DATE:

CONFIDENTIAL WHEN COMPLETED

APPROVED BY OMB: NO. 3150-0056 **EXPIRES: 09/30/2017**

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INTERNATIONAL ATOMIC ENERGY AGENCY
DEPARTMENT OF SAFEGUARDS AND INSPECTION

DESIGN INFORMATION QUESTIONNAIRE *

(CONTINUED)

The "Confidential" marking on this form is for IAEA purposes only. It indicates that the IAEA considers the information in the completed form to be 'safeguards confidential' and is not to be confused with any U.S. security classification.

* Questions which are not applicable may be left unanswered.

IAEA USE ONLY

SPENT FUEL ENCAPSULATION PLANTS

OVERALL PROCESS PARAMETERS

13. FACILITY DESCRIPTION (indicating all process stages, storage areas and points as pertaining to the measurement, control and accountancy of nuclear material)	GENERAL FACILITY DIAGRAM(S) ATTACHED UNDER REF. Nos.
14. PROCESS DESCRIPTION	PROCESS FLOW SHEET ATTACHED UNDER REF. Nos.
15. DESIGN CAPACITY (e.g. number of spent fuel assemblies or CANDU bundies, other quantities of nuclear material in metric tons)	
16. ANTICIPATED ANNUAL THROUGHPUT (e.g. number of spent fuel assemblies or CANDU bundies, other quantities of nuclear material in effective kilograms)	
17. IMPORTANT ITEMS OF EQUIPMENT PROCESSING NUCLEAR MATERIAL, IF ANY (e.g. testing and experimental equipment)	

NUCLEAR MATERIAL DESCRIPTION AND FLOW

18. MAIN MATERIAL DESCRIPTION	
i) Main types of nuclear materials and accountability units to be handled in the facility	
ii) Physical (mechanical) form, cladding, and overall dimensions of spent fuel assemblies or CANDU bundies	DRAWING(S) ATTACHED UNDER REF. Nos.

NUCLEAR MATERIAL DESCRIPTION AND FLOW	
iii) Physical (mechanical) form, overall dimensions, and capacity of disposal canisters	DRAWING(S) ATTACHED UNDER REF. Nos.
iv) Physical form and overall dimensions of other types of containers and packaging	DRAWING(S) ATTACHED UNDER REF. Nos.
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 Pu contents of fuel assemblies	
viii) Means of batch identification, batch size, flow rate, and campaign period	
ix) Range of radiation levels in 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 NUCLEAR MATERIAL IN THE FACILITY AND ITS LOCATION, IF ANY	
20. SCHEMATIC FLOWSHEET FOR NUCLEAR MATERIAL (identify flow and inventory measurement points, accountability areas, inventory locations, etc.)	DRAWING(S) ATTACHED UNDER REF. Nos.
21. NUCLEAR MATERIAL FLOW QUANTITIES FOR EACH NUCLEAR MATERIAL HANDLING AREA, (including range and maximum quantities of nuclear material at one time) i.e.: -- process area (handling cell) -- storage area (input fuel assemblies; disposal canisters) -- other locations	
22. DESIGN RANGE OF INVENTORIES OF NUCLEAR MATERIAL IN EACH STORAGE AND PROCESS AREA	
NUCLEAR MATERIAL HANDLING	
23. CONTAINER AND PACKAGING DESCRIPTION	DRAWING(S) ATTACHED UNDER REF. Nos.

NUCLEAR MATERIAL HANDLING		
i)	Describe containers and packaging in which nuclear material is received: -- TYPE: -- MATERIAL: -- CAPACITY (In terms of spent fuel assemblies or CANDU bundies and other nuclear material): -- IDENTIFICATION FEATURES: -- SIZE:	
ii)	Describe containers and packaging in which nuclear material is shipped (inner container and over pack container): -- TYPE: -- MATERIAL: -- CAPACITY (In terms of spent fuel assemblies or CANDU bundies and other nuclear material): -- IDENTIFICATION FEATURES: -- SIZE:	
iii)	Range of radiation and heat levels at exterior of storage and transport packages and disposal canisters	
24.	DESCRIPTION OF EACH NUCLEAR MATERIAL STORAGE AND PROCESS AREA (including range of radiation levels in nuclear material storage and process areas)	DRAWING(S) ATTACHED UNDER REF. Nos.
25.	SHIELDING (for storage and transfer)	
26.	METHODS AND MEANS OF HANDLING AND TRANSPORT OF NUCLEAR MATERIAL (including loading into disposal containers)	DRAWING(S) ATTACHED UNDER REF. Nos.
27.	TRANSPORTATION ROUTES FOLLOWED BY NUCLEAR MATERIAL (with reference to plant layout)	DIAGRAM(S) ATTACHED UNDER REF. Nos.
PLANT 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 NUCLEAR MATERIAL	
30.	SPECIFIC HEALTH AND SAFETY RULES FOR INSPECTOR COMPLIANCE (if extensive, attach separately)	

NUCLEAR MATERIAL ACCOUTANCY AND CONTROL		
31.	SYSTEM DESCRIPTION Give a description of the nuclear material accountancy system, the method of recording and reporting accountancy data and establishing material balances, procedures for account adjustment after plant inventory, mistakes, etc., under the following headings:	SPECIMEN FORMS USED IN ALL PROCEDURES ATTACHED UNDER REF. Nos.
i)	General (This section should also state what general and subsidiary ledgers will be used, their form (hard copies, tapes, microfilms, etc.) as well as who has the responsibility and authority. Source data (e.g. shipping and receiving forms, internal transfer documents, physical inventory forms, the initial recording of measurements and measurement control sheets) should be identified. The procedures for making adjustments, the source data and records should be covered as well as how the adjustments are authorized 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 should be defined)	
iii)	Shipments (disposal canisters; spent fuel assemblies or CANDU bundies and other nuclear materials, if applicable)	
iv)	Physical inventory (description of procedures and methods of operator's inventory taking (for item accountancy), frequency, estimated distribution and accessibility of nuclear material, and verification method, and expected accuracy for nuclear material measurements. In particular, the description of procedures should also provide the basic inventory approach to be used, i.e. planning, organizing, and conducting the inventory, prelisting, use of prior measurement data; who has the primary responsibility for the inventory)	
v)	Operational records and accounts (including logbooks, general ledgers, internal transfer forms, method of adjustment or correction and retention location, and 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 plant layout)	

NUCLEAR MATERIAL ACCOUTANCY AND CONTROL	
33. FOR EACH FLOW AND INVENTORY MEASUREMENT POINT IDENTIFIED UNDER QUESTION 20, GIVE THE FOLLOWING	SEPARATE SHEET(S) CAN BE ATTACHED FOR EACH MEASUREMENT POINT, IF NECESSARY, ATTACH DRAWING(S)
i) Description of location, type, identification	
ii) Types of inventory change at this measurement point	
iii) Possibilities to use this measurement point for physical inventory taking	
iv) Description of 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 Pu content)	
v) Nuclear material containers, packaging, and method of storage	
vi) Item identification and containment-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) Type, composition and quantity of nuclear material per batch (with indication of batch data, total weight of each element of nuclear material, and form of nuclear material)	

OPTIONAL INFORMATION

34. OPTIONAL INFORMATION (that the operator considers relevant to safeguarding the facility)	

Signature of Responsible Officer:

Date: