|  |
| --- |
| **List of authorization topics preferred by the President of the National Atomic Energy Agency (PAA)** |

1. The issues indicated below can be used in the submitted application for the authorization of the President of PAA. Laboratories and expert units may also submit an application for authorization within the scope proposed by them or within the scope being a combination of two or more topics indicated in the list.

|  |
| --- |
| **Topics related to the safety assessment of the nuclear power plant site** |

1. Analyses of site seismic conditions and hazards.
2. Analyses of site tectonic conditions and hazards.
3. Analyses of site hydrogeological conditions and hazards.
4. Analyses of site geological-engineering conditions and hazards.
5. Analyses of site hydrological conditions and hazards.
6. Analyses of site meteorological conditions and hazards.
7. Analyses of site natural conditions and hazards.
8. Analyses of site conditions and hazards related to human activity.

|  |
| --- |
| **Topics related in particular to the safety assessment of the nuclear power plant project** |

1. Deterministic safety analysis of anticipated operational occurrences and design basis accidents in nuclear power plants.
2. Deterministic safety analysis of multiple failures in nuclear power plants for design extension conditions.
3. Deterministic safety analysis of severe accidents in nuclear power plants.
4. Preparation and validation of a nuclear power plant model for safety analyses.
5. Assessment of radiological consequences resulting from safety analyses of different nuclear power plant states.
6. Development of input data for on-site and off-site emergency plans.
7. Determination of postulated initiating events and verification of their categorization and grouping for nuclear power plant safety analyses.
8. Severe Accident Management Guidelines verification.
9. Probabilistic safety analysis level 1 and 2.
10. Nuclear physics issues in practical applications to nuclear power plant reactors. *(nuclear fuel, design of fuel elements and core)*
11. Stress analyses of structures, systems and components *(including nuclear reactor and pressure vessel structures)* and civil engineering structures.
12. General aspects of the design of nuclear power plants *(e.g. safety classification of electrical systems, seismic qualification of structures, systems and components).*
13. Assessment of cybersecurity provisions in nuclear power plant design.
14. Management system and quality assurance verification *(with particular emphasis on the safety culture policy)*.
15. Assessment of I & C technical provisions.
16. Assessment of electrical systems in nuclear power plant design.
17. Structural strength of components in nuclear power plants.
18. Assessment of fire protection technical provisions.
19. Buildings and civil structures resistance to aircraft impacts, extreme weather phenomena and seismic hazards.
20. Resistance to corrosion processes of steel in civil structures as well as methods of monitoring and counteracting corrosion.
21. Management of radioactive waste and spent nuclear fuel (*with particular emphasis on the management of radioactive waste generated during the operation of a nuclear power plant*).
22. Analysis of the consideration of human factors engineering in a nuclear power plant design in terms of safety assessment.