

Regulation

Regulation for an Application for a Licence to Construct a Nuclear Facility (FANR-REG-06)

Version 0

Federal Authority for Nuclear Regulation (FANR), 2010
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Definitions

Article (1)

For purposes of this regulation, the following terms shall have the meanings set forth below.

Independent Safety Verification (ISV)	A written verification performed by suitably qualified and experienced individuals, who did not participate in the original Safety Assessment, to determine whether the approach taken in conducting such Safety Assessment was reasonable and in accordance with international best practice.
Limited Construction Licence	The Limited Licence for Parts and Stages of Construction of a Nuclear Facility issued by the Authority granting authorisation to carry out different parts and stages of Construction of a Nuclear Facility prior to the issuance of a Construction Licence.
Postulated Initiating Event (PIE)	An event identified in Design as leading to anticipated Operational occurrences or accident conditions. A PIE is not an accident itself, but the event that initiates a sequence and leads to an Operational occurrence, a design basis accident or a severe accident depending on the additional failures that occur, including equipment failures such as pipe breaks, human errors, human induced events and natural events.
Probabilistic Risk Assessment (PRA)	<p>A comprehensive, structured approach to identifying failure scenarios constituting a conceptual and mathematical tool for deriving numerical estimates of risk.</p> <p>Level 1 comprises the assessment of failures leading to the determination of the frequency of core damage.</p> <p>Level 2 constitutes the assessment of containment response and leads to the determination of frequency of containment failure resulting in release to the environment of a given percentage of the reactor core's inventory of radionuclides</p>
PSAR	Preliminary Safety Analysis Report.
Structures, Systems and Components (SSCs)	A general term encompassing all the elements of a Facility or Activity which contributes to protection and safety, except human factors. Structures are the passive elements such as building vessels and shielding. A System comprises several components assembled in such a way as to perform a specific active function and a Component is a discrete element of a system.

Scope

Article (2)

The objective of this regulation is to establish the requirements for an application to the Authority for a Limited Construction Licence and a Construction Licence or to undertake certain activities that are defined to be a part of the Regulated Activity.

Application for a Limited Construction Licence

Article (3)

1. The applicant may apply for a Limited Construction Licence as part of an application for a Construction Licence in accordance with this regulation.
2. The application for a Limited Construction Licence shall contain the following:
 - a. a description of the proposed activities;
 - b. the general information required in Chapter 4 Part 1 of this regulation and the technical information required in Chapter 4 Part 2 of this regulation, as applicable, to ensure effective oversight of the activities that are within the scope of the Limited Construction Licence application; and
 - c. a description of the Management System that will be applied to the activities.
3. An application for a Limited Construction Licence shall demonstrate that the proposed activities will be performed in compliance with the applicable laws of the State and the regulations of the Authority.

Application for a Construction Licence

General Requirements

Article (4)

1. The applicant shall provide information in its application for a Construction Licence which demonstrates that the proposed Nuclear Facility will be Designed and Constructed in compliance with the applicable laws of the State and the regulations of the Authority.
2. The applicant shall provide:
 - a. its name and business address and the names of its directors and principal officers who are empowered to act on its behalf;
 - b. the Licence applied for, a description of the purpose for which the applicant desires to Construct the Nuclear Facility, the requested term of the Construction Licence and a list of related Licences issued or applied for in connection with the proposed Nuclear Facility;

- c. information establishing that it is a juridical entity approved by a competent authority of the State;
- d. information describing its overall ownership and management structure, including its projected financial and human resource requirements for the proposed Nuclear Facility;
- e. details regarding its financial and technical qualifications to complete the proposed activities in accordance with applicable law and regulations;
- f. information describing its relationship to major contractors and the structure of responsibilities between the applicant and any contractors responsible for the Siting, Design, Construction and Operation of the Nuclear Facility; and
- g. the anticipated Construction commencement and completion dates and a schedule outlining the major Construction phases and milestones.

Preliminary Safety Analysis Report (PSAR)

Article (5)

A PSAR shall be submitted to the Authority for review and shall include detailed evidence of safety-related concerns. The PSAR provides a primary basis for the Authority's review and assessment whether to grant a Construction Licence and upon which conditions.

Requirements for PSAR

Article (6)

The applicant shall include the following (without limitation) in the PSAR. (Restricted information shall be handled as provided in Article 7 of this regulation.)

1. An introduction containing information on the preparation and structure of the PSAR, the objective and scope of each section and a list of material incorporated by reference as part of the PSAR.
2. A general description of the proposed Nuclear Facility that shall include the basic technical characteristics of the proposed Nuclear Facility, information on the layout and related aspects, description of the operating modes of the proposed Nuclear Facility unit and a comparison with other similar Facilities currently operating in the State or elsewhere.
3. Identification of any reference Nuclear Facility, evidence of approval of the reference Nuclear Facility by the authorised regulatory authority in the country of origin, a list of proposed departures or changes to the submitted reference Design, an Independent Safety Verification report describing all proposed departures from or changes to the reference Design, and a list of all country of origin Safety information incorporated by reference in the PSAR.

4. A description of the arrangements that the applicant/Licensee will implement to manage Safety, including its management structure, the Management System that will be implemented to assure that all requirements for Safety, Security and Safeguards will be satisfied during the proposed activity, and its strategy for the development, maintenance and enhancement of a strong safety culture.
5. A description of the site evaluation including site reference data, evaluation of site specific hazards and information on the proximity of industrial, transport and military facilities and other activities at or near the site that may influence the Safety of the proposed Nuclear Facility. Information on the hydrology, meteorology and seismology conditions of the proposed Nuclear Facility and the surrounding site shall also be included. Further, it shall describe the radiological conditions due to external sources, site-related issues in Emergency Planning and Accident management, radiological and non-radiological impacts of the proposed Nuclear Facility during Operation and accident conditions, and monitoring of site related parameters and an Emergency Plan during Construction, including consideration of fire, flooding, sand storms and security violations.
6. A description of the general Design of the proposed Nuclear Facility including safety objectives and criteria, design principles, applicable codes and standards, the classification of SSCs, descriptions of the civil engineering works, structures and equipment qualification, and environmental factors relating to Nuclear Safety. Design information shall also be provided on human factors, engineering and proposed Nuclear Facility protection against internal and external hazards.
7. A description of the SSCs of the Nuclear Facility in line with their importance to Nuclear Safety including a discussion of their safety objectives, design bases, safety classification, design and construction codes and the inspection, tests and analysis that provide reasonable assurance that the system will meet its design objectives.
8. A description of how recent lessons learned and experience from other similar Facilities, scientific and technical developments, as well as the results of any relevant research on protection and safety have been applied to resolve potential safety issues.
9. A summary of the results of the safety analyses performed to assess the safety of the Nuclear Facility on the basis of safety criteria and authorised limit on radioactive releases including safety objectives and acceptance criteria, identification and classification of PIEs, deterministic safety analysis in support of normal operation, analysis of anticipated operational occurrences, design basis events and beyond, and selected severe accidents and Level 1 and Level 2 PRAs.
10. Preliminary information on the Commissioning Programme to be adopted prior to entering the operational stage including the test and verification programme that will be used to provide assurance that the as-built Nuclear Facility satisfies the design safety requirements.
11. Preliminary information on operational aspects relevant to Safety.

12. Preliminary information on operational limits and conditions to ensure a safe operating envelope.
13. Preliminary information on the Radiation Protection programme including a description of all on-site radiation sources, the application of the “as low as reasonably achievable” principle (known as the ALARA principle) for the optimisation of protection, and design features for Radiation Protection of personnel and the Nuclear Facility.
14. Preliminary information on the programme for pre-disposal management of Radioactive Waste including arrangements for identification and control of Radioactive Waste streams, proposals for authorised discharges of Radioactive Waste, and arrangements for pre-treatment, treatment, conditioning and Storage of residual Radioactive Waste pending Disposal.
15. Preliminary information on the capability for performing actions necessary to protect the public, workers and the environment, and the proposed Nuclear Facility in the event of a nuclear or radiological emergency based on the referenced standard Nuclear Facility Design.
16. A physical protection plan for the Construction phase describing how the applicant will protect the construction site from unauthorised intrusions, vandalism and sabotage. The applicant shall submit preliminary information on the design features of the proposed Nuclear Facility and preliminary information on the physical protection during the operation phase.
17. A preliminary programme to account for and control Nuclear Material in accordance with these regulations and international guidance; Design information relevant to the implementation of Safeguards including but not limited to a Nuclear Material flow chart; a description of the design features of the proposed Nuclear Facility that will ensure the control and accountability of all Nuclear Material and related equipment and protection against unauthorised access, theft, sabotage or other such impacts that can result in a radiological accident including the unauthorised possession of Nuclear Material or nuclear waste); and general plans of the areas where Nuclear Material will be stored and managed and a description of major equipment with which the Nuclear Material will be managed.
18. Preliminary information on Decommissioning and end of life aspects including how the Design supports safe Decommissioning.
19. A description of the process, including timing that will be used, to update and/or revise the PSAR during the assessment period to account for changes or modifications in Design.

Restricted Information

Article (7)

1. An applicant seeking to have information in a Construction Licence application withheld from public disclosure in accordance with Article 9(B) of the Law must prominently mark the information the applicant seeks to protect and provide a statement that:
 - a. identifies the parts of the application sought to be withheld and indicates the location(s) in the application of all information sought to be withheld; and
 - b. declares the basis for proposing the information to be withheld in accordance with the provisions of Article 9(B) of the Law and a specific statement of the harm that would result if the information sought to be withheld is disclosed to the public.
2. The Authority may grant or deny the applicant's request to withhold certain information. In either case, the Authority will notify the applicant, and if denied, the Authority will also provide a statement of the reasons for that determination and allow a thirty (30) day period in which the applicant may through a written request to the Authority withdraw the information. During this period, the Authority will not use the information and after the expiry of the period the information will be returned.
3. During the thirty (30) day period the Authority may elect to release the information to the public if it has been released by the owner to the public or if the basis for seeking to restrict public disclosure of the information is no longer valid.
4. If the Authority decides to release the information to the public for any reason, it will notify the applicant thirty (30) days prior to releasing the information. Unless the Authority has released the information to the public for the reasons described in (3), the applicant may request to withdraw the information, and the information will be returned unless the information is required for reasonable use by the Authority.