construction, in operation, shutdown, closed down, decommissioned for safeguards purposes);

8. Construction schedule dates (if not in operation): start of construction, commissioning, operation;

9. Normal operating mode (days only, number of shifts; number of days/year, etc.);

10. Facility layout (drawings showing structural containment, fences, access, qualifying nuclear material storage areas, laboratories, waste disposal areas, routes followed by qualifying nuclear material, experimental and test areas, etc.);

11. Siting of facility (maps showing location, premises and perimeter of site, other buildings, roads, railways, rivers, etc.);

12. Titles and addresses of persons responsible for accountancy and control of qualifying nuclear material and contact with the Agency (if possible, provide organisation charts showing the position of persons).

General Reactor Data

13. Facility description (indicating important items of equipment which use, produce or process qualifying nuclear material) and general flow diagram;

14. Rated thermal output, electricity output (for power reactors);

15. Number of units (reactors) and their layout in the facility;

16. Reactor type;

17. Type of refuelling (on or off load);

18. Core enrichment range and plutonium concentration (at equilibrium for on-load reactors; initial and final for off-load reactors);

19. Moderator;

20. Coolant;

21. Blanket, reflector.

Qualifying Nuclear Material Description

22. Types of fresh fuel;

23. Fresh fuel enrichment (U-235) and/or plutonium content (average enrichment per each type of assembly);

24. Nominal weight of fuel in elements/assemblies (with design tolerances);

25. Physical and chemical form of fresh fuel (general description);

26. Reactor assemblies (with drawings): indicate for each type—

i) types of assemblies;

ii) number of fuel assemblies, control and shim assemblies, experimental assemblies in the core, in blanket zone(s);

iii) number and types of fuel elements;

iv) average enrichment and/or plutonium content per assembly;

v) general structure;

vi) geometric form;

vii) dimensions;

viii) cladding material;

27. Description of fresh fuel elements (with drawings):

i) physical and chemical form of fuel;

ii) quantity of qualifying nuclear material and fissionable isotopes (with design tolerance);

iii) enrichment and/or plutonium content;

iv) geometric form;

v) dimensions;

vi) number of slugs/pellets per element;

vii) composition of alloy;

viii) cladding material (thickness, composition of material, bonding);

28. Provision for element exchange in assemblies of each type (indicate whether this is foreseen to become a routine operation);

29. Basic operational accounting unit (fuel elements/assemblies, etc.), with drawings;

30. Other types of units;

31. Means of qualifying nuclear material/fuel identification;

32. Other qualifying nuclear material in the facility (each separately identified).

Qualifying Nuclear Material Flow

33. Schematic flowsheet for qualifying nuclear material for operator purposes (identifying measurement points, accounting areas, inventory locations, etc.);

34. Inventory: state quantity range, number of items and approximate uranium enrichment and plutonium content (under normal operating conditions) for the following—

i) fresh fuel storage;

ii) reactor core;

iii) spent fuel storage;

iv) other locations;

35. Load factor (power reactor only);

36. Reactor core loading (number of elements/assemblies);

37. Refuelling requirements (quantity, time interval);

38. Burn-up (average/maximum);

39. Is the irradiated fuel to be reprocessed or stored (if stored, indicate site)?

Handling of Qualifying Nuclear Material

40. Fresh fuel:

i) packaging (description);

ii) layout, general arrangements and storage plan (with drawings);

iii) capacity of store;

iv) fuel preparation and assay room, and reactor loading area (description and indication of layout and general arrangement), with drawings;

41. Drawings of fuel transfer equipment (including refuelling machines);

42. Routes followed by qualifying nuclear material (fresh fuel, irradiated fuel, blanket, other qualifying nuclear material);

43. Reactor vessel diagram (showing core location, access to vessel, vessel openings, fuel handling in vessel);

44. Reactor core diagram (showing general disposition, lattice, form, pitch, dimensions of core, reflector, blanket; location, shapes and dimensions of fuel elements/assemblies; control elements/assemblies; experimental elements/assemblies);

45. Number and size of channels for fuel elements or assemblies and for control elements in the core;

46. Average mean neutron flux in the core:

i) thermal;

ii) fast;

47. Instrumentation for measuring neutron and gamma flux;

48. Irradiated fuel:

i) layout, spent fuel storage plan and general arrangement (internal and external), with drawings;

ii) method of storage;

iii) design capacity of storage;

iv) minimum and normal cooling period prior to shipment;

v) description and drawings of irradiated fuel transport equipment and shipping and/or storage cask (if no information on site, specify where it is held);

49. Maximum radiation dose rate of fuel blanket after refuelling (at the surface and at a distance of 1 metre);

50. Methods and equipment for handling irradiated fuel (except as already provided under questions 41 and 48(v));

51. Qualifying nuclear material testing areas: for each such area (except as already provided under question 40) describe—

i) nature of activities;

ii) major equipment available (e.g. hot cell, fuel element, decladding and dissolution equipment);

iii) shipping containers used (main qualifying nuclear material, scrap and waste);

iv) storage areas for both un-irradiated and irradiated qualifying nuclear material;

v) layout and general arrangement (with drawings).

Coolant Data

52. Flow diagram (indicating mass flow, temperature and pressure at major points, etc.).

Protection and Safety Measures

53. Basic measures for physical protection of qualifying nuclear material;

54. Specific health and safety rules for inspector compliance.

Accountancy and Control of Qualifying Nuclear Material

55. System description: describe the qualifying nuclear material accountancy system, method of recording and reporting accountancy data and procedures for account adjustment after inventory change and for correction of mistakes, etc., under the following headings (include specimen forms for all procedures)—

i) General: state what general and subsidiary ledgers will be used, their form (hard copies, tapes, microfilm, etc.) and who has responsibility and authority; identify the source data (e.g. shipping and receiving forms, the initial recording of measurements and measurement control sheets); describe procedures for making adjustments, the source data and records and how adjustments are authorised and substantiated;

ii) Receipts;

iii) Shipments;

iv) Physical inventory: describe procedures, scheduled frequency, methods of operator's inventory taking (both for item and/or mass accountancy), including relevant assay methods and expected accuracy, access to qualifying nuclear material, possible verification methods for irradiated qualifying nuclear material, methods of verification of qualifying nuclear material in the core and list major items of equipment regarded as qualifying nuclear material containers;

v) Nuclear Loss and Production (estimation of limits);

vi) Operational Records and Accounts (including method of adjustment or correction, place of preservation and language);

56. Features related to containment and surveillance measures (general description);

57. For each measurement point of an accounting area (including those identified under questions 13, 33 and 34), provide the following (if applicable) and attach drawings (if necessary)—

Total number of measurement points:

i) description of location, type, identification;

ii) anticipated types of inventory change and whether it is possible to use the measurement point for physical inventory taking

iii) physical and chemical form of qualifying nuclear material (with cladding materials description);

iv) qualifying nuclear material containers, packaging;

v) sampling procedures and equipment used;

vi) measurement methods and equipment used (item counting, neutron flux, power level, nuclear burn-up and production, etc.);

vii) source and level of accuracy;

viii) technique and frequency of calibration of equipment used;

ix) programme for the continuous appraisal of the accuracy of methods and techniques used;

x) method of converting source data to batch data (standard calculative procedures, constants used, empirical relationships, etc.);

xi) anticipated batch flow per year;

xii) anticipated number of items per flow and inventory batches;

xiii) category, composition and quantity of qualifying nuclear material per batch (including batch data, total weight of each element of qualifying nuclear material and, in the case of plutonium and uranium, the isotopic composition when appropriate; form of qualifying nuclear material);

xiv) access to qualifying nuclear material and its location;

xv) features related to containment and surveillance measures.

Post-Operational Information

58. Decommissioning schedule dates: end of operations, decommissioned;

59. Facility decommissioning plan including:

i) key events of the decommissioning plan;

ii) removal and recovery of qualifying nuclear material;

iii) removal or rendering inoperable of essential equipment.

G. Separate Storage Facilities

General information

1. Name of qualifying nuclear facility (including any usual abbreviation);

2. Location, postal address, telephone number and e-mail address;

3. Owner (legally responsible person);

4. Operator (legally responsible person);

5. Description (main features only);

6. Purpose;

7. Status (e.g. planned, under construction, in operation, shutdown, closed down, decommissioned for safeguards purposes);

8. Construction schedule dates (if not in operation): start of construction, commissioning, operation;

9. Normal operating mode (days only, number of shifts; number of days/year, etc.);

10. Facility layout (drawings showing structural containment, fences, access, qualifying nuclear material storage areas, laboratories, waste disposal areas, routes followed by qualifying nuclear material, experimental and test areas, etc.);

11. Siting of facility (maps showing location, premises and perimeter of site, other buildings, roads, railways, rivers, etc.);

12. Titles and addresses of persons responsible for accountancy and control of qualifying nuclear material and contact with the Agency (if possible, provide organisation charts showing the position of persons).

General Storage Data

13. Facility description (indicating important items of equipment which use, produce or process qualifying nuclear material) and general flow diagram;

14. Design capacity;

15. Anticipated annual throughput and inventory (forward programme indicating the proportion of various receipts and shipments).

Qualifying Nuclear Material Description

16. Main types of accounting units to be handling in the facility;

17. Description of qualifying nuclear material for each accounting area (general):

i) physical (mechanical) form and dimensions (for the items stored, with drawings);

ii) chemical and physical form (indicate chemical composition or main alloy constituents);

iii) enrichment range and plutonium content;

iv) range of weight of qualifying nuclear material;

v) cladding materials;

vi) means of qualifying nuclear material identification;

vii) types of containers, packaging;

viii) radiation level at qualifying nuclear material location;

ix) other qualifying nuclear material in the facility not already specified (quantity, form and location of inventory);

18. Waste material:

i) Source and form (including major contributors; liquid or solid; range of constituents, enrichment range and plutonium content; include contaminated equipment);

ii) quantities in storage or at other locations;

iii) method and frequency of recovery/disposal;

19. Other qualifying nuclear material in the facility and its location (each separately located);

20. Means of qualifying nuclear material identification in the facility;

21. Radiation level at qualifying nuclear material locations (at the surface of the qualifying nuclear material and at distance of 1 meter in μSv/h, mSv/h or Sv/h);

22. Schematic flowsheet for qualifying nuclear material (identifying measurement points, accounting areas, inventory locations, etc. for operator purposes);

23. Categories, form and range of quantities of qualifying nuclear material in operation areas, storage areas, other locations (average data for each location).

Handling of Qualifying Nuclear Material (For Each Accounting Area)

24. Description of qualifying nuclear material storage (including capacity, anticipated inventory and throughput, etc.), with drawings;

25. Maximum quantity of qualifying nuclear material to be handled in accounting areas;

26. Modification of the physical/chemical form during operation;

27. Qualifying nuclear material transfer;

28. Frequency of receipt and shipment;

29. Qualifying nuclear material transfer equipment (if applicable), with drawings;

30. Description of containers used for storage and handling (with drawings);

31. Routes followed by qualifying nuclear material;

32. Shielding (for storage and transfer).

Protection and Safety Measures

33. Basic measures for physical protection of qualifying nuclear material;

34. Specific health and safety rules for inspector compliance.

Accountancy and Control of Qualifying Nuclear Material

35. System description: describe the qualifying nuclear material accountancy system; method of recording and reporting accountancy data and establishing material balances; procedures for account adjustment after inventory change and correction of mistakes, etc., under the following headings (include specimen forms for all procedures)—

i) General;

ii) Receipts (including method of dealing with shipper/receiver differences and subsequent account corrections);

iii) Shipments (including waste);

iv) Measured discards (estimated quantities per year, period of storing);

v) Retained waste (estimated quantities per year, period of storing);

vi) Physical inventory: describe procedures, scheduled frequency, estimated distribution of qualifying nuclear material, methods of operator's inventory taking (both for item and/or mass accountancy, including relevant assay method), accessibility and possible verification method for qualifying nuclear material, expected accuracy and access to qualifying nuclear material and list major items of equipment regarded as qualifying nuclear material containers;

vii) Operational Records and Accounting Records (including method of adjustment or correction, place of preservation and language);

36. Features related to containment and surveillance measures (general description of applied or possible measures);

37. For each measurement point of accounting areas identified under question 24, provide the following (if applicable)—

Total number of measurement points:

i) description of location, type, identification;

ii) anticipated types of inventory change and/or whether the measurement point can be used for physical inventory taking;

iii) physical and chemical form of qualifying nuclear material (with cladding materials description);

iv) qualifying nuclear material containers, packaging;

v) sampling procedure and equipment used;

vi) measurement method and equipment used;

vii) source and level of random and systematic errors (weight, volume, sampling, analytical, non-destructive assay);

viii) technique and frequency of calibration of equipment used;

ix) method of converting source data to batch data;

x) means of batch identification;

xi) anticipated batch flow rate per year;

xii) anticipated number of inventory batches;

xiii) anticipated number of items per flow and inventory batches;

xiv) category, composition and quantity of qualifying nuclear material per batch (including batch data, total weight of qualifying nuclear material in item, isotopic composition (for uranium) and plutonium content, when appropriate; form of qualifying nuclear material);

xv) features related to containment and surveillance measures.

Post-Operational Information

38. Decommissioning schedule dates: end of operations, decommissioned;

39. Facility decommissioning plan including:

i) key events of the decommissioning plan;

ii) removal and recovery of qualifying nuclear material;

iii) removal or rendering inoperable of essential equipment.

H. Spent Fuel Encapsulation Facilities

General information

1. Name of qualifying nuclear facility (including any usual abbreviation);

2. Location, postal address, telephone number and e-mail address;

3. Owner (legally responsible person);

4. Operator (legally responsible person);

5. Description (main features only);

6. Purpose;

7. Status (e.g. planned, under construction, in operation, shutdown, closed down, decommissioned for safeguards purposes);

8. Construction schedule dates (if not in operation): start of construction, commissioning, operation;

9. Normal operating mode (days only, number of shifts; number of days/year, etc.);

10. Facility layout (drawings showing structural containment, fences, access, qualifying nuclear material storage areas, laboratories, waste disposal areas, routes followed by qualifying nuclear material, experimental and test areas, etc.);

11. Siting of facility (maps showing location, premises and perimeter of site, other buildings, roads, railways, rivers, etc.);

12. Titles and addresses of persons responsible for accountancy and control of qualifying nuclear material and contact with the Agency (if possible, provide organisation charts showing the position of persons).

Overall Process Parameters

13. Facility description (indicating important items of equipment which use, produce or process qualifying nuclear material, all process stages, storage areas and points as relevant to the measurement, control and accountancy of qualifying nuclear material) and general flow diagram;

14. Process description and flow sheet;

15. Design capacity (e.g. number of spent fuel assemblies or CANDU bundles, other quantities of qualifying nuclear material in metric tonnes);

16. Anticipated annual throughput (e.g. number of spent fuel assemblies or CANDU bundles, other quantities of qualifying nuclear material in effective kilograms);

17. Other important items of equipment processing qualifying nuclear material, if any.

Qualifying Nuclear Material Description and Flow

18. Description of main qualifying nuclear material:

i) main categories of qualifying nuclear material and accounting units to be handled in the facility;

ii) physical (mechanical) form, cladding and overall dimensions of spent fuel assemblies or CANDU bundles (with drawings);

iii) physical (mechanical) form, overall dimensions and capacity of disposal canisters (with drawings);

iv) physical form and overall dimensions of other types of containers and packaging (with drawings);

v) means of item identification;

vi) range of initial weights of heavy metal and initial enrichments of uranium in fuel assemblies;

vii) range of spent fuel burn-ups, cooling times and plutonium contents of fuel assemblies;

viii) means of batch identification, batch size, flow rate and campaign period;

ix) range of radiation levels in qualifying nuclear material storage and process areas;

x) range of radiation and heat levels at exterior of transport and disposal containers;

xi) frequency of receipt and shipment (batches/units per month);

19. Other qualifying nuclear material in the facility (if any) and its location;

20. Schematic flowsheet for qualifying nuclear material for operator purposes (identifying flow and inventory measurement points, accounting areas, inventory locations, etc.);

21. Qualifying nuclear material flow quantities for each qualifying nuclear material handling area i.e. process area (handling cell), storage area (input fuel assemblies; disposal canisters), other locations (including range and maximum quantities of qualifying nuclear material at any one time);

22. Design range of inventories of qualifying nuclear material in each storage and process area.

Handling of Qualifying Nuclear Material

23. Containers and packaging description (with drawings):

i) Describe containers and packaging in which qualifying nuclear material is received:

(i) Type;

(ii) Material;

(iii) Capacity (in terms of spent fuel assemblies or CANDU bundles and other qualifying nuclear material);

(iv) Identification features;

(v) Size;

ii) Describe containers and packaging in which qualifying nuclear material is shipped (inner container and over pack container):

(i) Type;

(ii) Material;

(iii) Capacity (in terms of spent fuel assemblies or CANDU bundles and other qualifying nuclear material);

(iv) Identification features;

(v) Size;

iii) Range of radiation and heat levels at exterior of storage and transport packages and disposal canisters;

24. Description of each qualifying nuclear material storage and process area (including range of radiation level in qualifying nuclear material storage and process areas), with drawings;

25. Shielding (for storage and transfer);

26. Methods and means of handling and transport of qualifying nuclear material (including loading into disposal containers), with drawings;

27. Transportation routes followed by qualifying nuclear material (with reference to facility layout), with diagrams.

Facility Maintenance

28. Maintenance, decontamination:

i) Normal plant maintenance;

ii) Plant and equipment decontamination;

iii) Plant start-up and plant shutdown procedures if different from normal operation.

Protection and Safety Measures

29. Basic measures for physical protection of qualifying nuclear material;

30. Specific health and safety rules for inspector compliance.

Accountancy and Control of Qualifying Nuclear Material

31. System description: describe the qualifying nuclear material accountancy system, method of recording and reporting accountancy data and establishing material balances, procedures for account adjustment after physical inventory, mistakes, etc., under the following headings (include specimen forms for all procedures)—

i) General: state what general and subsidiary ledgers will be used, their form (hard copies, tapes, microfilms, etc.) and who has responsibility and authority; identify the source data (e.g. shipping and receiving forms, internal transfer documents, physical inventory forms, initial recording of measurements and measurement control sheets); describe procedures for making adjustments, the source data and records and how adjustments are authorised and substantiated;

ii) Receipts (including method of dealing with account corrections; the checks and measurements used to confirm spent fuel items and the persons responsible for those determinations);

iii) Shipments (disposal canisters, spent fuel assemblies or CANDU bundles and other qualifying nuclear material, if applicable);

iv) Physical inventory: describe procedures (including basic inventory approach, i.e. planning, organising and conducting the inventory, prelisting, use of prior measurement data, who has primary responsibility for inventory) and methods of operator's inventory taking (for item accountancy), frequency, estimated distribution and accessibility of qualifying nuclear material, verification method and expected accuracy for qualifying nuclear material measurements;

v) Operational Records and Accounts (including logbooks, general ledgers, internal transfer forms, method of adjustment or correction, retention location, languages, control measures and responsibility for records);

32. Features related to containment and surveillance measures (general description of applied or possible measures in reference to floor plan or facility layout);

33. For each flow and inventory measurement point identified under question 20, provide the following—

Total number of measurement points:

i) description of location, type, identification;

ii) types of inventory change at the measurement point;

iii) whether the measurement point can be used for physical inventory taking;

iv) description of qualifying nuclear material (including physical and chemical form; cladding; initial and final heavy metal weight; initial and final uranium isotopic composition; burn-up; cooling time; and plutonium content);

v) qualifying nuclear material containers, packaging and method of storage;

vi) item identification and containment and surveillance measures (including special identifying features and radiation and heat characteristics of disposal canisters);

vii) measurement equipment used and corresponding accuracies (including radiation measurements of fuel assemblies in handling cell);

viii) measurement control, including technique and frequency of calibration of equipment used, and standards used;

ix) method of converting source data to batch data;

x) means of batch identification;

xi) anticipated batch flow rate per year;

xii) anticipated number of inventory batches;

xiii) anticipated number of items per flow and inventory batches;

xiv) category, composition and quantity of qualifying nuclear material per batch (including batch data, total weight of each element of qualifying nuclear material and form of qualifying nuclear material).

Post-Operational Information

34. Decommissioning schedule dates: end of operations, decommissioned;

35. Facility decommissioning plan including:

i) key events of the decommissioning plan;

ii) removal and recovery of qualifying nuclear material;

iii) removal or rendering inoperable of essential equipment.

I. Qualifying Nuclear Facilities with Limited Operation

General information

1. Name of qualifying nuclear facility (including any usual abbreviation);

2. Location, postal address, telephone number and e-mail address;

3. Owner (legally responsible person);

4. Operator (legally responsible person);

5. Description (main features only);

6. Purpose (intended use of qualifying nuclear material);

7. Status (e.g. planned, under construction, in operation, shut down, closed down, decommissioned for safeguards purposes);

8. Facility layout (structural containment, fences, access, qualifying nuclear material storage areas, laboratories, waste disposal areas, routes followed by qualifying nuclear material, experimental and test areas, etc.), with drawings (if applicable);

9. Siting of facility (maps showing location, premises and perimeter of site, other buildings, roads, railways, rivers, etc.);

Qualifying Nuclear Material Description and Flow

10. Category of qualifying nuclear material;

11. General description of qualifying nuclear material: for each category of qualifying nuclear material, describe the typical items and batches (e.g. coupons, rods, samples, trays), including—

i) chemical and physical form;

ii) enrichment range and plutonium content (if applicable);

iii) amount of qualifying nuclear material usually kept at the facility;

12. Means of qualifying nuclear material identification;

13. Radiation level (dose rate) at the surface of the qualifying nuclear material and at distance of 1 meter (in μSv/h, mSv/h or Sv/h);

14. Description of main containers used for transport, storage and handling, with drawings (if applicable);

15. Qualifying nuclear material transfer equipment, with drawings (if applicable);

16. Identification of measurement points, accounting areas, inventory location, with flowsheet.

Protection and Safety Measures

17. Basic measures for physical protection of qualifying nuclear material;

18. Specific health and safety rules for inspector compliance.

Accountancy and Control of Qualifying Nuclear Material

19. Description of the system: describe the qualifying nuclear material accountancy system, method of recording and reporting accountancy data and establishing material balance and procedures for account adjustment after inventory change, etc., under the following headings (include specimen forms for all procedures)—

i) General;

ii) Receipts;

iii) Shipments;

iv) Measured discards and retained waste;

v) Physical inventory: describe procedures, scheduled frequency, method of operator's inventory taking, expected accuracy and access to qualifying nuclear material;

vi) Operational Records and Accounting Records (including method of adjustment or correction, place of preservation and language);

20. For each measurement point of accounting areas identified under question 16, provide the following (if applicable)—

Total number of measurement points:

i) description of location, type, identification;

ii) physical and chemical form of qualifying nuclear material (with cladding materials description);

iii) measurement method and equipment used;

iv) method of converting source data to batch data;

v) means of batch identification and batch data description.

Post-Operational Information

21. Decommissioning schedule dates: end of operations, decommissioned;

22. Facility decommissioning plan including:

i) key events of the decommissioning plan;

ii) removal of qualifying nuclear material;

iii) removal or rendering inoperable of essential equipment."

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations amend the Nuclear Safeguards (EU Exit) Regulations 2019 (S.I. 2019/196) (the 2019 Regulations) and the Nuclear Safeguards (Fees) Regulations 2021 (S.I. 2021/1406) (the 2021 Regulations). The 2019 Regulations require operators of qualifying nuclear facilities (as defined in section 76A(6) of the Energy Act 2013 (c. 32)) to maintain a system of accountancy and control of qualifying nuclear material, record and report specified information to the Office for Nuclear Regulation (the ONR) and/or the Secretary of State, and enable the ONR to verify compliance. The 2021 Regulations prescribe the fees payable by operators to the ONR for the costs incurred in exercising its functions under the 2019 Regulations (among other things).

The following amendments update and clarify existing requirements in the 2019 Regulations:

- Regulations 3, 4(2)(e)(ii), 5, 7(a), 10, 15(c), 21(a), 30, 31(b) and 32(c) update definitions and terminology.
- Regulations 4(2)(a), 8, 12, 33(a) and (c) omit transitional provisions relating to the commencement of the 2019 Regulations.
- Regulation 6(a)(i) specifies additional information which may be relevant to the imposition of particular safeguard provisions.
- Regulation 15(d) and (e) clarifies that the requirements for notifications specified in regulation 20(3) of the 2019 Regulations does not apply to design information.
- Regulation 25 requires communications with the ONR to be signed and dated and omits provision for communications to be sent to the ONR by post or delivered in person.
- Regulation 29(b) omits provision for communications to be sent to the Secretary of State by post or delivered in person.
- Regulation 31(a) and the Schedule substitute the information about qualifying nuclear facilities that operators must declare to the ONR.
- Regulation 35 clarifies that the fees referred to in regulation 3 of the 2021 Regulations must be determined by the ONR so as to recover the costs reasonably incurred.

The following amendments make substantive changes:

- Regulations 4(2)(b)(ii)(cc), 20, 33(b)(i)(aa) and 36(d) omit requirements relating to the extraction of ore from which source material may be obtained.
- Regulation 4(2)(c) specifies the requirements for the declaration of design information in respect of re-purposed facilities.
- Regulation 6(a)(ii) and (b)(ii) specifies that particular safeguard provisions must take account of, and may give effect to, obligations under a relevant international agreement.
- Regulation 6(c) makes provision for the amendment or withdrawal of particular safeguard provisions.
- Regulation 13 omits the requirement to report increases in qualifying nuclear material as a result of any unusual incident or circumstances.
- Regulation 15(a) and (b) requires the reporting of quantities of qualifying nuclear material in grams (up to a maximum of three decimal places) unless a different unit of measurement is required.
- Regulation 19 omits the requirement for intermediaries involved in the conclusion of contracts for the supply of qualifying nuclear material to retain records of the transaction.
- Regulation 21(b) replaces the requirement to provide the ONR with an initial stock list of conditioned and retained waste that is treated or stored with a requirement to provide the most recently updated stock list, on request.
- Regulation 22 harmonises the requirements for the declaration of the transfer of conditioned or retained waste into or out of a qualifying nuclear facility.

- Regulation 24 replaces the exemption from the 2019 Regulations for persons who hold only end products which are used for non-nuclear purposes with an exemption that applies in respect of such products.
- Regulation 27 omits the requirement for ONR to provide an annual report to the Secretary of State.
- Regulation 28(a) and (b) provides that failure to comply with regulations 3(A3) or 5(3) of the 2019 Regulations constitutes an offence.
- Regulation 32(a) and (d) specifies additional requirements for an accountancy and control system relating to staffing, equipment, resources and other arrangements.
- Regulation 33(b)(ii) omits the requirement to update the accounting records retained under paragraph 8(1) of Schedule 4 to the 2019 Regulations.
- Regulation 36(a)(i), (b) and (e) inserts provision in the 2021 Regulations for the charging of fees in respect of the ONR's functions under regulations 3(A3), 5(5) and (7) and 29(2) of the 2019 Regulations.

The following amendments alter the time periods applicable to existing obligations in the 2019 Regulations:

- Regulations 4(2)(d) and 23(2)(b)(ii) shorten the period in which an operator must inform the ONR of a change in design information.
- Regulations 7(c), 18, 21(c), 33(b)(i)(bb) extend the period for which operators must retain specified information.
- Regulation 9(c) shortens the period in which an operator must send the ONR an amended accountancy and control plan.
- Regulations 16 and 17 increase the number of days' notice operators must give the ONR for exports and imports of qualifying nuclear material.
- Regulation 29(a) extends the deadline by which persons must provide notice to the Secretary of State of the receipt or production of relevant items or qualifying nuclear material, and increases the number of days' notice required for the proposed transfer of such items or material.

The remainder of the Regulations make amendments that are consequential to the foregoing.

A full impact assessment has not been produced for the Regulations as no, or no significant, impact on the private, voluntary or public sector is foreseen.